

ENGLISH

VDV526-200

**INSTRUCTION MANUAL**  
**LAN Scout™ Jr. 2**



**KLEIN**  
TOOLS®



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## GENERAL SPECIFICATIONS

The Klein Tools LAN Scout™ Jr. 2 is a portable data cable tester. It tests and troubleshoots RJ45 terminated cables and provides tone generation for cable tracing.

- **Dimensions:** 5.3" x 2.4" x 1.2" (13.5 x 6.1 x 3.0 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 connector pins without damage: RJ Jack: 66V DC or 55V AC
- **Battery Life typical:** 2x AAA Alkaline batteries **Standby:** 3 years **Active:** 80 hours
- **Cable types:** Shielded or Unshielded; Cat-7, Cat-6/6A, Cat-5E, Cat-3
- **Maximum Cable Length:** 2000 feet (610 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. 2 is designed for use on unenergized cabling systems. Connecting the LAN Scout™ Jr. 2 to live AC power may damage it and pose a safety hazard for the user.
- Improperly terminated RJ plugs have the potential to damage the jacks on the LAN Scout™ Jr. 2. Visually inspect an RJ plug before inserting it into the tester. 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.

## SYMBOLS ON TESTER

	Warning or Caution
	Always wear approved eye protection
	Do <b>NOT</b> use on energized circuits
	Read instructions
	<b>Conformité Européenne</b> - Conforms with European Economic Area directives
	This symbol indicates that equipment and its accessories shall be subject to a separate collection and correct disposal

## TESTER PORTS, BUTTONS &amp; DISPLAY

## TESTER (FIG. 1 &amp; FIG. 2)

FIG 1 - RJ45 shielded jack FIG 2 - Removable docked remote with Shielded RJ45 jack

## BUTTONS (FIG. 3)

Test Button **A** performs wire map test on RJ45 terminated cable.

Tone Button **B** transmits analog tones on conductor wires of RJ45 terminated cables. Button also cycles through available tone cadences and conductor wire selection options.

Power/Backlight Button **C** turns unit on or off, turns backlight on or off.



## DISPLAY (FIG. 4)

- 1 **Tone** icon illuminates when the tester is transmitting Lo or Hi or LoHi tone frequency – additionally the conductor wires being toned on will illuminate.
- 2 **Pass** icon illuminates if the cable is a properly wired 4-pair T568A/B data cable or crossover (uplink) cable.
- 3 **X-Over** illuminates when cable is correctly wired in the Crossover pattern (see details below).
- 4 **Shielded** illuminates when a data cable has a correctly assembled shield contact between the two terminated ends.
- 5 **Voltage Detected Warning:** If voltage is detected on the cable being tested, 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.
- 6 **Fail** icon illuminates if the cable is not wired to one of the cabling standards, and the appropriate fail mode icon(s) illuminates.
- 7 **Short** icon illuminates if there is a short on any two or more conductor wires, along with those pin numbers.
- 8 **Split** icon illuminates if the designated wire pairs are not terminated in the correct sequence.
- 9 **Open** icon illuminates when any of the conductor wires are not correctly terminated, along with that pin number.
- 10 **Battery Low** icon 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.
- 11 **Tester-End Wire Map:** The top line of the wiremap 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.
- 12 **Remote-End Wire Map:** The bottom line of the wiremap displays the corresponding pin on the remote-end. Dashed lines on the remote line indicate shorted pins. No pin numbers displayed on the remote line are open pairs.

FIG. 4



## CONTROL BUTTONS

Presses of less than about 1 second (short press) and more than 1 second (long press) are recognized differently:

1. Power / Back light button: Short press: First short press turns unit on. Press the power button second short press turns backlight on. Any repeat of short press turns backlight on or off. Long press (greater than 2 seconds) of power button turns unit off. “OFF” will display as unit is powering down.
2. Cable testing (short press): With the LAN Scout™ Jr. 2 on, short press of the test button initiates test. Loop mode, continuous test, is default setting. To turn off Loop Mode, long press the test button. \*\*
3. Toning: Starting with the LAN Scout™ Jr. 2 on, a short press of the test button will cause the LAN Scout™ Jr. 2 to tone in the low (Lo) frequency mode on the first conductor wire. A second short press will transmit the Lo tone on the second conductor wire. Repeated short presses will cycle through toning on each individual conductor wire, and then each mated pair and then all 8-conductor wires. The mode and wires toned on will be displayed.

A long press of the tone button will cycle the tone from the low frequency (Lo) to the high frequency (Hi) and to the warble cycle (Hi and Lo intermittently). In test mode, the LAN Scout™ Jr. 2 will automatically power off 10 minutes after last time test button is pressed. In tone mode, the tester will turn off automatically 60 minutes after the last button press or by exiting to mode select with a long press.

\*\*Loop Mode assists in testing for intermittent problems. A test occurs every 2 seconds with no need to press the test button. Loop Mode on is default. To turn Loop Mode off, long press the test button.

## OPERATING INSTRUCTIONS

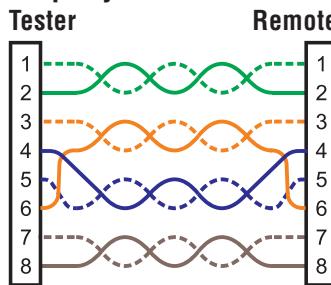
Testing continuity on terminated or installed RJ45 terminated cable (FIG 1 and 2):

1. Connect one end of the cable under test to the RJ45 shielded port located on the top of the main tester. If testing a wall port, connect a known good patch cable from the wall plate to the shielded RJ45 jack on the top of the main tester.
2. Connect the other end of the cable under test to the RJ45 shielded jack on the testing remote. If testing a wall port, connect a known good patch cable from the wall plate to the shielded RJ45 port on the testing remote.
3. Press the power button on the keypad to turn the tester on.
4. Press the test button on the keypad to begin the test.
5. Interpret the results of the testing using the wiring and display examples below.

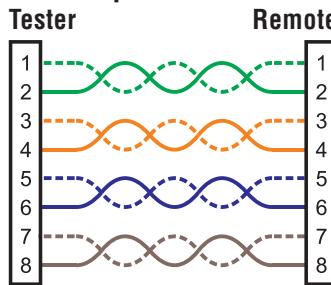
\*NOTE the remote can be removed or stored on tester during testing.

## WIRE MAP AND DISPLAY EXAMPLES

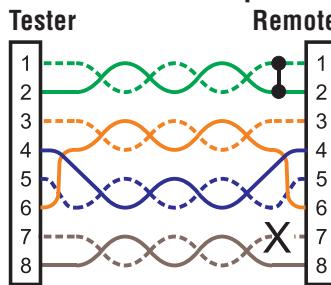
## Properly Wired T568A UTP:



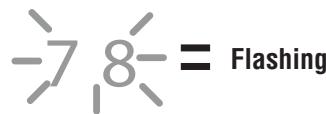
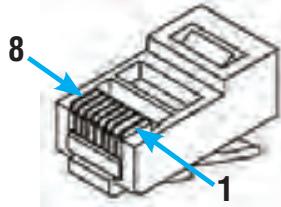
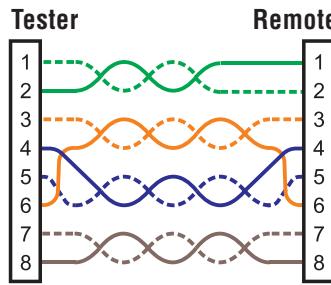
## T568A Split Pairs:



## T568A Short and Open:



## T568A Miswire:



**NOTE:** An open fault or short fault takes precedence over miswires when the appropriate icon(s) illuminates. The Split icon illuminates if the cable wiring does not maintain the designated pairs, an AC signal fault.

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.

*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 568a cable with a miswire: Pins 1 and 2 on the LAN Scout™ Jr. 2 are connected to pins 2 and 1 at the remote-end. The pins with this error are flashing.*

## TONING

### Tone Tracing on uninstalled RJ45 terminated cable:

1. Insert the RJ45 terminated end of the wire to be traced into the RJ45 shield port on the main tester body.
2. Press the power button on the keypad to turn the tester on.
3. Press the tone button on the keypad to begin toning. The tone will begin in the Lo mode on the conductor wire in position one on the connected RJ45 plug.
4. Short press the tone button to cycle through the conductor wires, 1 to 8 then mated pairs then to all eight conductor wires simultaneously.
5. Long press the tone button to cycle through Lo, Hi or warble (LoHi intermittently) tone frequencies.
6. Using an analog probe (Klein Tools VDV500-123 recommended, sold separately) to determine the wire or wires on which the tone is being transmitted (See Tone probe instruction manual for details.) Mark the cable with a label.
7. Repeat steps above for each unknown cable.

## Tone Tracing on installed RJ45 terminated cable:

1. Connect a known good patch cable from the wall plate to the shielded RJ45 jack on the top of the main tester.
2. Press the power button on the keypad to turn the tester on.
3. Press the tone button on the keypad to begin toning. The tone will begin in the Lo mode on the conductor wire in position one on the connected RJ45 plug.
4. Short press the tone button to cycle through the conductor wires, 1 to 8 then mated pairs then to all eight conductor wires simultaneously.
5. Long press the tone button to cycle through Lo, Hi or warble (LoHi intermittently) tone frequencies..
6. Use an analog probe (Klein Tools VDV500-123 recommended, sold separately) to determine the wire or wires on which the tone is being transmitted (See probe instruction manual for details). Mark the cable with a label.
7. Repeat steps above for each unknown cable.

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### BATTERY REPLACEMENT - FIG. 5

1. Remove single screw in the middle of the back cover of the LAN Scout™ Jr. 2 with a #2 Phillips head screwdriver. Remove battery door.
2. Remove and recycle exhausted AAA batteries.
3. Insert two fresh AAA batteries following proper orientation, as marked inside the battery compartment. (the spring contact is negative and the button contact is positive).
4. Replace battery door and screw, taking care not to over-tighten it.

**FIG. 5**



### 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. Please see [www.epa.gov](http://www.epa.gov) or [www.erecycle.org](http://www.erecycle.org) for additional information.