

## 6. Frequency Accuracy

This test measures the frequency accuracy of the lock-in. This tests the accuracy of the frequency counter inside the unit. The counter is used only in external reference mode. The internal oscillator frequency is set by a crystal and has 25 ppm frequency accuracy.

### Setup

We will use the frequency synthesizer to provide the reference signal.

Connect the TTL SYNC output of the frequency synthesizer to the Reference input of the lock-in.

### Procedure

- 1) {PRESET} (Turn the lock-in off and on with the [Setup] key pressed)
- 2) Set the frequency synthesizer to a frequency of 10 kHz.
- 3) Press the keys in the following sequence:
  - [Source]  
Select External reference mode (INTERNAL led off).
  - [Trig]  
Select POS EDGE.
- 4) The lock-in should be locked to the external reference. The frequency is displayed at the bottom of the screen. Record the frequency reading.
- 5) This completes the frequency accuracy test. Enter the results of this test in the test record at the end of this section.