Step 5: CALIBRATE

In the case of high frequency network and impedance measurement, the cables and test sets will greatly affect the measurement results. To obtain the most accurate measurements, it is necessary to reduce the errors caused by the measurement system. The HP 4195A analyzer is equipped with a variety of calibration modes to meet different measurement requirements.

Transmission Measurement
- Normalize
- Normalize + Isolation

Reflection Measurement
- Normalize (OPEN)
- 1-port Partial (OPEN, LOAD)
- 1-port Full (OPEN, SHORT, LOAD)

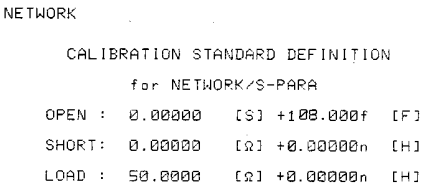
Impedance Measurements
- Calibration (CAL: OPEN, SHORT, LOAD)
- Compensation (COMPEN: 0S, 0Ω)

Calibration is not allowed during spectrum measurement. However, when a high loss probe is used, the User Math Function should be used to compensate for the loss.

Typical calibration procedures for different types of measurement will be described next.

Calibration Standard

Any types of calibration standard can be used for calibration but their calibrated data must be entered correctly. For example, if a 7 mm OPEN standard is used, 0.108pF of its capacitance value should be entered using the following procedure.



1. Press **CAL** key.
2. Press **more 1/2** softkey.
3. Press **CAL STD** modify softkey.
4. Press **OPEN CAL STD** softkey.
5. Type **OPENSTD=0, 108E-15** and press **ENTER**.

Use the same procedure to modify 0Ω and 50Ω standard values.