

S/1 NEWS now has over 70 subscribers and one or two new requests come in each week. I would like to thank those who have written with comments and suggestions for modifications and the like. Your response is very important in keeping the newsletter on the street. I would appreciate ANY information you might have of interest. Use a post card or whatever...my input along is not enough to keep this newsletter interesting for everyone. Thanks!

I am writing this issue a bit early so I cannot make any comments as to how the new is going. The suggested net time and frequency is as follows: 1400Z at 14280, Sunday mornings. Rob, WB4RSK will be net control.

Dont't forget to let me know the serial number of your CX7, CX7A or B for my file.

MODIFICATIONS AND REPAIR INFORMATION

K4BYM suggests the following replacements for existing transistors: Replace TIP29A (power supply transistors mounted on rear panel) with 2N6101 or 2N6103. Replace hard to find 2N5183 and 2N5184 units with 2N3053 and 2N3439 respectively. Butch also recommends placing small heat sinks behind Q1 - Q4 mounted on the rear panel. He used $\frac{1}{2}$ -inch copper strap. Be careful not to ground the heat sinks!

W2CR advises that a defective SN7420 on the counter board can cause hangup in the transmit mode after set has been operational for half an hour or so...

W2CR sent in an interesting modification of interest to all of us using the ALPHA 77 linears with Signal/Ones. The modification only consists of adding a single transistor which will allow use of the ALC circuits in the A77. According to W2CR, once a power level is set using the ALC pot on the A77, power will not exceed the set value no matter how hard you drive! See the attached schematic for the RF driver board, A5, which shows the added transistor in dotted lines. The recommended transistor is a MP5L51. This is a PNP unit with Vcb and Vce ratings of 100 volts and a gain of 20. A good substitute would be a 2N5400 for example. After the modification is installed connect A77 ALC to ALC jack on CX7 and set ALC pot on A77 for desired power level.

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VK5ZAD writes that examination of several 8072's from Signal/Ones, small fractures were found in the ceramic insulation between the anode and socket sections. Past experience with rigid mounting of the type used in the CX7 has shown that failures can occur due to the stresses applied to the tube. VK5ZAD suggests the following modification to prevent this type of failure from occurring:

Remove the metal skirt from the 8072 socket and punch the existing hole in the chassis to 1-3/8-inches diameter. The cathode connections, pins 1, 5, and 9 are joined by a piece of 20-ga wire in the form of a circle and ground connections are made by means of short pieces of braid (3 such pieces). The braid will allow flexibility of movement between socket and chassis.

WA1EOT suggests placing a piece of insulating tape across the screws that hold Q1 through Q4 to the rear of the chassis. A quick short can take out a lot of power supply transistors in unmodified units.

W8VHY wrote with a couple of interesting problems and repairs:

1. Transmit okay on BROADBAND but will not load on MANUAL was problem. Check across the variable loading capacitor and if a short is indicated, loosen the screws on the small trimmer capacitors located on top of this loading capacitor. If short disappears, replace the mica in both trimmers.

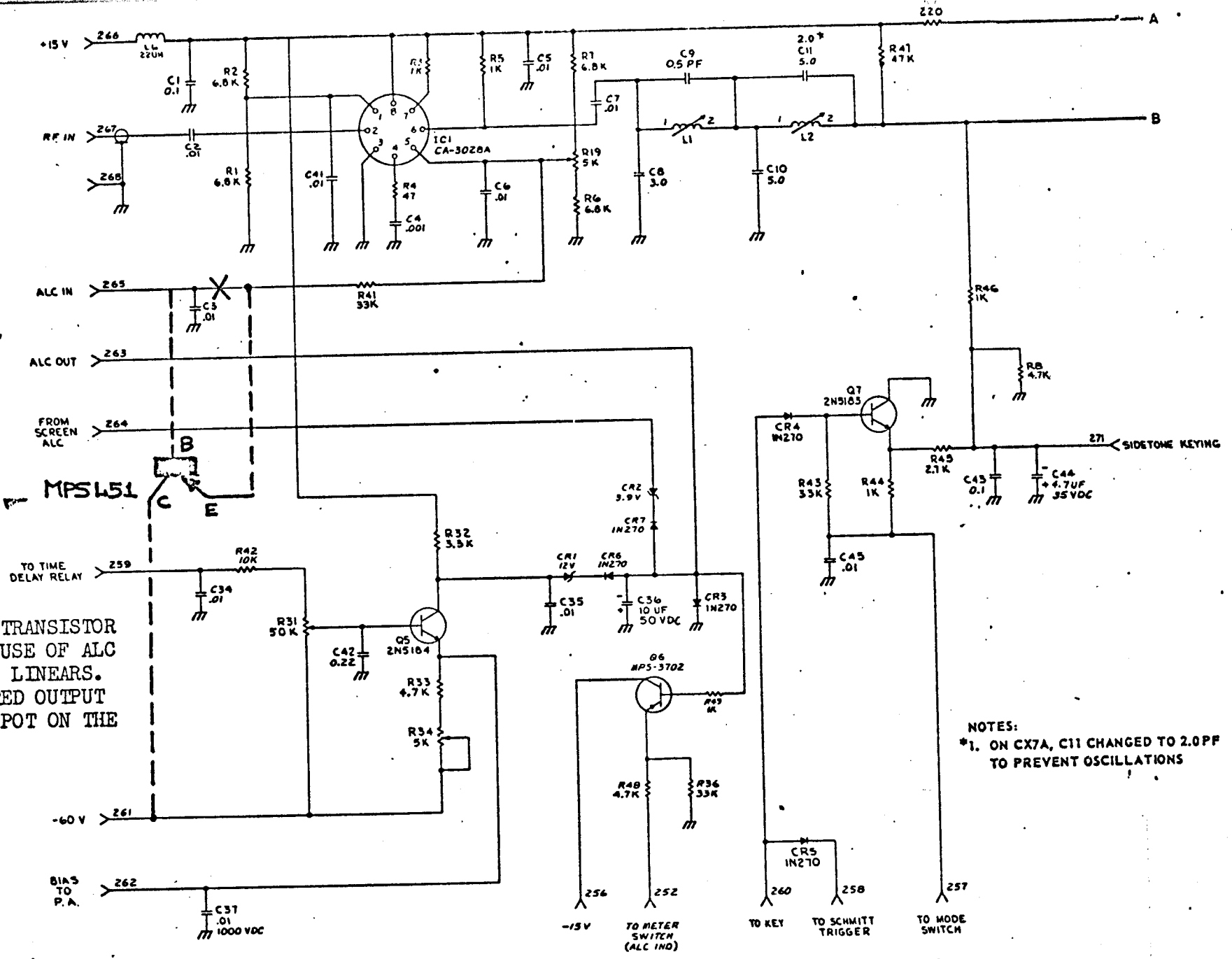
2. Receiver intermittent. Goes almost dead except for background noise from time to time. The problem could be Q1 on the Front End board, A2 but in this case a component was not the problem. The ground end of resistor R3 (220-ohm) on the Front End board, A2 goes through the ground foil on TOP of the board to the bottom where it has more solder connections. Solder had not been sufficiently run around the ground lead of R3 so as to make good contact with the top foil and hence a good ground connection. (W8VHY did not indicate how long it took him to find this one and I am afraid to ask!!)

W0NVE notes that the following Sylvania replacements are available for substitution as follows:

LM 380	ECG 740
2N5183	ECG 123
2N5184	ECG 124
40673	ECG 222
40603	ECG 221
40604	ECG 221

W4SXX notes that many audio IC's are available in the 1-watt class that are possible subs for the PA237 but none are pin-for-pin replacements. Some possibilities are Motorola MFC 9020 as shown in the Thomas manual, page 6-15 (not an easy replacement due to the large center tabs on the Motorola unit but circuit changes are minimal); The Motorola MC 1554G and Signetics 540 are 1-watt units in a TO-5 configuration.

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ADD THIS TRANSISTOR TO ALLOW USE OF ALC WITH A-77 LINEARS. SET DESIRED OUTPUT WITH ALC POT ON THE A-77.

NOTES:
*1. ON CX7A, C11 CHANGED TO 2.0PF TO PREVENT OSCILLATIONS

Figure 6-6. RF Driver Board A5 Schematic Diagram (Sheet 1 of 2)

INFORMATION WANTED AND FOR SALE

Maintenance Manual for CX7 and CX7A; \$8.00. Write W4SXX, Josef Darmento, Route 3, Box 930, Merritt Island, Florida, 32952.

CX7 modified to CX7A for sale. Serial 00102 updated to CX7A in December 1971 in California. New style counter board by Payne installed with plug-in IC's. \$1000 shipping by UPS included. Write John Musgrave, Jr., WB6UIB, 4295 48th Street, San Diego, California, 92115.

RTTY OPERATORS: Next month I will describe a lengthy modification sent by W4FQM/1 that will make the Signal/One much more adaptable for RTTY operation. His modification is a step by step procedure and should be of considerable interest to anyone operating RTTY with the Signal/One.

For those of you who are not so handy with a soldering iron and are interested in upgrading your CX7, 7A, I have had quite a few excellent reports concerning work done by Dick Cunningham, KØHHP. He is still turning around units in quick time and by all reports, his counter board and upgraded power supply are excellent.

Duplicating in small quantities is time-consuming and getting more expensive. Because of this, I cannot provide single back issues of S/1 NEWS anymore. I am, however, making up (in quantity) a package of the first six issues and these are available for \$2.50.

73,

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