

75A-4 MODIFICATION FOR SAC

GENERAL

The purpose of this supplement is to show the changes in the 75A-4 Instruction Book (Collins part number 520 5052 00) necessary to make it agree with the changes made in the equipment for the SAC Modification.

It is suggested that the user of the instruction book make the changes given in this supplement in his instruction book.

This modification is concerned with changing the frequency coverage of the 75A-4 Receiver from the amateur frequencies to those used by SAC. The changes in frequency are as shown in table 1 of this supplement.

TABLE 1

<u>OLD AMATEUR BAND</u>	<u>NEW DESIGNATION</u>	<u>FREQUENCY OF MODIFIED RECEIVER</u>
160 meter	160 meter	1.5 - 2.5 mc
80 meter	80 meter	3.2 - 4.2 mc
40 meter	40 meter	6.8 - 7.8 mc
20 meter	20.5 mc	14.0 - 15.0 mc
15 meter	20.5 mc	20.5 - 21.5 mc
11 meter	11 mc	11.0 - 12.0 mc
Low 10 meter	Not used	Not used
High 10 meter	Not used	Not used

Use this table to change references in the book from amateur frequencies to the frequencies of the modified equipment.

CHANGES IN THE INSTRUCTION BOOK

In addition to changing frequency references as described above, the following changes should be made in the instruction book.

Page 1-2. Par 3. Change the reference data table as shown in table 1 of this supplement.

Page 4-0. Par 3. Change the band coverage table as shown in table 1 of this supplement.

Page 4-1. Change figure 4-1 to agree with corrected schematic diagram, figure 5-5.

Page 4-1. Change tuning table to agree with table 2 of this supplement.

TABLE 2

BAND	ANT L	ANT C PAD	ANT TRIM	RF L	RF C PAD	RF C TRIM	OSC L	OSC PAD
160	T-1	C-6	C-7 C-18	--	--	--	--	--
80	T-2	C-9	C-8 C-18	L-6	C-24	C-23	L-12	C-40
40	L-1 (T-2)	C-10	C-11 (C-18)	L-7 (L-6)	C-25	C-26	L-13	C-41
20	L-2 (T-2)	C-12	C-13 (C-18)	L-8 (L-6)	C-27	C-28	L-14	C-42
20.5 mc	L-3 (T-2)	C-14	C-15 (C-18)	L-9 (L-6)	C-29	C-30	L-15	C-43
11 mc	T-7 (T-2)	C-22	C-16 (C-18)	L-10 (L-6)	C-50	C-31	L-16	C-44

() Components used in a previous band.

Page 5-3. Par 10. Change alignment table to agree with the following:

TABLE 3

BAND	RECEIVER AND SIG GEN FREQ Low End	RF "L"	ANT "L"	RECEIVER AND SIG GEN FREQ High End	RF "C"	ANT "C"
160	1.6	--	T-1	2.4	--	C-7
80	3.3	L-6	T-2	4.1	C-23	C-8
40	6.9	L-7	L-1	7.7	C-26	C-11
20	14.1	L-8	L-2	14.9	C-28	C-13
20.5mc	20.6	L-9	L-3	21.4	C-30	C-15
11 mc	11.1	L-10	T-7	11.9	C-31	C-16

Adjust S meter SENS for S-9 at 100 uv on 11.5 mc

Delete the note shown in the instruction book at the bottom of this table.

There is a revision in the S meter circuitry that will be incorporated in all 75A-4 Receivers in the future. The revision is in this receiver, and the change is shown in the attached schematic diagram and parts list.

SECTION VI

PARTS LIST REVISIONS

ITEM	CIRCUIT FUNCTION	DESCRIPTION	COLLINS PART NUMBER
C16	11 mc Ant Trim	CAPACITOR: 8-15 mmf trimmer	917 1075 00
C22	11 mc Ant Pad	CAPACITOR: 180 mmf mica	912 0511 00
C31	11mc RF Trim	CAPACITOR: Same as ref C16	
C44	11 mc Osc Pad	CAPACITOR: 110 mmf mica	912 0496 00
C50	11 mc RF Pad	CAPACITOR: Same as ref C22	
L10	11 mc RF Coil	COIL	3373EA101
L16	11 mc Osc Coil	COIL: Same as ref L10	
R39	V-8 Cathode	RESISTOR: 150 ohm 1/2 w	745 1317 00
R41	S meter SENS	RESISTOR: 1000 ohm Pot.	750 0511 00
R43	S meter ZERO	RESISTOR: Same as ref R41	
T7	11 mc Ant Coil	COIL: Same as ref L10	
Y5	Crystal for 20.5 mc	CRYSTAL: 23.0 mc	044 1961 51
Y6	Crystal for 11 mc	CRYSTAL: 13.5 mc	044 1960 51

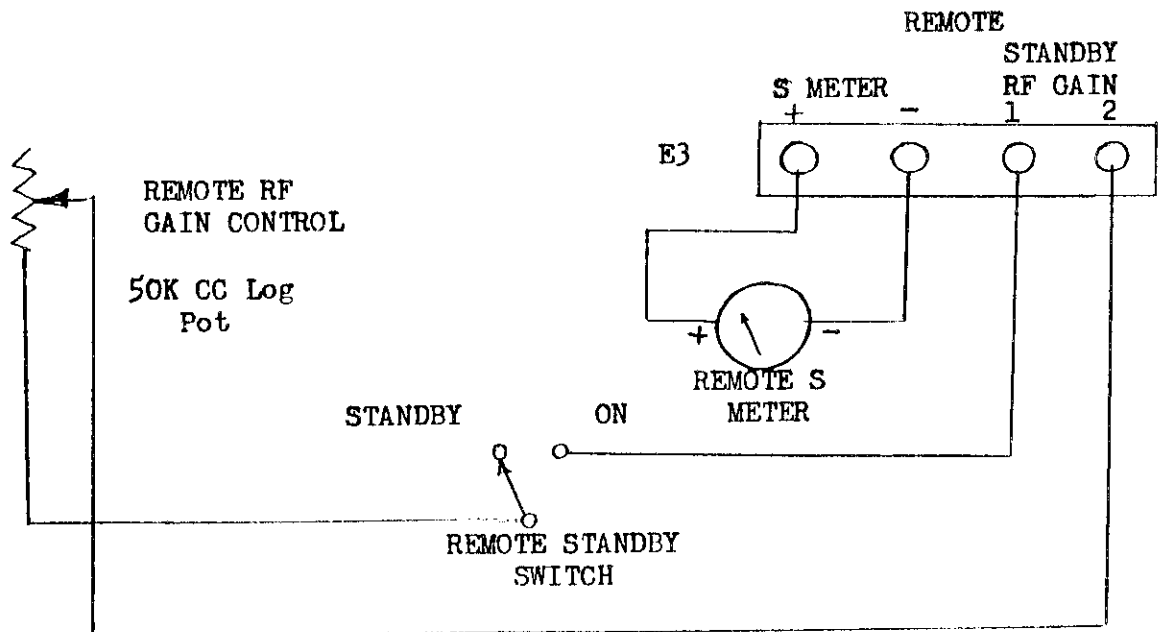
CALIBRATION OF EXTERNAL "S" METER

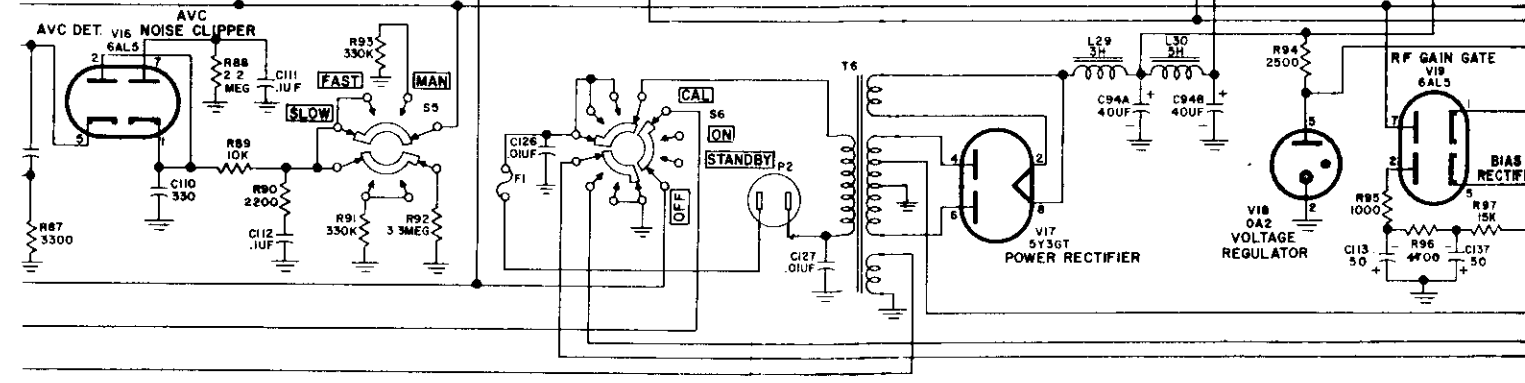
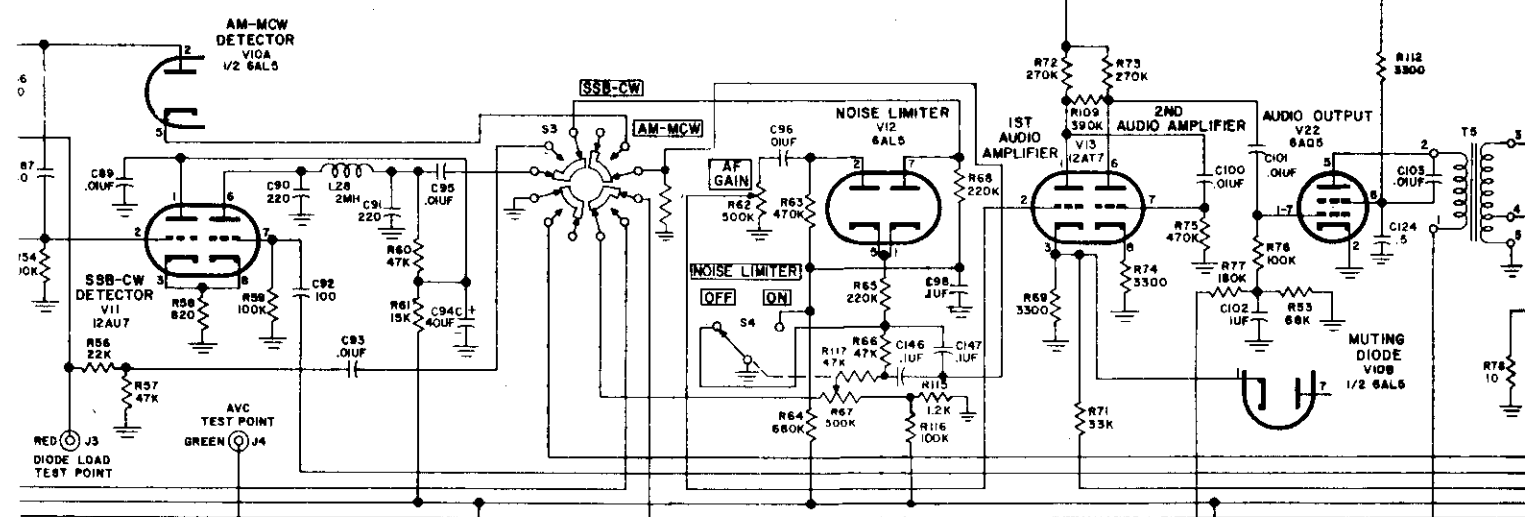
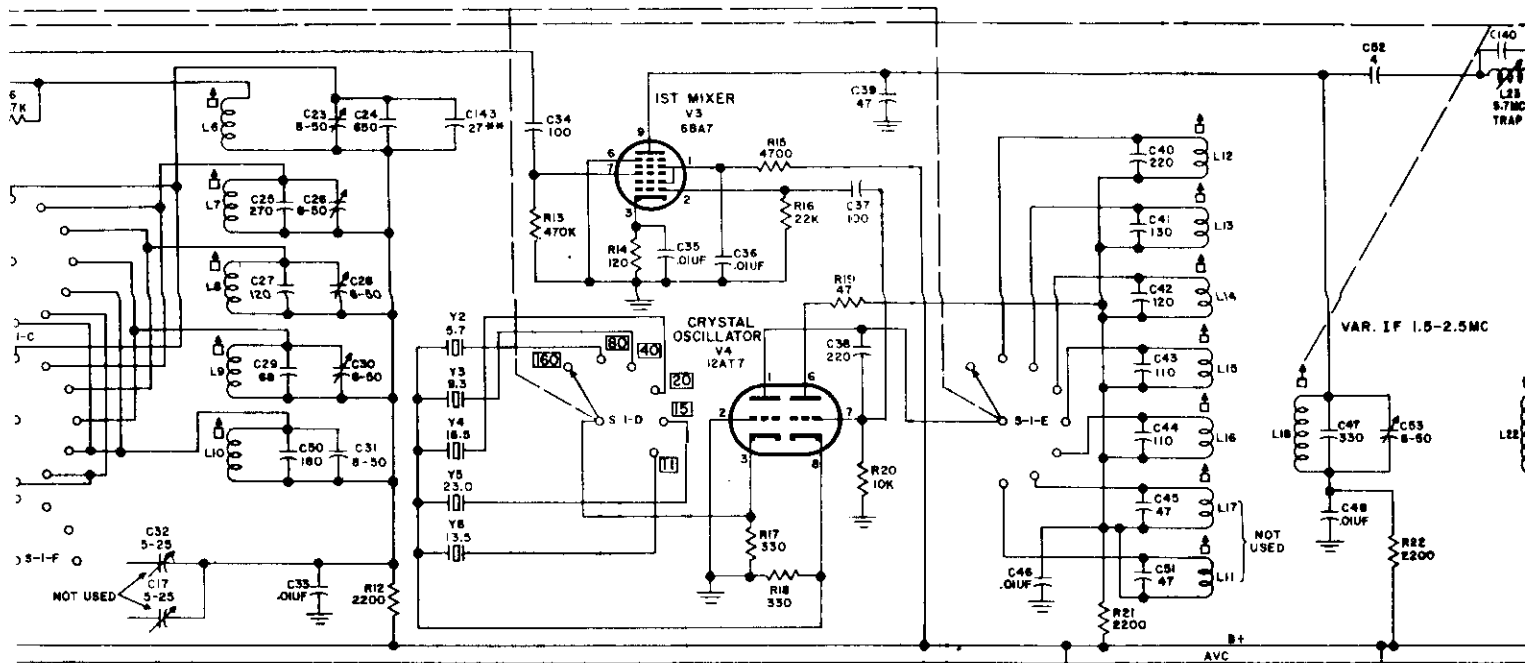
- A. - Find calibration point that reads slightly over S-9 on panel meter.
- B. - Adjust ANT trimmer until S Meter reads exactly S-9.
- C. - Open up jumper between plus and minus on remote S Meter terminal of receiver.
- D. - Connect external meter to proper terminals.
- E. - Readjust S Meter SENS control until both meters read S-9.

EXTERNAL GAIN CONTROL

Use a 50,000 ohm counterclockwise log potentiometer across terminals 1 and 2 of E-3.

If remote standby switch is required place it in series with the potentiometer. The RF GAIN control on receiver must be at maximum gain when remote control is used.





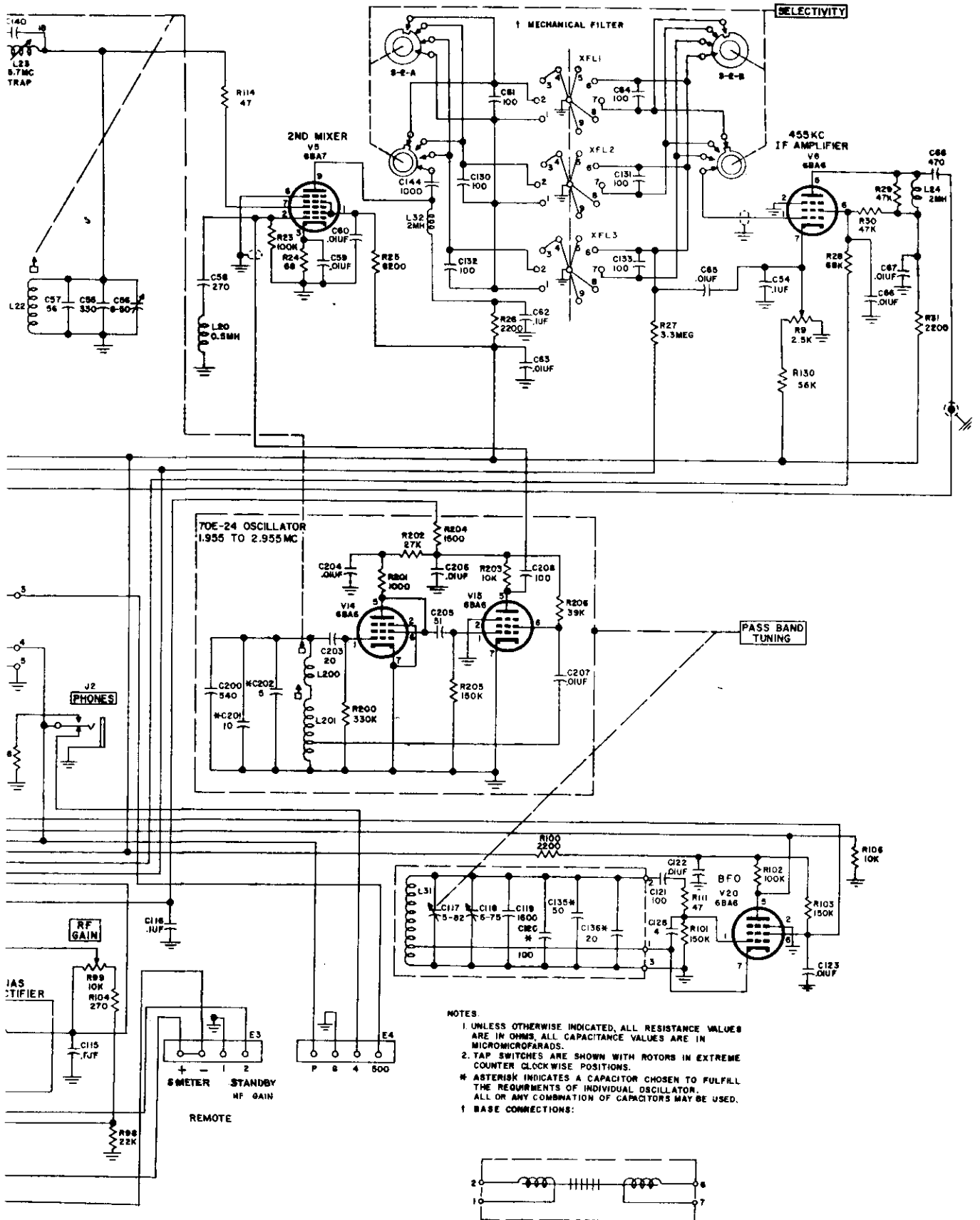


Figure 5-5. 75A-4 Receiver Schematic Diagram, SAC Mod.