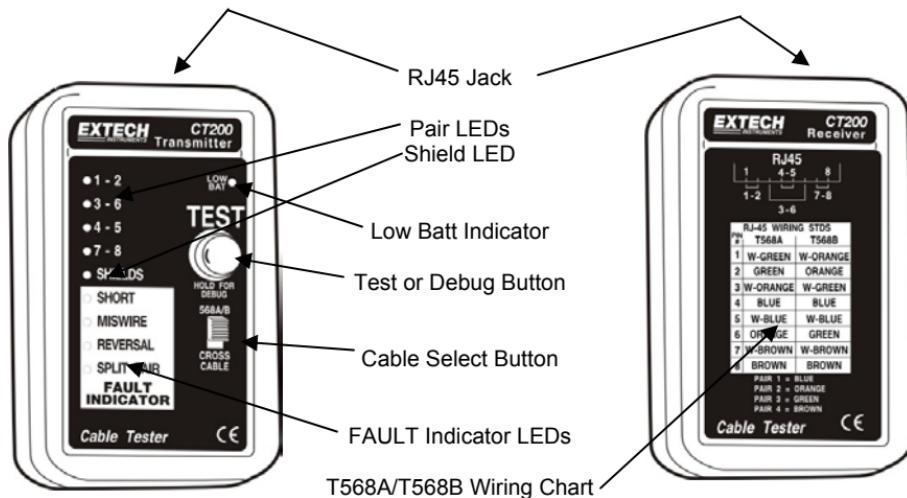


# User Guide



## LAN Cable Tester

### Model CT200



### Introduction

Congratulations on your purchase of the Extech CT200 LAN Cable Tester. This meter checks the continuity and configuration of wiring with twisted pairs. Proper use and care of this meter will provide many years of reliable service.

**WARNING:** Do not use on live circuits.

### Specifications

Minimum UTP/STP cable length for testing: 3 feet

Maximum Cable length for testing: 600 feet

Batteries: 5 x LR44 button cell (Transmitter only)

Transmitter Dimension: 3-1/4 x 2 x 1-1/4" (82.55 x 50.8 x 31.75mm)

Receiver Dimension: 3-1/4 x 2 x 1-1/4" (82.55 x 50.8 x 31.75mm)

Weight: 3.17oz. (90g)

### **TEST MODE**

1. Connect the TRANSMITTER to one end of the cable or circuit to be tested.
2. Connect the RECEIVER to the far end of the cable or circuit being tested.
3. Push TEST to perform tests.
4. The transmitter will display test results  
Results will be displayed for approximately 8 seconds. The tester will then automatically shut off.

### **PASS Indicators:**

#### **T568A and T568B**

Four green LEDs on pairs

1-2, 3-6, 4-5 and 7-8.

All four pairs are terminated correctly

- 1-2
- 3-6
- 4-5
- 7-8
- SHIELD



#### **10Base-T**

Two green LEDs on

pairs 1-2 and 3-6.

Both pairs terminated correctly

- 1-2
- 3-6
- 4-5
- 7-8
- SHIELD



#### **Token Ring**

Two green LEDs on pairs

3-6 and 4-5.

Both pairs terminated correctly.

- 1-2
- 3-6
- 4-5
- 7-8
- SHIELD



#### **Shield**

Green SHIELD LED indicates

that the shield on the cable is correctly and continuously wired.

- 1-2
- 3-6
- 4-5
- 7-8
- SHIELD



### **FAIL Indicators:**

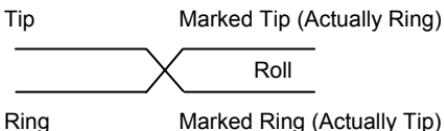
A flashing pair LED indicates that this wire has a fault. A flashing LED in the FAIL section will indicate which fault was detected. Multiple flashing LEDs indicate multiple pairs and/or multiple faults. Best practice is to correct cable faults until the cable is verified as correct with appropriate green LEDs.

**OPEN** – There is no “OPEN” LED indication. Opens are displayed as an unlit LED. The user will determine if a pair is OPEN by comparing the illuminated LEDs to the expected number of pairs that are good. (Example: When testing a 4 pair cable, three green LEDs in the PASS area indicate the presence of an OPEN condition in one of the pairs.)

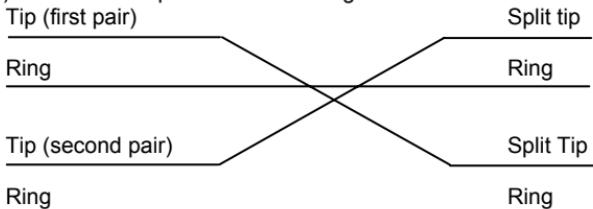
**SHORT** – A short circuit condition exists.

**MISWIRE** – Indicates the proper assignment of individual wire pairs to pins for the wiring schemes tested. Tester checks T568A, T568B, 10Base-T and Token Ring configurations.

**REVERSAL** – Reverse wiring means the pin for one wire in a pair is connected to the opposite pin for the pair in the remote jack.



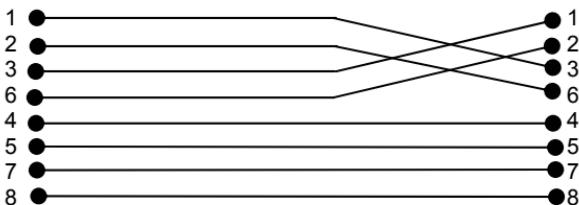
**SPLIT PAIRS** – Split pairs occur when the tip (positive conductor) and ring (negative conductor) of two twisted pairs are interchanged.



Note: The CT200 will check a fault condition in the above descending order before detecting other fault conditions. The detection and indication of the presence of a fault is handled on a "one-per-test" basis. Once a fault is corrected, it is recommended the cable be tested again for the presence of other faults.

#### Non-symmetric or Across Cable

Move the cable select switch to the Cross Cable position. The CT200 can then be used to test non-symmetric or across cables that are used to directly connect 2 PCs together.



#### DEBUG MODE

The DEBUG mode identifies which cable pairs have a wiring fault. It steps through pairs displaying test results one pair at a time. From the series of LED indications (FAULT INDICATOR LEDs), the failed pair and fault can be identified.

In debug mode, a short flash on PAIR LED indicates that the pair is under test. A long flash on PAIR LED is the destination of test.

1. Press and hold TEST button until all LEDs light up, then release button.
2. The pair identification LEDs and the FAULT INDICATOR LEDs work together in series to identify which pair is incorrect.
3. If a series of two green LEDs light for a pair, that pair is wired correctly.
4. A green pair LED followed by a red LED in the FAULT INDICATOR section will identify which pair is incorrect and identify the fault.
5. The DEBUG function will cycle twice through the pairs before shutting off. (Pushing and quickly releasing the TEST button also shuts the tester off.)

## Example 1:

A four pair patch cord has been tested. The test indicates a SHORT on Pair 3-6. The DEBUG mode LEDs will indicate as follows.

- Pair 1-2 will flash green-green as a good pair.
- Pair 3-6 will flash green on the pair LED followed by a red on the SHORT LED.
- Pair 4-5 will flash green-green as a good pair.
- Pair 7-8 will flash green-green as a good pair.

## Example 2:

Below are some examples of potential sequences on pair 1-2 and the interpretation of various fault conditions for that pair. Similar lights would relate to other pairs under test (short flash).

1rst Short Flash	2 <sup>nd</sup> Long Flash	Red Fault LEDs	Fault Condition
1-2	1-2	No Red Light	Good Pair
1-2	none	No Red Light	Open Condition
1-2	1-2	Reversal	Pair Reversed 1-2, 2-1
1-2	1-2	Short	Pin 1 shorted to Pin 2
1-2	1-2, 3-6	Short	Pin 1 or 2 shorted to 3 or 6
1-2	7-8	Miswire	Pin 1 – Pin 7, Pin 2 – Pin 8
1-2	7-8	Miswire/Reversal	Pin 1 – Pin 8, Pin 2 – Pin 7
1-2	1-2	Split Pair	Wire from 1-2 twisted with wire from another pair, continuity good

## Battery Replacement

Remove the screw at the rear of the transmitter unit to access the batteries.

**Note:** At times the screw can be hidden by a QC inspection sticker. Remove the sticker to locate the screw.

## Warranty

EXTECH INSTRUMENTS CORPORATION warrants this instrument to be free of defects in parts and workmanship for one year from date of shipment (a six month limited warranty applies on sensors and cables). If it should become necessary to return the instrument for service during or beyond the warranty period, contact the Customer Service Department at (781) 890-7440 ext. 210 for authorization or visit our website at [www.extech.com](http://www.extech.com) (click on 'Contact Extech' and go to 'Service Department' to request an RA number). A Return Authorization (RA) number must be issued before any product is returned to Extech. The sender is responsible for shipping charges, freight, insurance and proper packaging to prevent damage in transit. This warranty does not apply to defects resulting from action of the user such as misuse, improper wiring, operation outside of specification, improper maintenance or repair, or unauthorized modification. Extech specifically disclaims any implied warranties or merchantability or fitness for a specific purpose and will not be liable for any direct, indirect, incidental or consequential damages. Extech's total liability is limited to repair or replacement of the product. The warranty set forth above is inclusive and no other warranty, whether written or oral, is expressed or implied.

### Support Hotline (781) 890-7440

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