**N5138(Agilent Signal Generator):**

Set frequency: ":SOUR:FREQ:CW 3GHz"

Read frequency: "FREQ?" returns "+3.0000000000E+09"

Check if RF Power is ON: "[:SOURce]:STATe?" returns '0\n'/'1\n' (MUST BE ":STATe?", wrong otherwise)

NOTICE: "[:SOURce]:STATe" is about the modulation of the freq. We don't need this

The output can have modulation of the frequency:

To query and turn on/off the modulation:

":OUTPut:MODulation[:STATe] ON|OFF|1|0"

":OUTPut:MODulation[:STATe]?"

(Useless)Set the RF Power Modulation ON/OFF: "[:SOURce]:STATe ON|OFF|0|1" (1 means on)

Query/Turn on/off the RF output:

":OUTPut[:STATe] ON|OFF|1|0"

":OUTPut[:STATe]?"

Query the RF Power: "POWer?" returns "-1.3500000E+002"

Set the RF Power: ":POWer 5" sets to 5dBm

**6221(Current Source):**

"FREQ?" doesn't work.

Query wave frequency: ":SOURce:WAVE:FREQ?" returns "1.0000000E+03"

Set wave frequency: ":SOURce:WAVE:FREQ 300" (no unit) set it to 300Hz

"SOURce:WAVE:FREQ 3E+2" set to 300Hz

Query Amp: ":SOUR:WAVE:AMPL?" returns "1.000000E-03"(A)

Set amp: ":SOUR:WAVE:AMPL 0.1" sets to 0.1A

Query compliance: ":SOUR:CURR:COMP?" returns "1.05E+02"

Set compliance: ":SOUR:CURR:COMP 105" sets to 105(V), number can be arbitrary

Query wave shape: "SOUR:WAVE:FUNC?" retursns "SIN"

Set wave shape: "SOUR:WAVE:FUNC SIN"

Query Phase marker: "SOUR:WAVE:PMAR:STAT?" returns "ON/OFF"

Set Phase Marker: "SOUR:WAVE:PMAR:STAT ON" set the phase marker on

Duration time: "SOUR:WAVE:DUR:TIME"(s) If indefinite, returns "+9.9E+037"

Query output state: ":OUTPut:STAT?" returns "0\n"/"1\n"

Lockin:

Query freq: "FREQ?" returns "573.1"(Hz)

Query Output: "OUTPut? 1|2" returns the X/Y channel signals (No ‘:’ allowed)

Make lockin autophase: "APHS"