Instruction Manual

LAN Scout™ Jr.

VDV526-052

- **EASY TO READ LCD SCREEN**
- **DATA CABLE TESTING**
- **DETECTS SHORTS, OPENS, REVERSALS, MISWIRES, AND SPLIT PAIRS**
- **TONE GENERATOR**
- **AUTO POWER-OFF**

KLEIN TOOLS®

For Professionals... Since 1857® USA

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GENERAL SPECIFICATIONS

The Klein Tools LAN Scout™ Jr. is a portable data cable tester. It tests and troubleshoots RJ45 terminated cables and provides built-in tone generation for cable tracing.

- **Dimensions:** 4.6" x 2.3" x 1.1" (11.7 x 5.8 x 2.8 cm)
- **Weight:** 4.0 oz. (115 grams) with battery and remote
- **Operating Temperature:** 0°C to 50°C / 32°F to 122°F
- **Storage Temperature:** -20°C to 60°C / -4°F to 140°F
- **Humidity:** 10% to 90%, non-condensing
- **Maximum Voltage** between any two connectors pins without damage:
    - **RJ Jack:** 66V DC or 55V AC
- **Battery Life typical:** 6V alkaline batteries - 4 x LR44
    - **Standby:** 3.5 years
    - **Active:** 80 hours
- **Cable Types:** Shielded or Unshielded; Cat-7, Cat-6x, Cat-5E, Cat-5, Cat-4, Cat-3
- **Maximum RJ Cable Length:** 0 to 1000 feet (305 meters)
- **Minimum Cable Length for Split Pair Detection:** 1.5 feet (0.5 meters)

⚠ WARNINGS

To ensure safe operation and service of the tester, follow these instructions. Failure to observe these warnings can result in severe injury or death.

- The LAN Scout™ Jr. is designed for use on unenergized cabling systems. Connecting the LAN Scout™ Jr. to live AC power may damage it and pose a safety hazard for the user.
- Poorly terminated RJ plugs have the potential to damage the jack on the LAN Scout™ Jr. Visually inspect a RJ plug before inserting it into the tester. The contacts should always be recessed into the plastic housing of the plug. Plugging 6-position plugs into the 8-position jack on the tester has the potential to damage the outer-most contacts of the jack unless the plug is specifically designed for that purpose.

DISPLAY

1. **Pass:** "Pass" illuminates if the cable is a properly wired 4-pair T568A/B data cable or cross-over (uplink) cable. A cross-over cable will have the pin numbers of the crossed pairs flashing and will alternate with "C".

2. **Cable Faults:** The "Miswire" icon illuminates if the cable is not wired to one of the cabling standards. An open or short error takes precedence over miswires and the appropriate icon(s) illuminates. The "Split" icon illuminates if the designated pairs are not twisted together in the cable, an AC signal fault.

3. **Tester-End Wire Map:** The top line displays the pins on the tester end in order. These pins are mapped to the pins on the remote-end shown directly below them on the LCD.

4. **Remote-End Wire Map:** The bottom line displays the corresponding pin on the remote-end. Dash lines on the remote line indicate shorted pins. No pin numbers displayed on the remote line are open pairs.

5. **Battery Low:** The battery low symbol illuminates when the battery is nearing depletion. The symbol will begin to flash when the battery needs to be replaced. Results may be unreliable at this point.

6. **Shield:** The "S" icon illuminates when a shielded data cable is properly connected at both ends. It will be flashing if there is a short to a wire in the cable along with that pin number and the "Short" indicator.

7. **Voltage Detected Warning:** If voltage is detected on any of the tester connectors, the "Voltage!" icon illuminates. A check for voltage is performed before each test and if found, no test is run. The tester should be disconnected immediately from the source of the voltage.

CONTROL BUTTON

The LAN Scout™ Jr. has a single button to both start a test and select other functions and options. Presses of less than about 1 second (short press) and more than 1 second (long press) are recognized differently.

1. **Cable Testing (short press):** With the LAN Scout™ Jr. off, each short press of the button causes a cable test to be executed and the results displayed for 20 seconds before powering off. "TEST" is displayed while testing is being performed. If another short press occurs before the 20 second time out another test and 20 second time out begin. If the button is pressed and held until "LOOP" is displayed and then released, tests are run continuously and the display updated. The LAN Scout™ Jr. will turn off automatically if there is no test result change for 5 minutes. A long press of the button will cause the LAN Scout™ Jr. to exit cable test loop mode and enter mode selection as discussed below.

2. **Mode Selection (long press):** Starting with the LAN Scout™ Jr. off, a long press of the button will cause the LAN Scout™ Jr. to enter mode selection. In mode selection the LAN Scout™ Jr. cycles through cable test and tone generator modes. The mode displayed when the button is released will begin execution. From powered off, the modes in order are:

    • **LOOP:** Cable test that loops continuously until it times out or is exited by a long press that reenters mode selection. Used to troubleshoot intermittent problems.

    • **Four Tone Cadences (Hi Lo 1, Hi Lo 2, Hi, Lo):** The next four modes are all tone generator modes with different sounds. The "Hi Lo" tones are made up of two frequencies with different timings. "Hi" and "Lo" are single frequency. Once in a tone mode, short presses change the pins carrying tone. The pins with tone are displayed. In a tone mode, the Jr. will turn off automatically 30 minutes after the last button press or by exiting to mode select with a long press.

    • **OFF:** When the button is released with "OFF" displayed, the Jr. will power off. Once in one of the above modes, OFF is the first mode offered upon exiting to mode select. To select a different mode other than OFF, continue to hold the button down and the next mode in rotation will be displayed next.

    • **CABLE:** The cable test mode is the single cable test mode with 20 second timeout that a short press from powered off executes.
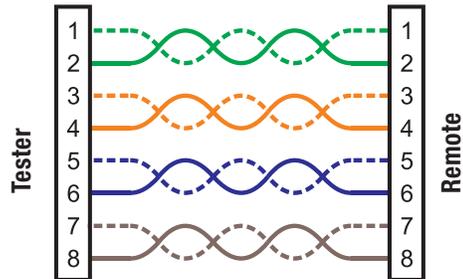
WIRING AND DISPLAY EXAMPLES

Properly Wired T568A UTP:
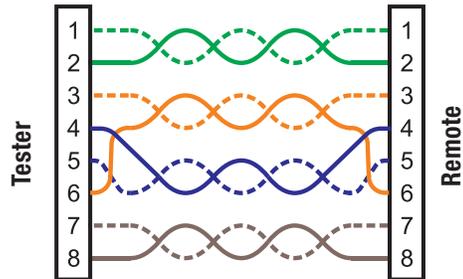
T568B is electrically identical to T568A, but swaps the green and orange pairs. Either standard will work as long as the same standard is used at both ends of a run or patch cable. Mixing "A" and "B" creates a cross-over cable.

T568A Cable with Split Pairs:

A common error in building a cable is to put all the pairs in pin sequence 1-2, 3-4, 5-6 and 7-8. This will produce the correct continuity, but the pairs are designated to be on pins 3-6 and 4-5 in the middle of the connector for compatibility with phone wiring. This wiring error is only detected by the split pair test since the designated pairs are not twisted together.
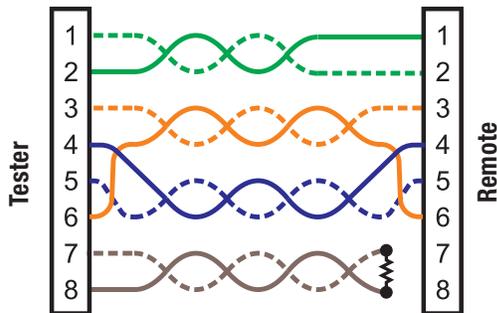
WIRING AND DISPLAY EXAMPLES

T568A Cable with a Short and Open:
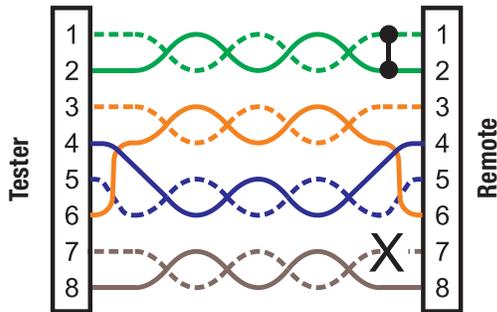
The 1-2 pair pins are shorted together and the 7-8 pair is open. The pins with the errors are flashing. Dash lines (-) on the bottom (remote) display line indicate the short, while no numbers on the bottom line indicate the open pair.

T568A Cable with a Miswire and Unrecognized Continuity:

T568A Cable with a miswire and unrecognized continuity: Pins 1 and 2 on the LAN Scout™ Jr. are connected to pins 2 and 1 at the remote-end. The pins with this error are flashing. The "U" for the remote pin numbers indicates an unrecognizable continuity was detected that is neither a short or open.
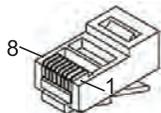
 = FLASHING

BATTERY REPLACEMENT

1. **Remove** single screw in the middle of the back of the LAN Scout™ Jr. with a #0 Phillips head screwdriver. Remove battery door.
2. **Recycle** exhausted batteries. Hitting the palm of your cupped hand with the back of the LAN Scout™ Jr. will usually dislodge the batteries from the compartment.
3. **Acquire** 4 x 1.5 alkaline batteries (IEC LR44, ANSI/NEDA 1166A).
4. **Insert** batteries into battery compartment with the battery plus sign (+) in the direction of the plus sign on the case (the spring contact is negative and the button contact is positive). Inserting the last battery in the middle of the stack is the easiest.
5. **Replace** battery door and screw, taking care not to over-tighten it.

CLEANING

Turn instrument off and disconnect any cables. Clean the instrument by using a damp cloth. Do not use abrasive cleaners or solvents.

STORAGE

Remove the batteries when instrument is not in use for a prolonged period of time. Do not expose to high temperatures or humidity. After a period of storage in extreme conditions exceeding the limits mentioned in the Specifications section, allow the instrument to return to normal operating conditions before using it.

DISPOSAL / RECYCLE

 Do not place equipment and its accessories in the trash. Items must be properly disposed of in accordance with local regulations.
Prior to disposal of this product, please contact Klein Tools for proper disposal options.

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