

067-0178-00 Instructions

The 067-0178-00 calibration fixture is designed for use with the P6500 Series Spring Contact Probes. The fixture contains a 50-Ω (± 0.5%) termination and provides a ground connection which simulates the optimum grounding configuration in a bed-of-nails fixture for a clean high-frequency response.

The cal fixture's voltage rating is 2.5 Vdc, 3.5 V<sub>p-p</sub> ac. Low duty factor pulses may exceed the 2.5-V rating (up to 40 volts maximum). Use the formula:  $V_{peak} = 2.5/\sqrt{\text{duty factor}}$ . (Duty factor = repetition rate x pulse duration.)

The 067-0178-00 may be assembled in any of three different configurations, each designed for its own application:

- 1) Testing either the P6511 or P6513.
- 2) Testing either the P6515 or P6517.
- 3) Testing any of the P6500 probe family after installation in a bed-of-nails test fixture.

Detailed instructions for use of the cal fixture can be found in the instruction manuals for the probes. This instruction sheet covers how to convert the fixture from one configuration to another.

The test fixture is shipped configured for testing the P6511 and P6513 probes. (See Figure 1.)

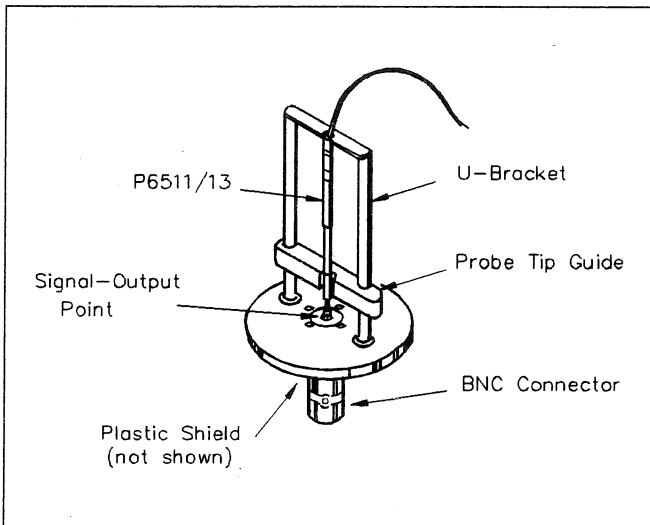


Figure 1. P6511/P6513 configuration.

To convert the fixture for use with the P6515 or P6517, it is necessary to first remove the U-shaped bracket. Unscrew the hex nut holding the plastic shield on the BNC connector. After the plastic shield is removed, two small hex nuts which hold the U-bracket to the circuit board will be accessible. Remove the two nuts and the bracket. To accommodate the longer probe-head of the P6515 and P6517, the two spacers (included with the fixture) must be added. They simply screw onto the bracket legs. The bracket and the plastic shield should then be reinstalled. (See Figure 2.)

In their standard configurations the P6515 and P6517 each have a spring tip attached to the probe head by a flexible lead. This lead and tip must be replaced by the rigid tip extension assembly (supplied with this cal fixture) before installing the probe head in the fixture. (See Figure 2.)

**NOTE:**

Additional spring tips may be made using the extra spring-loaded contact tips that are shipped with the probes and a stiff 23 AWG (22.6 mil), 0.900-inch long wire. Solder one end of the wire into the solder cup of the contact tip receptacle. The other end of the wire **MUST** be rounded off using a fine file or emery paper.

**CAUTION**

If the end of the wire is not rounded off, damage will result when it is inserted in the probe head socket.

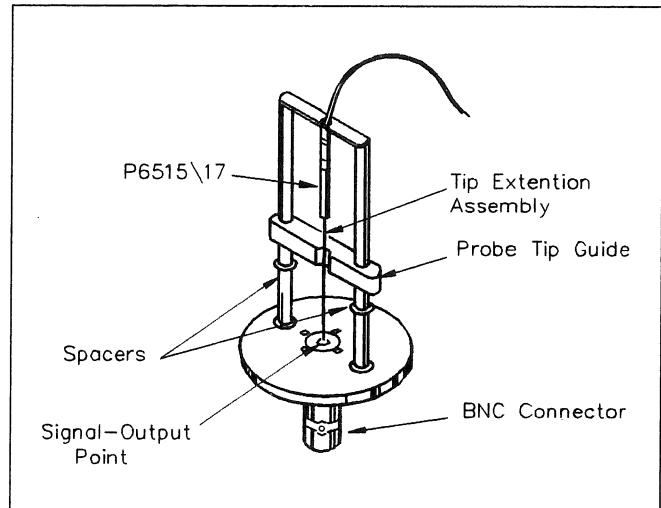


Figure 2. P6515/P6517 configuration.

To configure the cal fixture for after-installation testing of P6500 Series probes, merely remove the U-bracket using the procedure described above. The plastic shield should be re-installed to protect the termination after removing the bracket. (See Figure 3.)

The cal fixture may now be used to apply a terminated signal to an installed probe. The large circular ground plane on the fixture should be used to make ground contact with nearby probe ground pins.

**CAUTION**

Care should be taken to avoid touching the exposed ground plane on the cal fixture to any points on the bed-of-nails fixture that should not be grounded.

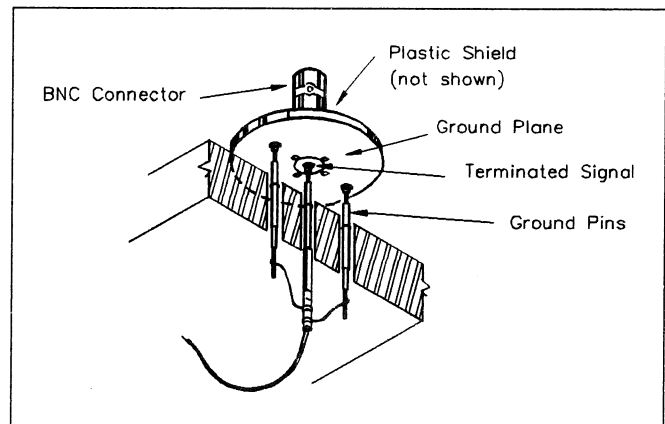


Figure 3. After-Installation testing.

