

Getting started with your Crystal Calibrator.

Many thanks for purchasing this simple crystal calibrator. The calibrator has been designed to be quickly deployed either as a bench unit or to be included in a radio. The calibrator has three output frequencies selected by a movable header/jumper. Powered from AC or DC this capable unit will be a great addition to the test bench or can be integrated into a radio.

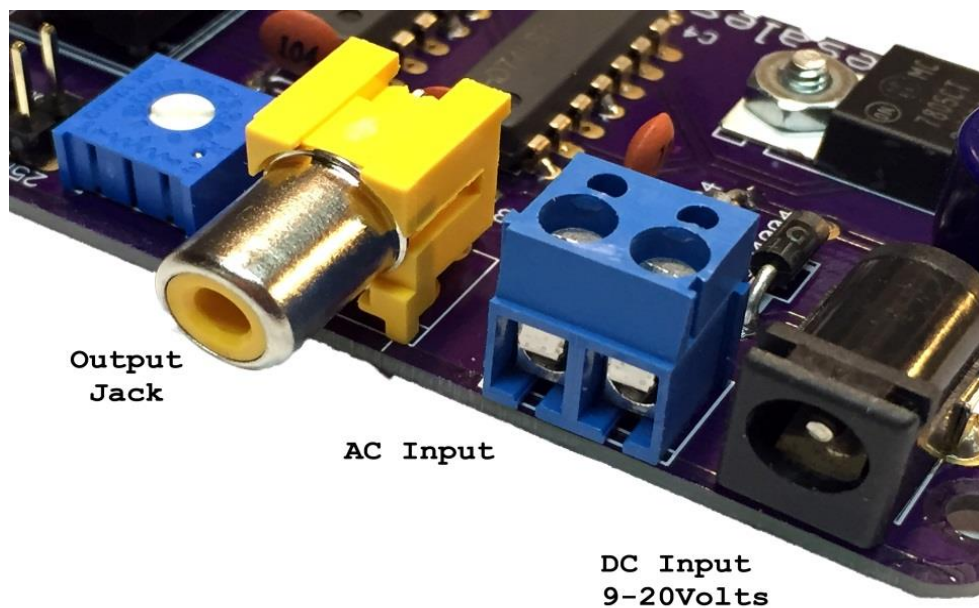
We appreciate your business and want to ensure that your experience with our products is a pleasurable one. We understand that you want the product to work without fault and that is our wish also. The following hints are designed to help you get up and operational as quickly as possible.

As supplied the calibrator is a fully completed unit that only requires power be supplied and the output frequency to be selected. Follow the steps below to start using the calibrator

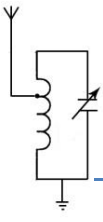
Powering the unit

The calibrator has been designed to accept a DC voltage on the barrel jack (2.1mmx5.5 mm center positive) between 9 and 20 volts, or an AC voltage on the blue screw terminals. This allows the user to have the unit on the bench powered from a bench supply or integrated in to a tube based receiver where the AC is tapped from the heater line.

***** NOTE, NEVER POWER WITH BOTH AC & DC AT THE SAME TIME TO AVOID DAMAGE*****



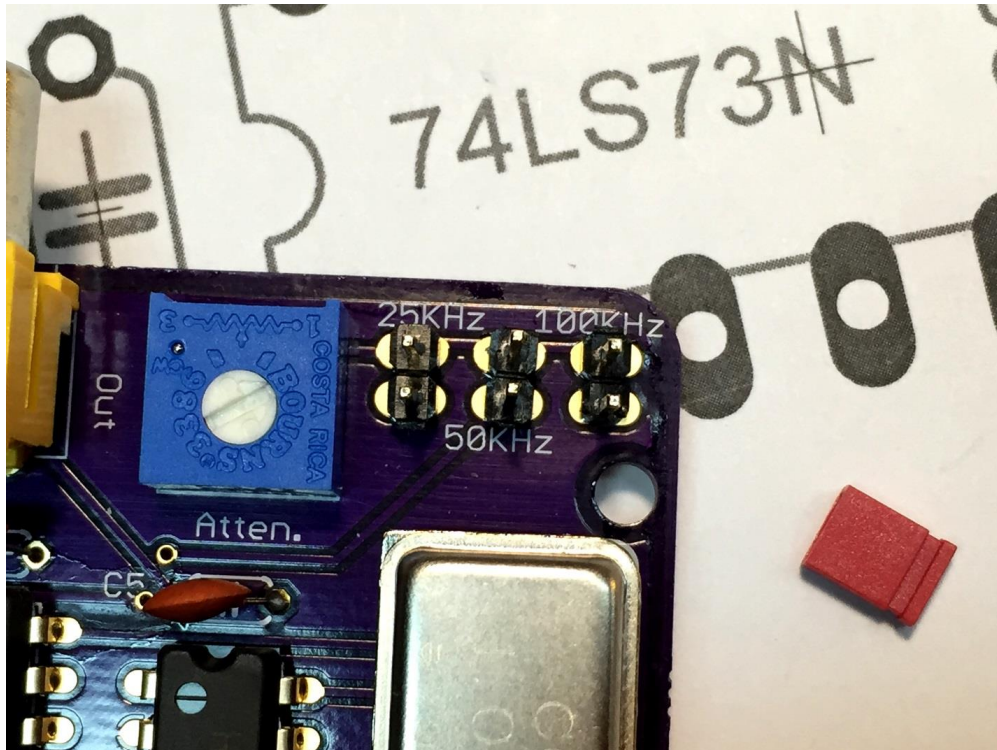
Interface Components
(c) Electroresales 2015



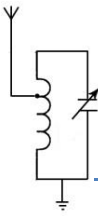
Selecting the output frequency

The calibrator can generate 3 different frequencies, 100 KHz, 50 KHz & 25KHz, while the 100KHZ marker frequency is the one most often selected, the other frequencies can be useful also. To select the desired output frequency, move the red header jumper from the as supplied 100 KHz position to the new position.

The frequencies are noted on the PCB next to the respective header pins, see photo below;



Also seen in this photo is a preset potentiometer, this is designed to vary the output level and if required to trim the square wave as needed, when the calibrator is connected to a scope. This is factory preset, so should not require any user adjustment.



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Testing & Use

In use the calibrator needs a RCA jack to be plugged into the output socket; this cable can then be connected to the radio antenna port. A step attenuator can be included between the calibrator and antenna if desired to reduce the output from the calibrator.

Classically, in use, the radio is tuned to 10.005 MHz, and with the calibrator on and connected, the radio is slowly tuned until the dial (analog or digital) reads 10.000 MHz, the beat of the calibrator should be heard as the radio is tuned until it nulls at the 10.000 MHz point, tuning up or down, past the null at 10.00 MHz, will produce a new signal and null every 100 KHz, in this way the accuracy of the radio dial can be determined.

Appendix 1 – Troubleshooting

The calibrator is a simple device that has been fully tested and checked before dispatch, however, issues can occur and we want you to have these simple troubleshooting steps to try. If these don't work, please contact us via email at: resalese@gmail.com

1. No signal – Check that the unit is receiving power, if using the AC input make sure the heater chain is on, if using DC is the input voltage above 9 VDC
2. No signal – Check the shorting jumper is in place on one of the output selection headers, is the jumper on both headers and not just one?
3. No signal – Check that the clock oscillator is properly seated in the socket, note this is a polarized device and must be fitted with the square corner pointing at the trim pot. Press the oscillator gently to make sure it is seated.
4. No signal – Check your output cable is in good condition, replace or substitute if needed.

Overall enjoy the calibrator and have fun with simple radio!

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There is a risk of electric shock, electrocution, burns, or fires that is inherent in the construction and use of electronic equipment. By purchasing this item, the buyer acknowledges these risks.

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