8. Sine Output Amplitude Accuracy and Flatness

This test measures the amplitude accuracy and frequency response of the internal oscillator Sine Out.

Setup

We will use the lock-in to measure the Sine Out. Connect the Sine Out to the A input of the lock-in.

Procedure

1) {PRESET} (Turn the lock-in off and on with the [Setup] key pressed)

2) Press the keys in the following sequence:

   [Channel 1 Display]
   Set the Channel 1 display to R.

3) Amplitude accuracy is verified at 1 kHz using various sensitivities. For each sine amplitude and sensitivity setting in the table below, perform steps 3a through 3b.

Sensitivity	Sine Output Amplitude
1 V	1.000 Vrms
200 mV	0.200 Vrms
50 mV	0.050 Vrms
10 mV	0.010 Vrms

   a) Press
   [Ampl]
   Use the knob to set the sine amplitude to the value in the table.

   [Sensitivity Up/Dn]
   Set the sensitivity to the value in the table.

   b) Wait for the R reading to stabilize. Record the value of R.

   c) Repeat 3a and 3b for each amplitude in the table.

4) Frequency response is checked at frequencies above 1 kHz. The sine amplitude is set to 1 Vrms for all frequencies. The test frequencies are listed below.

Test Frequencies
24 kHz
48 kHz
72 kHz
96 kHz

   c) Press
   [Sensitivity Up]
   Set the sensitivity to 1 V.

   [Ampl]
   Use the knob to set the sine amplitude to 1.00 V.