

K6BE writes that he is operating a full-time one-man ham radio repair business specializing in Signal/One work. He can be contacted at 2315 Derby Street, Berkeley, Calif., 94704. Tele is 415 548 1889.

Approximately 900 CX7 and CX7A's were sold according to Don Payne (Payne Radio). Recall that the three (and a few four) digit serial numbers are Florida units and the longer serial numbers (9 digits) are from California.

AUTEK RESEARCH (W6DYD) (Box 5390, Santa Monica, California, 90405) is marketing a new audio filter package. It is available both completely assembled in a small minibox or as a completely wired PC board, less power supply, that can be mounted as one sees fit. The unique feature of these filters is that both a peak and a notch is available. Attached to this issue is a specifications sheet for your information. At the present time I have one of these units under evaluation and will provide a more complete report on its performance in a future issue of S/1 NEWS.

According to Rudy, W4HX, based on a letter he received from General Electric, the GEIC-1 is a DIRECT REPLACEMENT for the PA-237 audio IC. Has anyone attempted to use one of these units as a replacement?

Elmar, DJ1RB, calculated that R14 on driver board, A5 dissipates .33 watt so replacing it with a 1-watt unit (rather than a 2-watt unit as suggested in the TROUBLE GUIDE) will be adequate. Furthermore the 1-watt unit fits the available space better.

I received a letter suggesting it would be a good idea for anyone repairing CX7's should provide the customer with a detailed description of what was done to the rig to effect the repair. I think KØHHP is an exception to this rule. How about you other fellows in the CX7 repair business...do you provide a detailed description of what you did?

I have quite a collection of letters from owners who have had various problems due to the fact they are keying using linears with slow-acting T/R relays. The reed relay in the CX7 is quite fast .. a slower acting relay in a linear can cause many problems in the CX7. If you want to use the break-in feature of the CX7, it is suggested you use a fast vacuum type antenna relay in your linear. Note, for example, the antenna relay used in the Henry linear is NOT fast enough for the CX7. No problems have been experienced with the A70, A77 series.

W6QJV recommends placing a 4 x 4-inch aluminum sheet (about 24 gauge) with a 1/2-inch lip to hold in place between the final cage and the power transformer to cut down heat radiated to the power transformer.

W8IPA recommends replacing C30 (on the RF driver board) with a 3 KV disc (the present unit is a 1KV unit) to prevent possible RF driver board damage if the final tube shorts plate to grid. (If C30 fails short with a final plate to grid short, 1800 volts will appear on the driver board!)

W8IPA also notes that it seems possible to replace the 8072 with the air cooled 8122 if adequate cooling is provided. Tube specs are all the same except for cooling.

W6RKJ gives the VFO dials a "flywheel effect" feel by filling the back sides of the knobs with lead shot and epoxy.

Attached to this issue, courtesy Paul, W8CX5, is a schematic he drew of the CX7 "B" power supply board by tracing the board! His board was purchased from New Jersey at a cost of \$125. C11 on this board was found to be in backwards as noted in a previous issue of S/1 NEWS.

Many have experienced problems with the built-in keyer. LED counter boards from KØHHP (since they use the same keyer circuit as the "old" type readout units) also have experienced some problems. The problem that comes up most of the time is that the keyer will not "start" immediately when attempting to send a dot. The following information concerning this problem is from Paul, W8CX5:

PROBLEM: To test the keyer operation, set keyer speed to the slowest setting. "Tap" the keyer paddle lightly, dot or dash, and note if the sidetone comes on instantly. Do you hear the key spark in the receiver audio before the sidetone and R.F. start? On 3 keyers tested here, you could snap the paddle all day and not get anything, but by holding the keyer paddle down the dot would start in 1/4 second, or less on some, but always the delay. The speed control does not shorten the delay much, at least up to the usual operating speeds.

TROUBLE: When the keyer paddle is closed, I.C.-15 puts out a positive 3.3 volt pulse that closely follows the actual key closure. See Figure 6-8, Counter board A-7, Sheet 2 of 2. Pin 6 of I.C.-15 puts out the plus 3.3 volts, this goes out to counter board pin 362, and thru a .001 Mf feedthru cap to the 25K speed control, back thru another .001 cap to pin 364 on the counter board, thru R-34 to the base of transistor Q-5 which turns on to start the multi-vib and put the dot generation sequence into operation. Note the 15 Mf capacitor C-14 on the base of Q-5. This capacitor is charged to .77 volts. The delay seems to be caused by the R-C time constant of the speed control and the two feed-thru caps, plus having to discharge capacitor C-14 to the point that base Q-5 has at least plus .6 volts to turn it on. A scope at the base of Q-5 shows a "ramp" charge with a long slope.

SOLUTION: The positive going pulse must get to the base of Q-5 faster to speed up the starting time and a small capacitor connected between pin 6 of I.C.-15 and the base of Q-5 will do the job. The rise time of I.C.-15 is good so it does not add any measurable delay.

CAUTION: If the new capacitor is too large in value, a new dot or dash will start every time the keyer paddle is operated and jamming will result.

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Experiments: The new capacitor must be larger than the feed-thru bypass total or nothing happens. A minimum value of .0025 Mfd is required and a value of .01 Mfd may be the maximum, with .1 Mf definitely too big.

THE FIX : Measure small ceramic disc capacitors with a capacitor checker (due to the plus or minus 100% tolerances) and select one with at least 100 volt rating with a measured value between .003 and .005 Mfd. I used the large size.

Remove counter board cage and the 4 mounting screws of the board. The connecting wires should be long enough to allow access to the bottom of the counter board. Lay the disc capacitor flat against the bottom of the board after cutting off any high projections. Tack-solder the disc capacitor from Pin 362 (where wire #398 goes) to the minus side of electrolytic capacitor C-14 (15 Mfd). The two points are less than half inch apart on the bottom side of the board. Figure 4-9 on page 4-19 shows component layout and all the 61S0007-001-, A, or B variations are the same. *C-14 STANDS UP FROM THE BOARD.*

On drawing Figure 6-3 Counter Board A-7, Page 6-23, Sheet 2 of 2, show a .005 capacitor between pin 6 of I.C.-15 and the base of Q-5, 2N5183. Also on drawing, note the .001 feed-thru capacitors on all connecting leads to pins 364,362,363,360,361. All leads to this board are bypassed this way except for the PTO and 100Khz pins #358,354,352.

INFORMATION WANTED AND FOR SALE

CX7A, Serial #00976 with all modifications including "B" power supply. Looks and runs better than new. Many spares. \$1,100.
Write Jesse Touhey, W6KKT, 17950 Burbank Blvd., Encino, Ca., 91316. Call at (213) 343-7908.

LATE INFORMATION:

Based on our useage to date of the AUTEK audio filter we have two comments that might be of interest: The lack of a "cutout" or "straight-through" switch position is a definite inconvenience. We have also experiences problems with RF getting into the unit. This was not unexpected since the manual made note of this possibility. To use a relay as the manufacturer suggests is not the best solution. We think the unit could be made insensitive to RF with additional by-passing, etc. (The relay mentioned above would disconnect audio output device). On the other hand, the filter provides a tremendous notch or peak of a variable bandwidth. We could copy stations using the filter (Q5) that we could not even hear using the 400hz CW filter on our CX7A! On 40-meters, it is possible to notch out a 40-over commerical carrier within 100hz of S-6 CW signal and copy the CW Q5! More information later...

CX11: I received a letter from Don Roehrs, President of Signal/One of New Jersey. He sent two very nice glossy photographs of the CX11 that I will try to duplicate for a future issue. He commented on W8CXS's comments of the CX11 in a past issue of S/1 NEWS: CXS had indicated a problem with the "stack" of PC boards making servicing difficult. Don noted that in the CX11 the BFO board is now located in a completely shielded enclosure located on the side of the chassis. He went on to say that the stack of three circuit boards has been eliminated and there are now 28 circuit boards, none of which have been retained from the CX7 design.

No information on delivery, software, etc.

