

VOL. I
NO'S 7-12
ORIGINALS

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S/1 NEWS is being supported (idea-wise) by only a handful of people who write with their solutions to problems, requests for help, and the like. I need more information from readers to put out an interesting and useful newsletter each month. Please take a moment to write with whatever you think might be useful to others.

Don't forget I am keeping a list of Signal/One serial numbers by owner. Write with yours if you have not done so.

I have updated my Trouble Guide. Cost is \$2.00. I also have the Thomas Advertising Company Signal/One manual (200 pages) available for \$20.00. If you order one, I'll throw in my Trouble Guide and send them both post-paid.

A couple fellows have written and promised their thoughts on the new CX-11 seen at Dayton. More next month on this.

MODIFICATIONS AND REPAIR INFORMATION

The following is a listing of possible transistor replacements for originally installed (sometimes hard to find) units:

ORIGINAL	POSSIBLE REPLACEMENTS
SFR-53104	2N5641
40604	40823, Sylvania ECG-221
40603	40822, Sylvania ECG-221
40468A	3N128
TIP29A	2N6101, 2N6103, 2N5294, Motorola S5003
TIP30	Motorola S3027
LM-380	Sylvania ECG-740
2N5183	Sylvania ECG-123, 2N3053
2N5184	Sylvania ECG-124, 2N3439
40673	Sylvania ECG-222
B5750 Nixies	B5755

editor

THINK THIS SHOULD
BE ECG-154 ?

KØHHP also recommends that if any work is being done and the Signal/One is out of its case, you should take the time to install a 1/8-amp fuse in series with the 8072 screen lead. Dick mounts a fuse holder between the heat sink and the sidetone potentiometer on the rear panel and picks up the screen lead at the feed-thru point in the upper P.A. assembly.

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The following information was supplied by W4FQM/1 concerning modifications to facilitate the integration of the CX7/7A into the normal amateur radio radioteletype station. The modifications to be described will provide for the following:

1. receiving 600-ohm audio output at J19 for the RTTY terminal unit.
2. installation of a cable and female RCA connector (cable type) to P6, the AC power connector, to bring out the FSK keyline.
3. changing the FSK keyline from -15 volts to +15 volts for easire integration into existing equipment. (This keyline must be keyed through an inverter stage in order to generate mark-high/space-low transmitted FSK signals.
4. changing the FSK position receiving mode from USB to LSB in order that the AFSK output to the RTTY terminal unit will be right-side-up.
5. converting the CW3 position to function as an additional FSK position having a bandpass of 400 hz for reception of narrow shift (170 hz) RTTY signals. This modification requires that the standard CW filter be installed. The 400 hz filter will now be used in both the CW2 position of the MODE switch for CW and in the CW3 position for narrow shift RTTY operation. The use of the 400 hz filter for narrow shift RTTY reception will improve the received signal plus noise to noise ratio by 6 db over the use of the normal 1200 hz filter.

Modification Procedure:

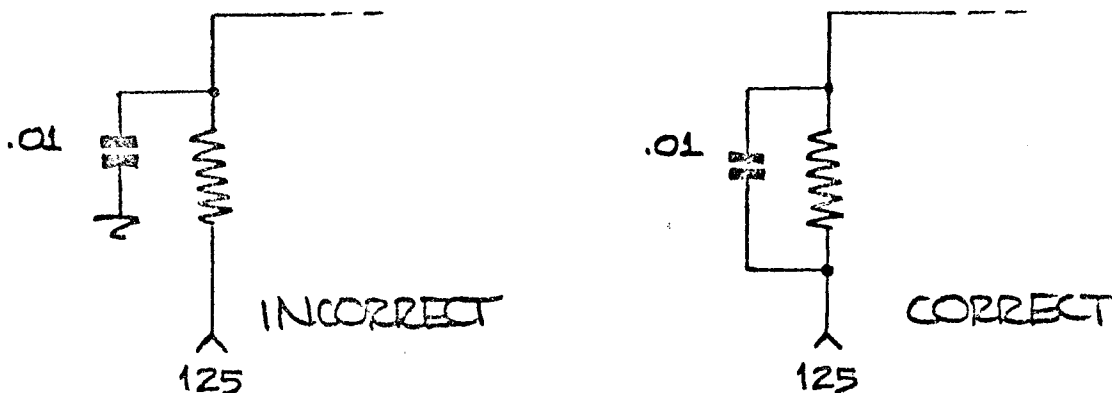
1. For 600-ohm audio output at J19 for RTTY terminal unit and phone patch; Remove the wire from pin 4 of J6 and resolder this wire to the center conductor terminal of the RCA phono jack marked J19. Remove the wire from pin 5 of J6 and resolder this wire to the ground lug of RCA phono jack J19.
2. For FSK keyline from P6 (The AC power connector plug); Connect the inner conductor of a 30-cm length of small shielded cable to pin 9 of P6. Connect the shield of this cable to pin 6 of P6. The other end of this cable is terminated with a cable type RCA female phone connector which will now be called J20, the FSK keyline.
3. For +FSK keyline voltage; Remove the blue wire (232) from TB1-8 and resolder this wire to TB1-3. Mechanically remove PTO "B" without unsoldering any leads to it and remove the cover. Remove, reverse polarity, and re-install diode CR2 (1N3182) on the PTO printed circuit board. Replace the PTO cover and re-install the PTO in the transceiver.
4. For LSB reception in the FSK position and in the CW3 position of the MODE switch and additional changes of the CW3 position to be an additional FSK position with a 400 hz bandpass for narrow shift RTTY operation; Remove blue wire (112) from pin 1 on S8B and resolder this wire to pin 11 on S8B. Remove the bus wire jumpers between pin 12 and pin 1 and between pin 11 and pin 12 on S8B. Connect a 6 cm length of insulated wire between pin 8 (there is a red wire (112) already connected to this pin) and pin 1 of S8B. Connect a 1 cm length of bare wire between pin 12 and pin 1 of S8B thus jumpering them together. Remove the center conductor of coax cable #248 from pin 12 of S8C and resolder it to pin 11 of S8C. Connect a 1 cm length of bare wire between pin 1 (there are 3 white wires already connected to this pin) of S8C and pin 12 of S8C. Remove white wire #253 from pin 12 of S8D and resolder this wire to pin 11 of S8D. Remove the jumper wire between pin 11 and pin 12 of S8D. Move the jumper wire connected from pin 12 to pin 1 of S8G to run from pin 12 to pin 11 of S8G. Move the jumper wire connected from pin 11 to pin 1 of S8H to ren from pin 11 and pin 12 of S8H.

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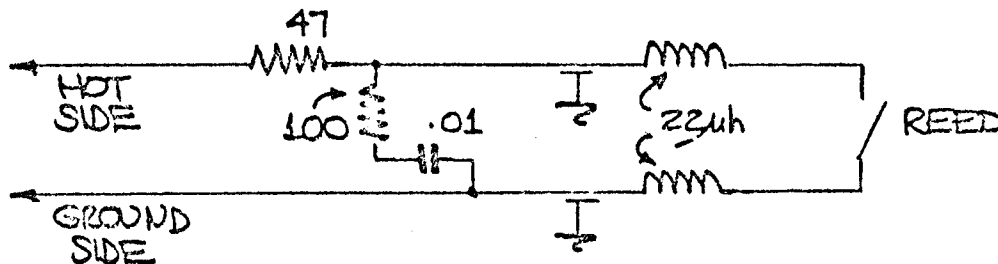
W6HX writes with the following information:

To take backlash out of VFO's, remove the VFO unit and take off its cover. Remove the 3 screws on the spring assembly around the shaft and back this assembly away from the slug one hole and try. If still backlash, try another hole away, etc.

On "B" power supply boards using the Motorola Audio IC, there is an error on the board which effects high frequency response. At pin 125 (audio in) on power supply board immediately after a resistor there is a .01µf capacitor to ground. This capacitor should not return to ground but should be in parallel with the resistor. See drawings below:



According to K2GI, Signal/One suggested the following circuit to prevent welding contacts together on the reed relay that are used for keying a linear amplifier



P. Webb writes with the following modification which will improve the receive audio quality and eliminate AGC "pumping" action: (All changes are on the AGC Detector board, A9). Change R43 from 10K to 1K, 1/4-w, 5%; Change C40 from 1 µf to 10 µf, 35 volts. (This determines AGC hang time); Add a 8.2K, 1/4-w, 5% resistor in series with the collector lead of Q13; Change C12 from 10 µf to 47 or 50 µf, 35 volts. (This determines the slope of the SLOW AGC discharge ramp); Change Q4 from 2N5183 to a Motorola type MPSA13.

An excellent modification (suggested by KØHHP) is the installation of an audio filter between the audio board and the output IC amplifier. A recommended unit is the CWF-2 CW filter available through MFJ Enterprises. See any recent issue of QST for additional details on this unit. A later issue of S/1 NEWS will carry details instructions for this modification.

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INFORMATION WANTED AND FOR SALE

WØNVE (POB 669, Fremont, Neb., 68025) has the following parts for sale:
2 PA-237; 2 output transformers; 1 new audio board; TIP29 and TIP 30;
TRW drivers; and 1 new Topaz power transformer. He did not send me
any prices so if you are interested write to WØNVE.