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MULTI-USE TRIGGER INPUT

MCX INPUT PORT - MODES AND FUNCTIONS

This document describes the functions and usage of the MCX input port available on certain signal generator models. This port is referred to as the sweep trigger or trigger input. This port accepts a 0V to 3.3V input but is 5V tolerant. The sweep trigger is internally pulled high to 3.3V.

Trigger Modes:

- **Trigger OFF. Command: "TRIG:OFF".** The input is disabled and will not trigger any action.
- **Full Sweep Trigger. Command: "TRIG:SWEEP".** This is the default mode that will be enabled when sweep mode is first configured. In this mode when the trigger is active (pulled low) for more than 1 μ s, the configured sweep will initiate.
- **Sweep Step Trigger. Command: "TRIG:STEP".** This mode is similar to the standard full sweep trigger mode, except that only a single step in the configured sweep will run each time the input is pulled low. This allows for single-stepping through a frequency list or sweep.
- **RF Output Control - Active High. Command: "TRIG:RFOH".** This mode is unrelated to frequency sweeping and controls if the RF output is enabled. In active high mode the RF output amplifiers are enabled when the input signal is high, or if the port is not connected because it is pulled high internally.
- **RF Output Control - Active Low. Command: "TRIG:RFO".** Active low RFO control mode is preferred because the chance of enabling the RF output port accidentally is minimized as a non-connected cable will result in a high value (RF output disabled).
- **RFO Pulse Mode. Command: "TRIG:PULSE".** (*Note: Experimental*) This mode is unrelated to frequency sweeping and controls if the RF output is enabled, but with a much faster response time than standard RFO Control Mode. This is achieved by leaving all the amplifiers powered up continuously and only controlling the output gate of a single pre-amplifier. In this active-low mode, full power usage is continuous along with extra heat. The standard RFO off command (OUTP:STAT OFF) must be issued after using this mode to power down the amplifiers.

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For more information or questions contact us!



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