*FLUKE networks*®

# MicroMapper™

LAN Wiremap Checker

## Users Manual

# LIMITED WARRANTY AND LIMITATION OF LIABILITY

Each Fluke Networks product is warranted to be free from defects in material and workmanship under normal use and service. The warranty period for the mainframe is one year and begins on the date of purchase. Parts, accessories, product repairs and services are warranted for 90 days, unless otherwise stated. Ni-Cad, Ni-MH and Li-Ion batteries, cables or other peripherals are all considered parts or accessories. The warranty extends only to the original buyer or end user customer of a Fluke Networks authorized reseller, and does not apply to any product which, in Fluke Networks' opinion, has been misused, abused, altered, neglected, contaminated, or damaged by accident or abnormal conditions of operation or handling. Fluke Networks warrants that software will operate substantially in accordance with its functional specifications for 90 days and that it has been properly recorded on non-defective media. Fluke Networks does not warrant that software will be error free or operate without interruption.

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Fluke Networks
PO Box 777
Everett, WA 98206-0777
USA

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## *Introduction*

Congratulations on your purchase of the MICROMAPPER™ network cable tester!

The MICROMAPPER is a hand-held cable tester that enables network professionals to quickly and easily verify the integrity of Ethernet twisted pair cables. In one step, the MICROMAPPER will test twisted pair cabling for opens, shorts, reversed, crossed, and split pairs. Simply slide the switch to the Cable position, press the ⬤ (TEST) button and the MICROMAPPER will automatically scan for any existing faults in your cable. The specially designed remote unit is provided for one-person testing of installed cabling. The tone generator function can be used with the MicroProbe cable tracer to trace cables and locate cables hidden in ceilings, walls, floors, and bundles.

## Features

- Tests for wiring faults and detects opens, shorts, crossed, reversed, and split pairs. (Split pair fault detection requires a minimum cable length of 15.75" (40cm))

- Verifies shield integrity

- MICROMAPPER's Remote Identifier enables one person to test installed cabling

- Easy to read fault display and high speed testing

- Generation of two tones for tracing cables and locating hidden cables

- Debug-mode for detailed fault identification results

- Auto-sleep mode to decrease power consumption

## MICROMAPPER Kit Content

Your MICROMAPPER kit contains the following:

- 1 MICROMAPPER network cable tester

- 1 MICROMAPPER remote

- Patch cord

- Quick Reference Guide

- Product Manuals CD

## Registration

Registering your product with Fluke Networks gives you access to valuable information on product updates, troubleshooting tips, and other support services.

To register, fill out the online registration form on the Fluke Networks website at www.flukenetworks.com/registration.

## Safety Information

### ⚠Warnings

**Do not connect MICROMAPPER to a live circuit as it may damage the unit.**

**Do not open the unit or attempt to repair in case of malfunction. Please send it back to your distributor for repair or replacement.**

### Caution

**Strong radio frequency fields may cause inaccurate readings.**

**Do not drop or get the unit wet. Do not expose MICROMAPPER to extreme humidity or direct sunlight.**

## Contacting Fluke Networks

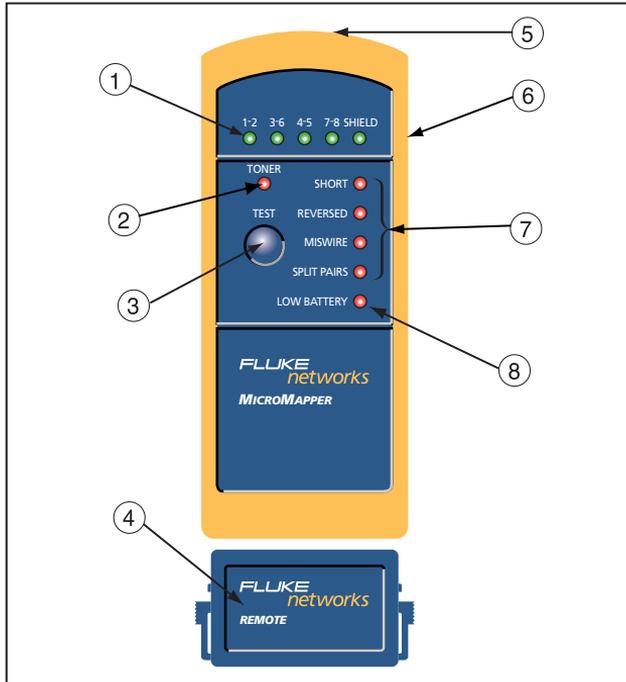| | |
|---|---|
| ℹ | www.flukenetworks.com |
| ✉ | support@flukenetworks.com |
| ☎ | +1-425-446-4519 |

- Australia: 61 (2) 8850-3333 or 61 3 9329 0244
- Beijing: 86 (10) 6512-3435
- Brazil: 11 3759 7600
- Canada: 1-800-363-5853
- Europe: +31-(0) 40 2675 600
- Hong Kong: 852 2721-3228
- Japan: 03-6714-3117
- Korea: 82 2 539-6311
- Singapore: 65-6799-5566
- Taiwan: (886) 2-227-83199
- USA: 1-800-283-5853

Visit our website at www.flukenetworks.com for a complete list of phone numbers.

## MICROMAPPER Controls and LEDs



Figure 1. MICROMAPPER Network Cable Tester

atx02f.eps

**Table 1. MICROMAPPER Controls and LEDs**

| Item Number | Description |
|:-:|:--|
| ① | Pair and Shield Indicator LEDs |
| ② | Toner LED |
| ③ | TEST button |
| ④ | REMOTE Adapter with RJ45 Jack |
| ⑤ | RJ45 Jack |
| ⑥ | Off/Cable/Toner Switch |
| ⑦ | Fault LEDs |
| ⑧ | Low Battery LED |

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## *Battery*

MICROMAPPER requires four 1.5 AAA batteries. IEC : LR03. Others : AAA, E92, 4003; JIS : AM 4 ; ANSI : 24A; 1.5 Volt (nominal).
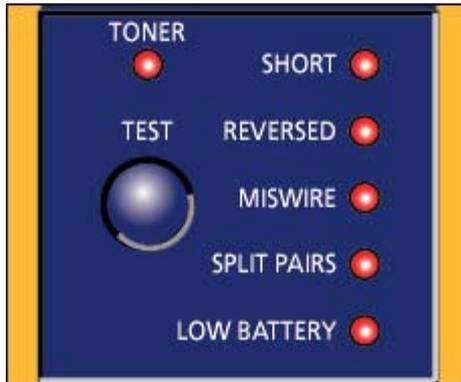


atx03s.bmp

The Battery LED will light up when MICROMAPPER detects a low battery condition. Using MICROMAPPER with a low battery may affect the test accuracy. If MICROMAPPER is stored for more than a month, the battery should be removed.

## *MICROMAPPER's Toner Operation*

1.  Slide the switch on the right side of MICROMAPPER to the **Toner** position.

2.  Connect the cable to the MICROMAPPER's RJ45 jack. (To send a tone into a patch panel, connect one end of the included patch cord to the MICROMAPPER's RJ45 jack and the other end to a jack on the panel.)

3.  To generate tone 1, press and quickly release the ⬤ (TEST) button.

4.  To generate tone 2, press and hold the ⬤ (TEST) button for two seconds.

5.  Use the MICROPROBE to trace the connected cable. The signal reception is strongest near the cable under test.

6.  Slide the switch on the right side to the **Off** position to discontinue the tone. (Always power the unit off to prevent battery drain.)

## MICROMAPPER Tests

1.  Slide the switch on the right side to the **Cable** position to turn MICROMAPPER on.

2.  Connect one end of the cable to be tested to the MICROMAPPER's RJ45 jack.

3.  Connect the other end of the cable to the MICROMAPPER Remote's RJ45 jack.

4.  Press ⬤ (TEST) to view the results.

5.  The horizontal LEDs indicate the cable's integrity status.

    - Green: Pair or Shield is good

    - Green flashing: Pair or Shield is faulty

    - No light: Pair is open or cable is not shielded

    The vertical LEDs indicate the wiring faults and a low battery status. Wiring faults are: **SHORT**, **REVERSED**, **MISWIRE**, **SPLIT PAIRS**.

6.  To find out a fault on a specific pair, use MICROMAPPER's diagnostic feature.

7.  Press and hold ⬤ (TEST) for more than 2 seconds.

    MICROMAPPER will scan each pair and the shield pausing and flashing each green LED separately. If a faulty pair is detected, the corresponding fault status will blink in red.
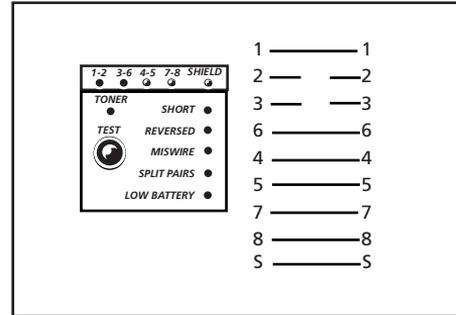
    *Note*

    *Push the Remote Terminator onto the MicroMapper until it snaps into position. This configuration allows you to conveniently test patch cables.*
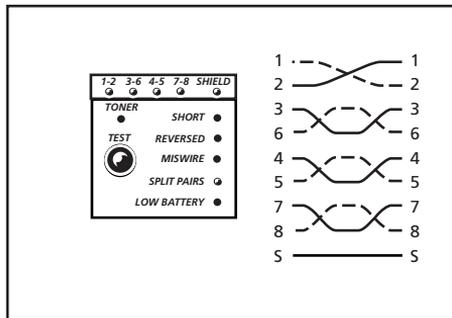
# Fault Status

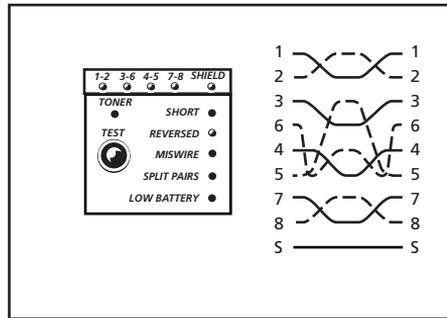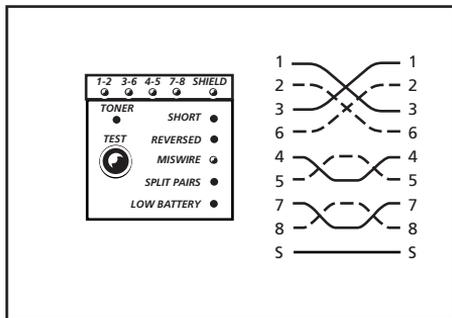## SHORT
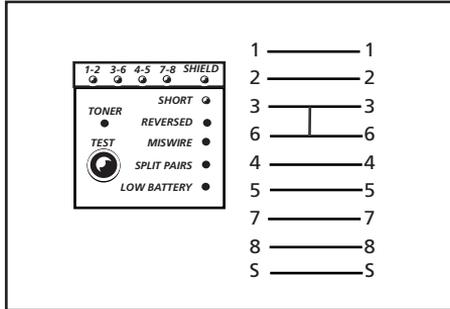


## OPEN

## REVERSED



## SPLIT PAIR



## MIS-WIRE

# *Technical Specifications*

### Connectors

MICROMAPPER main unit: RJ45 jack

Remote Identifier: RJ 45 jack

### Pairs tested

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

### LED Display

Horizontal: 5 green LEDs for pairs and shield display
(1 - 2, 3 - 6, 4 - 5, 7 - 8, and SHIELD)

Vertical: 6 red LEDs (TONER,  SHORT, REVERSED, MISWIRE, SPLIT PAIRS, and LOW BATTERY)

### Cables test limit

Minimum: 15.75"  (40cm); Maximum: 656' (200 m)

### Power

IEC 86-1 (1996-07) --- Primary Batteries - General

IEC 60086-2 (1997-07) --- Primary Batteries - Specification Sheets

MICROMAPPER: requires four 1.5  AAA batteries. IEC : LR03; Others : AAA, E92, 4003; JIS : AM 4 ; ANSI : 24A; 1.5 Volt (nominal)

Remote Identifier: No battery required

### Dimensions

MICROMAPPER: 4.92" x 2.05" x 1.54" 1
125 mm x 52 mm x 39 mm

Remote Identifier: 1.87" x 1.12" x 0.87"
47mm x 28mm x 22mm

### Weight

MICROMAPPER with Remote Identifier: 125 g