

Electro-Resales

Getting started with your Crystal Tester/RF Source Mk 2.

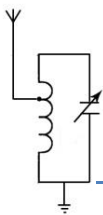
Many thanks for purchasing this simple crystal tester/RF source. The tester is designed to be quickly deployed as a way of testing crystals at home, in the field, in fact anywhere you may need to check that a crystal is functional. Additionally the crystal checker can be a low power ($\sim 100 \mu\text{V}$) source of RF at the frequency of the test crystal.

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.

Setup & Use

Refer to the photos in this document to assist you in understanding the tester.

1. The Mk 2 tester has an on board battery holder that accepts a standard 9 Volt battery (MN1604). The battery is held tightly, so to insert, position the contacts the right way round, and insert at a slight angle until the contacts engage, Photo 1, then push the battery down until it is flat and locked in the holder, Photo 2.
2. The crystal under test is either directly connected to the push terminals marked test, or a pair of clip or test leads can be attached here and used to connect to the crystal under test. This is particularly suited to testing larger footprint crystals such as the FT243 case style.
3. With the battery installed and a crystal connected, the onboard LED lights if the crystal oscillates, indicating that the crystal is functional; no led lighting indicates the crystal has an issue or is broken. A crystal is included in this sale to allow initial testing.
4. The BNC connector allows the frequency of the crystal oscillator to be monitored on a frequency counter or be applied to the antenna coax port on a radio. The board can be either directly attached to the radio/measuring device by means of an adapter, or a suitable cable.
5. The Mark 2 Checker includes the ability to 'tweak' the output frequency by means of a trim capacitor located just behind the test socket, Photo 4.
 - a. Using a small non-metallic screwdriver (preferred) carefully turn the screw on the trim capacitor, it will turn either way but is a little stiff, do not force it.
 - b. The trimmer only needs very slight adjustment to bring the oscillator to frequency
 - c. Once on frequency, no further adjustment is required.



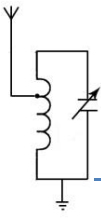
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1. The correct way to insert the 9 Volt battery



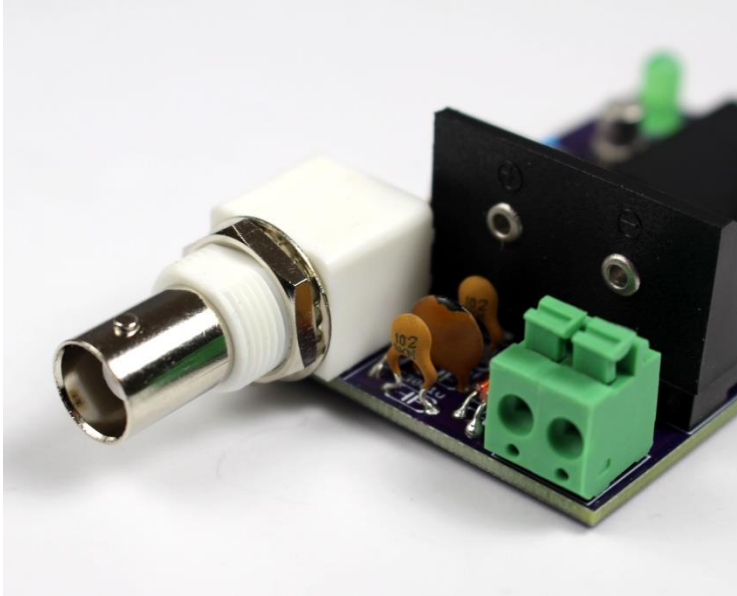
2. The battery in position



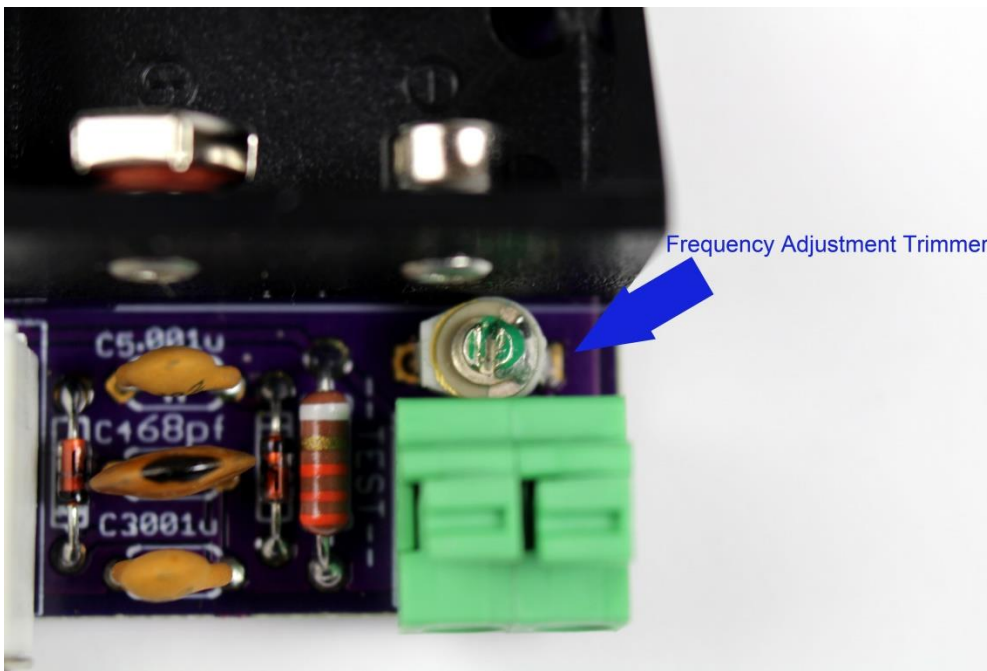


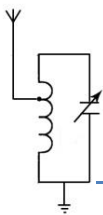
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3. The BNC and Crystal test push clips – The BNC allows the output frequency to be connected to test equipment.



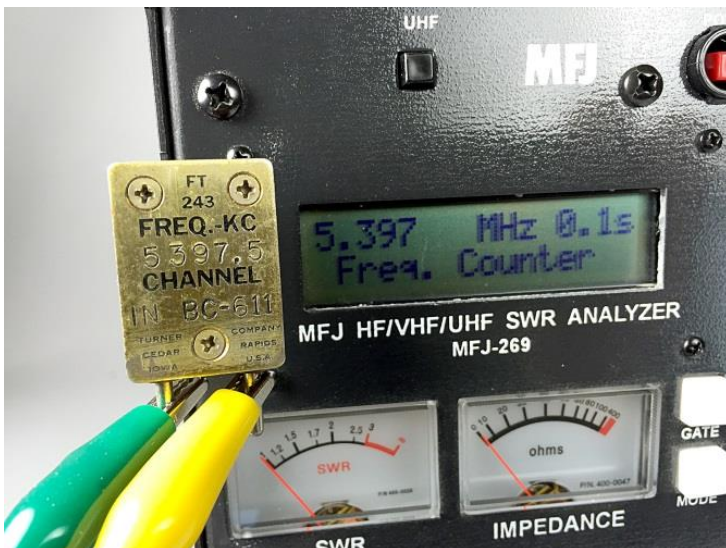
4. Location of the Frequency adjust trimmer – only slight adjustment should be needed





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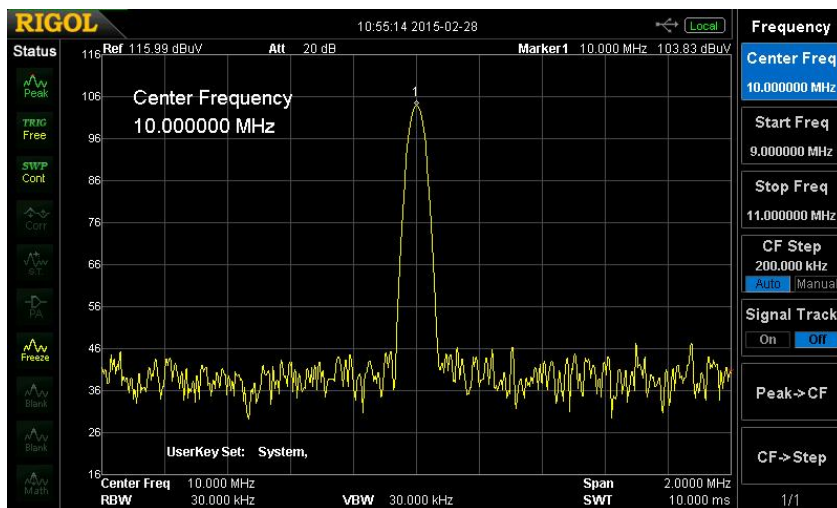
5. Measuring the Frequency of a FT 243 style crystal



Connect a BNC terminated cable to the BNC socket on the checker board, attach the other end to your measuring equipment. Remember at RF to use short shielded cables at all times, alternately directly connect the board to the measuring equipment using a BNC to BNC adapter

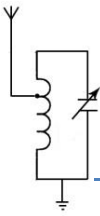
Note: Test clips shown in this photo are not included in this sale.

6. Analyzer* output measured for a 10 MHz crystal



Measuring the output of the crystal checker when a 10 MHz crystal is attached to the board

*Rigol Spectrum Analyser model IDSA 815



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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.

IN NO EVENT SHALL THE SELLER BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY NATURE including, but not limited to, property damage, personal injury, death or legal expenses. Buyer's recovery from Seller for any claim shall not exceed the purchase price paid by Buyer for the goods, irrespective of the nature of the claim, whether in warrant, contract or otherwise. By purchasing this item, BUYER AGREES TO INDEMNIFY, DEFEND AND HOLD SELLER HARMLESS FROM ANY CLAIMS BROUGHT BY ANY PARTY REGARDING ITEMS SUPPLIED BY SELLER AND INCORPORATED INTO THE BUYER'S PRODUCT.