

**IMPORTANT: RECEIVING INSTRUCTIONS** Visually inspect all components for shipping damage. If you find damage, notify the carrier at once.

Shipping damage is NOT covered by warranty. The carrier is responsible for all repair or replacement costs resulting from damage in shipment.



### 1. CAUTION

**REFER TO THIS MANUAL BEFORE USING THIS TESTER.**

### 2. SPECIFICATIONS:

**Operating Range:** 3-5.5 VDC, 0-3 ADC

**Indicators:** Visual Only

**USB Type:** 3.0-3.1 Type A

**Cleaning:** Remove grease and grime with clean, dry cloth.

Function	Range	Resolution	Accuracy
Voltage	3V-5.5 VDC	0.01V	±2%
Current	0A-3 ADC	0.01A	

### 3. OPERATION:

Note: When testing chargers and cables it's best to use a device that is less than 50% charged because at higher states of charge the current draw will typically be reduced.

#### To check phone/device wall chargers:

1. Plug the USB Multimeter into the wall charger to be tested
  - a. A properly functioning USB port will supply approximately 4.40 V – 5.25 V. A value significantly different indicates a defective charger
2. Plug a known good cable into the USB Multimeter (Refer to check cables section)
3. Plug the phone/device into the other end of the cable
4. Note the voltage (V) and current (A) values displayed on the USB Multimeter, the display alternates between voltage (V) and current (A) every 5 seconds
5. A properly functioning wall charger will typically output 80%-90% of its rated current (A) capacity when charging a phone/device that is less than 50% charged
  - a. Note: Maximum charging current (A) may be limited by the device being charged. For example the charging current (A) of a tablet may be significantly higher than a phone.

#### To check cables:

1. It's best to use a known good wall charger with a known output current (A) rating. It's difficult to know the output rating on USB ports on a computer/monitor/other device
2. Using the verified wall charger (refer to check phone/device wall chargers section) and charging the same device, measure charging current (A) for cable 1. Repeat test for cable 2
3. A significantly lower current (A) measurement indicates that the cable is inferior or defective

#### 4. NOTICE:

1. ~ 3 VDC and 0.1 A required to power the device
2. Not a comprehensive diagnostic instrument but a simple instrument to measure voltage (V), current (A), and correct polarity
3. Refer all indicated problems to a qualified electrician

**One Year Warranty** limited solely to repair or replacement; no warranty of merchantability or fitness for a particular purpose. Product is warranted to be free of defects in materials and workmanship for the normal life of the product. In no event shall Gardner Bender be liable for incidental or consequential damage.

