

## **Modular Tester user guide: CB tester**

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The CB tester allows testing of CB microphones or act as a microphone to put the CB radio in transmit mode with a selected tone to test and adjust the transmitter part of the CB radio.

The tester is very flexible, any pin of any connector can have any function as defined in the software, 23 models are programmed and should cover most mikes, some data is based on internet data and not everybody uses the same pin numbering so some might be wrong, I use the pin numbering as defined by the manufacturer of the connectors and viewed from the back of the mike connector or IOW looking into the CB radio connector.

Ohm measurements are done for the RX and TX (and “other”) pins to allow detection of contaminated or erratic switch contacts.

Connect the audio output to the signal tracer module or other external amplifier.

After power on the module shows the splash screen and goes to sleep.

Press the rotary encoder (right knob) and hold until the splash screen appears.

The tester will be in microphone testing (RX) mode.

Connect the microphone to the matching microphone input plugs.

Turn the rotary encoder to select the model.

The pin configuration is shown:

M: microphone pin.

S: shield pin (for microphone).

C: common pin (for TX/RX button)

SC: combined shield and common ground (for TX/RX button), usually used in 4 pin configurations.

RX: receive pin.

TX: transmit pin.

-: “other” pin, can be an up or down button, will be tested.

Blank: not used, ignored in test.

A green LED should display at the RX pin, if not or it is orange, recheck model selection.

Push the transmit button on the microphone, the green LED should display at the TX pin.

To test the modulation, listen to the signal tracer, adjust the output volume with the left volume potentiometer.

Press the rotary encoder to switch the display mode:

Default mode: LED's display the status of the pins, green means a good switch, orange means the resistance is higher than expected, red means it's really high and might fail as a switch.

Ohm mode: display actual Ohm values of the switches, useful to find bad contacts. Due to the measurement method there is some tolerance.

Scope mode: shows the modulation on the oscilloscope screen.

Press encoder long for the menu, turn to select, press to select or toggle setting:

Return: return to main screen.

TX mode / RX mode: toggle between microphone or CB radio testing.

Go to sleep: put the module to sleep.

In TX mode the connections of the output connector are shown (5 pin din), use adapter cables for the CB radio connection.

**Warning:** make sure an antenna or dummy load is connected to the CB radio when you want to use the TX function.

Turn the rotary encoder to select the modulation: none, 1KHz, 500Hz, 2.4KHz, 2.5KHz or 500Hz+2.4KHz dual tone.

Press the TX button to transmit.

Turn the left volume potentiometer to set the output level as required for the radio adjustment per service manual, start with volume at minimum.

