How to activate the SDG sweep marker function

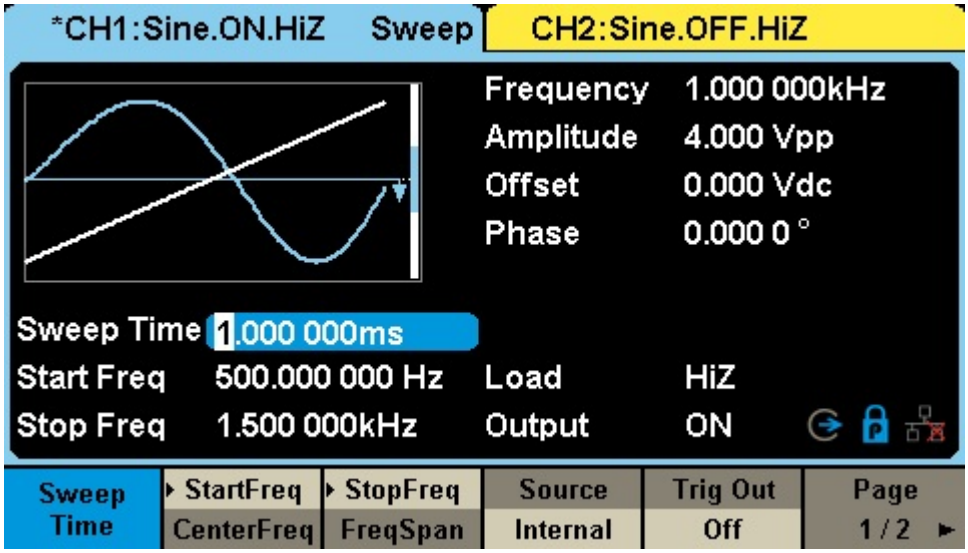
May 31, 2019

The SIGLENT SDG6X series of arbitrary waveform generators feature a frequency marker function that will output a signal when the sweep output passes through a user-defined target frequency.

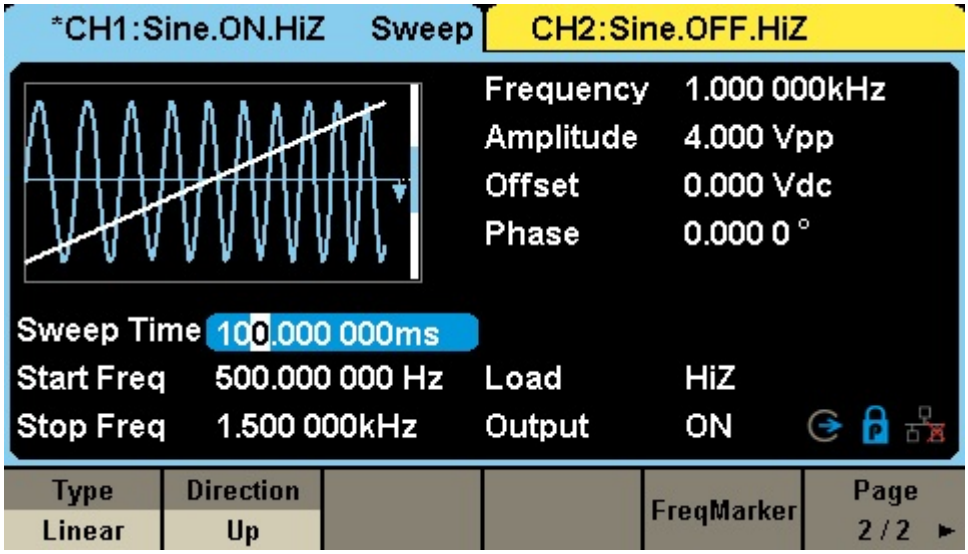
This can be very helpful when synchronizing measurements with other instrumentation, like oscilloscopes, that have no other way of syncing up with the frequency sweep.

To activate the frequency marker:

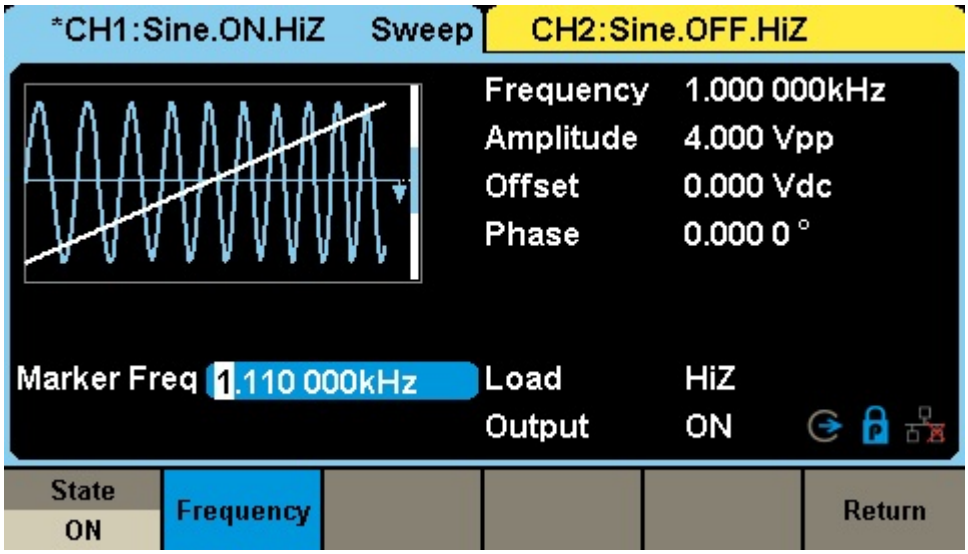
1. Activate the sweep function by pressing the Sweep button on the SDG6X front panel
2. Configure the sweep parameters. Here, we are going to sweep from 500 Hz to 1.5 kHz and the sweep time will be 100 ms (0.1 s).



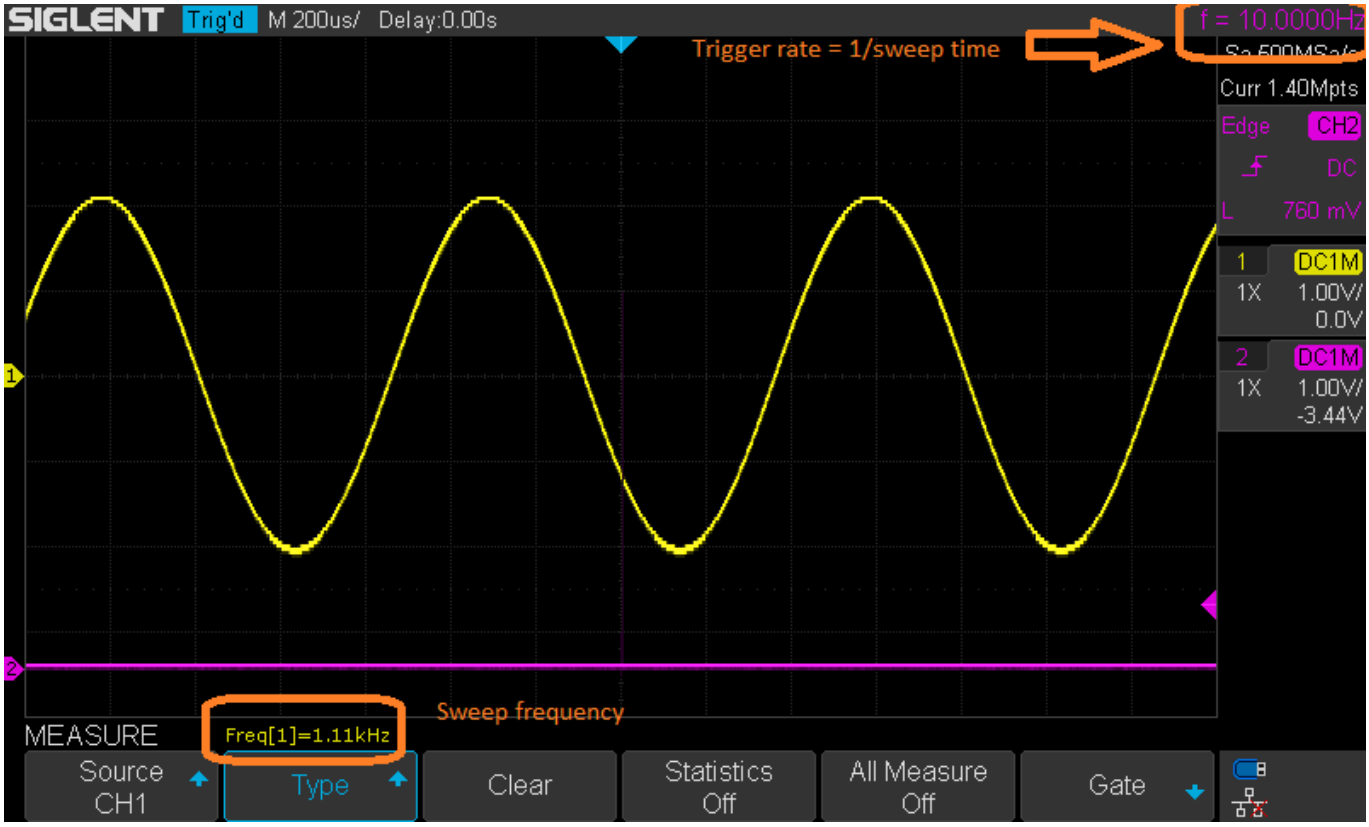
3. Go to page 2/2 and press FreqMarker



4. Set the marker frequency to 1.11 kHz and set the state to ON



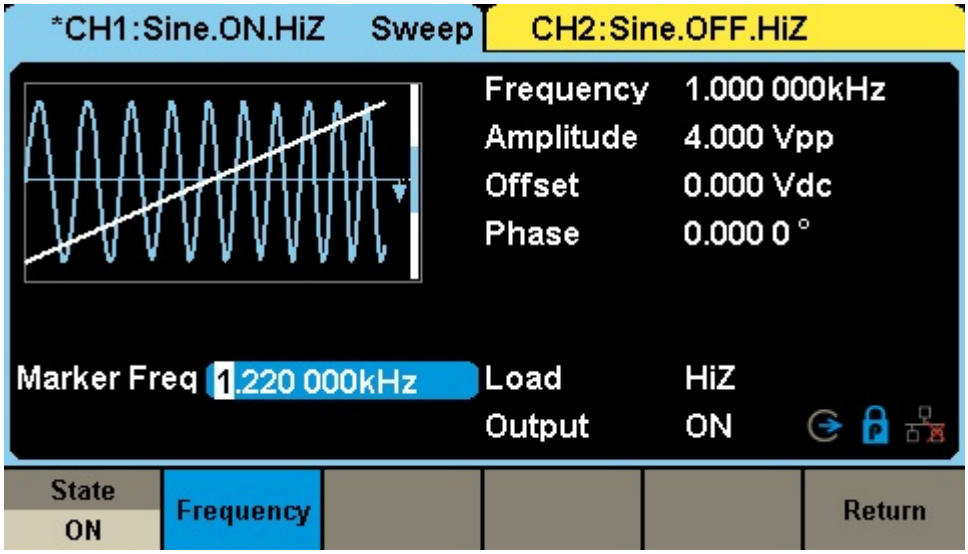
Now, we can capture the sweep on a scope, as shown below:

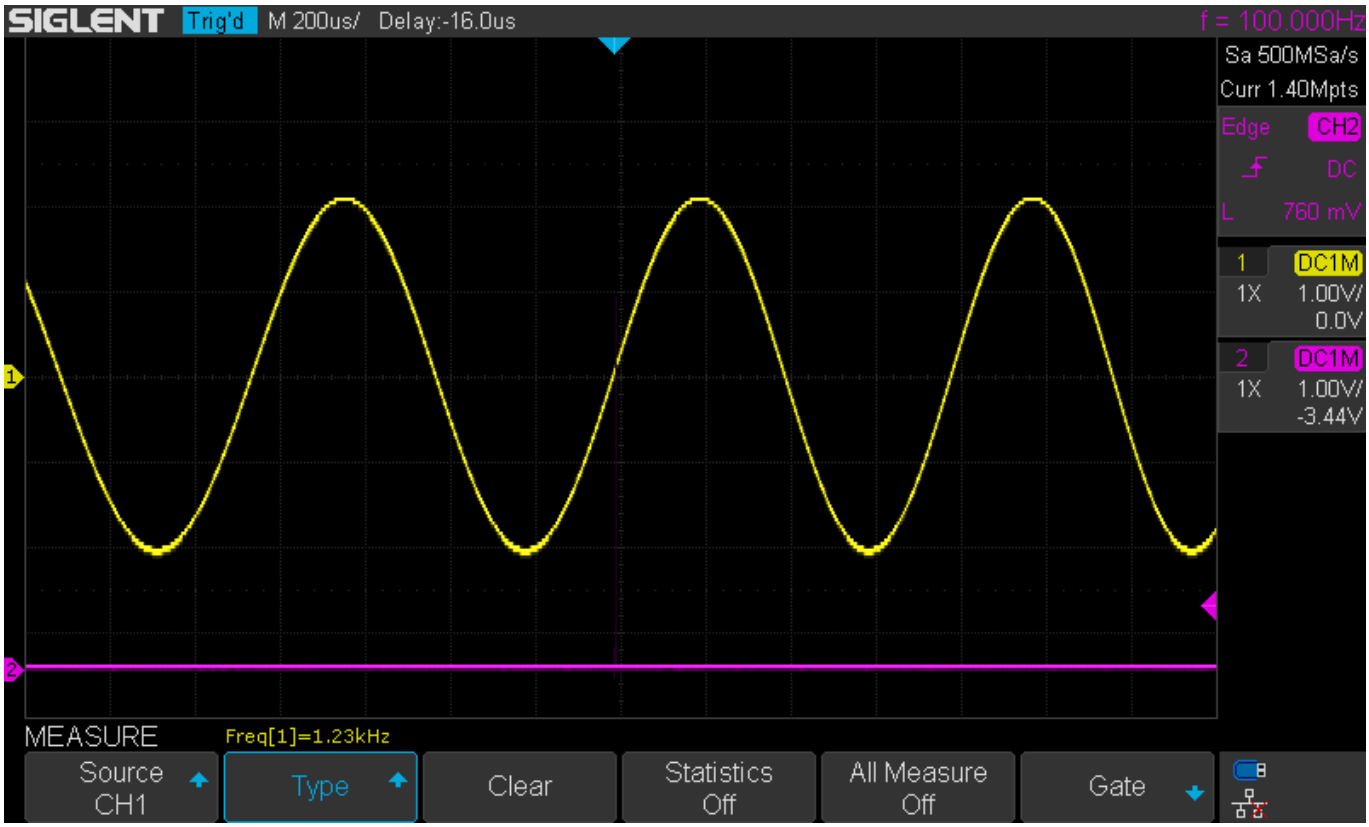


The frequency marker will output a pulse at the same time that the sweep frequency meets the setpoint for marker frequency.

In the first example, the sweep time was set to 100 ms. So, we should see 10 output pulses every second, or a 10 Hz repetition frequency and the output sweep waveform should be at 1.11 kHz, our marker frequency setpoint. Which we can confirm on the scope.

If we change the marker frequency to 1.22 kHz and the sweep time to 10 ms, we should see the marker frequency pulse occur one hundred times a second (100 Hz) and the sweep frequency should be at 1.22 kHz:


*CH1:Sine.ON.HiZ
Sweep
CH2:Sine.OFF.HiZ
Frequency 1.000 000kHz
Amplitude 4.000 Vpp
Offset 0.000 Vdc
Phase 0.000 0 °
Marker Freq 1.220 000kHz
Load HiZ
Output ON
State ON
Frequency
Return


SIGLENT
Trig'd
M 200us/ Delay:-16.0us
f = 100.000Hz
Sa 500MSa/s
Curr 1.40Mpts
Edge CH2
DC
L 760 mV
1 DC1M
1X 1.00V/
0.0V
2 DC1M
1X 1.00V/
-3.44V
MEASURE
Freq[1]=1.23kHz
Source CH1
Type
Clear
Statistics Off
All Measure Off
Gate

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