VOLUME II, NUMBER 3
MARCH 1976

S/1 NEWS

Steve Koczo, K2GI, has offered to provide single back issues for those of you who are missing selected S/1 NEWS letters at a nominal cost. Write to him directly at 24 Douglas Drive, Towaco, N. J., 07082. This is not a business for Steve, so do not write and ask for more than a single issue. If you have a requirement for numerous issues, write to me.

Lee, W3RHO, notes that the Nixie tubes advertised by B & F Enterprises (and noted in a previous issue of S/1 NEWS) do not appear to be exact replacements since two of the pins are cutoff and would have to be extended by a very difficult soldering procedure.

W7IV writes with an idea for a modification for S/1's. He notes that the modification has NOT been made by him but should provide very neat receiver incremental tuning (RIT). I think most of us would agree that the A/TO mode is not as useful as RIT. Here is the modification:

Each VFO has a varactor in the tank circuit, CR2, 1N3182, used for frequency shift in the FSK mode. If FSK is not used, this varactor can be used for RIT. According to calculations, this diode can give an offset of at least ±2.5 Khz at one end of the band and ±3.5 Khz at the other. The diagram below shows a possible RIT arrangement. In transmit, Q1 is switched on by the R/T line and feeds a fixed voltage to the varactor, the voltage being determined by R1 and R2. This should be about 6 volts. In receive, Q2 is switched on by the T/R line and Q1 is off. The voltage is now controlled by the setting of the 5K pot (FSK). With the switch in the "out" position, the voltage to the varactor is controlled by R1 and R2 in both transmit and receive. Q1 and Q2 are both 2N2907's but any PNP silicon switching transistor would do.

Make the mod as follows: Remove the lead from pin 1 of VFO A. Tape it up. Remove the three leads from the FSK pot and tape them up. (Use small diameter heat shrink tubing for this). Drill a ¼-inch hole below the FSK pot (or between the FSK and CAL pots) for the miniature "IN-OUT" toggle switch. (For those of you who could not bear to drill a hole in the front panel of the S/1, I suggest utilizing a combination pot and pull-type on/off switch to replace the FSK pot. ed.)

more...

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The parts for the RIT circuit can be mounted on a small L-shaped aluminum bracket, sandwiched between the pot and the front panel. Run the following leads from TB1:

R/T	TB1-13
T/R	TB1-15
-15V	TB1-8

Also, of course, a wire from pin 1 of VFO A to the junction of the two transistor emitters. It might be a good idea to make this a shielded wire.

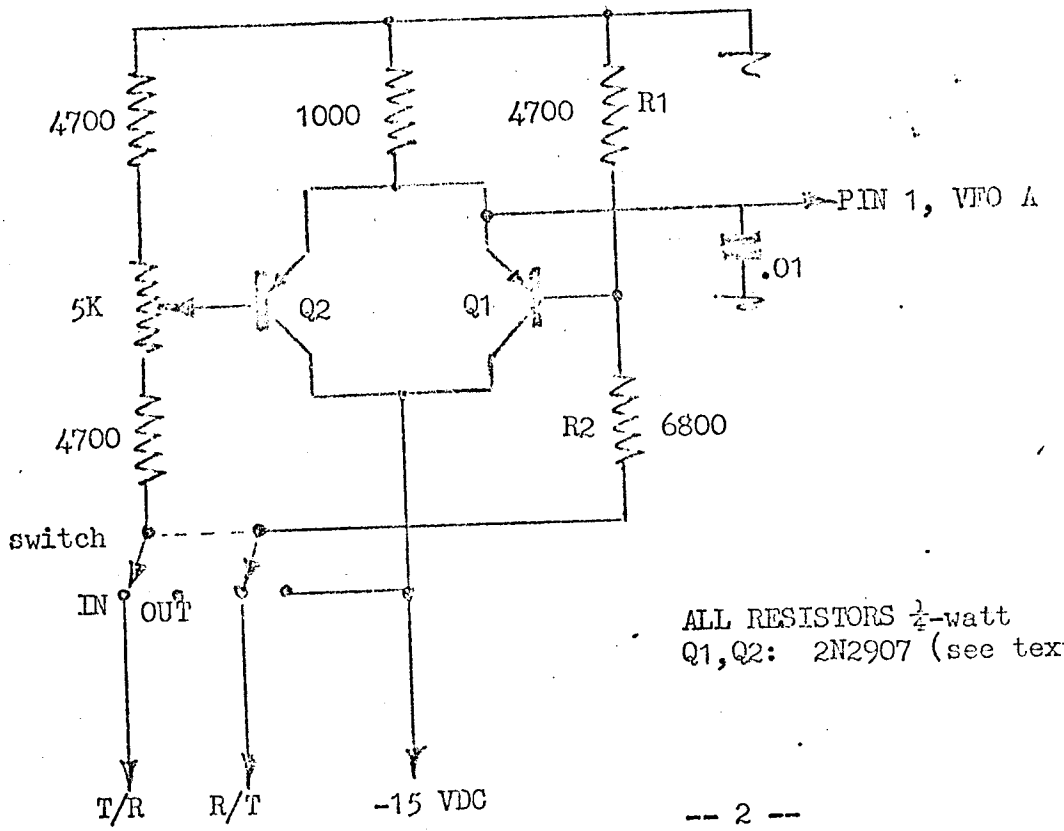
To make a really neat job, you can cut out a pice of thin aluminum to fit under the pot mounting hole and the toggle switch, conforming to the shape of the front panel, This can be painted to match the panel and labeled with rub-on letters.

The set can be converted back to FSK with little effort, if you ever want to.

Only one adjustment might be necessary. To center the offset range, the values of R1 and R2 might be adjusted. Or a 10K miniature trimpot might be substitute for R1 and R2.

Also, the taper on the 5K FSK pot might not be ideal for this application; a 5K pot with a different taper might be better, but this is lily-gilding.

The counter will read the actual frequency on both transmit and receive, unlike the "A/TO" mode.



ALL RESISTORS ¼-watt
Q1,Q2: 2N2907 (see text)

Harry, W7IV, would like to hear from anyone making this modification. Write to him directly at 9842 N. 57 St., Scottsdale, Az., 85253. (Also let me know your results.. ed.)

W8JUY reports that considerable problems with his CX7 were solved by Dick Cunningham. Bill noted that Dick provided a detailed report of all items found, repaired, or modified. Rig has been performing for a year without any problems. (Anyone who has a repair facility work on his rig should insist on details of the repairs as noted in a previous issue. I know that Cunningham does provide this for all his repair work. Let me know your procedures if you work on CX7's...ed.)

D. Reese, W3WKP/4, notes that the ECG-132 is an exact replacement for the 2N5485 used as Q1 on the Audio board.

K4FJC notes that, in reference to the modification suggested by W6HX in VOL I, Number 12 S/1 NEWS concerning sidetone volume, a 4700 ohm resistor in series with the center terminal on the sidetone pot gives a better volume range than the 10K resistor suggested by W6HX.

INFORMATION WANTED AND FOR SALE

K4FJC would like to trade a 1.2Khz filter for a CX7S speaker unit. He would also pay cash. Write him at 520 Hemlock Dr., Inman, S.C., 29349.