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Instructions for ICS5xx Demo Board

The ICS5xx demo board provides a way to quickly evaluate the performance of ICS' family of low cost 8 pin, compatible oscillator replacement clock generators. The connector on the bottom of the board fits a standard oscillator footprint, or it can be easily modified to fit a half size footprint.

Frequency Select Jumpers
The resistor locations R2, R3, R4, R5, R7, and R8 provide a location to jumper the input select pins to V_{DD} or GROUND. Refer to the device datasheet for frequency select tables. Small pieces of wire or 0 ohm chip resistors can be used for jumpers. R6 can be mounted if the Output Enable (tri-states the clock output) is to be used.
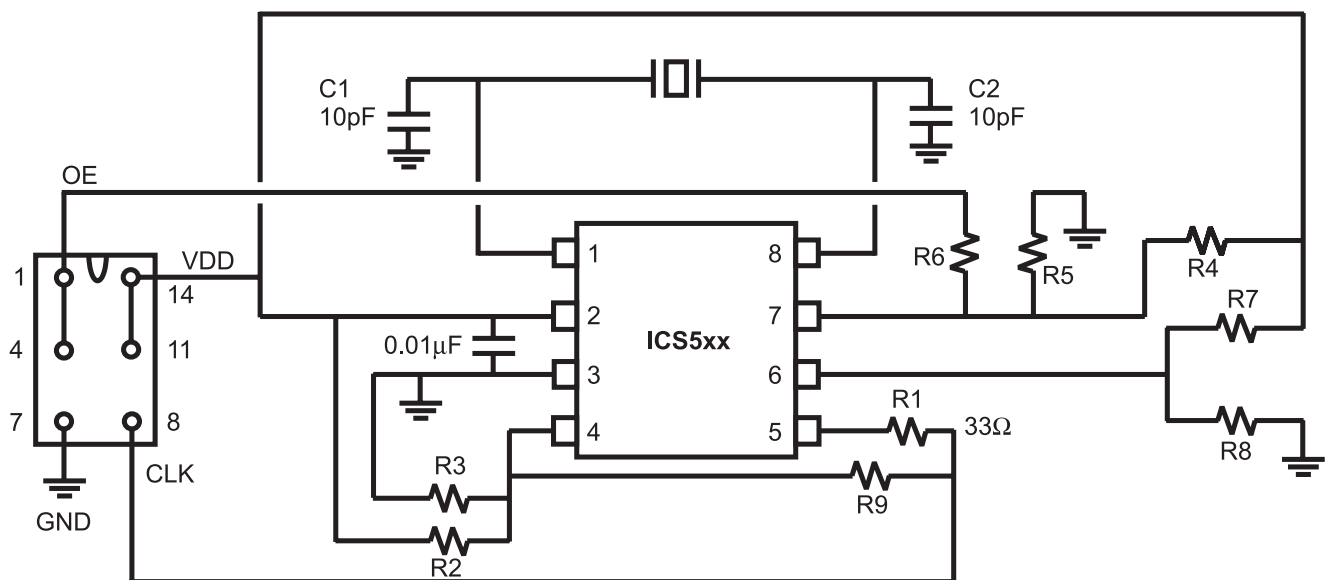
Output Termination
Resistor R1 is a 33 ohm series termination resistor on the clock output, which can be moved to the R9 location to evaluate parts which provide a second clock output on pin 4.

Crystal Tuning
Some of the ICS5xx family have on-chip crystal load capacitors which will provide accurate frequency output with 13 pF parallel resonant crystals. Consult datasheet for particular device.Crystals with any load capacitance value, or even series resonant crystals, will operate, but the frequency will be off by up to 500 ppm (0.05 %). To get an accurate frequency output by adjusting the board to a crystal with a different value of load capacitance, use the formula:

$$C1, C2 = 2(C_{L\ (crystal)} - 13)$$

The 10 pF capacitors on the board adjust the load capacitance of the part so that the frequency is correct when used with an 18 pF parallel resonant crystal.

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