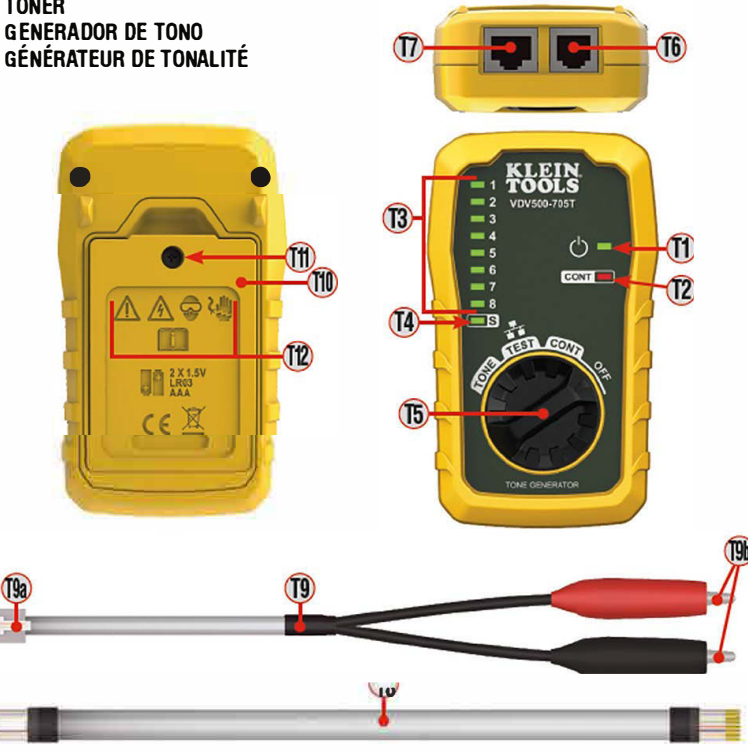


Tone & Probe Test & Trace Kit Instructions VDV500-705
Instrucciones del kit de prueba y rastreo Tone & Probe
Instructions pour l'ensemble de générateur et de sonde
Tone & Probe

FEATURE DETAILS / DETALLES DE LAS CARACTERÍSTICAS /
CARACTÉRISTIQUES DÉTAILLÉES

TONER
GENERADOR DE TONO
GÉNÉRATEUR DE TONALITÉ



PROBE
SONDA
SONDE DE TONALITÉ



FIG. 1

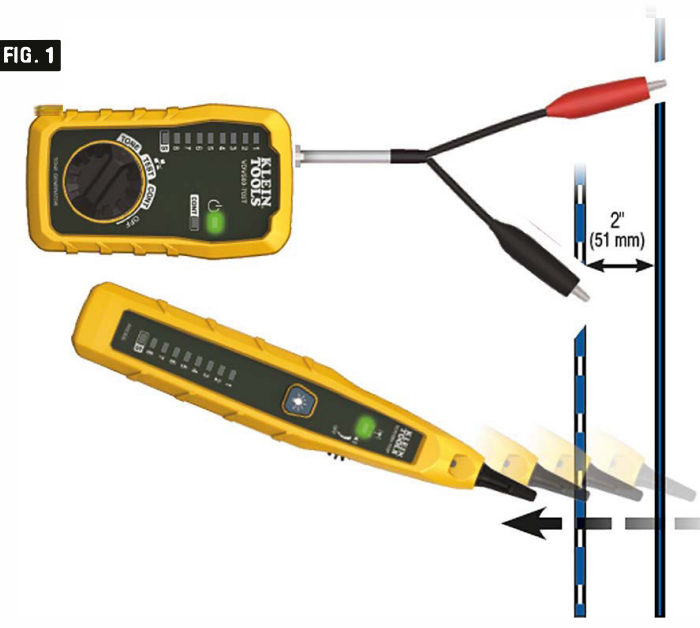


FIG. 2

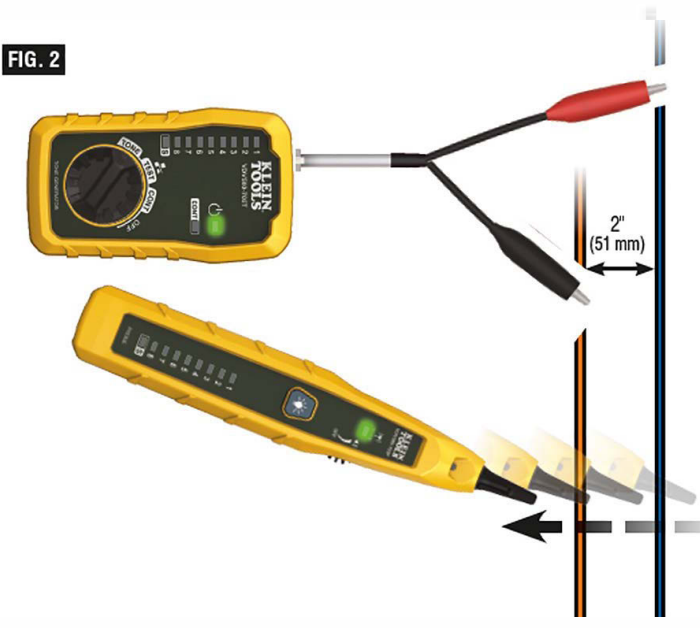


FIG. 3



FIG. 4



ENGLISH

GENERAL SPECIFICATIONS - TONER

The Klein Tools VDV500-705T Toner is a tone generator for wire identification, wiretracing and wire pair identification. It features a tone with a strong power output for tracing wires.
Operating Altitude: 6562 ft. (2000 m) maximum
Relative Humidity: 10% - 90% non-condensing
Operating Temp: 14° to 140°F (-10° to 60°C)
Storage Temp: -4° to 122°F (-20° to 50°C)
Dimensions: 2.51" x 4.33" x 1.24" (64 x 110 x 31 mm)
Weight: 4.0 oz. (113g) including batteries
Battery Type: 2 x 1.5V AAA
Battery Life: Active: 60 hours Standby/Storage: 3 years
Auto-Power Off: After 10 minutes of inactivity
Tone Power: 8dBm
Continuity Indication: Less than 10kΩ
Voltage Protection: Test Mode: 60V Tone Mode: 1000 Hz - 2000 Hz
NOTE: The maximum voltage across Alligator Clips of the Toner is 60 volts in Test mode, and 20 volts in Continuity mode. Connecting the Toner to live mains AC power may damage it and pose a safety hazard for the user.
Specifications subject to change.

GENERAL SPECIFICATIONS - PROBE

The Klein Tools VDV500-705P Probe is a tone tracer, featuring an inductive probe, a speaker for an audible output, a headphone jack for use in noisy environments, and a worklight for use in dark spaces.
Operating Altitude: 6562 ft. (2000 m) maximum
Relative Humidity: 10% - 90% non-condensing
Operating Temp: 14° to 140°F (-10° to 60°C)
Storage Temp: -4° to 140°F (-20° to 60°C)
Dimensions: 1.46" x 7.98" x 1.07" (37 x 203 x 27 mm)
Weight: 3.5 oz. (99 g) including batteries
Maximum Volume: 90 dB
Battery Type: 2 x 1.5V AAA Alkaline
Battery Life: Active: 18 hours Standby/Storage: 3 years
Auto-Power Off: After 10 minutes of inactivity
Specifications subject to change.

FEATURE DETAILS - TONER

- T1 Power Indicator
- T2 "CONT" (Continuity) Indicator
- T3 Wire Map / Pinout Indicators
- T4 Shield Indicator
- T5 Function Selector Switch
- T6 RJ12 Port
- T7 RJ45 Port
- T8 RJ45 Cable
- T9 RJ12-To-Alligator Clip Cable
- T9a RJ12 Plug
- T9b Alligator Clips
- T10 Battery Cover
- T11 Battery Cover Screw
- T12 Warning Symbols

FEATURE DETAILS - PROBE

- P1 Non-Metallic Conductive Tip
- P2 Worklight
- P3 Power Indicator
- P4 Power/Volume Control Dial
- P5 Worklight On/Off Button
- P6 Wire Map / Pinout Indicators
- P7 Shield Indicator
- P8 Headphone Jack
- P9 RJ45 Port
- P10 Battery Cover
- P11 Battery Cover Screw
- P12 Warning Symbols
- P13 Speaker

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 and Probe are designed for use on cabling systems for testing when NOT energized.
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 Alligator Clips and RJ11/RJ45 connectors 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.

WARNING SYMBOLS ON INSTRUMENTS

- Warning or caution
- Do not use on live electrical circuits
- Warning - Risk of electric shock
- Read instructions before using
- Wear approved eye protection

OPERATING INSTRUCTIONS

READ ALL INSTRUCTIONS BEFORE OPERATING AND RETAIN INSTRUCTIONS FOR FUTURE REFERENCE.

This tone and probe test kit traces non-energized wires. The toner transmits on non-energized wires using the 3rd and 4th contacts of the RJ12 terminal jack or the 4th and 5th contacts of the RJ45 terminal jack. Included with this kit are an RJ12-to-alligator clips test wire to use on unterminated wires or coaxial cable, as well as an RJ45 terminated jumper. These are to be used as an interface with the cable to be traced, if required. The probe is used to locate the toned wire at the far end of the cable. See below for specific details.

CONTINUITY TEST

The Toner transmits frequencies on non-energized wires only. Connect the cable to be tested to or, if necessary, connect the Alligator Clip Cable (T9) to the Toner, then attach the Alligator Clips (T9b) to the wires to be tested. If the resistance of the circuit is less than 10kΩ, the "CONT" indicator (T2) will illuminate red and no toning can occur. If there is continuity on the cables to be tested, toning cannot be performed.

OPERATING INSTRUCTIONS

TRACING PAIRED WIRES (FIG. 1)

1. Connect the cable to be tested to the Toner, or, if necessary, connect the Alligator Clip Cable (T9) to the Toner, then attach the red Alligator Clip (T9b) to one of the wires in the pair to be traced. Connect the black Alligator Clip (T9b) to the other wire in the pair to be traced.
2. Perform Continuity Test as described previously to verify the wire path is open for toning.
3. Turn the Function Selector Switch (T5) to "TONE" to initiate toning.
4. At the far end of the wire pair to be traced, spread the wires apart at least 2" (51 mm), if possible.
5. Turn on the Probe by rotating the Power/Volume Control Dial (P4) counterclockwise, to desired volume.
6. Use the Probe to scan the cable's wire pairs. Move the Probe's tip (P1) slowly across the wires. The Probe's volume will increase as it approaches the toned pair. When the Probe'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.

TRACING NON-PAIRED WIRES (FIG. 2)

1. Connect the cable to be tested to the Toner, or, if necessary, connect the Alligator Clip Cable (T9) to the Toner, then attach the red Alligator Clip (T9b) to the wires to be traced.
2. Connect the black Alligator Clip (T9b) 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 Alligator Clip to the outer shield, and the black Alligator Clip to the center conductor or ground.
3. Perform Continuity Test as described previously to verify the wire path is open for toning.
4. Turn the Function Selector Switch (T5) to "TONE" to initiate toning.
5. At the far end of the cable, spread the wires apart at least 2" (51 mm), if possible.
6. Turn on the Probe by rotating the Power/Volume Control Dial (P4) counterclockwise, to desired volume.
7. Use the Probe to scan the cable's wires. Move the Probe's tip (P1) slowly across the wires. The Probe's volume will increase as it approaches the toned wire.

RJ45 TERMINATED DATA CABLE WIRE MAP TESTING (FIG. 3)

1. Insert one end of the data cable to be tested into the Toner's RJ45 port (T7).
2. Insert opposite end of cable into the Probe's RJ45 port (P9).
3. Turn the Toner's Function Selector Switch (T5) to "TEST".
4. A wire pin-to-pin map will be displayed on both the Toner and the Probe. The Toner's Wire Map Pinout Indicators (T3) will slowly blink in order, 1 through 8, to indicate which pin on the Toner end of the cable is being mapped. Simultaneously, The Probe's Wire Map Pinout Indicators (P6) will illuminate to indicate which pin on the Probe end of the cable is connected to the actively indicated pinout on the Toner end (for example, if pin 3 on the Toner end of the cable is connected to pin 6 on the Probe end of the cable, when the Toner's #3 Pinout Indicator illuminates, the Probe's #6 Pinout Indicator will illuminate).
5. If the cable being mapped is terminated in T568A, T568B, or Straight-Through wiring, the Probe's Wire Map Pinout Indicators (P6) will illuminate 1 through 8, in the order of contact pin termination, in unison with the Toner's Indicators.
6. The test will be repeated until one (or both) end(s) of the cable is/are disconnected, or until the Toner's Function Selector Switch (T5) is rotated out of the "TEST" setting.

USING THE PROBE'S WORKLIGHT

The Probe has a worklight (P2) to aid in illuminating dark or low-light work areas. Press the Worklight On/Off button for less than one second (P5) to turn the light on and off.

AUTO-POWER OFF

Auto-power off will occur after 10 minutes of activity.

APPLICATION HINTS

- When tracing wires terminated to a terminal block such as a "66 block", attaching both generator leads to the cable or pair tends to contain the signal within the cable pair. This causes cancellation of the radiated signal. The tracer must nearly touch the end of the cable to detect the signal, which is helpful when the wires are close together or when terminated.
- Connecting one generator lead to a wire is normally sufficient to trace the cable. The more wires in a cable connected in parallel to the generator, the stronger the radiated signal.
- When necessary to maximize radiated signal, connect one lead of the generator to the wire or cable and the other end to ground, such as electric box, metallic water pipe or ground rod.
- Connect the generator to the ungrounded shield of a coax cable for the strongest signal. If the generator is connected to the center lead the shield will do its job and shield the signal from being radiated.

BATTERY REPLACEMENT (FIG. 4)

1. Turn off instrument(s) before attempting to replace batteries.
2. Loosen screw (T11, P11) on battery cover (T10, P10).
3. Remove and properly dispose of two 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 instrument is turned off and wipe with a clean, dry lint-free 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 GENERAL SPECIFICATIONS section, allow the equipment to return to normal operating conditions before using.

WARRANTY

www.kleintools.com/warranty

DISPOSAL / RECYCLE

- 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.