

VOL. II  
NO'S 7-12  
of 12 issues

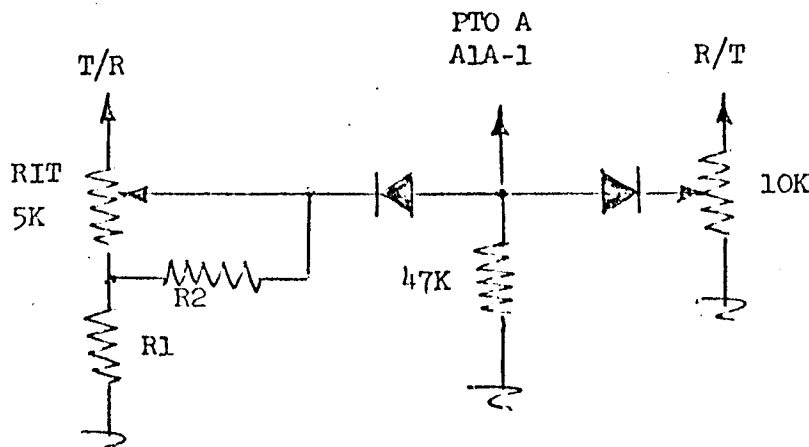
# S/1 NEWS

VOLUME II, NUMBER 7  
JULY 1976

S/1 NEWS seems to be doing a good job. I'm pleased to say that the renewal subscription rate is over 95%. I thank you all and hope that S/1 NEWS will continue to be informative.

Mark, K6BE, reports that he has limited his repair shop to SIGNAL/ONE repairs exclusively. He can be contacted at the following address:  
Mark Mandelker, 2315 Derby Street, Berkeley, California, 94705.

Mark also forwarded one of his RIT systems that he has been using for the past few months. It is straightforward and utilizes the existing FSK potentiometer. No switch is used since the total range is  $\pm 1$  KHz and is resettable to zero (The "I" in RIT on panel) to within 10 Hz. See circuit below. All components are mounted on a small terminal strip soldered and exoxied to rear of FSK potentiometer. R1 is selected for range desired and is selected at the low end of PTO range. Range of RIT pot is slightly more at higher frequencies. R2 is selected to obtain centering of range at center of RIT control rotation. Typically R1 = 4700 and R2 = 1000 for a range of  $\pm 1$  KHz. The XMIT SET pot is a miniature trimmer. Diodes are 1N456.

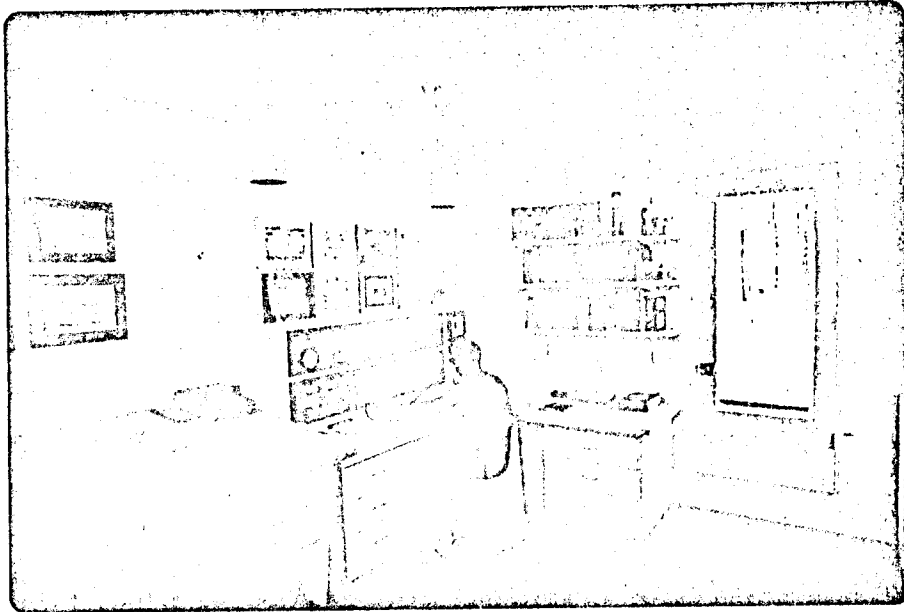


Dick, KØHHP, does not agree with leaving the CX7 on all the time but for those who do, he has the following suggestion: Turn the RF OUTPUT control full CCW, put the mode switch to CW, and turn the spot level control to maximum CW position. If the rig should go into the transmit mode when the operator is out of the area, the CW sidetone will be heard and give a warning that a malfunction has occurred.

S/1 NEWS is published monthly by Bob Sullivan, WØYVA/4, POB 6216, Arlington, Virginia, 22206. Subscription rate is \$4.50 per year. Foreign subscription by air is \$11.00 per year. SASE for sample.

JULY -76

Here is what my station looks like. The CX7A is flanked by an ALPHA 77 and a home made console to match the CX7. Send us a picture of your station .. we'll make the best copy possible for use in S/1 NEWS. ... Bob, WØYVA/4.



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We have received many letters asking what the differences between the Thomas Manual and the 'original' (thick) technical manual are. From the standpoint of trouble-shooting, I think the Thomas manual is a must. Basically, the changes in the Thomas manual were the following:

1. All production changes have been incorporated into the drawings and parts listings. Additionally, each change is identified as to why it was made.
2. Alignment procedures were corrected for minor errors such as call-outs.
3. All photographs have been corrected to show all production changes.
4. Accessory plug connections have been identified by pin and function.
5. Information on the use of phone patches has been added.
6. Tune up procedures have been rewritten.
7. All schematics have been reduced in size and are much easier to read and use.
8. Many general corrections have been made such as wire color coding, wire numbers, editorial, etc.

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Volume II, Numbers 1 - 6 are now available as a package for \$2.85 postpaid.

RF driver transistors (Q3 and Q4 on A5) can be replaced using Motorola type 2N5641's. The mounting holes must be reamed out slightly for proper fit.

Elmo, reports on an interesting problem. VFO A quit oscillating on the high end of its range. The frequency at which oscillation stopped became progressively lower until the VFO stopped working altogether. Replacing Q1 solved the problem. Q1 was replaced with a general type HEP unit.

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Please write in with your problems and solutions (if you have it!) - we need more input for the newsletter. Take a few moments .. you can be sure someone will appreciate your efforts. Thanks! editor.

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I have not received renewals from the following stations: W8VHY, WAOPZB, K8ICQ, and K8HAO. The following subscriptions are due this month: W6GBY, W6QDV, W1OTI, W6UW, WA1CGM, W6DYA, WA4DOZ, W8AKJ, W2GRU, W8BBK, W8ECE, W7FS, W8WKP, W8GYF, PAYNE RADIO, W6BH, W7RX, W8EPE, W8NTE, and WA9LFR.

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FOR SALE AND INFORMATION WANTED

CX7B Serial #850 factory modified from a CX7A. \$1500. Contact Mr. David Talley, W2PF, 40 East 9th Street, New York, New York, 10003. Phone (212) 982 2420 after 5:00 PM.

Nixie-type counter boards. Used, but in perfect working condition. Boards with plug-in IC's are \$32. Boards with soldered-in IC's are \$22. One CX7 speaker cabinet without speaker or grill, \$49. One new power transformer, \$115. All prepaid. Contact K8HHP, Dick Cunningham at 1477 N. 96th Avenue, Omaha, Nebraska, 68114. Phone is (402) 391 6230.

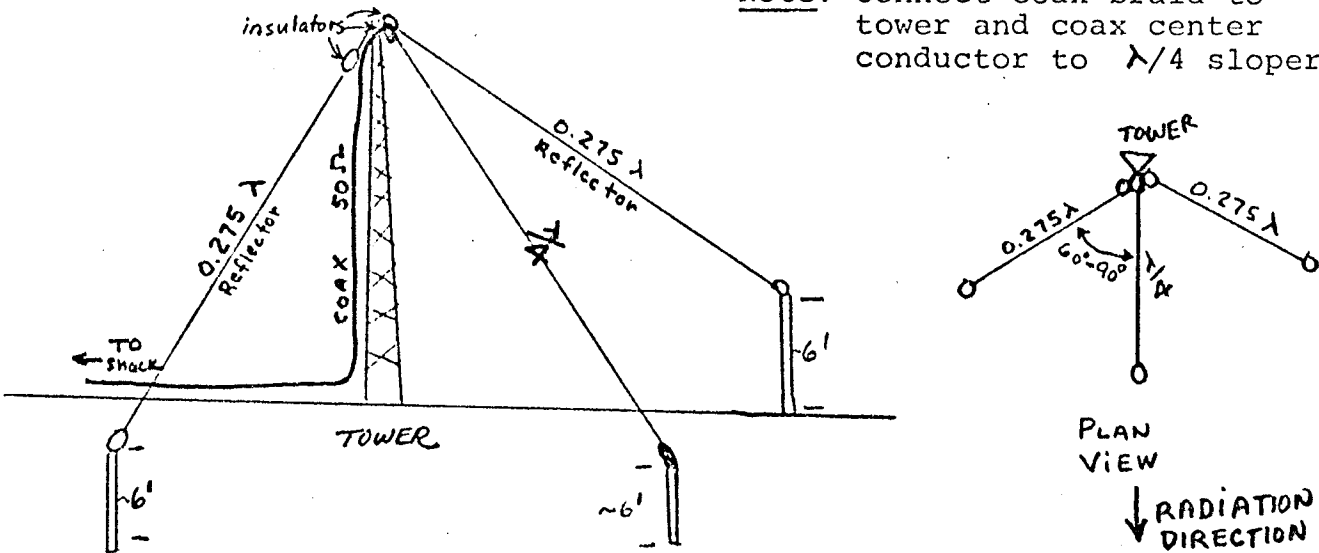
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LOW BAND DX ANTENNA

One of the low band antennas (160, 80 and 40 meters) featured recently in the antenna column of CQ Magazine is the quarter-wave sloper antenna. The chief advantage of this antenna system is that the height of the structure (tower) required to support a quarter-wave sloper is about half that required to support a conventional half-wave sloper antenna. The use of the quarter-wave sloper by a number of amateur stations in the Va-WashD.C.-Md area has shown that the quarter wave sloper is a very efficient low angle radiator with wideband resonance characteristics. In a number of instances on 75 meters a single quarter-wave sloper has out-performed a full size 75 meter delta loop especially on long haul DX.

The addition of two quarter-wave reflector elements from the same point on the sloper supporting structure at 60°-90° angles from the sloper enhances the performance of this simple antenna considerably by providing a noticeable front-to-back signal ratio and a small amount of gain. A unidirectional quarter-wave sloper system is shown in the figure below. Note that a tower height of only 55-60 ft is all that is required for 80-75 meters.

Note: Connect coax braid to tower and coax center conductor to  $\lambda/4$  sloper.



As the 1976-1977 winter DX season approaches, now is the time to think about antennas for the low bands. The sloper system described above is a system which shows great promise for the low band DX'er who does not have a large tower to support a half wave sloper system or a full wave loop. Good luck and good DXing. See you on 75, WA4TLB.