

# S/1 NEWS

The next issue of S/1 NEWS will contain a complete index for Volume II. All of Volume II will be available as a package at an early date. Let me ask again for you to send any information you might have of interest concerning your CX7 or CX11 .. if you have a picture of your station send it along - I'll return it if you wish.

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W1USZ reports excellent results with the MFJ CW filter installed as per S/1 NEWS instructions. Thanks for the feedback, Jim. (This MFJ unit is the best CW selectivity you will get for the dollar! ed.)

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More on the synthesizer by W7IV: Harry reports that his synthesizer is NOT the cause of the problems he is having with the CX7 and is continuing to work on the modification. His problem is RF feedback as follows: RF feedback occurs on all bands and even into a dummy load. It seems to be in the IF board since the rig puts out a CW signal whenever the PTT button is pushed and on both sidebands. The signal is present even when the broadband driver is disconnected and it is not carrier leakage from the balanced modulator - signal is present with the balanced modulator disconnected. Does anyone have ideas on this? Write S/1 NEWS or W7IV at 9842 N. 57 St., Scottsdale, Arizona, 85253.

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W2J0J reports a problem using the general replacement ECG-123 for the 2N5183 used for Q16 on the audio board. (The replacement was required after trouble shooting a lock-up in the transmit mode a few seconds after turn on - a problem discussed in a previous issue of S/1 NEWS). Apparently replacing Q16 with the ECG-123 would not allow proper T/R switching. Jonas tried a number of ECG-123's and a RE-12 - none would function properly in the Q16 position. Replacement with a 2N5183 restored proper operation. Jonas noted, however, that Q17 (also a 2N5183) can be replaced with the ECG-123 and proper operation achieved.

Audio output module utilizing the LM380 now available for the CX7 series. See last page of this issue.

The following subscriptions are due: (NOTE NEW SUBSCRIPTION RATE BELOW)

W8SWN, W3RHO, W7IV, W0NVE, K4CIW, K3AU, W1NXY, W4SXX, W8QCX,  
WB6UIB, K2LI, W8JMO, WB0LGY, W2LL, WB8CTA, W2MZV, WA0VDX,  
K6JAN, W8QBY, WA9BWY, VO1HH, WW6JHN, K Waites (your call please...).

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Arlington, Virginia, 22206. Subscription rate is \$6.00 per year.  
Foreign subscriptions by air are \$11.00 per year.

From WALEOT: Bruce reports excellent results with the KØHHP LED counter board. He made a minor modification to enable readout to 10 hz: Use an unused portion of the REV PWR meter switch to switch between X & Y on the counter board. When REV PWR is depressed readout is to 10 hz and when REV PWR is normally out, readout is to 100 hz.

Karl, DL2AA/W1 provided readout switching between 100 and 10 hz by replacing the keyer SPEED control with a control using a SPDT switch.

Below is a picture of WA3EQQ's station, Howard. He utilizes a HA-2 2-meter transverter seen at the lower left. Send me a picture of your station. ed.

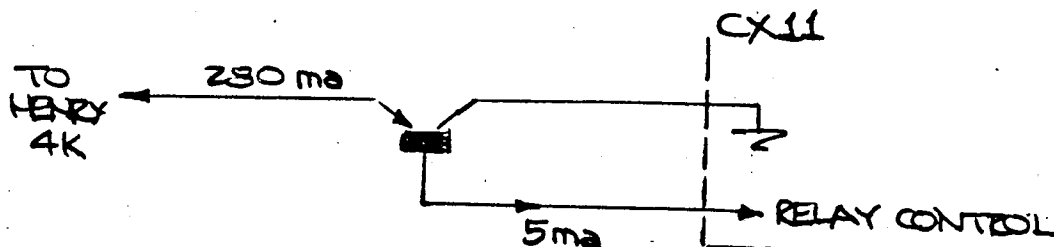


PREVIEW OF FUTURE ISSUES: Number 3. Complete description and construction details for K6BE/5's high SWR protection modification.

Number 4. Complete construction details for W7IV's synthesizer modification.

FUTURE: Extensive semiconductor substitution guide for the CX7 series.

Jordan, WA1HBP, has received his CX11. In his words.. "...[it] is nothing less than sensational...." He did indicate that a slight modification was required to allow it to operate with the 4K Ultra Henry amplifier. See the schematic below. The CX11 did not operate the relay on the Henry because it was designed to operate primarily with Alpha linears.

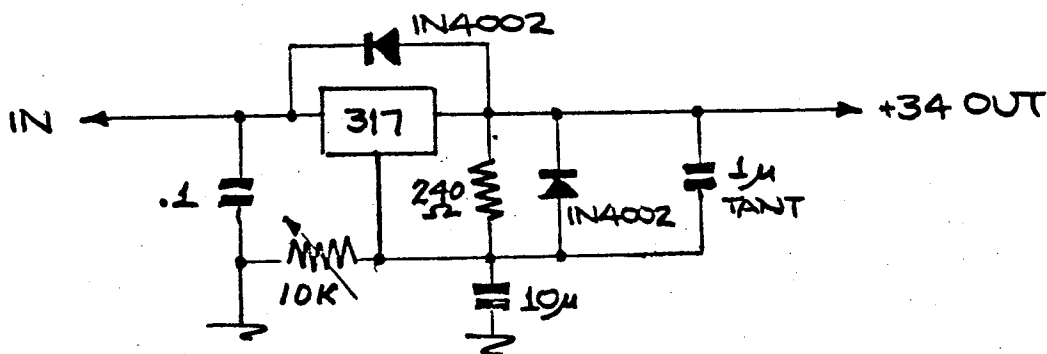


Larry, W1WKJ/W5QMU, asks where to obtain replacement 8072's. If anyone knows of local sources let me know and I'll compile a listing for publication..ed. Recall that a modification was described in Volume II, Number 4 for replacing the 8072 with a 4CX350.

W6HX writes with the following information:

*222 type  
(NTE 222)*

1. On AGC board (#9) use a 40823 for Q6. This replacement seems to clean up the received signal. A 40822 also works well for Q1 on the front-end board.
2. To regulate the 34 volt power supply when going to the new MC series regulators for +15 and +5 volt supplies, use a National LM317K (To3) or plastic To220 package with the following circuit. Adjust the 10K pot for +34 volts. Mount the regulator IC just to the left of the fuse on the rear panel and be sure to insulate it from the chassis. An additional heat sink is recommended just above the new 4 IC regulators - a good size is 3" high x 5" long.

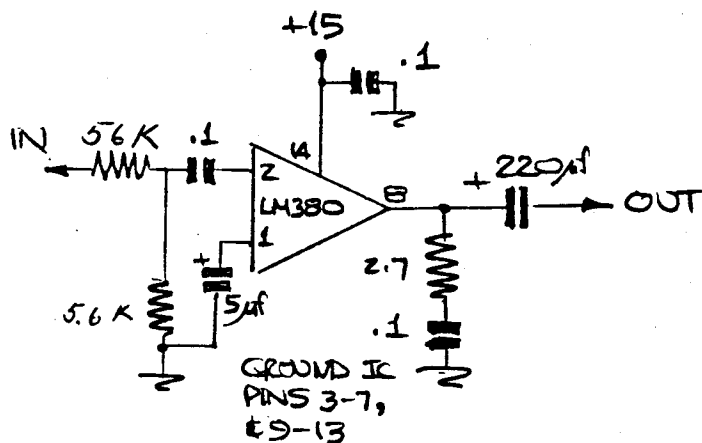


3. If you experience a lockup in receive be sure to check CR5 on the RF driver board.

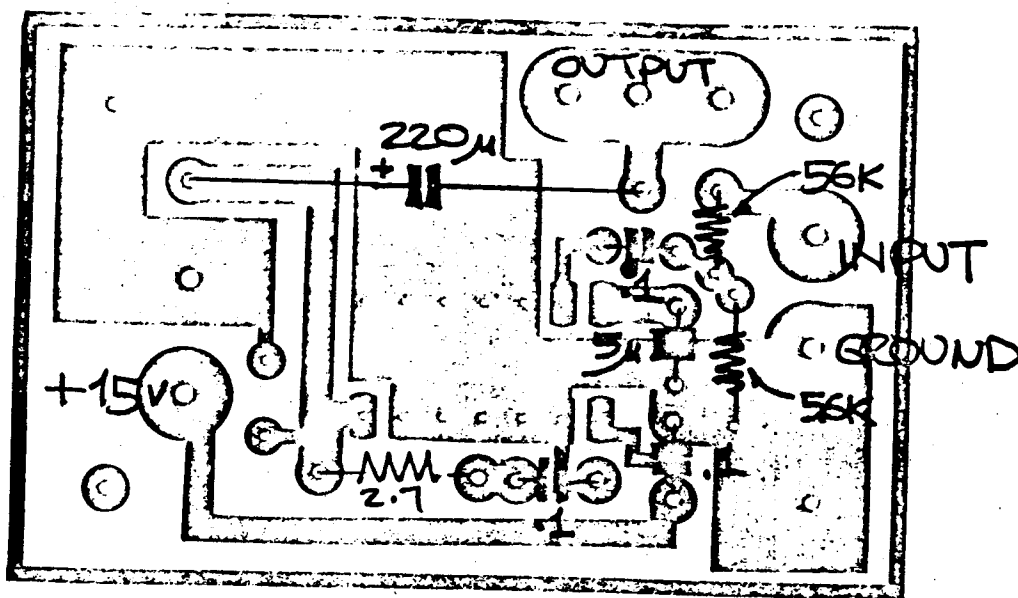
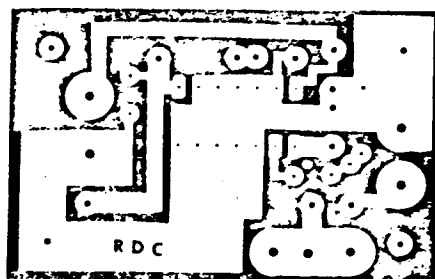
REPLACEMENT AUDIO MODULE

As promised some time back, we now have available a replacement audio module for the CX7 series. The board was designed by Dick, KØHHP. A LM380 is utilized and will provide much improved audio over the PA237. The LM380 utilizes +15volts and therefore all components associated with the +24volt supply may be removed and the small audio board mounted in their place on the power supply board.

A completely wired and tested module with instructions for installation is \$15.00 postpaid. The module is complete and can be used for other applications than CX7 if desired. Order from Bob, P. O. Box 6216, Arlington, Va., 22206. The circuit, printed circuit pattern, and parts layout are as follows:



actual size



S/1 NEWS is a time consuming project and pressures of business are taking their toll on my time. I want to keep the newsletter alive and to do this, I am having future newsletters typed, duplicated, collated, and addressed by "professionals." This is going to increase my costs a bit so I find it necessary to increase the yearly subscription rate from the present \$4.50 to \$6.00. This is only 50¢ per issue - not too bad for all the good info we provide...hi! All future renewals should be at this new rate. Foreign subscription rate remains at \$11.00.

I am trying to increase the number of subscribers through advertising in QST, Ham Radio & CQ magazines. Eventually it might be possible to reduce the subscription price since the cost of duplicating additional issues is minimal.

I am also trying to get a few small manufacturers to run an advertisement in S/1 NEWS. This will defray my costs a bit which could result in decreased subscription costs. If in fact, I do run advertisements and you have occasion to purchase the companys' product please mention S/1 NEWS in your correspondence with the company. It will help us all.

Thanks for your understanding. Please write with any information you have concerning your CX7 experiences -- I always need copy for the newsletter. I would also like pictures of your station which I will be glad to return if you desire.

Finally, would you new CX11 owners drop me a note to let me know what this new rig is like, how it is performing for you and any other comments you feel interesting.

73,

Bob Sullivan  
WØYVA/4

Editor

## CX7 SERIES AUDIO MODULE

This module, which utilizes an easily obtainable National LM380, will provide increased and cleaner audio for the CX7 series. It may be used for any application requiring about 1-watt of audio.

Installation into the CX7 is straightforward. The existing audio output transformer is retained and utilized. The new module is mounted onto the power supply board, A3, with four 1/4-inch standoffs. The method of installation can easily be seen from the following figures.

Figure 1: This is the schematic of the module along with a pictorial showing parts layout for the PC board.

Figure 2: This shows original and revised wiring for the audio output circuits.

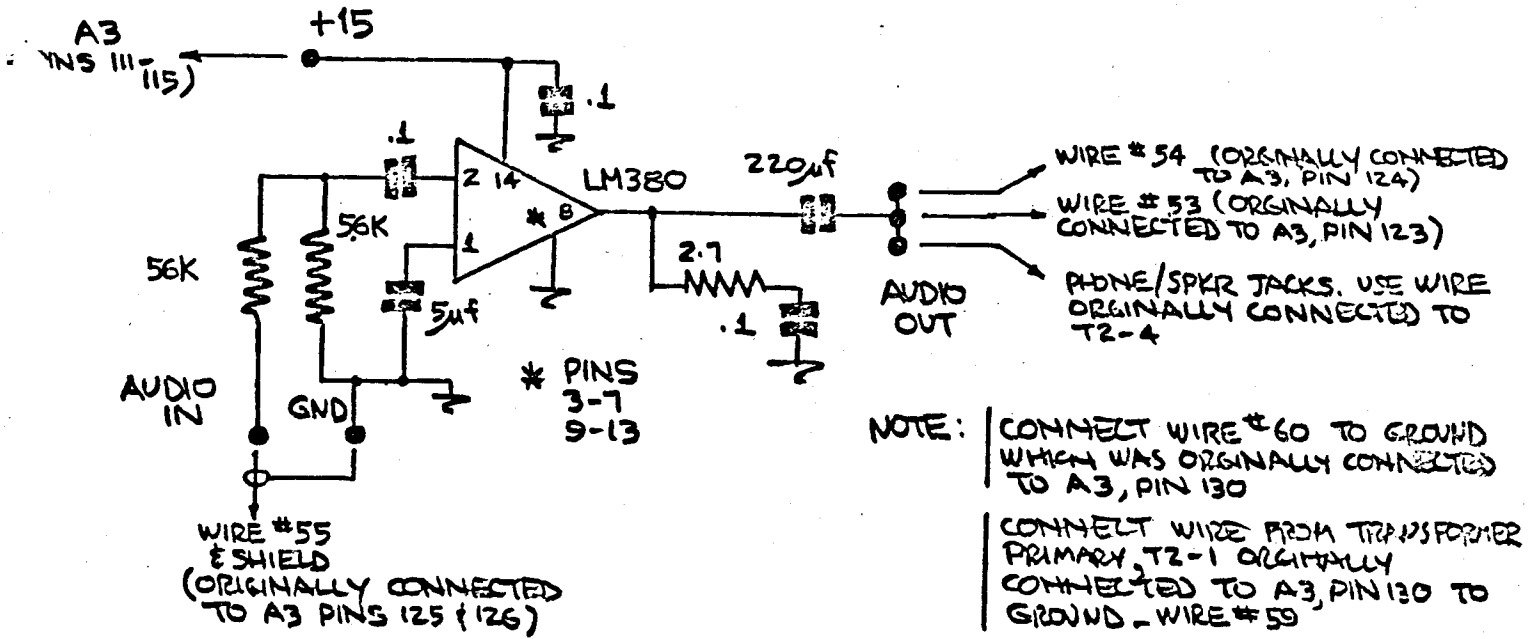
Figure 3: Pictorial showing location of the new module on power supply board, A3.

Figure 4: This shows parts to be removed from the power supply board to make room for the new module. All parts removed are from the existing audio output circuitry and its power supply.

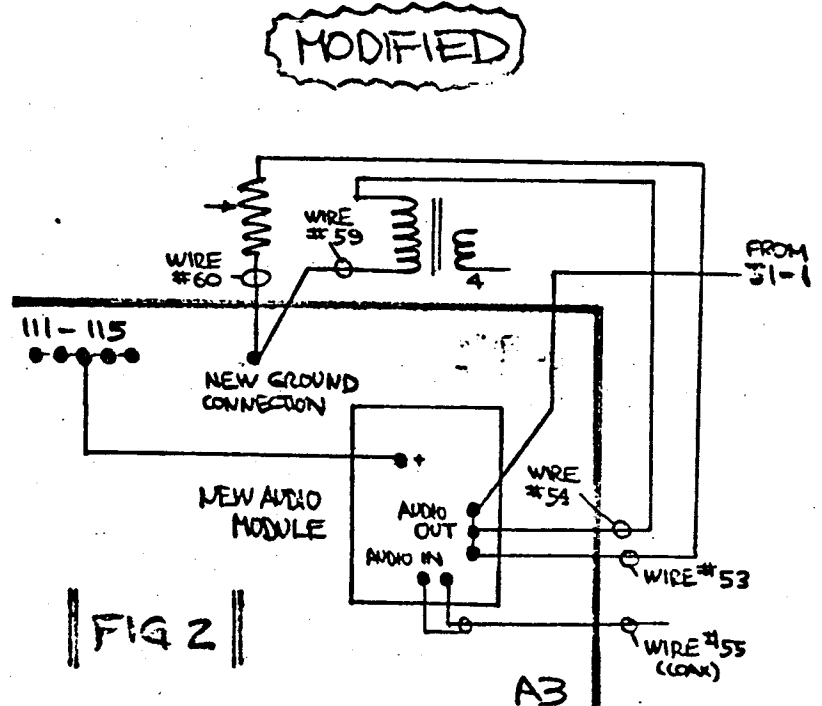
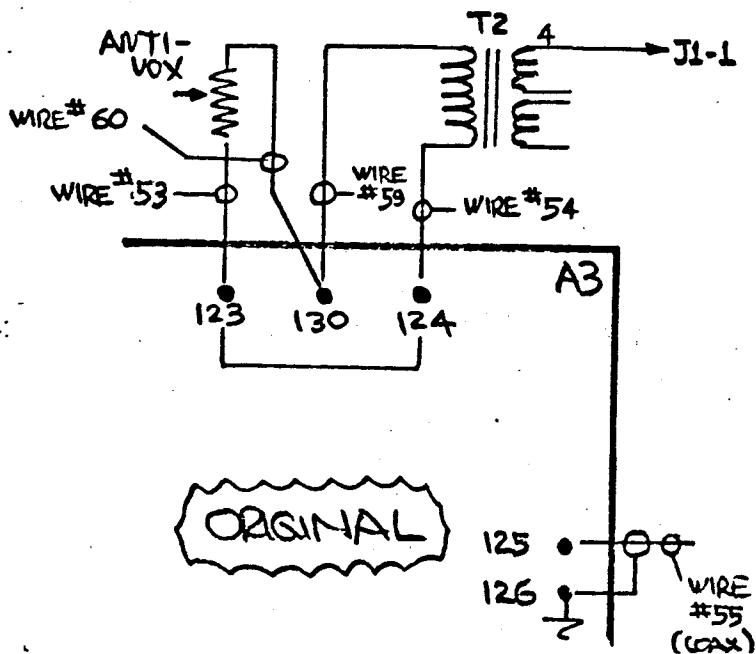
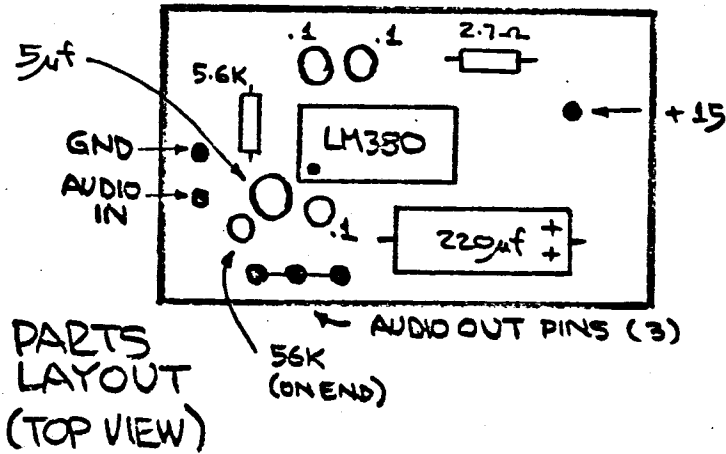
Figure 5: Two times actual size view of the audio module printed circuit board.

NOTE: The figures do not show the following modifications necessary for proper operation:

1. The heat sink area on the power supply board for Q11 (see Figure 3) must be isolated from the +34 volt line by cutting a land on the rear side of the power supply board, A3. Connect a short jumper from the Q11 heat sink area to ground (this can be done on the top of the board).
2. On the CX7A series move zener tied to the +34 volt line to another location. This is necessary since the +34 volt tie point used by this zener is the heat sink area for Q11 which is modified in step 1 above to be at ground.



|| FIGURE 1 ||



POWER SUPPLY  
61-S0003-001  
(CX7)

MOUNT NEW MODULE IN THIS  
LOCATION USING  $\frac{1}{8}$ -INCH  
STANDOFFS.

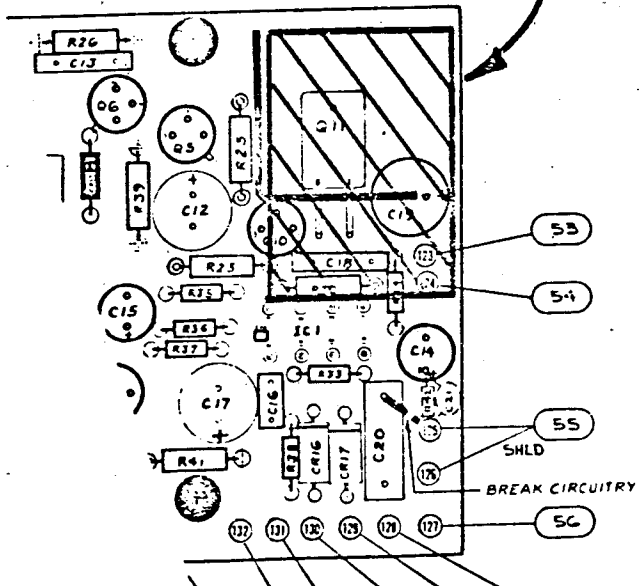


FIGURE 3

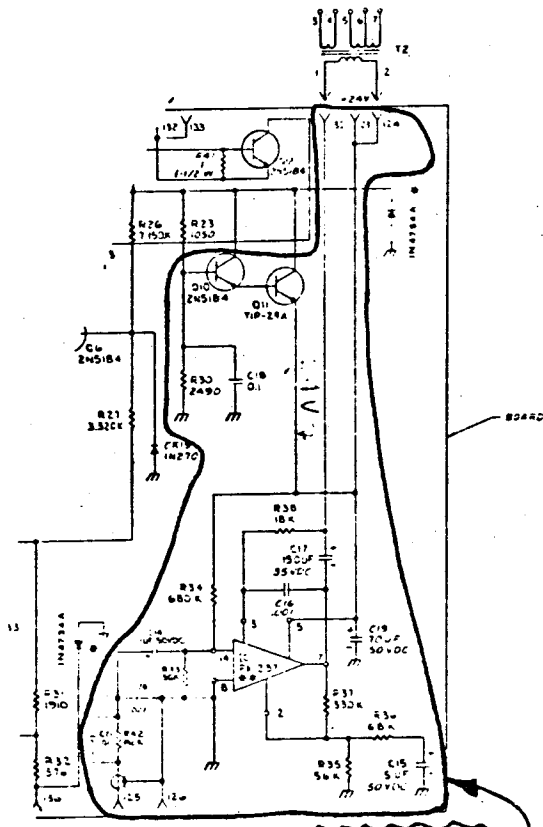
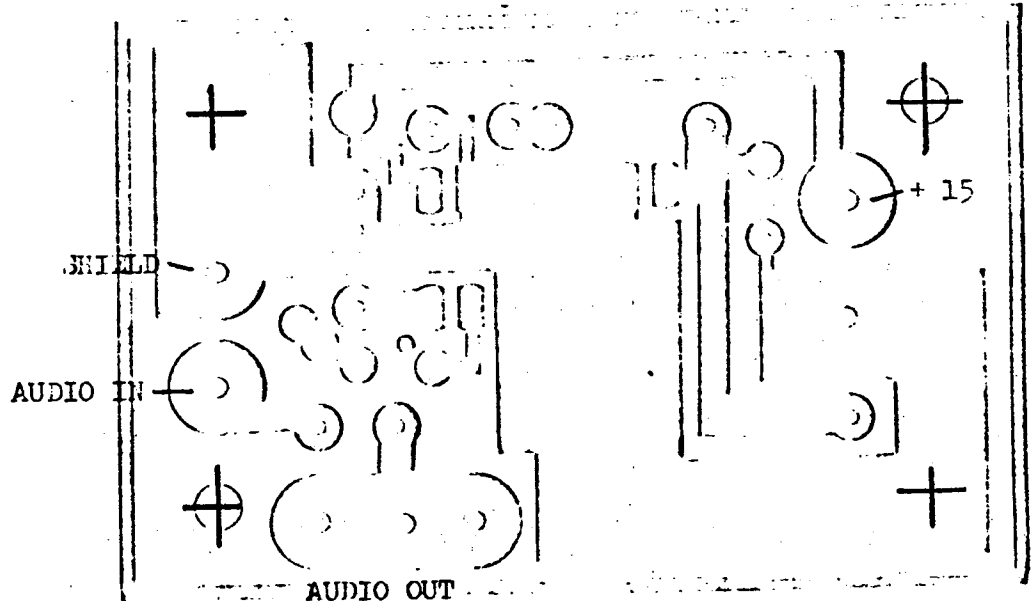


FIGURE 4



+ MOUNTING HOLE LOCATIONS

FIGURE 5