

TRIPLETT

Model 1101-A

**Compact, Digital
Multimeter**
Instruction Manual



 **TRIPLETT**

TRIPLETT MODEL 1101-A

COMPACT, DIGITAL MULTIMETER WITH BACKLIT DISPLAY & TEMPERATURE TEST

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1: INTRODUCTION

The **Triplett Model 1101-A** is a 3 1/2 digit, handheld Digital Multimeter with a backlit LCD display. At its core is an LSI (Large Scale Integration) integrated circuit which uses dual slope A/D conversion for stability and accuracy. The meter can measure AC and DC Voltage and Current, Resistance, Temperature, Transistor gain, and perform a Diode and Continuity Test. Overload protection makes the meter resistant to damage from accidental overloads.

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

2: SAFETY RULES & WARNINGS



WARNING!!!

This meter is NOT to be used to measure High Energy circuits (power circuitry fused at greater than 4KW, such as distribution circuits, power entrance circuits, etc.) or circuits classified by CE as CATEGORY III (CAT III).

- 2.1 Read all instructions in this manual before using this meter.
- 2.2 Prior to using the meter in any situation which could result in injury to the user, in order to verify that the meter is functional and producing a valid reading, test the meter on a circuit(s) known to have potentials equivalent to the potential that is to be measured. For example, before using the meter to determine if an AC power line is energized with 120VAC, test the meter on a line known to be energized with 120VAC.
- 2.3 Do not use this meter with its battery cover open, its rear case open, or with parts removed. Doing so may damage the meter and/or injure the user.
- 2.4 When using this meter in schools and workshops, responsible teachers or skilled personnel must control the usage of this meter.
- 2.5 Follow the recommendations of any Trade Organizations or Regulatory Agencies whose scope encompasses the use of this meter.
- 2.6 Do not open this meter for maintenance without first disconnecting the test leads from all external circuitry.
- 2.7 Repairs and maintenance must only be carried out by qualified service personnel or qualified electricians / technicians who know the dangers of, and the safety rules applicable to this type of equipment.
- 2.8 Always set the meter to the appropriate range or mode before connecting it to the circuitry to be tested.
- 2.9 Check the condition of the test leads before making a measurement. Do not use the test leads if there is damaged insulation or exposed metal.
- 2.10 Make sure test leads are properly inserted and seated in the meter's input jacks. A loose test lead may cause the user to believe that no hazard exists, when in fact, dangerous voltages or currents may be present.
- 2.11 Do not touch the tips of the test leads when making a measurement. Do not touch live circuitry when making a measurement.
- 2.12 Before using the meter, examine both the meter and the test leads for damage. Do not use the meter if damage (damaged insulation, exposed metal, cracked case, burnt smell, etc.) is evident.

- 2.13 Insert the test leads in the jacks specified in the instructions for performing particular tests. Inserting the test leads in incorrect jacks can damage the meter and/or injure the user.
- 2.14 Do not exceed the maximum voltage or current limitations of the meter (see product specifications). Doing so may damage the meter and/or injure the user.
- 2.15 Do not apply voltage or current to the input of the meter when it is set to any of the Ohms Ω ranges. Doing so may damage the meter and/or injure the user.
- 2.16 Do not apply voltage or current to the input of the meter when it is set to the Diode Test / Continuity Beeper mode . Doing so may damage the meter and/or injure the user.
- 2.17 Do not attempt to measure a voltage source with the test leads plugged into the meter's 10A jack. Doing so may damage the meter and/or injure the user.
- 2.18 Do not rotate the Function switch with the test leads connected to the circuitry to be tested. Doing so may damage the meter or the circuitry, and/or injure the user.
- 2.19 Replace fuses only with exact or equivalent fuses. Do not "bridge" fuses out of circuit. Doing so may damage the meter and/or injure the user.
- 2.20 Do not apply voltages to the input of the meter which are elevated above the earth ground potential by more than 600VDC / AC peak. Doing so may damage the meter and/or injure the user.
- 2.21 Do not continue to use meter when the "low power" symbol  is displayed. The displayed reading may be in error and lead the user to believe that no hazard exists, when in fact, dangerous voltages or currents may be present.
- 2.22 Use caution when working with voltages above 25 volts AC or 35 volts DC. Such voltages may cause a life threatening electrical shock.
- 2.23 This meter is not for use by children.
- 2.24 Do not use this meter to make measurements in adverse environments such as rain, snow, fog, or locations with steam, explosive gases or dusts. Doing so may damage the meter and/or injure the user.
- 2.25 Do not use meter in condensing atmospheres. That is, do not use meter in conditions where ambient temperature and humidity could cause condensation of water inside of meter. Doing so may cause injury to the user.
- 2.26 Do not use the meter if either the meter or the test leads are wet, either from exposure to the weather, or after cleaning the case of the meter. Doing so may cause injury to the user.
- 2.27 Do not attempt immediate use of the meter when bringing it from a cold environment to a warm environment. Condensation of water, inside and outside of the meter, may produce dangerous measuring

- conditions. Allow the meter to warm to room temperature before using.
- 2.28 Do not modify the meter. Changing the design may make the meter unsafe and may result in injury to the user.
- 2.29 Use caution when attempting to evaluate if a dangerous voltage is present. The meter will not read AC voltage if it is set to DC, nor will it read DC if it is set to AC. For example, if the meter is set to 200VDC, it will not measure a dangerous AC voltage, even if the probes are inserted into a household AC wall outlet.
- 2.30 Do not touch the metallic portion of one test lead if the other test lead is connected to a live circuit. The current from the live circuit may pass through the meter and appear on the unconnected test lead. Failure to observe this warning may result in user injury.
- 2.31 Remove the battery when the meter may be left unused for longer than 1 month. Chemical leakage from the battery could damage the meter, leading to user injury.
- 2.32 Do not use the meter if there is evidence of chemical leakage from the battery. Leakage could damage meter and lead to injury of user.
- 2.33 Do not attempt to use meter when no display is present on LCD. Doing so may damage the meter and/or injure the user.
- 2.34 Do not attempt to measure voltages on capacitors holding dangerous charges. These charges may be of lethal potential, and may have enough energy to cause damage to the meter, or injury to the user. These capacitors can store electricity, even when the circuitry which they are in has been disconnected from its power source.
- 2.35 Do not use this meter to measure voltages or currents in industrial applications where High Energy circuitry is used. High Energy circuitry is usually regarded as any circuitry capable of supplying over 4000 watts to a load before a safety device (like a fuse) interrupts the circuit. See product specifications for Category rating of this meter.
- 2.36 Do not use this meter to measure current in circuits whose open circuit voltage exceeds 500V AC/DC. The meter's fuses are rated at 500V max.
- 2.37 Always replace the meter's internal fuse with an exact replacement. Do not substitute a 250V fuse for a 500V fuse.
- 2.38 When you use the meter to check a high-voltage circuit, do not try to connect both test leads at once. Instead, clip one probe to the neutral or ground lead of the circuit (usually a bare, green, or white wire in AC wiring circuits) using the insulated slip-on Alligator Clips. Then probe for voltages with the other test lead. This helps prevent you from accidentally touching a hot wire, since you need to concentrate on only one test lead.
- 2.39 If there is any doubt about the condition of the meter (i.e. safe vs unsafe), remove the meter from service and secure it in a location that will prevent its unintentional use.

- 2.40 Do not use the meter if it does not appear to work correctly on all ranges and in all modes.
- 2.41 Do not use the meter if it has undergone long-term storage under unfavorable conditions.
- 2.42 Do not use the meter if it may have been damaged in transport.
- 2.43 Always connect one of the meter's alligator clips to the low side of a power circuit first. Never clamp onto a hot wire first, (usually red, black, or blue in AC wiring circuits.) If you clamp onto a hot wire first, and touch the other probe, you could receive a shock.
- 2.44 To avoid damage to the meter and possible user injury, disconnect test leads from test points before changing the function/range.
- 2.45 Avoid usage near strong magnetic fields (magnets, loudspeakers, transformers, motors, coils, relays, contactors, electromagnets, etc.). The meter may display readings that are in error, causing the user to misinterpret the hazards present. For example, the meter may indicate a low voltage when high voltages are actually present.
- 2.46 Avoid usage near strong electrostatic fields (high voltage power lines, televisions, computer monitors, etc.). The meter may display readings that are in error, causing the user to misinterpret the hazards present. For example, the meter may indicate a low voltage when high voltages are actually present.
- 2.47 Avoid usage near strong RF fields (radio or television transmitters, walkie talkies, cellular phones, etc.). The meter may display readings that are in error, causing the user to misinterpret the hazards present. For example, the meter may indicate a low voltage when high voltages are actually present.
- 2.48 The LCD can be damaged by prolonged exposure to intense sunlight or to high temperatures. Avoid using or storing the meter under such conditions.
- 2.49 When replacing the battery, dispose of the depleted battery in accordance with any prevailing safety or environmental regulations.

3: INTERNATIONAL SYMBOLS

The following International Symbols are used throughout this manual and on the case of the meter to identify, caution, or warn the user of important product limitations or important operational procedures that must be followed to ensure safe usage of the product.



Read Instruction Manual for Cautions and Warnings



HIGH VOLTAGE: A dangerous voltage may be present. Use caution and follow instructions and warnings to avoid electric shock. Failure to do so may result in user injury.



GROUND: The voltage rating associated with this symbol identifies the maximum allowable voltage that may be applied between the identified terminal(s) and earth ground.



AC: Alternating Current



DC: Direct Current



FUSE: For continued safety, replace only with exact or equivalent fuses.




DOUBLE INSULATION: This meter uses Double Insulated construction. Do not alter the construction and use care not to degrade the insulation when replacing fuses and battery.

4: PRODUCT FEATURES

- 4.1 20 Measurement Ranges
- 4.2 0.5" (12mm) high LCD display
- 4.3 3 1/2 digit resolution (2000 counts)
- 4.4 Backlit LCD display
- 4.5 Protective shock absorbing "boot"
- 4.6 Diode Test
- 4.7 Continuity Beeper
- 4.8 Transistor Gain Test
- 4.9 Temperature Measurement
- 4.10 Fused μA / mA ranges
- 4.11 Overload protection
- 4.12 CAT I (600VDC, 750VAC), CAT II (300V AC/DC) on Voltage Ranges

5: SPECIFICATIONS

- 5.1 Display: 0.5" (12mm) high LCD
- 5.2 Display Resolution: 2000 counts, 0000 to 1999
- 5.3 Overrange Indication: First digit displays "1",
remaining digits are blank
- 5.4 Measurement Rate: 2 to 3 measurements per second
- 5.5 Low Power Annunciator: ... 
- 5.6 Case Dimensions: 5.4 x 3.1 x 1.6 inches (L x W x H)
(including boot)
- 5.7 Weight with battery: 0.55 lbs.
(including boot)
- 5.8 Power Source: 9 volt battery
- 5.9a Overvoltage Category: Category II (CAT II) IEC 1010, 300V
(Installation Category) AC/DC. For measuring local level,
appliances, portable equipment, etc. For
applications where transient voltages
are not present, or are of low amplitude.
Not for use in high energy industrial
installation measurement. Not for use on
circuitry where source capability exceeds
4KW.
- Applies to
Voltage
Measurement
Only**
- 5.9b Overvoltage Category: .. Category I (CAT I) IEC 1010, 600VDC,
600VAC. For measuring in low power
consumer electronics where transient
voltages are not present. Not for use in high
energy industrial installation measurement.
Not for use on circuitry where source
capability exceeds 4KW.
- Applies to
Voltage
Measurement
Only**
- 5.10 Fuses: mA Jack: 300mA / 500V, 5 x 20mm: 3207-130
10A Jack: UNFUSED
- 5.11 Supplied Accessories: ... Boot: 10-4271
Test Leads: 79-760
Temperature Probe: 79-795
Instruction Manual: 84-848

Note:

- a) The following accuracy specifications are valid at 23 degrees C,
+/- 5 degrees C, Relative Humidity less than 75%
- b) The specifications are in the form " $\pm (x \% \text{ of reading} + \text{dgt})$ " where dgt is
"Least Significant DIGIT".

DC Voltage		
Range	Resolution	Accuracy
200mV	0.1mV	$\pm (0.5\% \text{ rdg} + 2 \text{ digits})$
2000mV	1mV	
20V	10mV	
200V	100mV	
500V	1V	$\pm (0.8\% \text{ rdg} + 2 \text{ digits})$



Input Impedance: All ranges are 10M Ω
Overload Protection: 500Vrms

AC Voltage		
Range	Resolution	Accuracy
200V	100mV	$\pm (1.2\% \text{ rdg} + 10 \text{ digits})$
500V	1V	



Input Impedance: All ranges are approx. 5M Ω
Frequency: 40Hz to 400Hz
Overload Protection: 200mV is 230V (AC or DC Current).
 All other ranges are 500Vrms.
Display: Average Value (RMS of Sine Wave)

DC Current		
Range	Resolution	Accuracy
2000 μ A	1 μ A	$\pm (1.0\% \text{ rdg} + 2 \text{ digits})$
20mA	10 μ A	
200mA	100 μ A	$\pm (1.2\% \text{ rdg} + 2 \text{ digits})$
10A	10mA	$\pm (2.0\% \text{ rdg} + 5 \text{ digits})$



Overload Protection: 0.3A / 500V fuse, 10A range is unfused.
Max. Current Input: 10A (10 seconds max, 15 minute cool down)
Burden Voltage: 300mV max

Resistance		
Range	Resolution	Accuracy
200 Ω	0.1 Ω	\pm (0.8% rdg + 5 digits)
2000 Ω	1 Ω	\pm (0.8% rdg + 2 digits)
20K Ω	10 Ω	
200K Ω	100 Ω	
20M Ω	10K Ω	\pm (1.0% rdg + 5 digits)



Open Circuit Voltage: Less than 3V on all ranges

Overload Protection: All ranges 500Vrms (AC or DC Current).

Temperature		
Range	Resolution	Accuracy
-40°F to 302°F	1 degree Fahrenheit	\pm (1.0% rdg + 5 digits)
303°F to 1832°F		\pm (1.5% rdg + 15 digits)



Overload Protection: 500Vrms

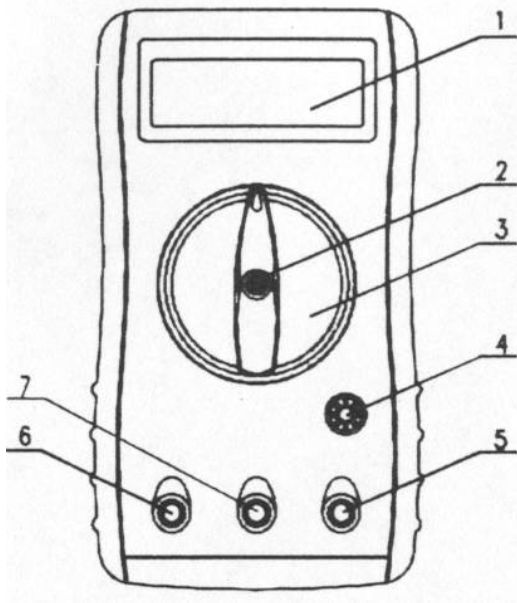
Thermocouple: K-Type

Note: The provided thermocouple is only intended to measure Temperatures up to 300 degrees F. Exceeding this temperature may damage the probe.

Diode Test and Continuity Beeper		
	Displays relative reading in mV, not actual diode voltage	Test current about 1mA. Open circuit voltage about 2.8V
	Beeper sounds if meter displays <70. (Approx. 30 Ω)	Test current about 1mA. Open circuit voltage about 2.8V

Transistor hFE test		
hFE	Can measure NPN or PNP transistor hFE. Range: 0-1000 β	Base current about 10 μ A, Vce about 2.8V

6: FRONT PANEL



- 1) Backlit LCD Display
- 2) Backlight and Hold button
- 3) Rotary Function / Range Selector Switch
- 4) Transistor Test Jack
- 5) **COM** Jack: Common (black) jack for all measurements
- 6) **10A** Jack: Input for currents from 200mA to 10A
- 7) **V/Ω / mA / F** Jack: Input for Voltage, Ohms, μ A, mA, and Temperature

7: MEASUREMENT PROCEDURES

7.1 DC Voltage Measurement:

 **WARNING!**


If the magnitude of the voltage to be measured is unknown, always start by setting the meter to the highest range, and then to lower ranges, until a satisfactory reading is obtained.

Do not rotate the RANGE switch with the input applied to the meter.

If the input voltage is higher than 500VDC, or exceeds the limitations of a CAT I 600V measurement, do not attempt to measure!

 **WARNING!**

This meter will display voltages that exceed the maximum voltage that can safely be applied to the meter. The fact that the meter displays the voltages does not mean that it is safe to measure these voltages.

- 7.1.1 Connect the black test lead to the **COM** jack and the red test lead to the **V/Ω /mA / F** jack.
- 7.1.2 Set the RANGE switch to a **V**  position. If the magnitude of the voltage is unknown, set the RANGE switch to the 500 position. If the input voltage is higher than 500VDC, or exceeds the limitations of a CAT I 600V measurement, do not attempt to measure!
- 7.1.3 With power disconnected from the circuit to be measured, connect the test probes to the measurement points. Apply power to the circuit. The LCD will display the DC voltage.
- 7.1.4 If the display indicates overrange, i.e. "1- -", remove power from the circuit, disconnect the test probes, and rotate the RANGE switch to the next higher position. Reconnect the test probes, reapply power, and read the voltage on the LCD display. If the RANGE switch is already at the highest position (i.e. 500 VDC), the input voltage exceeds the measurement capability of the meter and should not be measured.
- 7.1.5 If the displayed value is less than "200" (decimal point not shown), a more accurate reading may be obtained by setting the RANGE switch to a lower range. Remove power from the circuit, disconnect the test

probes, and rotate the RANGE switch to the next lower position. Reconnect the test probes, reapply power, and read the voltage on the LCD display. If the RANGE switch is already on the lowest position (i.e. 200mV DC), no greater measurement resolution can be obtained.

7.2 AC Voltage Measurement:



WARNING!


If the magnitude of the voltage to be measured is unknown, always start by setting the meter to the highest range, and then to lower ranges, until a satisfactory reading is obtained.

Do not rotate the RANGE switch with the input applied to the meter. If the input voltage is higher than 500VAC, or exceeds the limitations of a CAT I 600V measurement, do not attempt to measure!



WARNING!

This meter will display voltages that exceed the maximum voltage that can safely be applied to the meter. The fact that the meter displays the voltages does not mean that it is safe to measure these voltages.

- 7.2.1 Connect the black test lead to the **COM** jack and the red test lead to the **V/Ω /mA / F** jack.
- 7.2.2 Set the RANGE switch to a **V**  position. If the magnitude of the voltage is unknown, set the RANGE switch to the 500 position. If the input voltage is higher than 500VAC, do not attempt to measure!
- 7.2.3 With power disconnected from the circuit to be measured, connect the test probes to the measurement points. Apply power to the circuit. The LCD will display the AC voltage.
- 7.2.4 If the display indicates overrange, i.e. "1- -", remove power from the circuit, disconnect the test probes, and rotate the RANGE switch to the next higher position. Reconnect the test probes, reapply power, and read the voltage on the LCD display. If the RANGE switch is already at the highest position (i.e. 500VAC), the input voltage exceeds the measurement capability of the meter and should not be measured.

- 7.2.5 If the displayed value is less than "200" (decimal point not shown), a more accurate reading may be obtained by setting the RANGE switch to a lower range. Remove power from the circuit, disconnect the test probes, and rotate the RANGE switch to the next lower position. Reconnect the test probes, reapply power, and read the voltage on the LCD display. If the RANGE switch is already on the lowest position (i.e. 200V AC), no greater measurement resolution can be obtained.



7.3 DC Current Measurement:

 **WARNING!**

If the magnitude of the current to be measured is unknown, always start by setting the meter to the highest range, and then to lower ranges, until a satisfactory reading is obtained.

Do not rotate the RANGE switch with the input applied to the meter.

If the input current is higher than 10A, do not attempt to measure! If the input current is between 5A and 10A, limit the measuring time to 10 seconds, and allow 15 minutes for the meter to cool down between measurements. Do not attempt to measure current in a circuit whose open circuit voltage exceeds 500V.

- 7.3.1 Connect the black test lead to the **COM** jack. Connect the red test lead to the **10A** jack unless it is known that the input current is less than 200mA. If the current is less than 200mA, connect the red test lead to the **V/ Ω /mA / F** jack.
- 7.3.2 If the red test lead is inserted into the **10A** jack, set the RANGE switch to the **10 A**  position. With power removed from the circuit to be tested, connect the test leads of the meter in series with the circuit. Apply power to the circuit. The LCD will display the DC current.
- 7.3.3 If the red test lead is inserted into the **V/ Ω /mA / F** jack, set the RANGE switch to the **200m A**  position. With power removed from the circuit to be tested, connect the test leads of the meter in series with the circuit. Apply power to the circuit. The LCD will display the DC current.
- 7.3.4 If the display indicates overrange, i.e. "1- -", remove power from the circuit, disconnect the test probes, and rotate the RANGE switch to the next higher position. Reconnect the test probes, reapply power, and read the current on the LCD display. If the meter is already set to

measure 10A, the current being tested exceeds the measurement capability of the meter and cannot be measured.

- 7.3.5 If the displayed value is less than "200" (decimal point not shown), a more accurate reading may be obtained by setting the RANGE switch to a lower range. Remove power from the circuit, disconnect the test probes, and rotate the RANGE switch to the next lower position (and, if necessary, move the red test lead from the **10A** jack to the **V/Ω /mA / F** jack). Reconnect the test probes, reapply power, and read the voltage on the LCD display. If the RANGE switch is already on the lowest position (i.e. 2000 uA), no greater measurement resolution can be obtained.

7.4 Resistance Measurement:



WARNING!


Do not apply voltage or current to the meter when it is set to any of the Ohms Ω ranges!


- 7.4.1 Connect the black test lead to the **COM** jack, and the red test lead to the **V/Ω /mA / F** jack.
- 7.4.2 Set the RANGE switch to the **Ω** position that is appropriate for the device or circuit to be measured. The LCD display will indicate overrange (i.e. "1 - -").
- 7.4.3 Connect the test leads to the device or circuit being measured. Observe correct polarity if appropriate.
- 7.4.4 If the display indicates overrange, i.e. "1- -", rotate the RANGE switch to the next higher position and observe the reading on the LCD display. If the RANGE switch is already at the highest position (i.e. 20M Ohms), the resistance exceeds the value measurable by the meter.
- 7.4.5 If the displayed value is less than "200" (decimal point not shown), a more accurate reading may be obtained by setting the RANGE switch to a lower range. Rotate the RANGE switch to the next lower position and observe the reading on the LCD display. If the RANGE switch is already on the lowest position (i.e. 200 Ohms), no greater measurement resolution can be obtained.

Note: On the 20Ω range. The displayed value must be less than "20" to obtain a reading on a lower range.

7.5 Continuity Beeper:

 **WARNING!**


Do not apply voltage or current to the meter when it is set to the Diode Test / Continuity Beeper mode .


- 7.5.1 Connect the black test lead to the **COM** jack and the red test lead to the **V/Ω /mA / F** jack.
- 7.5.2 Set the RANGE switch to the  range.
- 7.5.3 Connect the test probes to the device or circuit to be tested.
- 7.5.4 If the resistance of the device or circuit is less than approximately 30 Ohms, the continuity beeper will sound.

***Note:** The reading displayed on the LCD is not an accurate indication of the resistance of the device or circuit being measured.*

7.6 Diode Test:

 **WARNING!**

Do not apply voltage or current to the meter when it is set to the Diode Test / Continuity Beeper mode .

- 7.6.1 Connect the black test lead to the **COM** jack and the red test lead to the **V/Ω /mA / F** jack.
- 7.6.2 Set the RANGE switch to the  range.
- 7.6.3 Connect the test probes to the device or circuit to be tested. To test a simple diode, connect the red test probe to the Anode of the diode and the black test lead to the Cathode ("banded" end) of the diode. The LCD will indicate the relative voltage drop of the diode. Reverse the connections of the test probes to the diode. The LCD should indicate overrange ("1 - -"). If the Continuity Beeper sounds when the leads

are connected in either direction to the diode, the diode is probably shorted.

Note: *The reading displayed on the LCD is not an accurate indication of the voltage drop of the device or circuit being measured.*

7.7 Temperature Test:



WARNING!

Do not apply voltage or current to the meter when it is set to the Temperature measurement mode.

Do not attempt to measure the temperature of an electrically "live" surface. User injury may result.

The provided thermocouple is only intended to measure temperatures up to 300 degrees F. Exceeding this temperature may damage the probe.

7.7.1 Connect the black lead of thermocouple probe to the **COM** jack and the red lead of thermocouple probe to the **V/ Ω /mA / F** jack.

7.7.2 Set the RANGE switch to the degree **F** range.

7.7.3 Press the tip of the thermocouple probe against the surface to be measured. The tip may also be immersed in non-corrosive liquids.

7.8 Transistor Gain Test:

7.8.1 Set the RANGE switch to the **hFE** position.

7.8.2 Insert the transistor whose gain is to be measured into the test socket. Observe the correct polarity (NPN vs PNP) and pinout (E (Emitter), B (Base), C (Collector)).

Notes:

- 1) *The Transistor Gain Test does not indicate if a transistor is "good" or "bad". It only tests for gain assuming that the transistor is good.*
- 2) *For safety purposes, the contacts in the test socket are recessed down into the socket. This may cause difficulty when attempting to measure the gain of transistors removed from a circuit board. To test transistors with short leads, solder a small length of solid wire to each lead before inserting into test socket.*

8: BACKLIGHT AND HOLD

8.1

Backlight:

The 1101-A incorporates a light green LED backlight into the LCD assembly. Since the backlight uses more power than anything else in the meter, an anti-tease function on the button prevents accidental turn-on, and a 20 second time-out prevents extended battery drain.

To turn on backlight, press and hold the Backlight / Hold button for about 3 seconds, until the backlight comes on. Release the button. The backlight will stay on for about 20 seconds and then turn itself off.

8.2

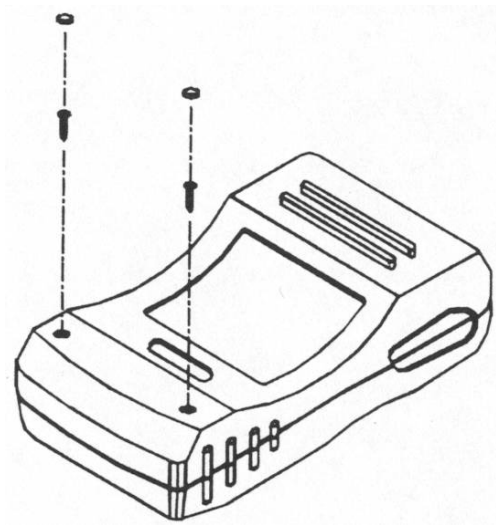
Hold:

A Hold feature is incorporated into the 1101-A. It is a momentary Hold feature that only holds a reading as long as the associated button is kept depressed. Since the button that performs Hold is also the Backlight button, if the Hold feature is engaged for longer than 3 seconds, the Backlight will turn on.

To activate the Hold feature, press and hold the Backlight / Hold button. The Hold annunciator will appear in the LCD display for as long as the button is held depressed.

9: MAINTENANCE

9.1 Battery and Fuse Replacement:



- 9.1.1 On the back of the case, remove the rubber bumpers that cover the case screws. Remove the screws.
- 9.1.2 Gently open case, starting at the bottom where the screws were removed.
- 9.1.3 When the back of the case is removed, remove the depleted battery or damaged fuse, replace, and reassemble the meter.

Note: When replacing the fuse, use the exact type specified. Do not substitute a 250V fuse for the 500V fuse.

9.2 Cleaning:

To clean the outside of the meter, use a cloth dampened with a mild detergent solution. Do not use any abrasive cleansers, or chemical solvents that may damage the case of the meter.

9.3 Calibration:

Periodic calibration of the meter will insure that it is accurate and performing in accordance with its design specifications. A one year interval is suggested. Annual calibration is not included in the warranty.

9.4 Service:

TRIPLETT PRODUCT RETURN INSTRUCTIONS

In the unlikely event that you must return your Triplet equipment for repair, the following steps must be taken.

- 1) Call 1-800-TRIPLETT to obtain a Return Material Authorization (RMA) number from Customer Service.**
- 2) Enclose a copy of the original sales receipt showing date of purchase.**
- 3) Clearly print the RMA number on the outside of the shipping container.**
- 4) Return to: Triplet Corporation
One Triplet Drive
Bluffton, OH 45817
ATTN: Repair Dept.**

Be sure to include a full description of the problem, and a telephone number, street address, or email address, where you can be contacted, and a return address where the meter can be shipped to upon repair.

10: TRIPLETT THREE YEAR LIMITED WARRANTY

The Triplett Corporation warrants instruments and test equipment manufactured by it to be free from defective material or workmanship and agrees to repair or replace such products which, under normal use and service, disclose the defect to be the fault of our manufacturing, with no charge within three years (one year on calibration) of the date of original purchase for parts and labor. If we are unable to repair or replace the product, we will make a refund of the purchase price. Consult the Instruction Manual for instructions regarding the proper use and servicing of instruments and test equipment. Our obligation under this warranty is limited to repairing, replacing, or making refund on any instrument or test equipment which proves to be defective within three years from the date of original purchase.

This warranty does not apply to any of our products which have been repaired or altered by unauthorized persons in any way so as, in our sole judgment, to injure their stability or reliability, or which have been subject to misuse, abuse, misapplication, negligence, accident or which have had the serial numbers altered, defaced, or removed. Accessories, including batteries and fuses, not of our manufacture used with this product are not covered by this warranty.

To register a claim under the provisions of this warranty, return the instrument or test equipment to Triplett Corporation, Service Department, One Triplett Drive, Bluffton, Ohio 45817, transportation prepaid. Upon our inspection of the product, we will advise you as to the disposition of your claim.

ALL WARRANTIES IMPLIED BY LAW ARE HEREBY LIMITED TO A PERIOD OF THREE YEARS (ONE YEAR ON CALIBRATION) FROM DATE OF PURCHASE, AND THE PROVISIONS OF THE WARRANTY ARE EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES EXPRESSED OR IMPLIED.

The purchaser agrees to assume all liability for any damages and bodily injury which may result from the use or misuse of the product by the purchaser, his employees, or others, and the remedies provided for in this warranty are expressly in lieu of any other liability Triplett Corporation may have, including incidental or consequential damages.

Some states (USA ONLY) do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. No representative of Triplett Corporation or any other person is authorized to extend the liability of Triplett Corporation in connection with the sale of its products beyond the terms hereof.

Triplett Corporation reserves the right to discontinue models at any time, or change specifications, price or design, without notice and without incurring any obligation.

This warranty gives you specific legal rights, and you may have other rights which vary from state to state.



Triplett Corporation One Triplett Drive Bluffton, OH 45817
800-TRIPLETT FAX: 419-358-7956 www.triplett.com