

# Tenma 72-7210 Function Generator Quick Guide



The Tenma 72-7210 Function generator is a single output repetitive function generator. It is capable producing a sine, triangle or square wave with an adjustable frequency and amplitude. The waveform symmetry and base amplitude voltage can be modified, as well as setting the frequency up to sweep between to limits at an adjustable rate.

## Display and Display mode:

The frequency output display can be set to display the output frequency of the function generator or can be used to measure an external digital frequency.



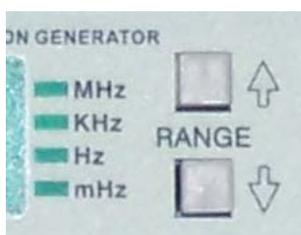
The ON button switches the display to the external counter mode. With the button left out, the display will show the value of the internal frequency generator.



The display indicates the frequency and the lit indicator to the right of the display indicates the frequency range.

## Frequency setting:

The output frequency is controlled by a combination of two controls. The range buttons switch the range of the output, rotating through setting from (1-560) mHz [*.001 to .560 Hz*] up through (3.6 – 6.2) MHz. Some ranges have multiple settings. An example of this is the KHz range selection has 3 selections, each increasing a decade.

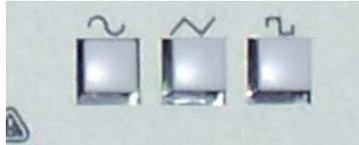


The frequency value within the selected range is adjusted by the use of the vernier knob located below the display. This is a continuously adjustable knob that allows the adjustment of the frequency anywhere within the selected range.

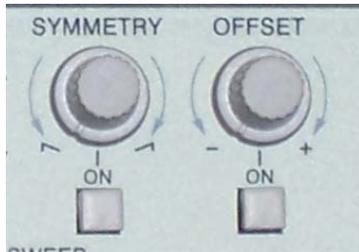


### Waveform Shape:

The waveform shape is selected by three buttons located at the bottom of the face.



Pressing one of these three buttons allows you to select either a sine wave, triangle wave or square wave. In addition to the basic wave shape, it is possible to modify the waveform by using one or more of the two OFFSET and SYMMETRY functions.



The OFFSET function allows the user to adjust where the zero crossing point of the repetitive waveform is. This can be adjusted either positive or negative. (note that this control and the amplitude control will interact with each other.) Leaving the button below the control out will disable this function.

The SYMMETRY function will allow you to cause the output wave to be non-symmetric. As an example the triangle wave can be skewed to be a sawtooth in either direction, or anyplace in between the two extremes. Leaving the button below the control out disables this function.

### Amplitude Control and Output:



The AMPLITUDE vernier adjusts the peak to peak value of the output signal within the limits. Selecting the -20dB button will lower the output range allowing lower peak to peak values. The OUTPUT connector is the location that the signal is actually generated on.

This is where you will connect to the unit to obtain your useable signal.

### Sweep Mode:

In addition to the basic signal, this unit has the ability to “sweep” the base frequency



through some range. The SWEEP controls are the portion that controls this. Under normal operation the two buttons are left out, disabling this function. When pressed, the ON button starts the sweep

mode. The STOP button allows the display to show what the upper level of the sweep frequency is set to. This is adjusted by the STOP FREQ vernier knob. The sweep mode will vary the output signal from the base frequency to the stop frequency. The rate of this change is selected with the RATE vernier.