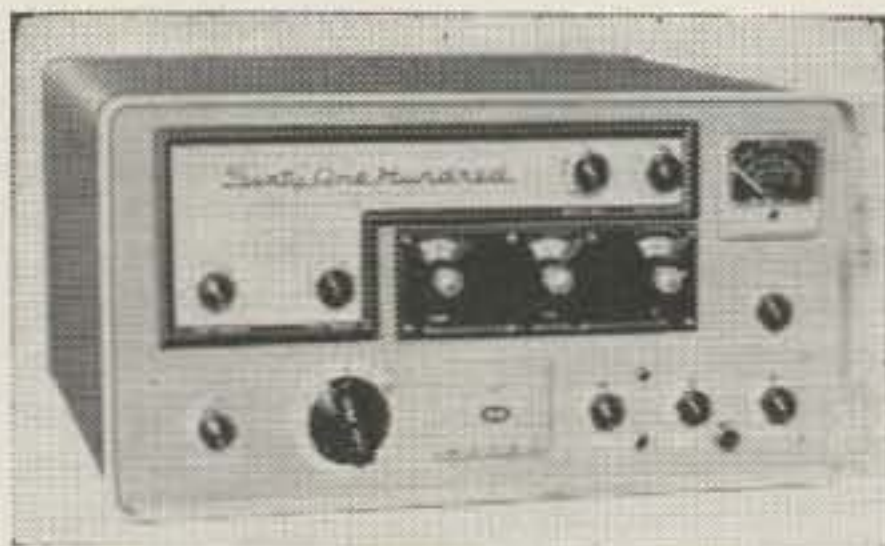


73 Tests the



B & W 6100

An incredible amount of design has obviously gone into the B & W 6100 transmitter since it is a radical departure from present day amateur transmitter equipment. The big difference is the tuning system. Instead of the usual one knob for tuning the transmitter VFO, the 6100 uses three and they are so accurate that you can read your frequency directly on them.

This is accomplished by means of a frequency synthesizer, a veritable forest of crystals inside which are switched by the 100 kc control, the 10 kc control and then "rubbered" by the last knob, which is calibrated directly in kilocycles. The megacycles are set by the bandswitch.

The crew at the 73 hamshack were quite impressed by the ease with which you can go to any desired frequency just by setting the dials . . . and you are within 200 cycles, invariably. Needless to say the unit is rock-stable. Another good feature was the extreme ease of tuning up on any band. Once you learn the system you can flip to any frequency on any band and be tuned up in a few seconds. Though fellows don't pay a lot of attention to how ham gear looks, we did notice that the XYL's visiting the station almost always had something nice to say about the 6100. It is a beautiful piece of gear, in case you hadn't thought of it.

The 6100 runs 180 watts PEP on sideband and CW, and 90 watts on single sideband AM phone to a pair of 6146's in the final. It has VOX, push-to-talk and manual operation.

The ALC circuit is particularly effective in the 6100. It feeds back voltage to two earlier stages, each with a different time constant

(one is .03 seconds to control the gain during syllabic variation, the other 1.5 seconds to control the gain between words), with up to 10 db of voice compression resulting. This can be read on the panel meter in one switch position.

The panel meter also reads the cathode current of the final and the output power.

The power supply uses all silicon diodes, with the result that the 6100 operates noticeably cooler than most transmitters. The input of the rig can be matched to your line voltage from 105-125 volts.

The sideband signal is generated by means of the B & W crystal lattice filter. Filter bandwidth at the 3 db points is 3000 cycles, so voice comes through clear and clean.

The 6100 provides extra contacts on its VOX relay to operate antenna relays, disable the receiver, etc. It also provides -100 volts for possible blocking of your receiver or a linear.

The clickless grid-block keying was very popular with the CW ops in our crew.

The output of the 6100 is designed to match either 52 or 75 ohm coax, though it will tune anything from 30 to 100 ohms with the pi-net. Beyond that it is prudent to use an antenna matching unit. We *always* do.

B & W is to be congratulated on turning out such a good looking, well designed and fine operating transmitter. We enjoyed our tests of this rig very much and there were many groans when the time came for it to go back to B & W.

Now that B & W has broken the ice and proved that it is possible to have a frequency

synthesizer in ham equipment we may find more manufacturers following their lead.
 ... W2NSD/1

Specifications

Frequency coverage: 3.5-4.1 mc, 7-8 mc, 14-15 mc, 21-22 mc, 28-29 mc, and 29-30 mc.
Power Input: 180 watts CW/SSB PEP, 90 watts AM PEP.
Final: 6146's in parallel.
 Power supply included.
Price: \$875.
Manufacturer: Barker and Williamson, Bristol, Pennsylvania.

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