Pro'sKit®

CABLE SNIFFER-REMOTE
MT-7057N

RoHS COMPLIANT CE
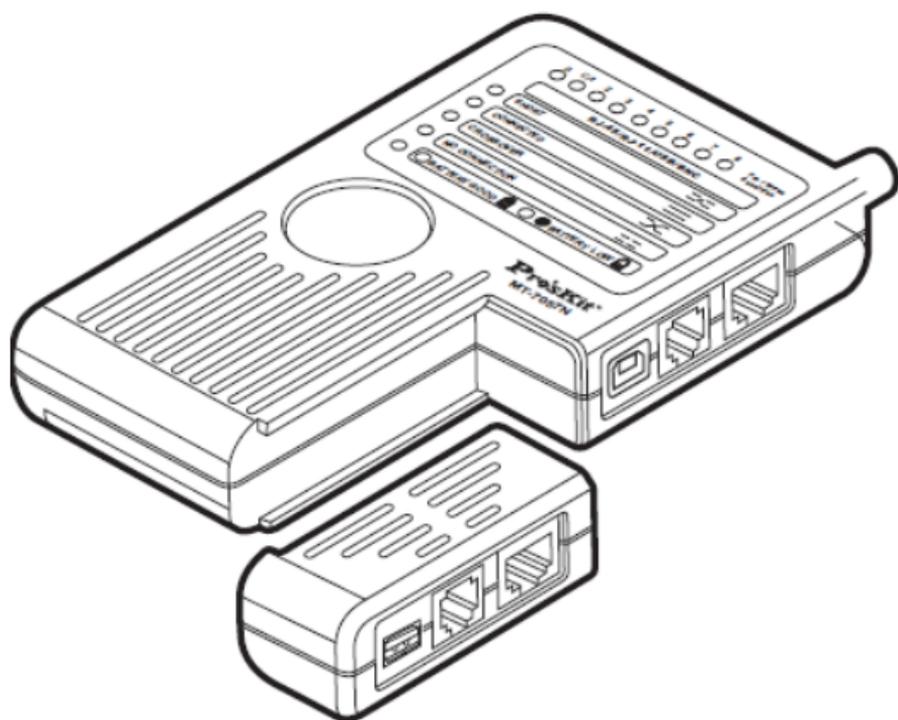
User's Manual
1st Edition, 2016

Contents

INTRODUCTION

The 4 in 1 CABLE SNIFFER-REMOTE provides 4 common LAN and computer cables test. It tests installed cables or patch cords with RJ-45, RJ-11, USB, and BNC connectors. It is intended to test cables with straight through connections not cables with reversed or transposed connections like some LAN crossover cables or reverse wired telephone cables.

SAFETY & WARNINGS

⚠ **WARNING**

This tester is not intended for use on powered circuits. Attaching this tester to a powered circuit can result in damage to the tester or injury to the user.

1. Read instructions carefully before using this tester. Failure operation may result in damage to the tester or injury to the users.
2. Do not use this tester with its case open, or with parts removed. Doing so may damage the tester and/or injure the user.
3. When using this tester in schools and workshops, responsible teachers or skilled personnel must control the usage of this tester. Failure to observe this precaution may result in damage to the tester or injury to the

user.

4. Follow the recommendations of any Trade Organizations or Regulatory Agencies whose scope encompasses the use of this tester failure to do so may result in damage to the tester or injury to the user.

5. Do not open this tester for maintenance without first disconnecting it from all external circuitry. Failure to observe this precaution may result in damage to the tester or injury to the user.

6. Repairs and maintenance must only be carried out by qualified service personnel or qualified electricians/technicians who know the dangers of, and the safety rules applicable to this type of equipment. Failure to observe this precaution may result in damage to the tester or injury to the user.

7. Do not touch the ends of the cables when making tests. An Unexpected dangerous potential may be present. Failure to observe this precaution may result in damage to the tester or injury to the user.

8. Do not apply voltage or current to any of the tester's connectors. Doing so many damages the tester and /or injury the user.

9. This tester is not for use by children. Failure to observe this precaution may result in damage to the tester or injury to the user.

10. Do not use this tester to make measurements in adverse environments

such as rain, snow, fog, or locations with steam, explosive gases or dusts.

11. Do not use tester in condensing atmospheres. That is, do not use tester in conditions where ambient temperature and humidity could cause condensation of water inside of the tester.

12. Do not use this tester if it is wet, either from exposure to the weather, or after cleaning the case of the tester.

13. Do not attempt immediate use of the tester when bringing it from a cold environment to a warm environment. Condensation of water, inside and outside of the tester, may produce dangerous conditions. Allow the tester to warm to room temperature before using.

14. Do not modify this tester. Changing the design may make the tester unsafe and may result in injury to the user.

15. Do not use this tester if it has undergone long-term storage user unfavorable conditions.

16. Do not use the tester if it has been damaged in transport.

17. Avoid usage near strong magnetic fields (magnets, loudspeakers, transforms, motors, coils, relays, contactors, electromagnets, etc.) The tester may display readings that are in error.

18. Avoid usage near strong electrostatic fields (high voltage power lines, televisions,

computer monitors, etc.). The tester may display readings that are in error.

19. Avoid usage near strong RF fields (radio or television transmitters, walkie talkie, cellular phones etc.).The tester may display reading that is in error.

20. Remove the battery when the tester may be left unused for longer than month. Chemical leakage from the battery could damage the tester.
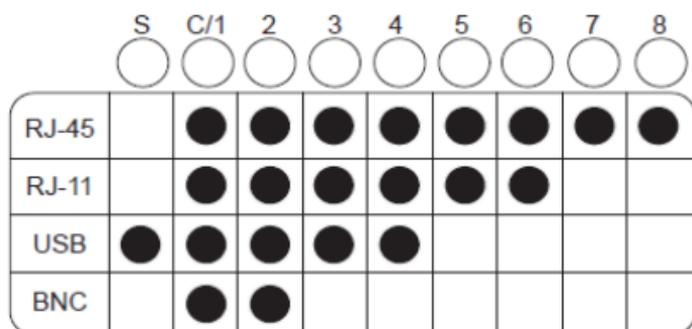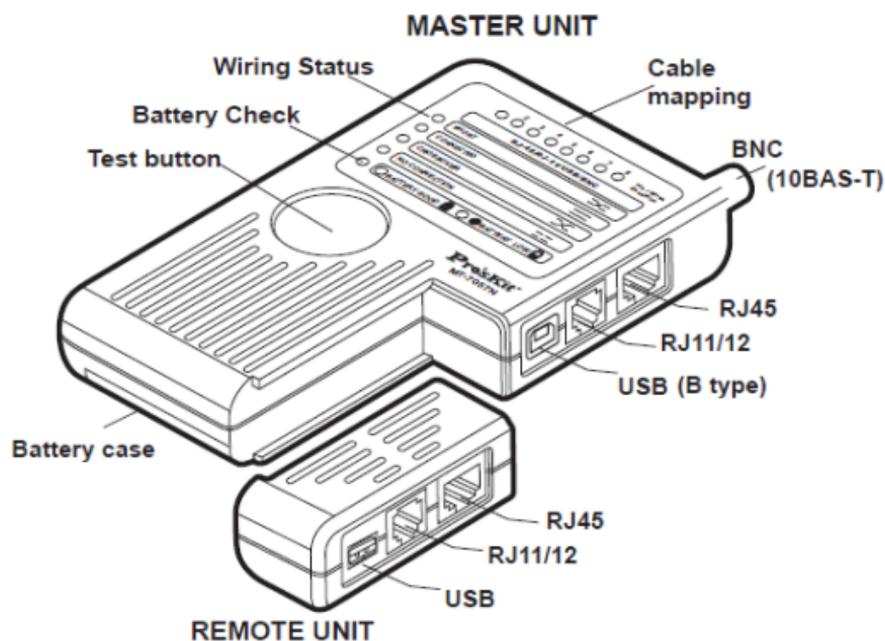
PRODUCT FEATURES
1. Test 4 types of cables
2. Simple one button test
3. Ergonomic portable handheld design
4. Tests installed wiring or patch cables
5. Remote unit stores in main unit
6. 500meter(1,640ft) test distance (RJ-45/RJ-11/BNC)
7. Convenient battery access
8. Built in battery test
9. LEDs indicate connections and faults
10. Beeper provides audible annunciation of test results
11. Tests shielded (STP)or unshielded(UTP) LAN cables
12. Test USB cables
13. PoE line voltage protective design

SPECIFICATIONS

1. Cables Tested: UTP and STP LAN cables Terminated in RJ-45 male connectors. (EIA/ TIA 568)RJ-11 cables with male connectors, 2 to 6 connectors installed. USB cables with Type A flat plug on one end and type B square Plug on other end. BNC cables with male connectors.
2. Faults Indicated: No Connection, Short, connected, crossover.
3. Low Battery Indicator: LED light up to indicate low battery
4. Case Dimensions:6.3x3.4x1.0 inches(LxWxH)
5. Weight:170 grams,0.375lbs (without battery)
6. Battery: 1 pc 9-volt alkaline battery.(Not include.)

FRONT PANEL & 4 in 1 DIAGRAM

	S	C/1	2	3	4	5	6	7	8
RJ-45		●	●	●	●	●	●	●	●
RJ-11		●	●	●	●	●	●		
USB	●	●	●	●	●				
BNC		●	●						

Pin / Wires Condition

S C/1 2 3 4 5 6 7 8

RJ-45/RJ-11/USB/BNC

○ SHORT

○ CONNECTED

○ CROSSOVER

○ NO CONNECTION

○ ○ BATTERY GOOD   ○ ● BATTERY LOW

MASTER UNIT

Wiring Status
Battery Check
Test button
Cable mapping
BNC (10BAS-T)
RJ45
RJ11/12
USB (B type)
Battery case

REMOTE UNIT
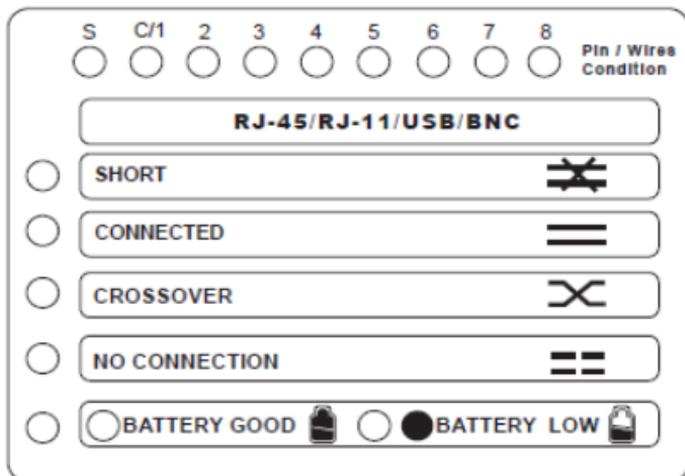
RJ45
RJ11/12
USB

ACCESSORIES:
1. RJ45 to BNC female connector
2. Instruction manual
3. Pouch bag

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OPERATION

1. General information: the cable sniffer-remote performs its tests when the single button on its front panel is pressed and released.6 Status LEDs indicate the condition of the cable being tested, as well as informing the user that power is turned on, and that the battery is good (or bad).8 additional connection LEDs light to indicate that specific wires in a cable are connected.

Note:
Only one cable can be tested at a time. i.e. A BNC cable and an RJ-45 cable cannot be tested simultaneously.

2. The MAIN and REMOTE unit: The CABLE SNIFFER-REMOTE consists of a Main unit and a Remote unit .The Remote unit stores conveniently on the bottom of the Main unit. It can be removed or replaced by sliding it from left to right or right to left respectively. Use care when removing or replacing the Remote. Some of the plastic edges are a little sharp. The Remote is often attached to the Main unit when storing, when transporting, or when patch cables are being tested. The Remote is removed from the Main unit when an installed (in wall, ceiling, etc.) cable is being tested.

3. Testing Patch cables:
"Patch" cables have both ends accessible at

the same location. Usually, but not always, these cables are less than 25ft in length, and are not installed in a wall or ceiling. Since both ends are accessible, one end can be plugged into the Main unit, and another end into the Remote unit. It is not necessary to remove the Remote unit from its docked position on the Main unit.

4. Testing Installed cables:
To test cables installed in ceilings or walls, or in applications that prevent the ends from being in the same location, the Remote can be detached from the Main unit. Once detached, the Remote can be attached to one end a cable, and the Main unit attached to the other to the other end of the cable. These ends are often in different rooms and on different floors of a building.

5. Performing the Test:
Once the Remote and Main unit are attached to the ends of the subject cable, as described in 6.3 and 6.4 ,testing may begin, simply press and release the test button on the Main unit, observe the LED indicators, and note the beeping sound that comes from the Main unit.

6. Interpreting the Results:
6.1 Battery Good Indicator:
The "BATTERY GOOD" LED should light whenever the test button is pressed and released. It will stay in for a minimum of 10 seconds, or for however long the test button

is pressed. If the "BATTERY GOOD" LED does not light, replace the battery.

6.2 Low Battery Indicator:
When the "BATTERY LOW" LED light on, replace the battery.

6.3 No connection LED/Single Beep
If the Remote is not connected to the main unit with a cable, or the cable has no intake conductors, the "NO CONNECTION" LED with light and the beeper will sound once.

6.4 Connected LED/Lo-Hi Beep /Numbered LEDs
If the "CONNECTED" LED lights and the beeper emit a Lo-Hi beep, examine the numbered LEDs (i.e. LEDs numbered to 8 and the S LED). Corresponding to the type of cable being tested must light .Examine the table below the Numbered LEDs, noting what LEDs should light .If all of the LEDs do not light; the cable has an OPEN fault. If all of the appropriate numbered LEDs light, the cable is OK.
Note:
When testing an RJ-45 UTP cable, the S LED must not light. The CABLE SNIFFER-REMOTE is intended to test complete cables. It may not find faults in cables that are intentionally incomplete. For example, the standard EIA/TIA 568 RJ-45 terminated Ethernet cables is expected to contain 8 conductors. If only 4 conductors are used between the RJ-45 connectors. The CABLE SNIFFER-REMOTE may not properly identify the faults.
RJ-11 cables may have 2 connections, 4

connections, or as many as 6 connections. For 2 connection cables, LED 3 and 4 must light .For 4 connection cables, LED 2,3,4, and 5 must light. For 6 connection cables, LED 1, 2,3,4,5, and 6 must light. The numbered LEDs do not indicate that a good connection exists, only that a connection exists. If the "SHORT" or "CROSSOVER" LEDs are light, there is a fault in the cable.

6.5 Short LED/3 Beepers/Numbered LEDs

If the "SHORT" LED light, the beeper emits 3 beeps, the Numbered LEDs indicate the location of a short.

Note:

In the "SHORT" mode, the Numbered LEDs only indicate the location of the shorts. The other Numbered LEDs are dark. If more than 3 numbered LEDs light, there may be multiple shorts in the cable.

6.6 Crossover LED/2 Beepers/ Numbered LEDs

If the "CROSSOVER " LED lights, the beeper emit 2 beeps, the Numbered LEDs lights will flashing and indicate the location of a cross.

Notes:

In the "CROSSOVER" mode, RJ-11 cables used for telephone connections are often crossed. Even new cables are often crossed. This seldom affects the performance of standard analog telephone lines (POTS). Digital telephone lines and old touch-tone phones may be polarity sensitive, so a crossed cable may prevent then from working properly.

CABLE REPAIR

1. **General information:** The following section provides information to the user about common cable types, common failures and repairs. It is not meant to be an exhaustive study of the topic, just some basic information that the uninitiated may find helpful.

2. **Cable damage:** When a cable tests badly, either the wire of the connectors or both may be at fault. If the cable has been installed and working, then it's likely that the wire or connectors have been abused in some way. The wire portion of the cable can be damaged by being crushed (under the leg of a desk), stretched (pulled sharply around a corner), punctured (by a nail or staple), over loaded (hit by lighting), etc. Similar abuses will damage the connectors on the ends of the cable. The connectors can also be damaged by excessive insertion and removal or flexing of the cable close to connector body. While the CABLE SNIFFER-REMOTE can identify a bad cable, it cannot determine if the wire or the connectors are at fault. The user must examine the different parts of the cable to determine the cause of failure and take the appropriate steps to correct the problem.

3. **Which end is bad?**
   The CABLE SNIFFER-REMOTE like many cable testers, cannot find the location of the fault, or even determine which end or connector is bad. It simply knows that a fault exists. The user must locate the fault and take the appropriate action.

4. Cables with molded on ends:
Many cables have molded on ends that cannot
be opened up for repair. The entire cable must be
replaced, or the molded on end removed and
replaced with a user serviceable
connector .These types of cables usually fail from
Opens or Shorts. They seldom fail from a
Crossed connection.

5. Cables with crimped on RJ connectors:
Crimped on RJ connectors cannot be reused or
repaired. New connectors must be installed on
the cable. If the cable being tested has just been
made up or put in service, and it tests as Open or
Crossed, the RJ connectors have probably been
installed incorrectly. Shorts very seldom occur as
the result of a badly crimped RJ connector, so
the user should suspect a problem with the wire
(possibly a staple or mail through the wire, or a
crushed or pinched wire) if the 4 in 1 indicates a
short. A visual examination of the RJ connectors
may reveal the fault---but keep in mind that
what-ever the cause of a connector problem (i.e.
mis-wiring improper stripping of the wire, bad
crimp, etc.) The only solution is to replace the
connector. Consequently, it is not necessary for
the user to know the exact cause of the problem,
simply to make sure that he installs the new
connector correctly!

6. Conflicting Results:
Sometimes, the test results of the 4 in 1 seem to
conflict with the performance of the cable---i.e.,
the cable tests badly but works OK, or vice versa.
The following items list some of the reasons why.

6.1. The Cable Sniffer-Remote **indicates the cable is not working, but my LAN works OK:**

Installed LAN cables with RJ-45 connectors that have been in service and working OK may test as Open, Shorted, or Crossed. Here's why---The EIA/TIA 568 standard for LAN cable only uses 4 of the wires in the eight-wire cable. The other 4 wires in the cable may have faults, but these will not affect the operation of the LAN. The 4 in 1 tests all of the wires in the LAN cable, and identifies the faults, even though these wires may not being used in the LAN system. Not all LAN cables are wired straight through Crossover cables used on LANs are purposely mis-wired, with their Receive and Transmit wires cross over. The CABLE SNIFFER-REMOTE will test this as a bad cable, but it may work just fine as Crossover cable.

6.2. The CABLE SNIFFER-REMOTE **says my cable is good, but it does not work on my LAN:**

Many cable testers like the CABLE SNIFFER-REMOTE only perform continuity style tests (open, short, crossover, etc). Ethernet LAN cables are constructed in a special way. The 8 wires inside are grouped into 4 pairs of 2 way. Not only must the 8 wires connect from end to end of the cable, the pairs in the cable must connect to specific pins of RJ-45 plugs on to the ends of cable ignoring the pairing (as described in EIA/TIA 568),and the cable will test ok. But when the

cable is tried on the LAN, it does not work .This is because the lack of the proper pairing causes excessive cross talk in the cable, preventing the LAN from working. This type of cable fault is sometimes call a split pair or double split pair to detect this type of fault, a more sophisticated tester capable of performing a NEXT test(Near End Cross Talk) must be used. Both the Pair Master and LAN TDR can perform NEXT tests.

Notes:
Cross talk increases with the length of the cable. A LAN system will tolerate a certain amount of cross talk. A short cable (10ft or less) that is improperly paired may work just fine. However, longer cables paired in exactly the same way, may not work. This explains why an installer can make short jumper cables that work (although they are improperly paired), but when he installs RJ-45's in exactly the same way on a longer cable, the cable does not work.

6.3. The CABLE SNIFFER-REMOTE says my phone cable is bad, but my phone works ok.

Most single line telephones only use 2 wires in a modular cable the modular cable, which terminates in RJ-11 connectors could have as may as 6 wires in it. The unused wires may have faults, which the 4 in 1 identifies, but these faults may have no effect on the working 2-wrie telephone circuit. Many

telephone cables with RJ-11 plugs/jacks are wired inverse. The CABLE SNIFFER-REMOTE will show that a cable like this is crossed. A cable like this reverses the polarity of the telephone line. Most regular telephones made in the last 10 years are not polarity sensitive. So, even though the cable is wired in reverse (crossed), it may work OK. Early touch-tone telephones and answering machines were polarity sensitive. If connected in reverse polarity, the touch-tone phone may not dial out (no touch), and the answering machine may not answer when the line rings.

MAINTENANCE

Your CABLE SNIFFER-REMOTE is a precision test instrument and, when used as described in this manual, should not require maintenance. There are no internal adjustments. Calibration is not required. To clean the outside of the tester, use a cloth dampened with a mild detergent solution. Do not use any abrasive cleansers or chemical solvents that may damage the case of the tester.
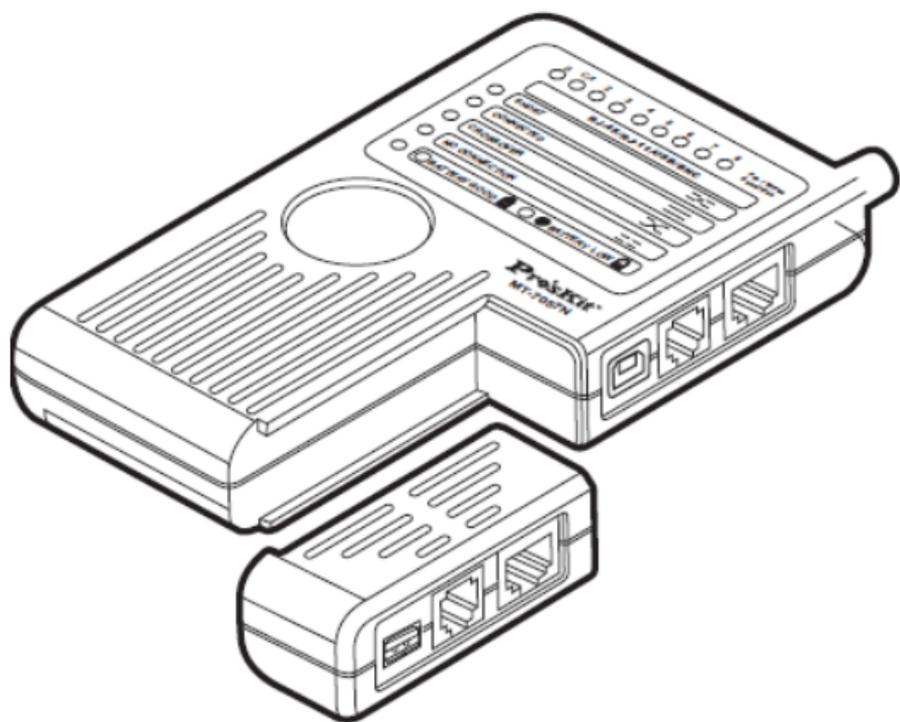
The group of products may be discontinued, models specifications, price or design changed at any time without notice and without incurring any obligation.

Pro'sKit®

RoHS COMPLIANT CE

MT-7057N 4合一網路測試器

產品使用說明書

一、產品介紹：

MT-7057N 是一款集 4 種測試功能於一體的多功能纜線測試器，可測試的線材種類 RJ-45、RJ-11、USB 及 BNC，只需一按開關，所測試線材狀況一目了然。 線材的斷路、短路、交錯都一一顯示在主機面板上。

二、安全注意事項：

注意：此測試器不能用於測試帶有電壓之活線，若將活線接於此測試器，可能會造成測試器損壞。

** 使用前請細詳閱讀使用說明書，錯誤使用可能造成測試器損壞。

** 使用時請勿將機殼打開使用或自行更換內部零件，如此可能造成測試器損壞。

三、產品特色：

1. 可測試 4 種線材
2. 單鍵操作，簡單方便
3. 具有自動掃描檢測網絡線，檢視跳接正確性、短路、斷路及芯線排列順序等功能
4. 具有電源狀態指示
5. 明亮清楚的 LED 燈顯示
6. 誤測帶電 PoE 交換機時，可提供初步保護

四、產品規格：

1. 測試線材：UTP / STP RJ-45 , RJ-11 , USB , BNC
2. 尺寸：6.3 x 3.4 x 1.0 inches (L x W x H)
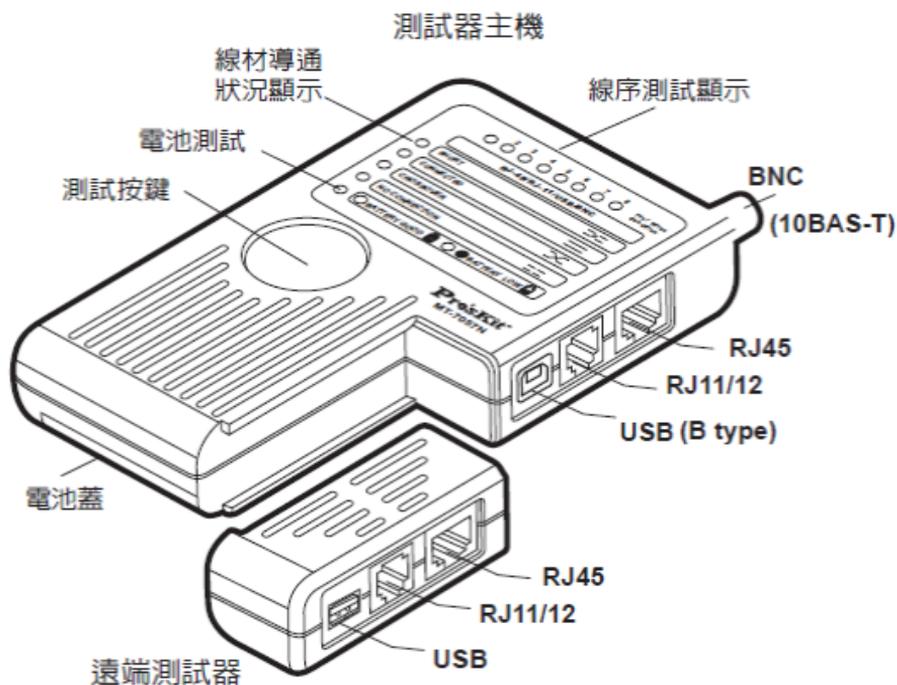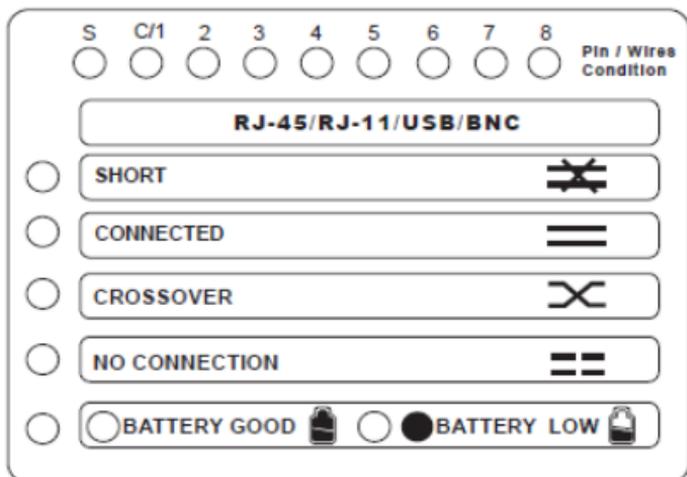3. 重量：170 克 (不含電池)
4. 電源：9V 電池 (出貨不含)

五、配件：
1. 測試器
2. RJ45 轉 BNC 母端接頭
3. 使用說明書
4. 收納袋

六、 顯示面板及 LED 燈功能介紹：
(1). "S" 燈號：表示遮罩線 / 接地線。
(2). "1 -8 " 燈號：表示對應的線路。
(3). "SHORT" 燈燈號：表示線材有短路。
(4). "CONNECTED" 燈號：表示受測試的線材連接是正確的。
(5). "CROSSOVER" 燈號：表示受測試的線材連接有交錯的問題。
(6). "NO CONNECTION" 燈號：表示沒有相通的線，或是接頭沒有插好，有可能是接觸不良。
(7). "BATTERY GOOD" 燈號：表示本測試器的電源正常，可正常使用。
(8). "BATTERY LOW" 燈號：表示本測試器的電源不足，應及時更換電池，以免對測試結果產生影響。

	S	C/1	2	3	4	5	6	7	8
RJ-45		●	●	●	●	●	●	●	●
RJ-11		●	●	●	●	●	●		
USB	●	●	●	●	●				
BNC		●	●						

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| | S | C/1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Pin / Wires Condition |

RJ-45/RJ-11/USB/BNC

SHORT ⤬

CONNECTED ═══

CROSSOVER ⤬

NO CONNECTION ══

○ BATTERY GOOD ▯ ○ ● BATTERY LOW ▯

測試器主機

線材導通
狀況顯示

線序測試顯示

電池測試

測試按鍵

BNC
(10BAS-T)

RJ45

RJ11/12

USB (B type)

電池蓋

RJ45

RJ11/12

遠端測試器   USB

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七、4種線材的測試方法

⚠️注意：同一時間，一次只能測試一種線纜。比如：一條視頻線和一條網線不能在同一時間進行測試。

1. 測試雙絞線方法：

1.1 把所需測試線插入主測試器和遠端測試器，按一下開關主機"CONNECTED"燈亮，而上方對應的 1~8 號線路指示燈也同時亮（如果是 STP 線則"S"燈也同時亮），表示這條線正確。

1.2 "SHORT"燈亮，表示有短路，短路的線路其對應的指示燈號也會同時亮。

1.3 "CONNECTED"燈亮，表示有斷路，斷路的線路其對應的指示燈不亮。

1.4 "CROSSOVER"燈亮，表示有線路交錯或順序相反，交錯的線路其對應的指示燈會閃爍，。

2. 測試電話線：

1. 6 芯電話線 ：線路指示燈 1 到 6 號燈亮
2. 4 芯電話線 ：線路指示燈 2 到 5 號燈亮
3. 2 芯電話線 ：線路指示燈 3 到 4 號燈亮
   以上燈亮時，"CONNECTED"燈同時也會亮。

3. 測試 USB 線材：

"CONNECTED"燈、"S"及 1 到 4 號指示燈同時亮，表示線材正確。

4. 測試 BNC 同軸電纜：

"CONNECTED"燈和 1 到 2 號指示燈同時亮，表示線材正確。

Pro'sKit®

RoHS COMPLIANT CE

MT-7057 4合一网络测试器

產品使用說明書
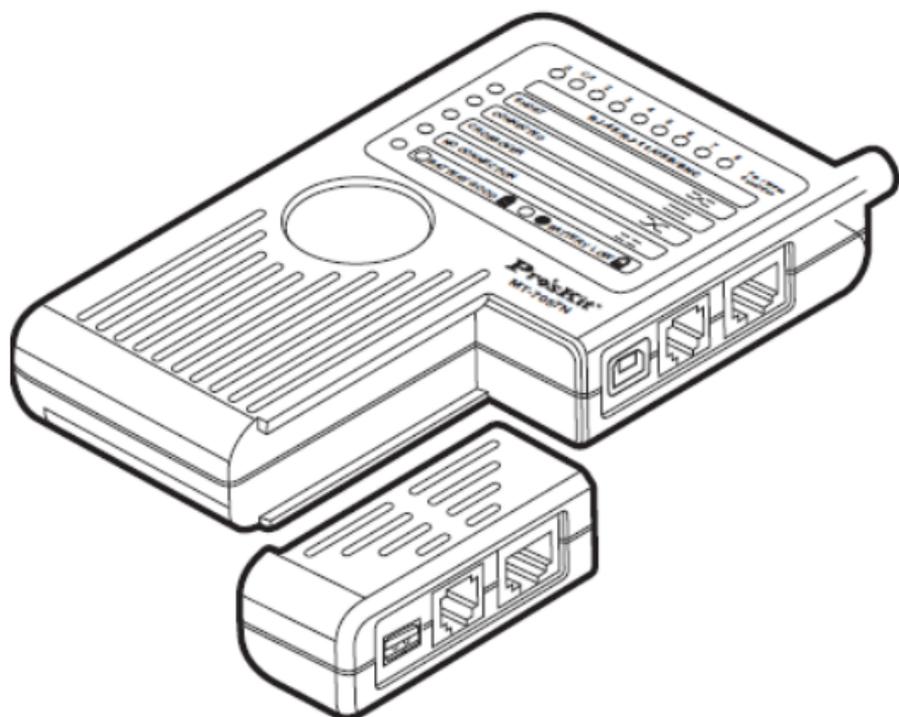
一、 产品介绍：

MT-7057N 是一款集 4 种测试功能于一体的多功能缆线测试器，可测试的线材种类 RJ-45、RJ-11、USB 及 BNC，只需一按开关，所测试线材状况一目了然。 线材的断路、短路、交错都一一显示在主机面板上。

二、安全注意事项：

注意：此测试器不能用于测试带有电压之活线，若将活线接于此测试器，可能会造成测试器损坏。

** 使用前请细详阅读使用说明书，错误使用可能造成测试器损坏。

** 使用时请勿将机壳打开使用或自行更换内部零件，如此可能造成测试器损坏。

三、产品特色：

1. 可测试 4 种线材
2. 单键操作，简单方便
3. 具有自动扫描检测网络线，检视跳接正确性、短路、断路及芯线排列顺序等功能
4. 具有电源状态指示
5. 明亮清楚的 LED 灯显示
6. 误测带电 PoE 交换机时，可提供初步保护

四、产品规格：

1. 测试线材：UTP / STP RJ-45, RJ-11 , USB , BNC
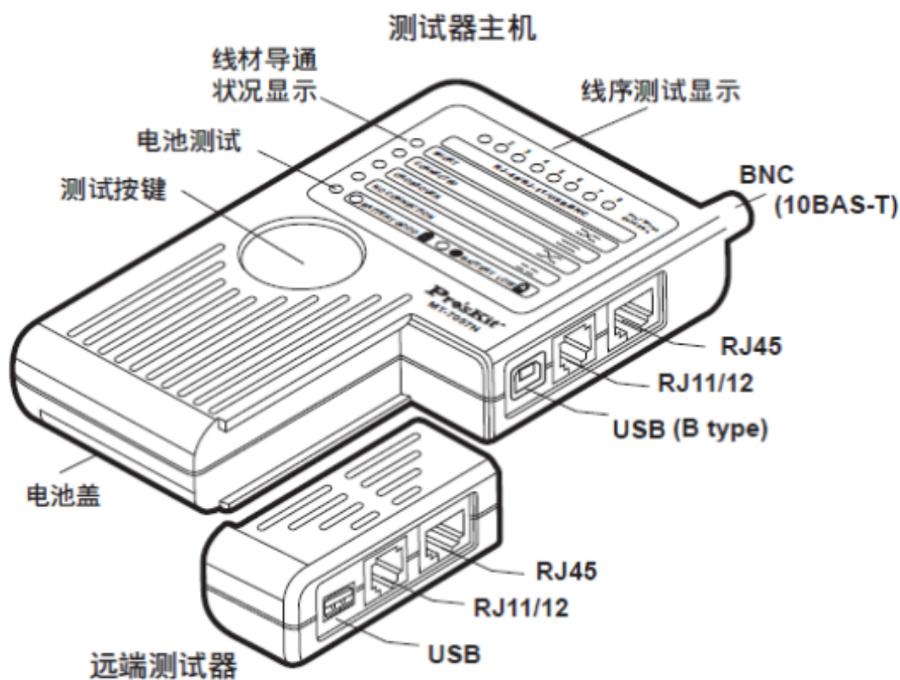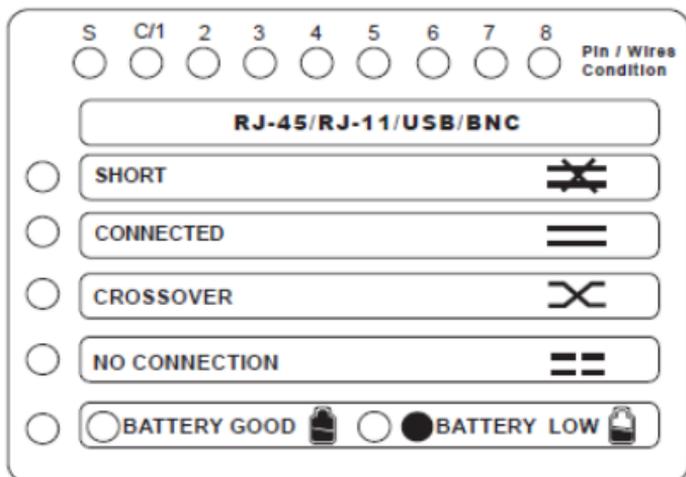2. 尺寸：6.3 x 3.4 x 1.0 inches (L x W x H)
3. 重量：170 克 (不含电池)
4. 电源：9V 电池 (出货不含)

五、配件：
1. 测试器
2. RJ45 转 BNC 母端接头
3. 使用说明书
4. 收纳袋

七、显示面板及 LED 灯功能介绍：
(1). "S " 灯号：表示屏蔽线 / 接地线。
(2). "1 -8 " 灯号：表示对应的线路。
(3). "SHORT " 灯号：表示线材有短路。
(4). "CONNECTED " 灯号：表示受测试的线材连接是正确的。
(5). "CROSSOVER " 灯号：表示受测试的线材连接有交错的问题。
(6). "NO CONNECTION " 灯号：表示没有相通的线，或是接头没有插好，有可能是接触不良。
(7). "BATTERY GOOD " 灯号：表示本测试器的电源正常，可正常使用。
(8). "BATTERY LOW " 灯号：表示本测试器的电源不足，应及时更换电池，以免对测试结果产生影响。

	S	C/1	2	3	4	5	6	7	8
RJ-45		●	●	●	●	●	●	●	●
RJ-11		●	●	●	●	●	●		
USB	●	●	●	●	●				
BNC		●	●						

S	C/1	2	3	4	5	6	7	8	Pin / Wires Condition

RJ-45/RJ-11/USB/BNC

SHORT

CONNECTED

CROSSOVER

NO CONNECTION

BATTERY GOOD   BATTERY LOW

测试器主机

线材导通状况显示

线序测试显示

电池测试

测试按键

BNC (10BAS-T)

RJ45

RJ11/12

USB (B type)

电池盖

远端测试器

RJ45

RJ11/12

USB

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七、4种线材的测试方法

⚠️注意：同一时间，一次只能测试一种线缆。比如：一条视频线和一条网线不能在同一时间进行测试。

1. 测试双绞线方法：

1.1 把所需测试线插入主测试器和远程测试器，按下主机开关"CONNECTED"灯亮，对应的1~8号指示灯也同时亮（STP线则"S"灯也同时亮），表示这条线正确。

1.2 "SHORT"灯亮，表示有短路，短路线路与所对应的指示灯也同时亮。

1.3 "CONNECTED"灯亮，表示有断路，断路线路与所对应的指示灯不亮。

1.4 "CROSSOVER"灯亮，表示有交错或顺序相反，交错的线路与所对应的指示灯闪烁。

2. 测试电话线：

1. 6芯电话线 ：线路指示灯1到6号灯亮
2. 4芯电话线 ：线路指示灯2到5号灯亮
3. 2芯电话线 ：线路指示灯3到4号灯亮

以上灯号亮时，"CONNECTED"灯也会亮。

3. 测试 USB 线材：

"CONNECTED"灯和"S"及1到4号指示灯同时亮，表示线材正确。

4. 测试 BNC 同轴电缆：

"CONNECTED"灯和1到2号指示灯同时亮，表示线材正确。

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