

### Continuity Tester Pro Model CT20

#### Introduction

Congratulations on your purchase of the Extech CT20 Continuity Tester Pro. The CT20 allows a single user to quickly identify and label two wires even when the wire ends are in different rooms. This tester is shipped fully tested and with proper use will provide years of reliable service.

#### Safety



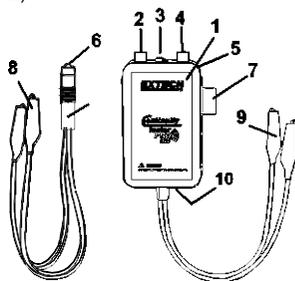
**CAUTION: DO NOT CONNECT TO A LIVE CIRCUIT**

#### Safety Precautions

1. Improper use of this tester can cause damage, shock, injury, or death. Read and understand this user's guide before use.
2. Ensure that the battery door is properly closed and secured before use.
3. Inspect the condition of the test leads and the tester itself for any damage before use.
4. Remove the battery from the tester if it is to be stored for a long period.

#### Description

1. Local Continuity Tester (main pulsing unit)
2. Local Continuity Indicator (flashing red LED)
3. Power On/Off (mini-slide switch)
4. Power "On" Indicator (steady green LED)
5. Local Continuity Beeper (with air holes on rear of case)
6. Remote Probe Continuity Indicator (red/green bi-color LED)
7. Remote Probe Holder (side mounted plastic piece)
8. Red and Black Remote Probe Leads w/alligator clips
9. Red and Black Tester Leads w/alligator clips
10. 9 Volt Battery Compartment (removable cover on rear)



#### Specifications

Power supply	9 Volt Battery
Beeper	85dB
Battery life	Approx. 12 months with normal use
Continuity confirmation	≤ 2k Ohms
Continuity drive current	Pulsed (2.0 Hz) 20 to 50mA at 10 Ohms and 2.0mA to 8.0mA at 1000 Ohms.
Wire Verification Distance	10,000 ft., 3,000 m (26 gage min.)
Fuse	250V 0.5A fast blow
Operating Temperature	10°F to 113°F (-12 to 45°C)
Storage Temperature	-4 to 176°F (-20 to 80°C)
Operating Humidity	10 to 90% RH (non-condensing)
Dimensions	3.6 x 2.2 x 1.14 in (90 x 57 x 29 mm)
Weight	9.2 oz (260 g)

#### Operation

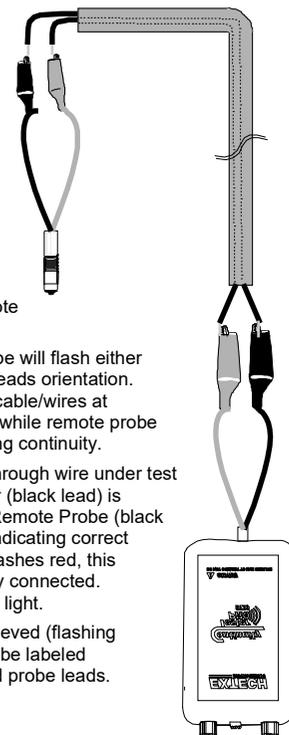


**CAUTION: DO NOT CONNECT TO LIVE WIRES**  
Use only on non-energized circuits

#### Remote Continuity

Remote continuity is a different mode of usage for the Tester and requires the Remote Probe. This mode is primarily used for: **A.** remote verification of continuity for cable/wires, or **B.** individual cable/wires for identification and labeling. Properly used, the Tester with Remote Probe will eliminate numerous trips when testing cable TV, electrical cables, and speaker/telephone wiring in multi-room/multi-floor installations.

1. Turn power on. The green power LED will glow. If green LED fails to light replace 9V battery.
2. Attach red and black alligator clips of Tester to one end of cable/wires under test.
3. Proceed to the other end of the cable/wires and connect them to Remote Probe test leads.
4. If continuity exists, the LED on the probe will flash either green or red depending on the Probe leads orientation. Note: At this point, Tester hanging on cable/wires at origination end will beep and flash red while remote probe (with user) at destination end is verifying continuity.
5. When Tester (red lead) is connected through wire under test to Remote Probe (red lead) and Tester (black lead) is connected through wire under test to Remote Probe (black lead), then Probe LED flashes green indicating correct connection orientation. If Probe LED flashes red, this indicates Probe Leads are not correctly connected. Reverse probe leads to produce green light.
6. Once correct orientation has been achieved (flashing green LED), then wires under test can be labeled consistent with the colors on tester and probe leads.

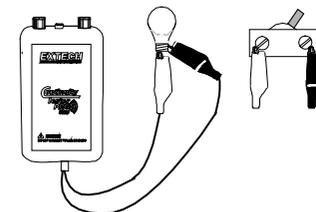


#### Advanced Remote Continuity and Wire Identification

The Remote Continuity mode can be used to check continuity and to identify two, three or more cables/wires simultaneously by applying simple logic and a testing strategy. To facilitate cable/wire identification, the leads of the tester and probe use matching colors.

#### Local Continuity

Using just the tester (without probe) you can easily test any in-wall wiring from point to point locations in the same room. Other handy uses are to quickly test light bulbs, fuses, switches, relay contacts, diodes, low ohm power resistors, circuit breakers, etc. for electrical continuity.



1. Turn power switch on. The green power LED will glow. If green LED does not light, replace 9V battery.
2. To check same room wiring runs, attach both red and black alligator clips of Tester to both wires on one end of multi-wire cable under test and let Tester hang from wires.
3. Go to other end of same cable and momentarily connect wires in cable together. The Tester will beep, and red LED will flash, indicating continuity.
4. When continuity is found, label both ends of cable with the same number or name.
5. To test other devices (listed above) connect Tester leads to device terminals in any\* lead orientation (red or black). If device makes internal electrical connection, then Tester will beep, and red LED will flash, indicating continuity.

\*Exception: When testing a diode, the red Tester lead is positive and will show continuity when connected to the anode (positive [+] side) with black Tester lead to cathode (negative [-] side).

#### Three-year Warranty

**Teledyne FLIR warrants this Extech brand instrument to be free of defects in parts and workmanship for three years from date of shipment (a six-month limited warranty applies to sensors and cables). To view the full warranty text please visit: <http://www.extech.com/support/warranties>.**

#### Contact Customer Support

**Customer Support Telephone List:** <https://support.flir.com/contact>

**Calibration, Repair, and Returns:** [repair@extech.com](mailto:repair@extech.com)

**Technical Support:** <https://support.flir.com>

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