Tenmars TM-901N

Tenmars TM-901N LAN Cable Tester User Manual

Model: TM-901N

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1. INTRODUCTION

The Tenmars TM-901N is a professional LAN cable tester designed for efficient and accurate diagnosis of network cable issues. It is capable of identifying various wiring faults such as discontinuity, short-circuits, incorrect connections, and split pairs in both Shielded Twisted Pair (STP) and Unshielded Twisted Pair (UTP) cables. This device can measure cable lengths up to 265 meters, making it an essential tool for network installers and technicians.

2. SAFETY INFORMATION

Please read and understand all safety instructions before operating the device. Failure to follow these instructions may result in injury or damage to the device.

- Do not attempt to test live circuits or cables connected to active network equipment.
- Ensure the battery is correctly installed before use.
- Do not expose the device to moisture or extreme temperatures.
- Do not open the device casing, as this may void the warranty and expose you to electrical hazards.
- Dispose of batteries according to local regulations.

3. PACKAGE CONTENTS

Verify that all items are present in your package:

- Tenmars TM-901N Main Unit
- Remote ID Locator (ID 1)
- User Manual (this document)
- *Note: A 9V battery is typically required and may not be included.*

Image 3.1: Tenmars TM-901N Main Unit and Remote ID Locator.

4. PRODUCT OVERVIEW

4.1 Main Unit

Image 4.1: Front view of the TM-901N Main Unit.

The main unit features an LCD display for showing test results and cable status. It includes several control buttons:

- **TEST Button:** Initiates a cable test.
- **L/W Button:** Toggles between Length measurement and Wiremap display modes.
- **SET/UNIT Button:** Used to enter settings mode and change measurement units (e.g., meters, feet).
- **Arrow Buttons (Left/Right):** Used for navigation in settings or for reviewing test results.

4.2 Remote ID Locator

Image 4.2: Remote ID Locator.

The remote ID locator is a passive unit used in conjunction with the main unit to test installed cables. It connects to one end of the cable while the main unit connects to the other. The remote unit is labeled "ID 1" for identification.

4.3 Rear Panel and Wiring Diagram

Image 4.3: Rear view of the TM-901N Main Unit with wiring diagram.

The rear panel of the main unit includes the battery compartment and a printed wiring diagram for reference, showing standard T568A/B pin assignments for RJ45 connectors.

5. SETUP

5.1 Battery Installation

1. Locate the battery compartment cover on the rear of the main unit.
2. Slide the cover open or remove it as indicated.
3. Insert a new 9V battery, ensuring correct polarity (+/-).
4. Replace the battery compartment cover securely.

Image 5.1: Battery compartment with cover removed.

5.2 Connecting Cables for Testing

Before connecting any cables, ensure they are disconnected from all active network devices.

- **For patch cables (uninstalled cables):** Connect one end of the cable to the RJ45 port on the main unit and the other end to the RJ45 port on the remote ID locator.

- **For installed cables:** Connect the main unit to one end of the installed cable (e.g., a wall jack) and the remote ID locator to the other end of the cable (e.g., in a patch panel).

6. OPERATING INSTRUCTIONS

6.1 Powering On/Off

The device typically powers on automatically when a cable is connected and the TEST button is pressed, or by pressing the TEST button. It usually powers off automatically after a period of inactivity to conserve battery.

6.2 Performing a Cable Test

1. Ensure the cable is properly connected to the main unit and the remote ID locator.
2. Press the **TEST** button.
3. The tester will automatically scan the cable and display the results on the LCD.

6.3 Interpreting Test Results (Wiremap)

The LCD will display the wiremap, indicating the connection status of each wire pair. Common indications include:

- **Pass:** All wires are correctly connected (1-1, 2-2, etc. for straight-through, or appropriate cross-over mapping).
- **Open/Discontinuity:** A break in one or more wires. The display will show which wire(s) are open.
- **Short-Circuit:** Two or more wires are touching. The display will indicate the shorted wires.
- **Incorrect Connection/Miswire:** Wires are connected to the wrong pins at one or both ends. The display will show the incorrect mapping (e.g., 1-3, 2-6).
- **Split Pairs:** A more complex fault where two pairs are swapped, but the wiremap appears correct. The tester is designed to detect this.

6.4 Measuring Cable Length

1. After performing a test, press the **L/W** button to switch to Length measurement mode.
2. The display will show the estimated length of the cable.
3. To change the unit of measurement (meters, feet), press the **SET**/**UNIT** button while in Length mode and use the arrow buttons to select the desired unit. Press **SET**/**UNIT** again to confirm.

7. MAINTENANCE

7.1 Cleaning

Wipe the device with a soft, dry cloth. Do not use abrasive cleaners or solvents. Ensure no moisture enters the device.

7.2 Battery Replacement

When the battery low indicator appears on the display, replace the 9V battery as described in Section 5.1. Remove the battery if the device will not be used for an extended period to prevent leakage.

7.3 Storage

Store the device in a cool, dry place, away from direct sunlight and extreme temperatures. Keep it in its original packaging or a protective case when not in use.

8. TROUBLESHOOTING

Problem	Possible Cause	Solution
Device does not power on.	Low or dead battery; incorrectly installed battery.	Replace the 9V battery; check battery polarity.
Inaccurate length measurement.	Cable not fully extended; incorrect cable type setting (if applicable); cable damage.	Ensure cable is straight; verify cable integrity; check if unit calibration is needed (refer to advanced settings if available).
"Open" or "Short" displayed for a new cable.	Faulty cable; improper connection to tester.	Re-seat the cable connectors firmly; try testing a known good cable; inspect cable for visible damage.

Problem	Possible Cause	Solution
No display or erratic display.	Low battery; internal fault.	Replace battery. If problem persists, contact customer support.

9. SPECIFICATIONS

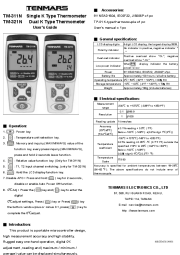| Feature	Specification
Model	TM-901N
Type of Tester	LAN wiring
Measured Cable Length	Max. 265m
Measuring Resolution	1m
Cable/Adapter Structure	RJ45 socket
Measurement Features	Connection map test: discontinuity, short circuit, incorrect connection, split pairs
Supported Cables	STP / UTP cables
Measurement Accuracy	±10% ±1m
Power Supply	9V battery x1
Weight	160g
Dimensions	130x58x35mm
Manufacturer	TENMARS
Country of Origin	Taiwan

10. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation provided with your purchase or contact your local distributor. Keep your proof of purchase for warranty claims.

Related Documents - TM-901N

	[TENMARS TM-102/TM-103 Sound Level Meter Datalogging User Manual](#) Comprehensive user manual for the TENMARS TM-102 and TM-103 Sound Level Meters, covering specifications, operation, calibration, measurement, and software usage for accurate sound level monitoring.
	[TENMARS Lux/Fc Light Meter User Manual - Models TM-201, TM-202, TM-204, TM-205, TM-205N](#) User manual for TENMARS Lux/Fc Light Meters (TM-201, TM-202, TM-204, TM-205, TM-205N). This document provides detailed information on the product's description, safety precautions, features, specifications, operation procedures, instrument description, relative spectral sensitivity, attention points, recommended illumination levels, and battery replacement.
	[TENMARS TM-192 / TM-192D Triaxial ELF Magnetic Field Meter User Manual](#) User manual for the TENMARS TM-192 and TM-192D Triaxial ELF Magnetic Field Meter. This document details product features, applications, measurement procedures, specifications, safety precautions, and software installation.
	[Autoranging True RMS Multimeter TM-87 / TM-88 User's Manual](#) This user manual provides comprehensive instructions for the Tenmars TM-87 and TM-88 Autoranging True RMS Multimeters, covering safety precautions, general description, operating instructions, maintenance, and technical specifications.
	[Tenmars TM-311N & TM-321N K Type Thermometer User's Guide](#) User's guide for Tenmars TM-311N Single K Type Thermometer and TM-321N Dual K Type Thermometer, detailing specifications, operation, and features.
	[TENMARS Heat Stress WBGT Meter TM-188/TM-188D/TM-188B User's Manual](#) Comprehensive user manual for the TENMARS Heat Stress WBGT Meter (models TM-188, TM-188D, TM-188B). Provides detailed information on features, specifications, operation, data logging, BLE connectivity, software installation, and safety guidelines for measuring Wet Bulb Globe Temperature (WBGT) and assessing heat hazards.