

The Bayou Jumper

This is an unusual radio. It is based on the “Paraset” spy radios of WWII, both in circuitry and packaging. The “Bayou Jumper” name is a play on the KnightKit “Ocean Hopper” from days gone by. The circuit has been updated from vacuum tubes to semiconductors. It consists of a regenerative receiver and a crystal-controlled transmitter. It is a single band radio, and basically covers the lower half of the 40 meter band. It is CW only. It is available as a kit or prebuilt.

The radio is built into a wooden case with a carry handle. It measures 20 centimeters wide, 14 centimeters from front to back, and 8 centimeters high, not counting the handle and latch. These add about 1.5 centimeters to the front of the case. It weighs 606 grams. The wood is unfinished, so you can paint or varnish how you please.

There is no keyer or speaker. There is an included crystal checker that will allow checking a crystal at its series resonant frequency. Two crystals, for 7030 and 7122 khz., are included. Any crystal having an appropriate frequency and in an FT243 holder or adapter will work. An adapter that will allow placing a variable series inductor or capacitor in series with the crystal will permit “rubbering” the frequency slightly. Capacitance will raise the frequency. I understand the two crystals supplied are usually a few hundred hertz lower than marked. The crystal checker will allow placing the receiver on frequency, as there is no dial. It might be a good idea to work up a calibration curve for the tuning, print it out, and paste it to the inside of the lid. This would be slightly different for each radio, so you will have to do it yourself.

The radio has a built-in “key”, if you can call it that. I found it a miserable substitute for a real key. Maybe I am spoiled by having a few keys made by people who know their way around a machine shop. One is custom made for me. An external key is an excellent idea. The EZKeyer III, also from 4 State, will work well with this transceiver. It is an almost perfect cube 7.5 centimeters on an edge. It is powered from 3 penlight cells. With a set of lithium penlights it weighs 220 grams. It has a few memories, so it can send something like the CQ from memory.

The power input connector is the fairly standard 2.1 x 5.5 millimeter coaxial barrel connector. The radio works well on the usual 13.8-14.0 range of input voltage. A 10-cell NiMH AA battery pack will probably give about 15 hours of operation, depending on the exact quality of the cells and the amount of transmitting. With little transmitting it would do much better. I am using a 25%/75% key-down/ key-up ratio to arrive at the 15 hour figure. I have a couple of 9 amp-hour LiFePO4 batteries. These would likely last for about 50 hours. There is no battery monitor in this radio. Pacific Antennas has a monitor. One unusual feature is that the radio has internal protection in case the power is connected with reversed polarity. The antenna connector is the standard BNC.

The audio output circuitry for the receiver is a bit unusual. It is basically a push-pull dual op amp. The two outputs are connected to the tip and ring of the phone jack, and the sleeve is open. This effectively places the two earpieces of a stereo headset in series. If a mono headset is plugged in, the headset sleeve will contact the jack ring, and things will work properly. Some stereo headsets have a stereo/mono switch. This switch must always be in the stereo position. If it is in the mono position it will short the two IC outputs together. If you are using something that has one of its inputs grounded, like the code reader in the Hamcrafters “K4” series keyers, you must use an isolation transformer between the Jumper and the keyer.

There is an accessory for the Jumper called the “Soup’er Up’er”. It is an internal circuit board and can be switched in or out. When switched in, it provides vernier tuning, TX sidetone, and audio filtering. It is fitted to mine, and is included in the weight given.

TX/RX changeover is handled by a 3-position Off/RX/TX switch that also controls the power. There is a 2-color LED that is yellowish-green in RX and red in TX.