HP 66311A Installation and Operation Checklist

Check the Output Compensation

As shipped from the factory, the output compensation of the dc source is set to Low Mode. This lets the unit operate with phones having input capacitances from 0 to 12000 μF.

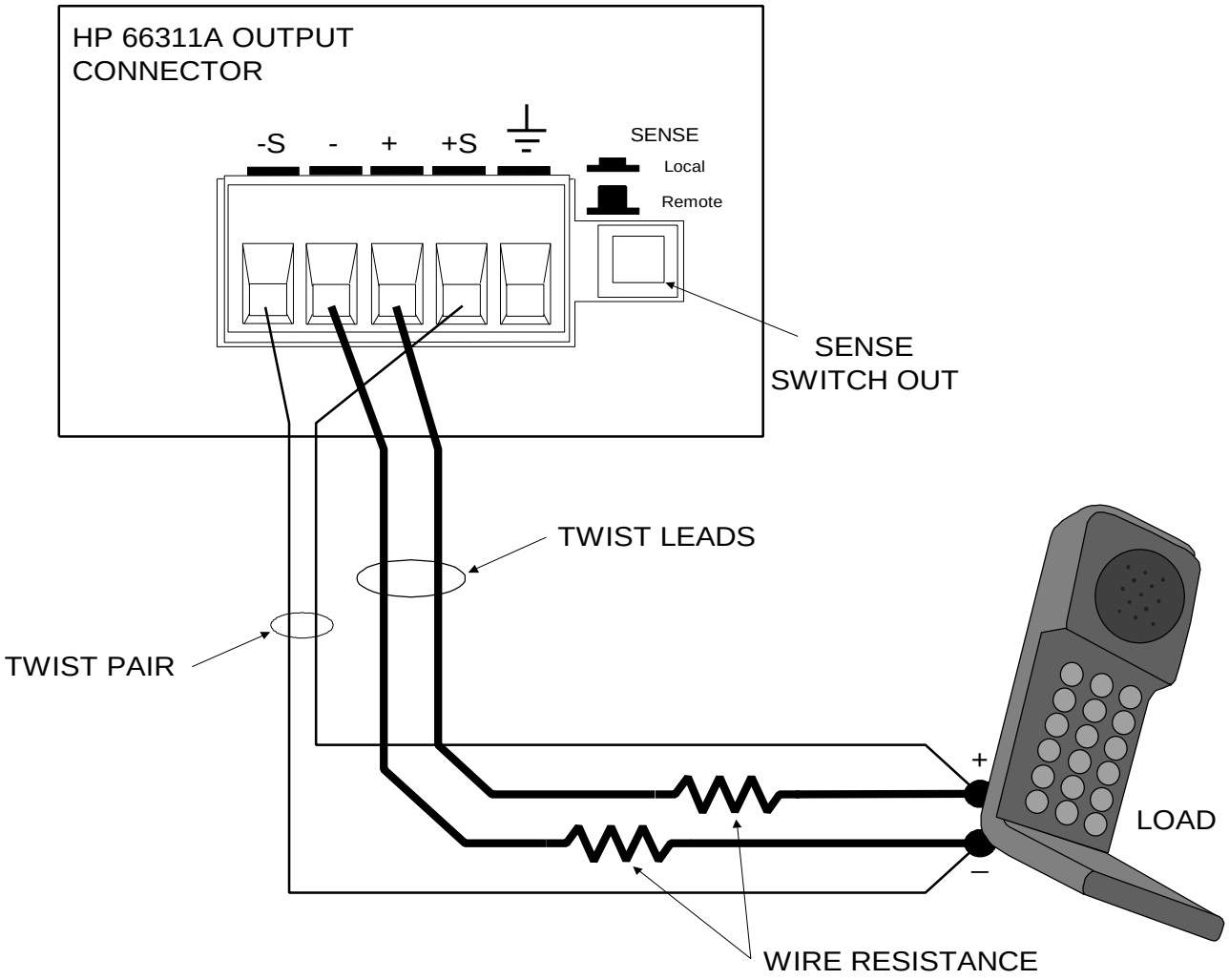
For improved transient response in your test system, you may want to set the output compensation to High Mode (for phones having input capacitances from 5 to 12000 μF).

To check the output compensation, press the Output key. Press ▼ to access the TYPE:CAP command. If necessary, press ↓ to select either HIGH or LOW, then press Enter.

Check the Phone Connections

1. If you are remote sensing, is the sense switch on the back of the dc source in the remote position? Push the switch out for remote sensing.

The following figure illustrates remote sensing connections and the location of the sense switch.



2. Is the resistance of the load leads, sense leads, and any external relays less than 2 ohms per lead (or per side) between the dc source and the phone contacts? Check the resistance of the lead path.

Temporarily unplug the output connector from the dc source and use an ohmmeter to check the lead resistance. High resistance results in poor output voltage regulation.

3. If you are remote sensing, are the + and - sense leads connected ONLY at the test fixture and within 20 inches of the phone contacts? Check that there is NO continuity from either sense lead to earth ground or to the output leads.

Temporarily unplug the output connector from the dc source and disconnect the sense leads at the phone. Use an ohmmeter to perform the continuity check. If continuity exists from the sense leads to earth ground or from the sense leads to the output leads, it will result in poor transient response. For best performance, the distance from sense lead termination to the phone contacts should be as short as possible.

4. If you are using the front panel terminals, are the load leads twisted and less than 18 inches in length? For best performance, the load leads should be as short as possible.

When using only the front panel terminals, you must set the sense switch on the back of the unit to the Local position. Push the sense switch in for Local sensing.

Check the Operating Settings and Conditions

1. Are you able to communicate remotely with the dc source? If not, check that the *address* setting and the programming *language* are set correctly.

To check the address setting, press the Address key. The value displayed is the HP-IB address. If necessary, use the Entry keys to change the address, then press Enter.

To check the language setting, press the Address key and use ▼ to scroll to the LANG command. Press ↓ to select either SCPI or the COMPatibility language, then press Enter.

2. Is the Prot or Err annunciator on the front panel on? If yes, clear the fault condition before continuing.

To clear a Protection fault press the Protect key. This indicates the protection function that is presently active: OC=overcurrent, OT=overtemperature, OV=overvoltage, RI=remote inhibit. First remove the cause of the fault condition. Then press Shift and Prot Clr. The PROT annunciator will turn off.

To clear an error condition, press the Shift and Error keys. This displays the error. Cycle power to the unit. If the error persists, the unit requires service.

3. Is the Overvoltage circuit shutting the unit down? If yes, you can disable the overvoltage circuit.

To disable the overvoltage circuit, press the Shift and OV keys. Press ▼ to access the PROT:STAT command. Press ↓ to select OFF, then press Enter.

4. Are you measuring dynamic output currents? If yes, check that the current detector is set to ACDC.

To check the current sense detector, press the Shift and Input keys. Press ▼ to access the CURR:DET command. If necessary, press ↓ to select ACDC, then press Enter.

5. Are you measuring output currents under 20 mA? If yes, check that the current range is set to LOW.

To check the current range, press the Shift and Input keys. If necessary, press ↓ to select LOW, then press Enter.

6. Are the front panel readings unstable? If yes, check that the front panel sampling rate is correct. Also check the output compensation setting.

To check the front panel sample rate, press the Shift and Input keys. Press ▼ to access the TINT and then the POINT commands. The TINT command specifies the time interval between points. The POINT command specifies the number of points in the front panel measurement. These commands should be set to make a measurement that spans at least three cycles of the waveform being measured.

To check the output compensation, press the Output key. Press ▼ to access the TYPE:CAP command. If necessary, press ↓ to select LOW, then press Enter.

Note For items 2 through 7 above, you can also change the unit's operating settings and conditions over the HP-IB bus using SCPI commands. Refer to the HP 66311A User's Guide for more information.
