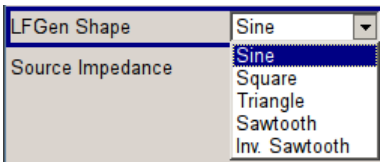
Remote command:
[:SOURce]:LFOutput<ch>:FREQuency on page 355

LF Gen Shape
Selects the waveform shape of the LF signal.



Note: The installed hardware determines the available settings. Use the Hardware Config dialog to check the hardware the instrument is equipped with.

For information on the required hardware revision, refer to the release notes.

Remote command:
[:SOURce]:LFOutput:SHAPe on page 363

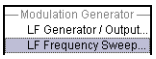
LF Source Impedance
Selects the output impedance of the LF generator. Selection LOW and 600 Ohm are available.

Note: The installed hardware determines the available settings. Use the Hardware Config dialog to check the hardware the instrument is equipped with.

For information on the required hardware revision, refer to the release notes.

Remote command:
[:SOURce]:LFOutput:SIMPedance on page 363

4.5.3 LF Frequency Sweep

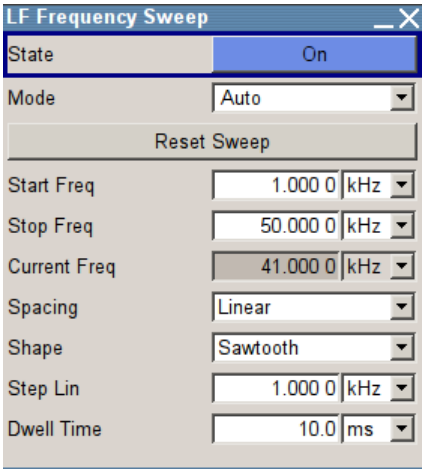


The "LF Frequency Sweep" dialog is used to configure and activate an LF frequency sweep signal.

To open the "LF Frequency Sweep" dialog, select "Mod Gen > Configure > LF Frequency Sweep" or use the [MENU] key under "Mod Gen".

The LF sweep mode is activated and the sweep mode is selected. The buttons are used to reset the LF sweep (all sweep modes) or to execute the LF sweep ("Single" mode).

The sweep range, sweep spacing and dwell time are set in the bottom of the section.



State
Activates the LF frequency sweep signal generation.

Note:
Activating a sweep mode automatically deactivates other sweeps and the list mode.

Remote command:
`[:SOURce<hw>]:LFOutput:FREQuency:MODE` on page 356

Mode
Selects the LF frequency sweep mode.

If you change the sweep mode during the execution, the signal generator stops the sweep and starts with the next trigger event at the initial value.

The "Reset Sweep" button sets the sweep to the start value.

"Auto" Generates a continuously repeating sweep signal immediately after activating the sweep mode.
The sweep steps are performed atomatically, controlled by the dwell time, see "Dwell Time - LF Sweep" on page 230.

Example:

```
SOUR:LFO:SWE:FREQ:MODE AUTO
TRIG0:SWE:SOUR AUTO
SOUR:LFO:FREQ:MODE SWE
```

"Single" Generates a single sweep cycle after a trigger event.
The sweep steps within the cycle are performed automatically, controlled by the dwell time. If one cycle is completed, the instrument waits for the next trigger event.
To trigger the sweep, use "Execute Single Sweep" button, or the corresponding remote control commands, for example `*TRG`.

Example:

```
SOUR:LFO:SWE:FREQ:MODE AUTO
TRIG0:SWE:SOUR SING
SOUR:LFO:FREQ:MODE SWE
SOUR:LFO:SWE:FREQ:EXEC
```

"Step" Generates the sweep signal step-by-step, manually triggered.
To perform the sweep steps, enter the frequency value under Current Freq.

Example:

```
SOUR:LFO:SWE:FREQ:MODE MAN
SOUR:LFO:FREQ:MODE SWE
SOUR:LFO:SWE:FREQ:SPAC LIN
SOUR:LFO:SWE:FREQ:STEP:LIN 1E34
SOUR:LFO:FREQ:MAN 12 kHz
```

The value entered with command `SOUR:LFO:SWE:FREQ:STEP:LIN|LOG` sets the step width.

The value entered with command `SOUR:LFO:FREQ:MAN` has no effect, the command only sets the next sweep step. In remote control only a step-by-step sweep from start to stop frequency is possible.

"Extern Single"

Generates a single sweep cycle when an a external trigger event occurs.
The sweep steps within the cycle are performed automatically, controlled by the dwell time. If one cycle is completed, the instrument waits for the next trigger event.
To trigger the sweep, apply an external trigger signal.
Refer to the description of the rear panel for information on the connectors for external trigger signal input (see Chapter 3.2.2, "Rear Panel Tour", on page 54).

Example:

```
SOUR:LFO:SWE:FREQ:MODE AUTO
TRIG0:SWE:SOUR EXT
SOUR:LFO:FREQ:MODE SWE
```
(External trigger)

"Extern Step" Generates the sweep signal step-by-step, manually triggered.
To trigger a sweep step, apply an external trigger signal. The step width corresponds to the step width set for the rotary knob.

Example:

```
SOUR:LFO:SWE:FREQ:MODE AUTO
TRIG0:SWE:SOUR EXT
SOUR:LFO:FREQ:MODE SWE
```
(External trigger)

"Extern Start/ Stop" Generates a continuously repeating sweep signal that is started, stopped and restarted by subseqeunt external trigger events. The sweep steps are performed automatically, controlled by the dwell time.
Refer to the description of the rear panel for information on the connectors for the external trigger signal input (see Chapter 3.2.2, "Rear Panel Tour", on page 54).

Example:

```
SOUR:LFO:SWE:FREQ:MODE AUTO
TRIG0:SWE:SOUR EAUT
SOUR:LFO:FREQ:MODE SWE
```
(External trigger)

Remote command:
`[:SOURce<hw>]:LFOutput:SWEep[:FREQuency]:MODE` on page 358
`:TRIGger<hw>[:SWEep]:SOURce` on page 462
`[:SOURce<hw>]:LFOutput:FREQuency:MODE` on page 356

Execute Single Sweep
Starts a sweep manually. This trigger button is displayed in "Single" mode.

Example:

```
SOUR:LFO:SWE:FREQ:MODE AUTO
TRIG:LFFS:SWE:SOUR SING
TRIG:LFFS
```

Remote command:
`[:SOURce<hw>]:LFOutput:SWEep[:FREQuency]:EXECute` on page 358
`:TRIGger<hw>:LFFSweep:IMMediate` on page 460
`:TRIGger<hw>:LFFSweep` on page 459
`:TRIGger<hw>[:IMMediate]` on page 463

Reset Sweep
Resets a sweep.

With the next trigger event, the sweep starts with at the initial value.

Remote command:
`[:SOURce<hw>]:SWEep:RESet[:ALL]` on page 433

Start Freq
Sets the start frequency.

Remote command:
[:SOURce<hw>]:LFOutput:FREQuency:STARt on page 357

Stop Freq
Sets the stop frequency.

Remote command:
[:SOURce<hw>]:LFOutput:FREQuency:STOP on page 357

Current Freq
Displays the current frequency.

In sweep "Step" mode, the parameter is editable and you can enter frequency for the next step.

Remote command:
[:SOURce<hw>]:LFOutput:FREQuency:MANual on page 356

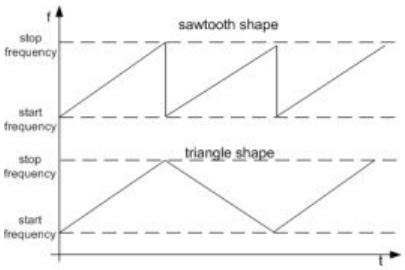
Spacing
Selects the mode for the calculation of the frequency sweep intervals.

"Linear" Takes the frequency value entered as an absolute value in Hz

"Logarithmic" Takes the value entered as a lograithmic value, that means as a constant fraction of teh current frequency in %.

Remote command:
[:SOURce<hw>]:LFOutput:SWEep[:FREQuency]:SPACing on page 361

Shape
Selects the waveform shape of the sweep signal.



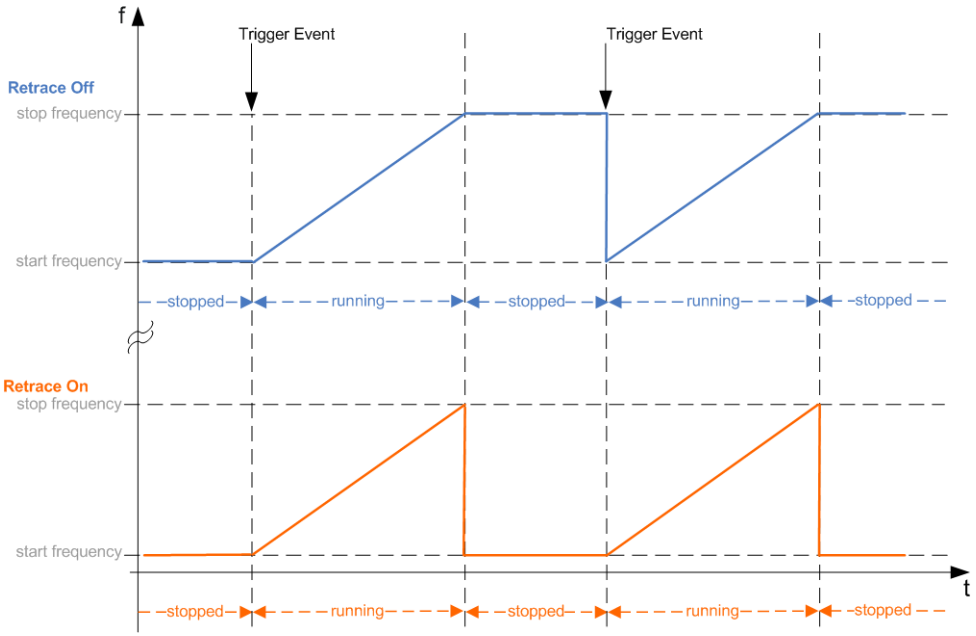
"Sawtooth" The sweep runs from the start to the stop frequency. Each subsequent sweep starts at the start frequency, that means the shape of the sweep sequence resembles a sawtooth.

"Triangle" The sweep runs from start to stop frequency and back, that means the shape of the sweep resembles a triangle. A subsequent sweep starts at the start frequency.

Remote command:
[:SOURce<hw>]:LFOutput:SWEep[:FREQuency]:SHAPe on page 361

Retrace - LF Frequency Sweep
Activates that the signal changes to the start frequency value while it is waiting for the next trigger event.

You can enable this feature, when you are working with sawtooth shapes in sweep mode "Single" or "External Single", see Mode.



Remote command:
[:SOURce<hw>]:LFOutput:SWEep[:FREQuency]:RETRace on page 360

Step Lin/Log - LF Sweep
Sets the step width for the individual frequency sweep steps.

At each step this value is added to the current frequency.

Depending on the Spacing mode you have set, the corresponding parameter is displayed.

"Step Lin" The step width is a constant value in Hz.

Remote command:
[:SOURce<hw>]:LFOutput:SWEep[:FREQuency]:STEP[:LINear] on page 361

"Step Log" The step width is determined logarithmically in %, that means as a constant fraction of the current frequency.

Remote command:
[:SOURce<hw>]:LFOutput:SWEep[:FREQuency]:STEP:LOGarithmic on page 362

Dwell Time - LF Sweep
Defines the duration of the individual sweep steps.