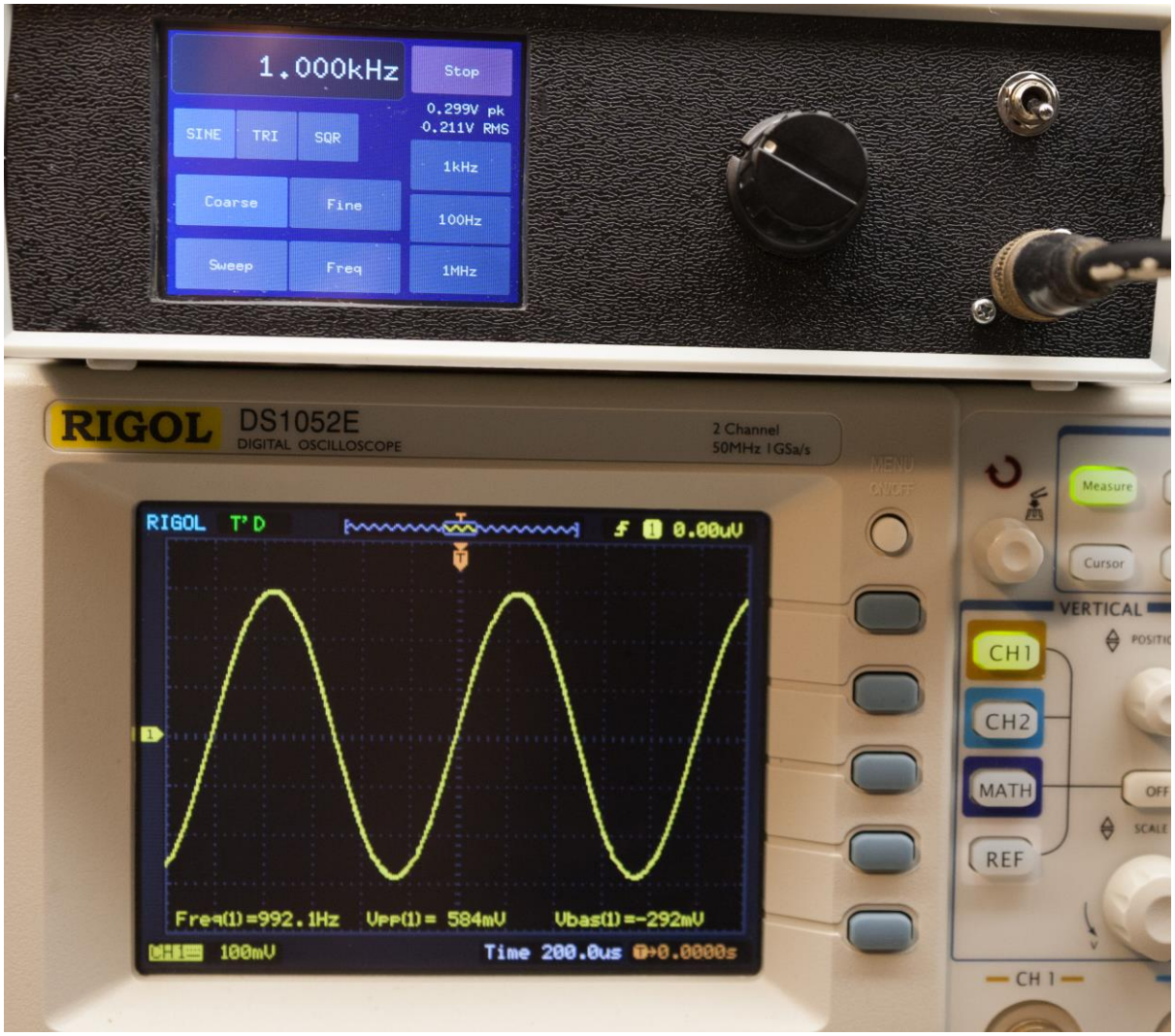
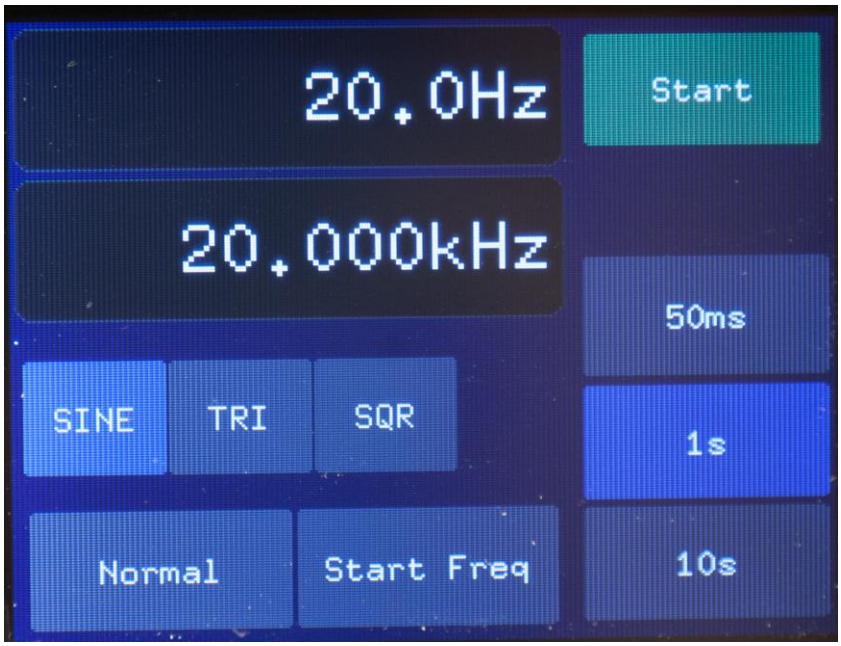
12.5MHz DDS Function Generator Software Manual

This function generator generates sine, triangle and square wave outputs from 0.1Hz to 12.5MHz in 0.1Hz increments.



When it is first switched on, it is in Normal mode. Press the *Sweep* button to go into sweep mode:



This allows you to sweep between the top frequency and bottom frequency in 50ms, 1s or 10s intervals. The settings shown above will sweep a sine wave from 20Hz to 20kHz in 1s. Touch *Start* to start the sweep. The *Start* button will change to a red *Stop* button that can be used to stop the sweep. Touch *50ms* for a 50ms sweep, *1s* for a 1 second sweep and so on.

SINE will change the output to sine waves.

TRI changes the output to triangle waves

SQR changes the output to square waves.

Normal changes the mode back to normal (non-sweep) mode.

Start Freq selects the value that is adjusted by the knob. Touching this button cycles through the modes: *Start Freq -> End Freq -> Level -> Start Freq* and so on.

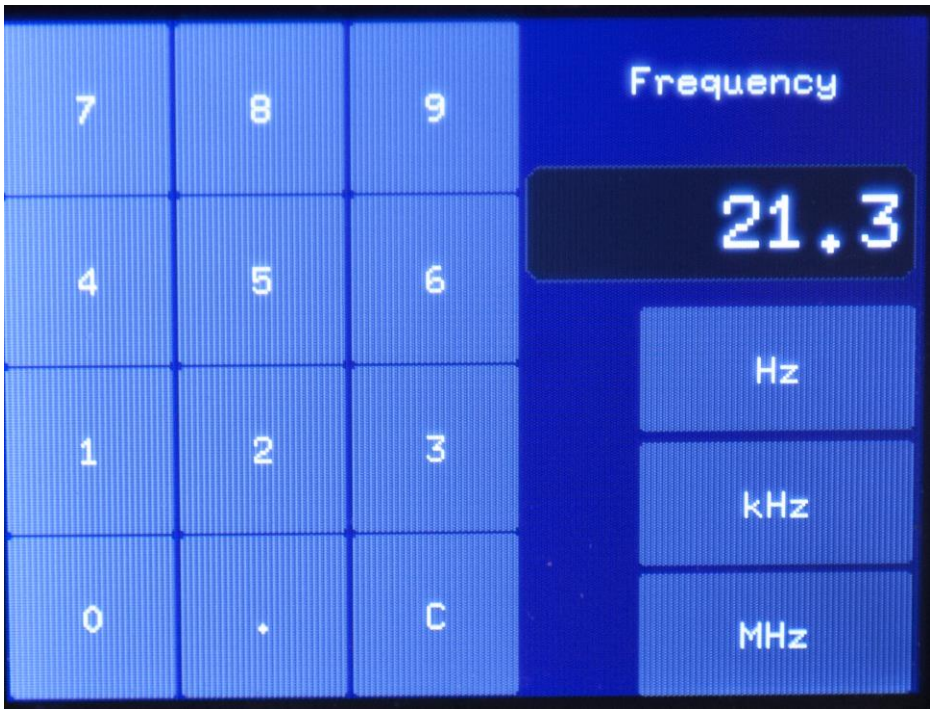
Start Freq causes the knob to adjust the start frequency (top value)

End Freq causes the knob to adjust the end frequency (lower value)

Level causes the knob to adjust the output level.

The speed at which the knob changes the values depends on whether *Fine* or *Coarse* are selected under Normal mode.

You can set the values of start frequency and end frequency numerically by touching the frequency value. This will be displayed:



Enter the desired frequency and touch Hz, kHz or MHz to use that frequency. If you make a mistake touch *C*. For example “1”,”2”,”.”,”3”,”5”,”kHz” will use 12.35kHz.

Normal mode looks like this:

The operation is very similar to sweep mode, but you have a few other features:

1kHz, *100Hz* and *1MHz* are favourites. While they are initially set to these values, whenever you numerically enter a value it will appear on the *1kHz* button, and the 1kHz and 100Hz buttons will be pushed down one place, so it will remember the last 3 values.

Coarse sets the knob adjustment to coarse changes, allowing you to rapidly change the frequency value. The amount it changes depends on the current frequency, so the change feels like the appropriate amount.

Fine sets the knob adjustment to 1/100th of the coarse adjustment, allowing precise adjustment.

For exact values, touch the frequency and the exact frequency can be entered through the keypad.

Freq means the knob adjusts the frequency. When you touch it, it changes to *Level* and moving the knob will adjust the output level. The level is displayed as peak and RMS below the *Stop* button. Touching it again returns to *Freq*.