

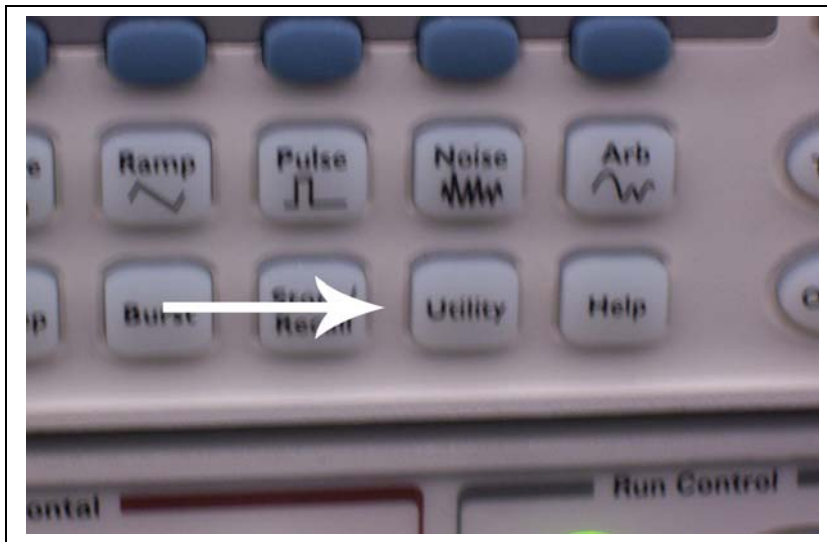
## Setting up the Agilent 33220A Function Generator

In order to observe consistent readings between the Agilent 33220A function generator and any scope, the output impedance of the generator must match the input impedance of the scope connected. Adjusting this level does not affect the output signal only the reading observed from the generator.

Perhaps you have experienced a reading from the scope that contradicts the output level reading on the generator? For example, the scope reads 200mVp-p, yet the generator says its output is 100mVp-p.

There is a simply remedy for this.

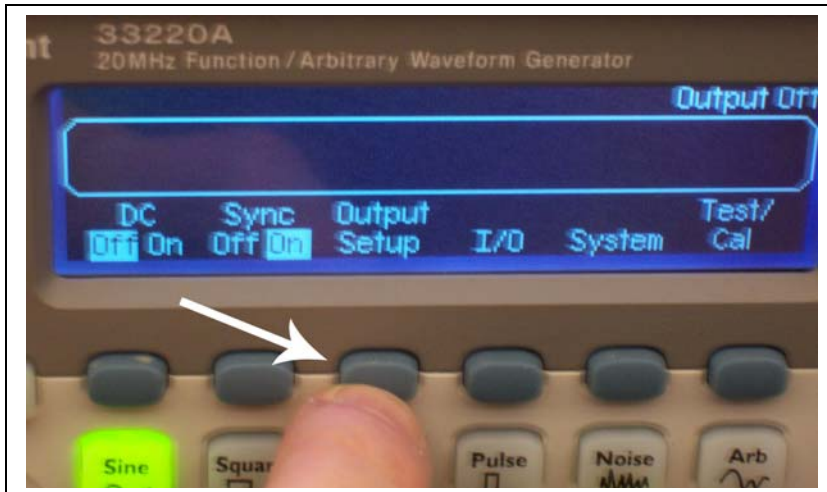
The Agilent 33220A has an output that can be adjusted to either 50 ohms or HighZ. Since we will be connected to a scope we would expect the input impedance to be approximately 1M ohm. Clearly if we are set to a 50ohm output on the generator we will end up with inconsistencies in the readings. Follow the instructions below to adjust this.



The "Utility" Button

1. To adjust the 33220A to a HighZ output, you must first hit the "Utility" button on the front of the generator. (See Picture)

2. From here the utility screen will show. You can see third from the left hand side of the menu options that there is an output setup option. Select this by pushing the soft key below the “Output Setup” text on the screen. (See picture Below)



Choose the Output Setup Option

3. Once you have selected Output Setup a different menu will be displayed; this is the output setup menu. On the left hand side of the screen you will notice an option called “Load” (See Picture Below)

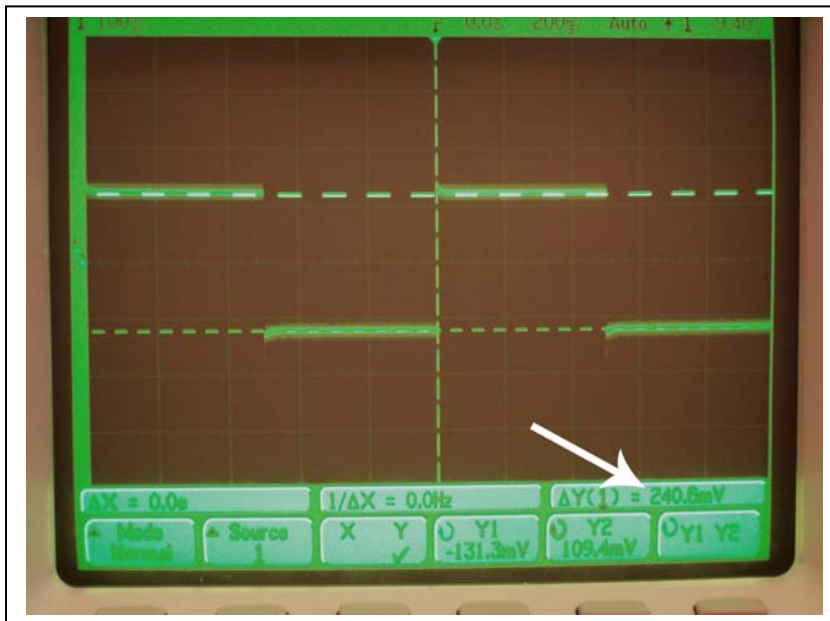


Adjust the Output Impedance

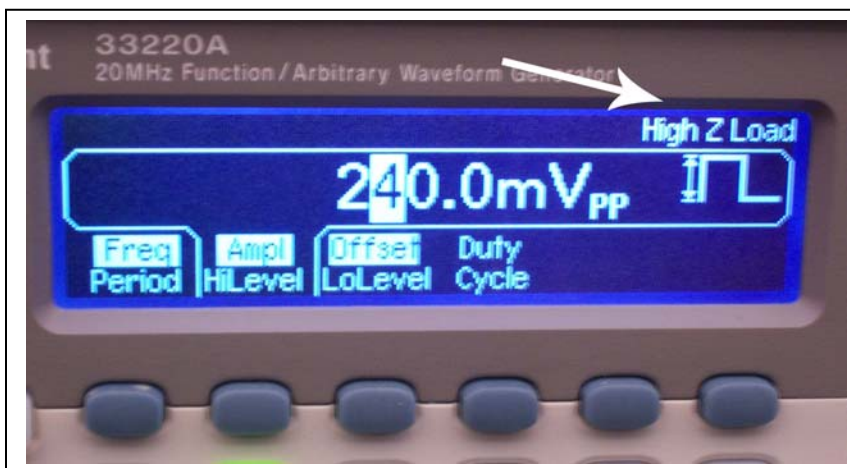
This is where you can choose either a 50 ohm, or HighZ output. In order to accommodate the 1M ohm scope, the “HighZ” selection is what we want.

4. Press the Load button to choose the “HighZ” selection and then press the “Done” key on the right.

Now that both the scope and the Agilent 33220A Function Generator are set to the same impedance, all your readings will be consistent between the output level of the generator and the reading you obtain from the scope. (See Pictures Below) Also notice the output display is now set to “High Z Load”.



The voltage on the scope is measured as 240.6mV



The output of the Agilent generator is also 240mV.

**NOTE:** The more accurate reading will come from the scope so only use the function generator output voltage level as a reference