
probes

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introduction

A probe is a link. It is a device connected between a test instrument (usually a scope or v.t.v.m.) and a radio or TV set being repaired. The simplest type of probe can be nothing more than just a pair of test leads. Alternatively, it can be complicated to the extent that a complete detecting and amplifying system will be inside the probe housing. Although most probes are characterized by the use of few components and elementary circuit structure, yet the work they must perform is out of all proportion to their size. Because a piece of test equipment, such as a probe, is small or inexpensive, does not mean that it is unimportant or unnecessary. The finest v.t.v.m. or scope is limited by the kind of probe you use with such equipment and by your own knowledge of probes.

Regardless of the particular probe you use at any time, a probe has one job and one job only. A probe is supposed to bring the voltage or waveshape being measured or examined out of the receiver and into the test instrument. In effect, what you are doing is getting the voltage or waveshape that interests you out of the defective receiver and into the open where it can be more easily inspected.

There are a few requirements that are imposed on the probe. It must not load the circuit being checked. It should not reduce the voltage at the point under test. A probe can be used to measure a voltage, in which case the voltage must remain the same at the point being tested, with or without the probe connection. If a probe is used for waveshape analysis, it must pick up that waveshape and transfer it to your scope without making any change in the shape of that wave. And finally, since probes are used for making dynamic tests (that is, with the radio or TV set turned on and working) the probe must do nothing to disturb the set.

The number of probes you will need for your servicing work

will depend entirely upon you. Obviously, the ideal arrangement is to have a probe for each specific function. Although probes are comparatively inexpensive you can build your own if you wish, buy individual probes as you need them or else get a complete probe set. Again this is a matter for personal choice.

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