

## Standard VOPs

Cable types are twisted pair unless noted otherwise.

VOP	Cable/Wire Type
72	PIC 19 AWG
67	PIC 22 AWG
66	PIC 24 AWG (default)
64	PIC 26 AWG
67	Gel Filled 19 AWG
64	Gel Filled 22 AWG
62	Gel Filled 24 AWG
60	Gel Filled 26 AWG
68	Paper 22 AWG
66	Paper 24 AWG
65	Paper 26 AWG
67	Inside Wire, CAT 5
80	Coax, RG59
81	Coax, RG6

To set the VOP, turn on the TS100 while holding down the **UP** or **DOWN** button. Press **UP** or **DOWN** while **-VV-** is displayed; then use **UP/DOWN** to adjust the value. Turn off the tester to exit VOP adjustment mode.

See the Users Guide for instructions on determining a cable's actual VOP value.

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**TS<sup>®</sup>100**  
Users Card

### Warning

**DO NOT USE** the TS100 to test cables that may have hazardous voltage present. The TS100 indicates high ac voltage by flashing 8.8.8.8. but will not detect DC voltages.

Always handle the test clips and cables by their insulation, **NEVER** by the conductive material.

To avoid electrical shock, verify that nothing is connected to the test clips before removing the battery door.

**Batteries:** Open the battery door on the back of the test set by pushing the latch toward the top. Insert the 4 AA batteries (included), observing correct polarity. Replace the battery door making sure the latch snaps shut.

**Line cord:** Connect the line cord (test leads) to the TS100 by inserting the BNC connector and twisting clockwise 1/4 turn.

### Note

*The only line cord compatible with the TS100 is the cord supplied with the tester. If the wrong line cord is used, the display shows - - - -.*

## Caution

Use the TS100 only on dry (non-working) circuits. If you connect the TS100 to a working ADSL or hi-cap circuit, it will cause an outage.

**Terminations:** Devices connected to the wires under test (such as telephone sets, fax machines, or modems) may cause the TS100 to display **-ERR**.

**Turning on the TS100:** Press the ON/STANDBY button. The display shows **8.8.8.8** during the self test.

**Tone:** The TS100 has a patented PowerTone™ Positive ID tone circuit. When the TS100 is connected to a wire pair, it automatically injects an identification tone that is compatible with most tone receivers. The tone has five different frequency cadence options.

To change the frequency cadence, momentarily short then open the far end of the wire pair under test.

**Locating Faults:** The TS100 displays the distance to the closest fault (short or open) on the wire pair. If there is no fault, the TS100 displays the distance to the end of the pair.

The default Velocity of Propagation (VOP) of 66 is usually sufficient to find the fault. For greater accuracy, set the tester's VOP per the Users Guide or this card.

**Opens:** The TS100 displays the distance to the first open it detects. If the wire pair has no fault, the TS100 displays the distance to the end of the pair.

**Shorts:** If there are one or more shorts on the pair, the TS100 displays the distance to the closest short. The TS100 buzzes when it detects a short.

**Bridged Taps:** If a fault exists before a bridged tap, the TS100 displays the distance to the fault. If there is no fault, the TS100 usually displays the distance to the end of one of the branches. Under certain conditions, the TS100 displays the distance to the bridged tap.

**Load Coils:** Like other Time Domain Reflectometers (TDRs), the TS100 cannot test past a load coil. It shows a coil as an **OPEN**.

**Out-of-Range:** If the conductors are too long to measure, the TS100 displays **-ERR**.