

# UT682D Tone and Probe Instruction Manual

## 1. Introduction

UT682D provides a simple way to help you quickly trace and identify cables, wires and wire pairs. You connect the toner to a line, then trace and follow the signal with the probe. The toner can also be used to test continuity and check polarity on telephone lines. With proper use, this tester will provide many years of reliable service.

## 2. Safety information

The following symbols are used either on the test set or in the manual:

	WARNING: Risk of personal injury or risk of damage or destruction to equipment. See the manual for details.
	Caution, risk of electric shock
	Equipment protected throughout by double insulation or reinforced insulation.
	Read the manual before using.
	Do not put circuit boards in the garbage. Dispose of circuit boards in accordance with local regulations.
	Complies with European Union standards

## 3. Warning

The manual includes the attention and safety rules that must be followed for the safety of the instrument. Please read carefully before using it and understand its contents.

- Do not put the instrument in dusty, high temperature or humid environments.
- The toner and probe are powered by 9V battery. Do not use other batteries to power the instrument.
- Take out the battery when the instrument is not used for a long time.
- The maximum voltage allowed across the test leads is 60V DC in toner and polarity modes.
- Do not connect to circuits carrying AC voltage in toner or polarity modes.
- Do not connect to circuits carrying AC or DC voltage in continuity mode.
- Do not touch the metal test lead tips when making connections.
- Do not use this instrument in thunderstorm conditions.

## 4. Structure

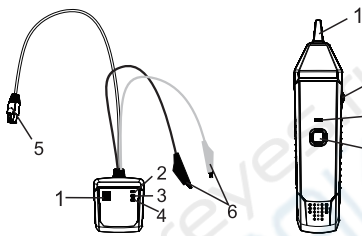


Figure 1. Toner and Probe

### Toner

1	TONE/POWER/CONTINUITY switch
2	TONE LED
3	POWER LED
4	CONTINUITY LED
5	Modular connector (RJ11 plug)
6	Test leads

### Probe

1	Signal probe
2	Volume/Sensitivity slider
3	POWER LED
4	Test button

## 5. Packaging list

- Toner ----- 1 pc
- Probe ----- 1 pc
- 9V Battery----- 2 pcs
- Manual----- 1 pc

## 6. Tracing cables (see Figure 2)

**WARNING:** Never connect to AC voltage. Do not connect to DC voltage in excess of 60 volts.

- Put the function switch on the TONE position. TONE and POWER LEDs will turn on.
- Connect the red test lead to one wire of a cable and connect the black lead to ground. If the cable is shielded, connect the red lead to the shield.
- Point the signal probe to the wire, then press the test button. The POWER LED on probe will turn on.
- Adjust the volume slider on the probe to identify and trace the wire.
- The voice from probe will be the loudest when the probe is at the wire connected to the toner.

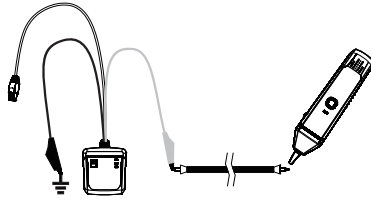


Figure 2. Tracing cables

## 7. Tracing pairs (see Figure 3)

**WARNING:** Never connect to AC voltage. Do not connect to DC voltage in excess of 60 volts.

- Put the function switch on the TONE position. TONE and POWER LEDs will turn on.
- Connect the red test lead to one wire and the black lead to the other wire of the pair being traced.
- Point the signal probe to the wires, then press the test button. The POWER LED on probe will turn on.
- Adjust the volume slider on the probe to identify and trace the wires.
- The voice from probe will be the loudest when the probe is at the wire connected to the toner.

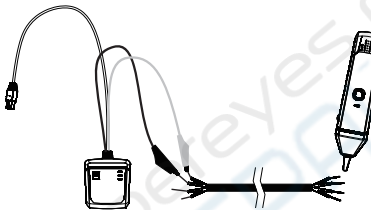


Figure 3. Tracing pairs

## 8. Indicating line conditions (Checking polarity)(see Figure 4)

- Put the function switch on the POWER position.
- Connect the red test lead to one wire and the black test lead to the other wire of the telephone line being tested.
- If the CONTINUITY LED turns green, it indicates a normal working line with correct polarity.
- If the TONE LED turns red, it indicates the reversed polarity.
- If the CONTINUITY LED turns dark green, it indicates off-hook or a faulty line in correct polarity.
- If the TONE LED turns dark red, it indicates off-hook or faulty line in reversed polarity.
- If the CONTINUITY or TONE LED is flickering, it indicates in ringing condition.

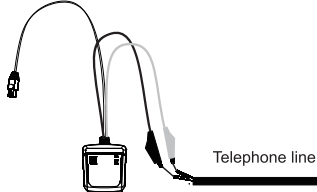


Figure 4. Indicating line conditions

## 9. Continuity test (see Figure 5)

**WARNING:** Do not connect to circuits carrying AC or DC voltage in continuity test mode to avoid damage to the toner.

- Connect the test leads to the wire or device being tested.
- Put the function switch on the CONTINUITY position.
- The CONTINUITY LED will be turn on if there is an electrical path between the connection points. The tester indicates continuity up to approximately 10kΩ. The LED will be brighter on low resistance and less bright on high resistance.

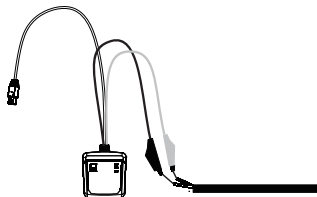


Figure 5. Continuity test

## 10. Supplying talk power

- Insert the RJ11 plug to the corresponding telephone interface.
- Put the function switch on the CONTINUITY position to supply talk power.

## 11. Using RJ11 modular plug

The toner has an RJ11 phone plug, which you can use instead of the clip test leads when the pair of wires you are testing is terminated with an RJ11 jack. You can use the RJ11 plug in any of the unit's operating modes.

## 12. Product specifications

### A. General specifications

Toner	Output power	10mW (into 600Ω)
	Output frequency	Alternating 1.25/1.4kHz; Warble rate: 6Hz
	Output voltage in continuity mode	8VDC with a new battery
	Over voltage protection	60VDC
	Battery	9VDC
	Low battery indication	Around 7V
	Operating temperature	0°C~40°C
	Storage temperature	-10°C~50°C
Probe	Dimensions	74*68*28mm
	Weight	150g
	Input impedance	>100MΩ
	Battery	9VDC
	Low battery indication	Around 7V
	Operating temperature	0°C~40°C
	Storage temperature	-10°C~50°C
	Dimensions	208*47*33mm
Weight	130g	

### B. Certification

The device conforms to CE standards: EN61326-1 : 2013, EN61326-2-2 : 2013.

## 13. Maintenance

### A. General maintenance

- Keep the tester dry. If it gets wet, wipe it off.
- Clean the case with a dry cloth. Do not use chemicals, detergents or solvents.
- Use and store the tester in normal temperatures.
- Handle the tester with care. Dropping it can damage the electronic parts or the case.
- Take out the battery when the instrument is not used for a long time.
- The maintenance and service must be implemented by qualified professionals or designated maintenance departments.

### B. Battery installation and replacement

**WARNING:** To avoid electrical shock, turn the unit off and disconnect its leads from any circuit before opening the battery door.

- Turn the unit off
- Open the battery door
- Install or replace the 9V battery (observe polarity)
- Close the battery door