

INSTRUCTION MANUAL

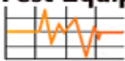
Toner-Pro Tone Generator

- TRACE INDIVIDUAL OR PAIRED WIRES*
- TEST RJ11, RJ12, AND RJ45 JACKS*
- DETECTS CONTINUITY AND POLARITY
- 5 DISTINCT TONES (3 CONSTANT, 2 ALTERNATING)
- EASY-TO-UNDERSTAND STATUS LEDs



* When used with VDV500-123 Probe-Pro

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**KLEIN
TOOLS**



GENERAL SPECIFICATIONS

The Klein Tools VDV500-063 Toner-Pro is a professional-series tone generator for wire identification, wire tracing and wire pair identification. It features several tone frequencies and strong power output for tracing wires.

- **Operating Altitude:** 6562 ft. (2000 m) maximum
- **Relative Humidity:** 10% – 90% non-condensing
- **Operating Temp:** 14° to 122°F (-10° to 50°C)
- **Storage Temp:** -4° to 140°F (-20° to 60°C)
- **Dimensions:** 2.5" x 5" x 1" (64 x 127 x 25 mm)
- **Weight:** 7.4 oz. (210 g) including batteries
- **Battery Type:** 4 x 1.5V AAA Alkaline
- **Battery Life: Active:** 120 hours
Standby/Storage: 3 years
- **Auto-Power Off:** After 60 minutes of inactivity
- **Tones: Constant:** 800Hz, 1000Hz, 1500Hz
Alternating: 800Hz/1000Hz, 1000Hz/1500Hz
- **Tone Power:** 8dBm
- **Continuity Indication:** Less than 10kΩ
- **Voltage Protection: Test Mode:** 60V
Tone Mode: 20V through external 600Ω

Specifications subject to change.

FEATURE DETAILS



FEATURE DETAILS



- T1** TEST MODE Indicator
- T2** "NRM" (Normal) Polarity Indicator
- T3** "REV" (Reverse) Polarity Indicator
- T4** "CONT" (Continuity) Indicator
- T5** TONE MODE Indicator
- T6** Tone Frequency Indicators
- T7** Tone Mode Down selector button
- T8** Tone Mode Up selector button
- T9** Power On/Off Button
- T10** TEST/TONE Button
- T11** Battery Status Indicator
- T12** Lanyard Slot
- T13** RJ11 Test Plug
- T14** ABN (Angled Bed-of-Nails) Test Clips
- T15** Battery Cover
- T16** Battery Cover Screw (#2 Phillips)

⚠ WARNINGS

To ensure safe operations and service of the instruments, follow these instructions. Failure to observe these warnings can result in fire, electric shock, severe injury or death.

- The Toner-Pro and Probe-Pro (sold separately) are designed for use on extra-low voltage cabling systems (less than 60 volts) for testing when **NOT** energized.
- The maximum voltage across ABN Test Clips of the Toner-Pro is 60 volts in Test mode, and 20 volts in Continuity mode. Connecting the Probe-Pro to live mains AC power may damage it and pose a safety hazard for the user.
- **DO NOT** use instruments if they are wet, as it could pose a shock hazard.
- **DO NOT** use instruments if they are damaged in any way.
- Turn off instruments and disconnect all ABN Test Clips before attempting to replace batteries.
- The battery door must be in place and secure before you operate the instrument.
- **DO NOT** open the case, other than the battery compartment.

OPERATING INSTRUCTIONS

READ ALL INSTRUCTIONS BEFORE OPERATING AND RETAIN INSTRUCTIONS FOR FUTURE REFERENCE

CONTINUITY TEST

The Toner-Pro transmits frequencies on non-energized wires only. When the Toner-Pro is turned on, a continuity test will be performed to determine if the 2 wires to be traced are in close proximity to each other, without a conductive path between them. The "CONT" Indicator **T4** will illuminate green to indicate pass. Attach the red and black ABN Test Clips **T14** to the wires to be tested. If the resistance of the circuit is less than 10kΩ, the "CONT" Indicator **T4** will illuminate red and no toning can occur. If the "CONT" Indicator is illuminated green, a tone can be generated and you may proceed.

SELECTING TONE FREQUENCY

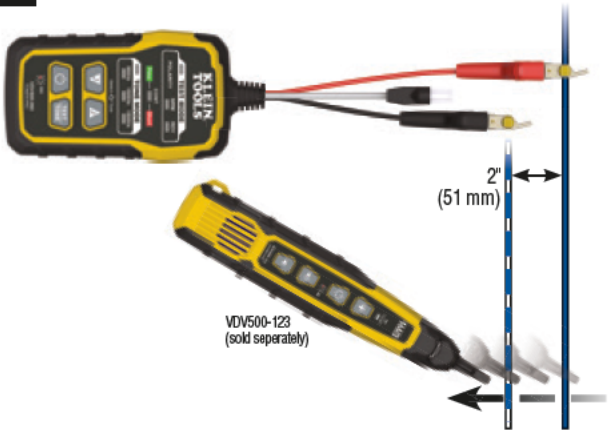
The Toner-Pro defaults to the 800Hz frequency setting when powered on. Use the Tone Mode Up **T8** and Tone Mode Down **T7** selector buttons to change the frequency. The Tone Frequency Indicators **T6** will display the frequency being transmitted. If an alternating tone is selected, the two respective Tone Frequency Indicators **T6** will blink. Tones will cycle through the available frequencies in a continuous loop when a selector button is pressed repeatedly.

TRACING PAIRED WIRES (FIG. 1)

1. Connect the Toner-Pro's red ABN Test Clip **T14** to one of the wires of the pair to be traced. Connect the black ABN Test Clip **T14** to the other wire to be traced.
2. Turn Toner-Pro on by pressing the Power On/Off button **T9**.
3. Check the "CONT" Indicator **T4**. If illuminated green, you may proceed.
4. Select the preferred tone setting using the Tone Mode Up **T8** and/or Tone Mode Down **T7** selector buttons.
5. Turn on the Probe-Pro (sold separately).
6. At the far end of the cable, spread the wires apart at least 2' (51 mm), if possible.
7. Use the Probe-Pro (sold separately) to scan the cable's wire pairs. Move the Probe-Pro's tip slowly across the wires. The Probe-Pro's volume will increase as it approaches the toned pair. When the Probe-Pro's volume is high over the first wire, low in the middle (between) the two wires, and high over the second wire, you have located the pair of wires you are tracing. Use the Volume Increase and Volume Decrease buttons to adjust the volume.

OPERATING INSTRUCTIONS

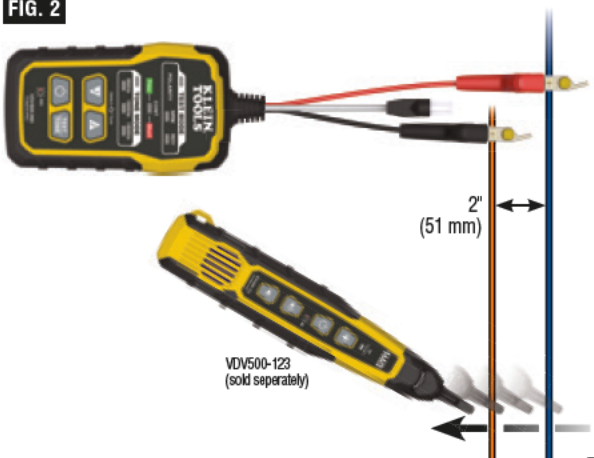
FIG. 1



TRACING NON-PAIRED WIRES (FIG. 2)

1. Connect the Toner-Pro's red ABN Test Clip (T14) to the wire to be traced.
2. Connect the black ABN Test Clip (T14) to another wire in the cable, but preferably not in the same pair (connect to ground, if available). When tracing a shielded cable, connect the red ABN Test Clip to the outer shield, and the black ABN Test Clip to the center conductor or ground.
3. Turn Toner-Pro on by pressing the Power On/Off button (T9).
4. Check the "CONT" Indicator (T4). If illuminated green, you may proceed.
5. Turn on the Probe-Pro (sold separately).
6. Select the preferred tone setting using the Tone Mode Up (T8) or Tone Mode Down (T7) selector buttons.
7. At the far end of the cable, spread the wires at least 2" (51 mm) apart, if possible.
8. Use the Probe-Pro (sold separately) to scan the cable's wire pairs. Move the Probe-Pro's tip slowly across the wires. The Probe-Pro's volume will increase as it approaches the toned wire.

FIG. 2



OPERATING INSTRUCTIONS

RJ11 / RJ12 / RJ45 TESTING

The Toner-Pro has an RJ11 Test Plug **(T8)** that can be used in place of the ABN clips to transmit the tone. The RJ11 plug works with RJ11, RJ12, or RJ45 jacks. The red and black ABN contacts are replaced by the 2 center conductors of the inserted plug, i.e. pins 2 and 3 for RJ11, pins 3 and 4 for RJ12, and pins 4 and 5 for RJ45.

Use the Probe-Pro (sold separately) to locate the toned wires at the far end of the cable, as described in the TRACING PAIRED WIRES section.

POLARITY AND VOLTAGE PRESENCE TESTING

The Toner-Pro may be used to test the polarity and type of voltage present.

1. Press the Power On/Off button **(T9)** on the Toner-Pro.
2. Press the TEST/TONE Select button **(T10)**. The 'TEST MODE' indicator **(T11)** will illuminate.
3. Connect the ABN Test Clips **(T14)**, or insert the RJ11 Test Plug **(T8)**.
4. Check the "CONT" Indicator **(T14)**. If illuminated green, you may proceed.
5. The 'NRM' (Normal) Polarity Indicator **(T12)** will illuminate if the red ABN Test Clip **(T14)** is connected to the POTS (Plain Ol' Telephone Service) in the proper orientation. The 'REV' (Reverse) Polarity Indicator **(T13)** will illuminate if the wires are reversed.
 - The 'NRM' (Normal) Polarity Indicator **(T12)** will illuminate when the black ABN Test Clip detects higher voltage than the red ABN Test Clip.
 - The 'REV' (Reverse) Polarity Indicator **(T13)** will illuminate when the red ABN Test Clip detects higher voltage than the black ABN Test Clip.
 - The 'NRM' (Normal) Polarity Indicator and 'REV' (Reverse) Polarity Indicator will both illuminate when AC voltage is present.
 - When the RJ11 Test Plug is used, the "NRM" (Normal) Polarity Indicator will illuminate on a correctly wired and powered POTS (Plain Ol' Telephone Service) phone jack.

NOTE: The POTS (Plain Ol' Telephone Service) color code convention (black/positive, red/negative) is the opposite of the multimeter color code convention (red/positive, black/negative).

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MAINTENANCE

BATTERY REPLACEMENT

When the Low Battery Indicator  blinks, the batteries must be replaced.

1. Turn off instrument(s) before attempting to replace batteries.
2. Loosen screw , on battery cover .
3. Remove and properly dispose of four 1.5V AAA batteries.
4. Install new batteries (note proper polarity).
5. Replace battery cover and fasten securely with screw.

 **To avoid risk of electric shock, do not operate while battery door is removed.**

CLEANING

Be sure equipment is turned off and wipe with a clean, dry lint-free cloth. **Do not use abrasive cleaners or solvents.**

STORAGE

Remove the batteries when equipment 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 GENERAL SPECIFICATIONS section, allow the equipment to return to normal operating conditions before using.

WARRANTY

DISPOSAL / RECYCLE

See Product Manual



Do not place equipment and its accessories in the trash. Items must be properly disposed of in accordance with local regulations. Please see www.epa.gov or www.ecycle.org for additional information.

See Product Manual

