

S/1 NEWS

Harry, W7IV, has been doing some work concerning a frequency synthesizer for the CX7. He notes that a synthesizer should put out frequencies from 41 to 69 Mhz in 1 Mhz steps at about a level of 1-volt. The advantages of a synthesizer would be the availability of general coverage from 1 to 30 Mhz in 1 Mhz slices; no more trimming of the front-end crystals (Harry notes that two of the crystals in his CX7 have drifted so far off they no longer can be zeroed); and calibration on one band will hold for all bands. The preliminary modifications to incorporate a synthesizer into the CX7 are as follows:

On the front-end board, remove the jumper between pins 53-54 and 71-72 and discard it. Remove the shielded leads from 78-79 and place them on 53-54. This brings the full output of the internal oscillator to J8, the "L.O. MON" jack. Take the shielded lead from 63-64 and put it on 71-72. The L.O. input to IC-1 and Q2 is now available at J10, the "HI IF" jack.

Make up a jumper about five inches long from two phone plugs and a piece of shielded wire. (Or purchase one from your local Hi-Fi store.) With this jumper bridging J8 and J10, operation is with the internal oscillator. When a synthesizer is available, it will be plugged into J10.

Remove the jumper between pins 10 and 11 of P6, the power plug. The -15 volts for the internal crystal oscillator passes through these pins. Bring out a couple of wires. With a switch or other means, these wires can be shorted when the internal oscillator is used (normal operation) and opened with a synthesizer in use.

Because of the extra length of shielded cable between the internal oscillator and the mixer after the above modifications are made, the injection voltage at the mixers is a little low. The voltage is raised to its former level by shunting a 6.8K $\frac{1}{4}$ -watt resistor across R33, the bias resistor for Q7, the oscillator.

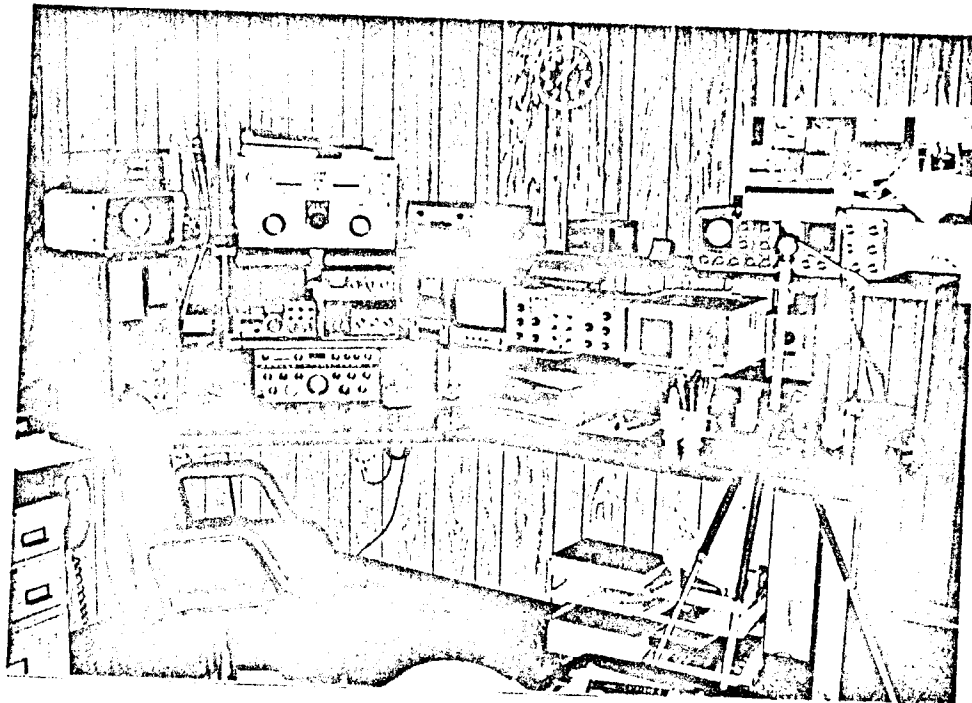
S/1 NEWS will publish the complete construction details of the synthesizer in an early issue. Our thanks to W7IV! A final note from Harry: If just a few additional bands are desired, a simple external oscillator can be built. The frequency is 40 Mhz plus the lower limit of the desired band. (for example 9-10 Mhz coverage requires an oscillator running at 49 Mhz)

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DL2AA/W1 recently purchased a blank counter board from Cunningham, KØHHP, and built it up. He reports it works quite well and when he installed it made a neat modification. Recall that Cunningham's board has provisions for 100Hz or 10Hz resolution by moving a single jumper on the board. Karl replaced the Keyer SPEED potentiometer with one with a SPDT switch and routed wires from the jumper location on the counter board to this pot. Now it is possible to select counter resolution from the front panel.

Does anyone know who has received a CX11? It would be interesting to find out any comments they may have concerning operation, etc. I have talked to Randy, WAØQZ/W6, the winner of the CX11 from the magazine contest. He thinks it is great but has only used it for a short while on SSB only. Don Payne, Payne Radio, tells me they are going out at a rate of 10 to 15 per month (\$4000!) so there must be some around somewhere. Please let me know... ed.

Here is another station. This one belongs to John Gallucco, WBSAKU. Note the antenna rotator control to the left .. what kind of antennas, John?



W3KV reports the following problem and solution;

SYMPTOM: Low audio on receive and no output on transmit

CAUSE: Voltage measurements on the power supply board pin 131, 132 was +24 (correct value is +34). Voltage on pins 123, 124 was +12 (correct value is +24). In both cases approximately half of what they should be. Checking with an ohmmeter showed Q6 to have a dead short from base to collector.

CURE: The 2N5184 replacement for Q6 was not readily available so it was replaced with an RCA SK-3040.

W3KV also notes that he has replaced the TIP 29A transistors on the rear panel with an item from the local "Radio Shack" store, part number 276-2020. Physical size is identical and ratings far exceed those of the original unit. Caution: Save the mounting hardware - the Radio Shack unit is supplied less hardware. The TIP 30A can be replaced with Radio Shack part number 276-2026.

The following subscriptions are due: W7DNN, W3AQY, KØUTX, WB9JJH, KL7EBK, W9IVG, W8IPA, W6KKT, VE7BD, Higgins, Craig Radio, WB6QGL, W5DUU, WA1USZ, WB4PUD, YV4AQE, LA7LJ, K4FJC, W6WLU, W2JOJ, VE3CWG, W6CPL, and W7CKW.

VHF Transverter with CX7 - W7NJJ would like to know if anyone has had any experience using a VHF transverter with the CX7.

LAST MINUTE NOTE: Harry, W7IV, notes that he is having some minor feed-through problems with the modification described in this issue for connecting the synthesizer. It is recommended the described modification not be made until further word from W7IV. I will keep you up to date via S/1 NEWS.

Sorry for the short newsletter but I am short on information to publish. It's summertime and I guess everyone is playing outside rather than inside trying to fix their CX7's... ed.

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