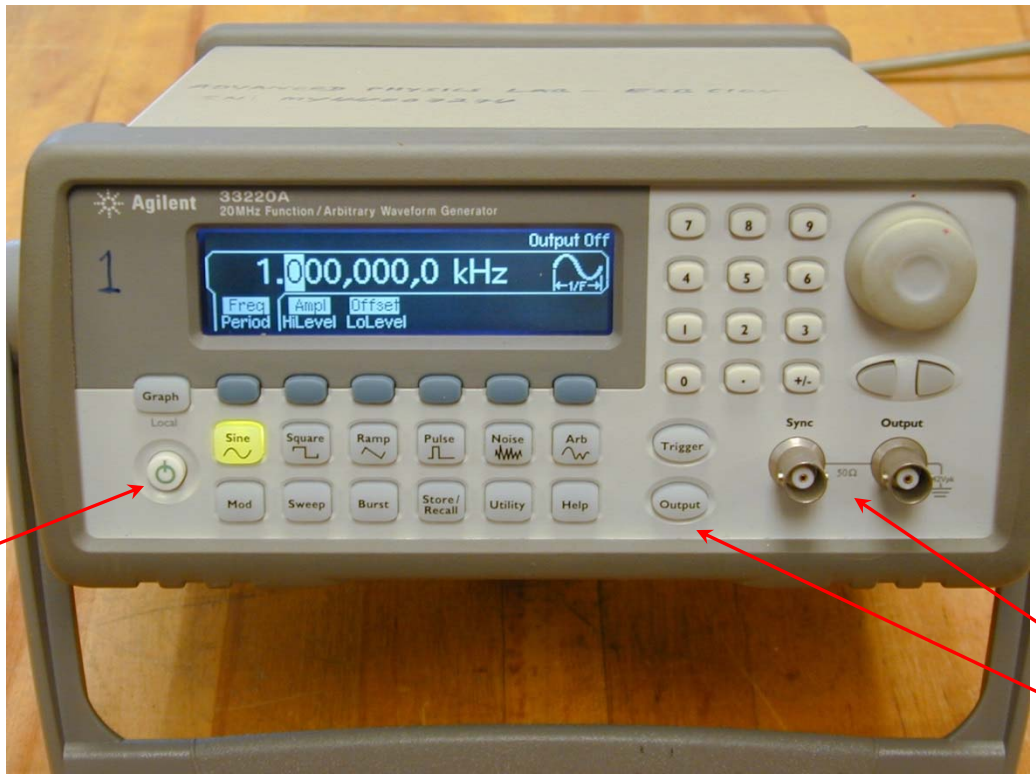
Basics of Using the Agilent 33220A Function Generator

This document {briefly} describes the basic features of, and how to use the Agilent 33220A Function Generator (FG). Detailed information is contained in the Agilent 33220A Function Generator User's Guide.



AC Pwr On/Off Switch

FG Output & FG Output On Button

Plug in the FG to the 120Vac wall power, then turn on the FG by pressing the AC power On/Off Switch. It takes a few seconds for the FG to boot up {it has a specialized processor in it}. The power-on default settings of the FG are a f = 1 KHz sine wave with a 100 mV_{pp} (= 0.100 V_{pp}) peak-to-peak amplitude . Note that the FG output is initially off – press the **Output** button to turn on the FG output.

The blue-gray buttons located immediately underneath the FG display enable the user to adjust waveform parameters – in the **Sine** wave case, the **Frequency**, **Amplitude** and DC **Offset** of the waveform can individually be set by using a combination of: *a*.) rotating the large round knob in the upper right hand corner, or *b*.) using the upper right hand keypad, and *c*.) the white left/right arrow keys in the upper right hand corner move the decimal place of the white cursor on the front panel display – explicitly try these controls out to see/learn how they work!

Next to the lit-up **Sine** wave button are **Square** wave, **Ramp**, **Pulse**, **Noise** and **Arbitrary** waveform buttons. Try pressing each of these buttons in sequence to see what they do. For each of the waveform buttons, note that there are sometimes additional choices of parameters associated with the blue-gray buttons for that waveform – e.g. for the **Square** wave, one can additionally adjust the **Duty Cycle** when this blue-gray button is selected (default = 50%) using a combination of the controls in the upper right hand corner of the FG. For the **Ramp** wave, one can adjust the **Symmetry** of the **Ramp** waveform when this blue-gray button is selected, again using a combination of the controls in the upper right hand corner. When the **Symmetry** = 50%, the waveform is known as a **Triangle** wave.