



Youkits TJ2B 2016 SSB CW HF TRANSCEIVER

OPERATION GUIDE

TJ2B is a high-performance QRP portable multi-band SSB/CW transceiver, used with DDS as LO, offering wide frequency coverage and fine tuning rate. The Doubly Balanced Diode Ring Mixer makes strong signal handling capability possible.

Operating Frequency:

BAND	1	2	3
FREQ	7.000000 – 7.300000	14.000000 – 14.350000	18.068000 – 18.168000

Mode: LSB, USB, CW

Tuning Rate: 10 Hz, 100 Hz, 1 kHz, 10 kHz, 100 kHz

IF: 9 MHz

Sensitivity: 0.3uV

Operating Power: DC 10.5 – 12.6V

Current Drain: 250 mA (RX); 1100 mA (TX)

Output Power: 5W

Features:

High Sensitivity

High-Performance IF AGC

Strong Signal Handling Capability

Low Noise High-Performance Audio IC

Wide RX Frequency Coverage

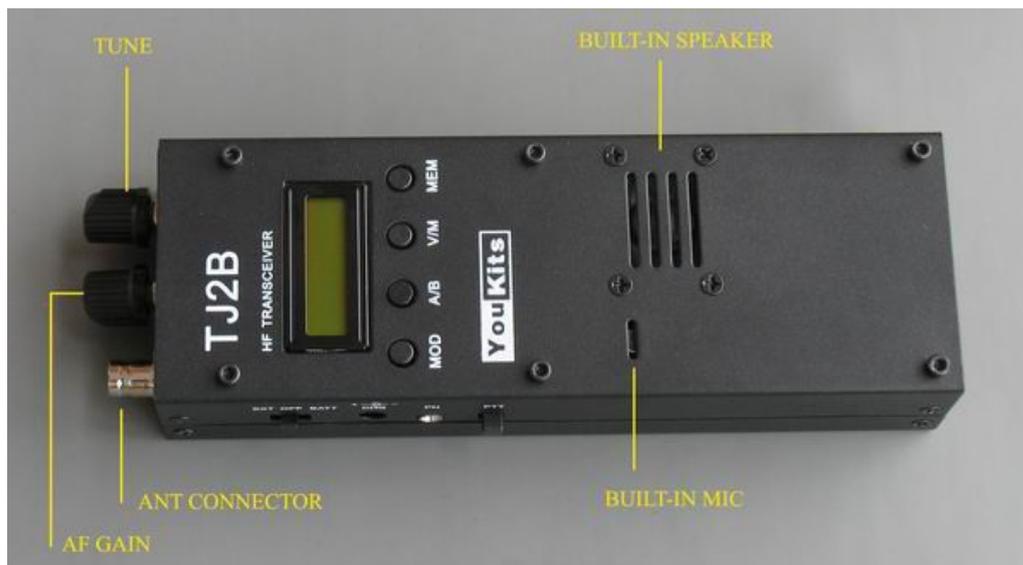
40 Memories

Dual VFO

Memory-VFO Transfer

High-Performance Built-in Speaker

High Sensitivity Built-in MIC



1. Connector and Knob on Top Panel



ANT – Q9 connector for antenna. Connect 50 ohm antenna to this connector.

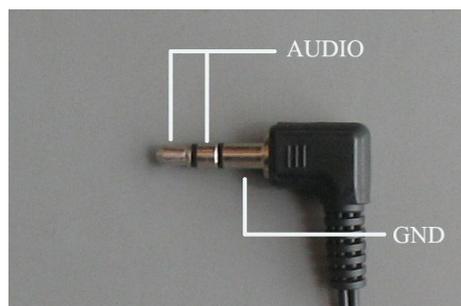
PH - Earphone/speaker socket. Either earphones or speaker can be used. The Built-in speaker is switched off when the earphone or speaker is plugged in.

Use the stereo plug. Never use

the mono one, which short-circuits one of the audio out put ring..

AF GAIN - Volume control. Turn clockwise to increase volume.

TUNE - Frequency tuning knob/Tuning rate selector. Rotate clockwise is frequency up, counter-clockwise frequency down. Press the knob to select the tuning rate. The sequence is 10 Hz, 100 Hz, 1 kHz, 10 kHz, 100 kHz, and 1 MHz.



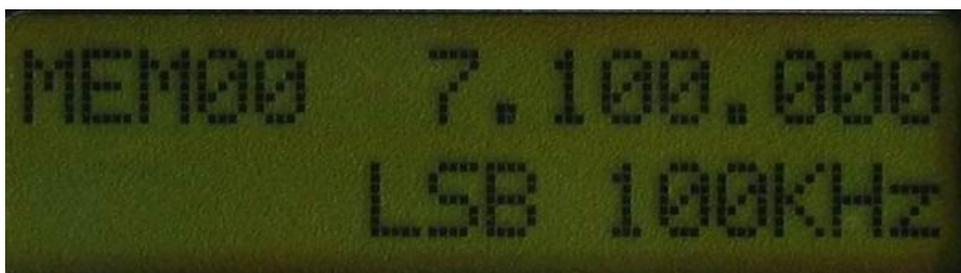
2. Buttons on Face Panel

MOD - Mode switch. Press to select LSB, USB and CW. In CW mode, the displayed frequency is exactly the sender's frequency. The MCU compensates 1kHz offset.

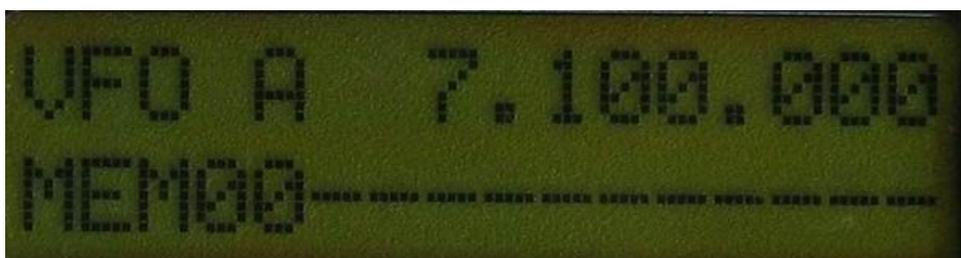
A / B - VFO selecting / Memory clearing. Press to select VFO A or VFO B. In MEM state, hold the button until all the memories are cleared.

V / M - VFO/MEM switching. Press to switch between VFO and MEM. Turn TUNE to

select the memory number.



MEM - Frequency saving / MEM to VFO transfer. Press to save the frequency to the memory. Press MEM, the memory number appears. The dashes indicate the blank state of the memory. Turn TUNE to select the MEM position you want to store the frequency to. MEM00 - MEM39 can be used to store the frequency.



In MEM state, press MEM, VFO appears on the left corner. For example, VFO A may appear on the left corner (Press A/B to select the VFO you want to transfer the memory to). Press MEM, the frequency in the memory will be transferred to VFO A. Press V/M to enter VFO A, and now you can see the transferred frequency.

S METER

In receive the bargraph shows relative signal strength. The second bar represents S7, the ninth bar S9, the fifteenth bar +10. The S-Meter levels are approximate, and accurate calibration is not supported.

3. Switch and Socket

BATT - When the switch is set at this position, the internal battery is switched on, and the rig works if the battery pack is installed.

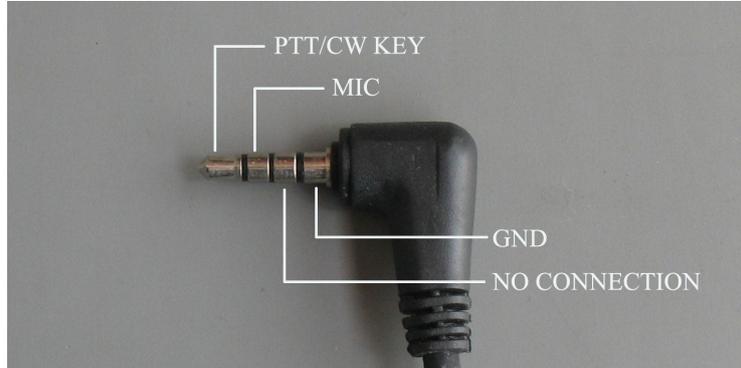
OFF - When the switch is set at this position, the power is off. The rig stops working.

EXT - When the switch is set at this position, external power is on, and the rig works if 12V DC is plugged in the 2.5mm DC socket.

CHG - Battery charging socket. The battery is charged no matter what position the switch

is set.

MIC - External MIC and PTT/CW key socket. Turn off the power before plugging in the external MIC plug. Built-in MIC is switched off when external MIC is plugged in. In CW mode MIC is switched off and PTT functions as the CW key if the external MIC is used. The socket can be used as CW key socket in CW mode.

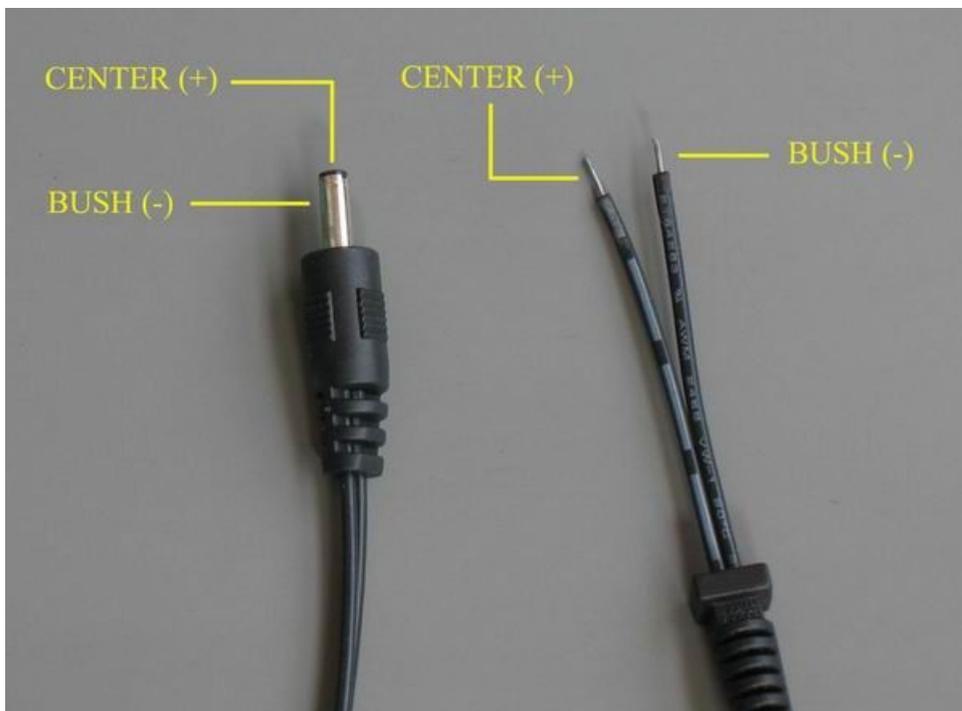


PTT - Push to talk. Press to transmit. In CW mode MIC is cut off. This button functions as the CW key.

DC12V - External power socket. Use stabilized DC power supply.



4. External Power DC Cable



Connect the DC cable as illustrated. The wire labeled white dash is the center, i.e., "+"; the other "-". However, use the ohm meter to confirm. The bush should be connected to "-", the center to "+", never use the wrong polarity!

4. Operation

If you do not have the battery, use the external power. (The battery is optional. Not included in the rig)

Connect the antenna and turn on the power. Signals or noise can be heard. Rotate the TUNE knob to the frequency you want. TJ2B has no band switch. Therefore, use fast tuning rate (For example, 10 kHz, 100 kHz) as the band switch to get to the meter band so as to save time, and then use the fine tuning rate (10 Hz, 100 Hz or 1 kHz) to search signals or tune accurately.

SSB Transmission

With the built-in MIC:

In LSB or USB mode, press the side PTT button, speak to MIC and your voice is transmitted.

With the external MIC:

In LSB or USB mode, press the handmic PTT button, speak to MIC and your voice is transmitted. The built-in MIC is disconnected when the handmic is plugged in.

CW Transmission

In CW mode, the CW note is sent out when PTT or CW key is pressed. A 1 kHz side-tone can be heard. Side-tone is not affected by AF GAIN. MIC stops working in this mode. Either the side PTT button or the handmic PTT button functions as the CW key. Alternatively a key can be plug in the MIC socket.

Important!

Never hold the CW key down for longer than 30 seconds. Long key operation would overheat the power transistor, causing damage.

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