

Hallicrafters SX-42

This model appears on pages 17-8 through 17-13 of Rider's Volume XVII. The following service hints apply to the S-Meter operation.

SYMPTOM NO. 1:

Meter fails to zero on AM.

ANALYSIS:

Assuming that all connections and other circuits, including AVC, are normal . . .

- 1) The line voltage is low, or
- 2) The first RF tube is weak

SYMPTOM NO. 2:

Zero adjustment appears too critical. Does not hold.

ANALYSIS:

The leads to the outside terminals of the "Zero Set" potentiometer should be disconnected, reversed, and reconnected.

SYMPTOM NO. 3:

Meter fails to zero on FM

ANALYSIS:

- 1) Adjust meter indicator mechanically with zero set on the meter.
- 2) Replace 7A4 tube
- 3) Replace R-68 with lower resistance if indicator remains on right side of FM zero
- 4) Replace R-68 with higher resistance if indicator remains on left side of FM zero

REMARKS:

The internal resistance of the meters is not specified, and depends on the supplier. The resistance ranges from 12 to 50 ohms.

The meter has a range of 5 ma. on a linear scale. The FM zero is arbitrarily calibrated at 1.4 ma.

An arbitrary figure of 60 m.v. to the antenna terminal was used for S-9 on the 20 meter band. Each S-unit represents 6 db variation.

60 m.v. to the antenna terminal of the receiver represents roughly a field strength of 15 m.v. per meter.

Hoffman C504, C514

These models are the same as model B504 appearing on pages 17-1 and pages 17-3,4 through 17-7 of Rider's Volume XVII, except for the following. Push-pull parallel 6K6 tubes are used in the output instead of push-pull 6V6 tubes. See Fig. 1.

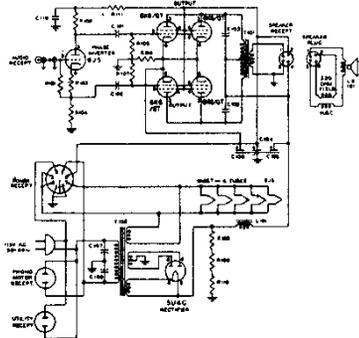


Fig. 1. Changes in the output stages of the Hoffman Models C504 and C514.

A resistance-capacitance filter (R-111 and C110) has been inserted in the B-plus line feeding the phase inverter stage in order to reduce the inherent hum level of the receiver to a satisfactory level. See Fig. 1.

An "entertainment panel" has been wired into the tuner chassis to provide microphone input, a speaker on-off switch, a pillow speaker plug, and an auxiliary phono input to be used either for television sound or wire recorder input. See Fig. 2.

On the recorder amplifier, the screen-dropping resistor (R11) has been changed from 0.1 megohm to 2.2 megohms and the cathode resistor (R2) changed from 2200

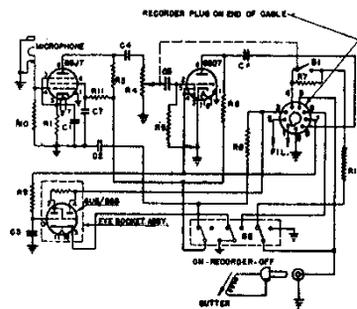


Fig. 2. Changes made to accommodate the "entertainment panel" of the Hoffman C504.

ohms to 4700 ohms. This change allows the screen current of the 6B7J to be self-regulating to eliminate variations in gain between various 6B7J tubes.

Several changes were made in the late production. A 270,000-ohm resistor was added across the phono input jack of the radio chassis. This resistor was on the record changer (960260-2) in the early production (Serial Nos. B-1001 to B-6000 and B-28,500 to B-30,000).

The location of the resistor may be checked by measuring the shunt resistance across the phono input jack of the radio chassis and across the phono output cable of the changer mechanism.

Hoffman C502 and C512, Chassis 113

These models are the same as Model B502, Chassis 113, appearing on pages 17-1 to 17-8 of Rider's Volume XVII, except for the following changes. Four 6K6-GT tubes are used in push-pull parallel in the output stage instead of the 6V6 tubes in push-pull.

An "entertainment panel" has been wired into the tuner chassis to provide microphone input, a speaker on-off switch, a pillow speaker plug, and an auxiliary phono input to be used either for television sound or wire recorder input. See Fig. 1.

A resistance-capacity filter R111 and C110, has been inserted in the B-plus line of the phase inverter stage in order to reduce the inherent hum level of the receiver, as shown in Fig. 2.

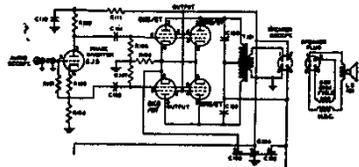


Fig. 2. The resistance-capacity filter in the Hoffman models C502 and C512.

The following changes should be made in the parts list:

Symbol	Description	Hoff. No.
C60	0.005 μ f, 600 V, tubular, paper	4102
R16, R20, R50	100,000 ohms \pm 20%, 1/2 watt	4511
R21, R48	47,000 ohms, \pm 20%, 1/2 watt	4504
R49	10 megohms, \pm 20%, 1/2 watt	4506
R27, R46	0.22 megohm, \pm 20%, 1/2 watt	4500
R47, R51	0.47 megohm, \pm 20%, 1/2 watt	4506
C110	10 μ f, 450 V, electrolytic	4203
R111	10,000 ohms, \pm 20%, 1/2 watt	4515

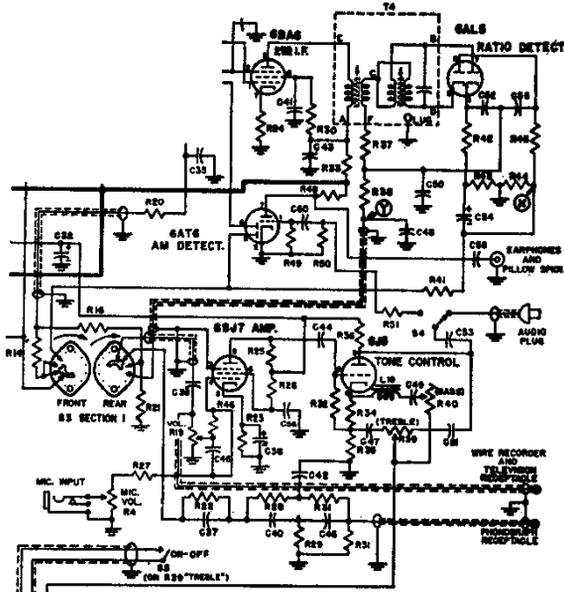


Fig. 1. The entertainment panel that is wired into the Hoffman models C502 and C512.

DeWald 418

This model is the same as model 414 appearing on page 11-2 of *Rider's Volume XI*.

Electronic Laboratories 2811

This model, shown on page 16-8 of *Rider's Volume XVI*, uses the Webster model 56 record changer, which is shown on page RCD.CH.15-10 of *Rider's Volume XV*.

Emerson BF-169, BF-204, And BF-207

These models are the same as Model BF-191 appearing on pages 9-1 and 9-2 of *Rider's Volume IX*.

Emerson 567, Chassis 120016

This model is the same as Model 560, Chassis 120016, appearing on pages 17-30 to 17-32 of *Rider's Volume XVII*.

FM Specialties Model Fidelotuner

This model is shown on pages 17-1 to 17-4 of *Rider's Volume XVII*. Three terminals are shown in Fig. 5, page 17-4; the first labelled 3, and the third terminal (not labelled in this figure) should be labelled 4. The ground from the phonograph connection to the receiver should be made to this third terminal (terminal 4).

Farnsworth AC-55, Chassis C2-3

This model is the same as model ACL-55, Chassis C 2-3, shown on pages 11-7 and 11-10 in *Rider's Volume XI*.

Farnsworth ACL 55, ACL56, AKL58, AKL 59

These models shown on pages 11-7 and 11-10 of *Rider's Volume XI* are erroneously listed as ATL.

Farnsworth GK-140

Slippage of the dial-drive cable on the early production sets can be corrected by replacing the cable with part number 05096. This cord is softer and smaller than the one used previously.

If the push buttons bind on the front panel of the cabinet, the ganged capacitor may not be properly positioned. This may be corrected by installing a flat metal washer under each of the mounting grommets. This may be done without removing the gang from the chassis.

Oscillation or low sensitivity on f.m. may be due to poor ground connections from the gang to the r-f shelf. When aligning the f-m band, oscillation may occur with certain signal generators. Changing the value of the resistor in series between the generator and the chassis will prevent oscillation. With some generators more than 400 ohms are required, with others less.

In some preliminary sets a 200- μ f capacitor was placed in series with the short-wave converter-trimmer. If

for any reason this trimmer requires replacement, removal of the capacitor is suggested. This capacitor is not shown on the schematic.

In some of the preliminary 14-tube sets, Belden braid was used to ground the ganged capacitor to the r-f shelf. In certain instances too much solder flowed into the braid and as a result some joints break loose or the set becomes microphonic. This braid should be replaced with soft copper strips.

General Electric A51, A56

These models are the same as model A54 shown on pages 7-4 to 7-6 of *Rider's Volume VII*.

General Electric H639AC-DC

The r-f alignment instructions of these models found on page 11-80 of *Rider's Volume XI*, should read as follows: With gang condenser plates completely meshed, set dial to the first mark at the left end of scale. Then set dial to 1500 kc. Apply a 1500-kc signal either through a standard I.R.E. dummy to the antenna terminal or through an additional loop connected to the generator output which can be magnetically coupled to the receiver Beam-Scope. Align C2 and C1 at 1500 kc for maximum output. Set dial to 580 kc and peak C3 on 580 kc while rocking the gang condenser. Retrim at 1500 kc.

GE YRB 60-12

This receiver is the same electrically as the YRB 60-2 appearing on page 15-5 of *Rider's Volume XV* but the cabinet is different.

GE YRB 92-2 and 81-3

These models are the same electrically as the YRB 82-1 appearing on pages 15-53 to 15-54 of *Rider's Volume XV*, but they have different cabinets.

General Electric L604

This model is the same as Model L600 appearing on page 13-40 of *Rider's Volume XIII*.

General Electric 202

This receiver is the same electrically as the model 200 as shown on pages 15-54 to 15-56 in *Rider's Volume XV*, except that it has a different cabinet.

General Electric 219, 220, 221

A few cases of hum which cannot be reduced in the normal manner from these models shown on pages 15-28 to 15-31 of *Rider's Volume XV*, may be corrected by cathode degeneration in the output tube, 35L6GT/G, cathode circuit. Remove R17 and C29-C from the circuit. This can be done by disconnecting one end of R17.

General Electric 260

This model appears on pages 16-7 to 16-12 of *Rider's Volume XVI*. It has been found that late production 1LC6 tubes, coded H7E, will oscillate at another frequency in addition to the desired frequency, causing unsatisfactory operation. To remedy this condition, the oscillator grid capacitor, C17, should be changed from 100 μ f to 56 μ f.

GE 254

This model is illustrated on pages 16-3 to 16-5 of *Rider's Volume XVI*. The suffix letters after 254 indicate only the cabinet styling. All versions are electrically identical.

Firestone 7402-4

This model is the same as model S7426-6 shown on page 10-5 of *Rider's Volume X*.

Firestone 7423-5

This model is the same as model S7402-5 shown on page 13-38 of *Rider's Volume XIII*.

Goodrich R655W

This model uses the Admiral record-changer model RC161 or RC161A, which are to be found on Admiral RCD. CH. pages 17-1 to 17-7 of Volume XVII.

Hallicrafters S-40A

This model is the same as Model S-40, second revision, on pages 16-67 to 16-86 of *Rider's Volume XV*, except for the following changes. C18 has been changed in value from 100 μ f to 68 μ f. A 10-ohm resistor (R30) has been connected between the center tap of oscillator coil T10 and terminal C. R30 has been removed from its previous position between C16 and the junction of C26, C6C, C7C, and switch S1F. C55 has been changed in value from 100 μ f to 47 μ f, and is now connected to the top of the 470- μ f capacitor (C54). The coil T17 is connected directly across C54, with one end going to ground. The center tap of this coil is connected to the cathode of the 6J8 tube. The 0.01- μ f capacitor (C53) is connected from the plate of the 6J8 tube directly to ground.

The parts list should be changed to read as follows:

Ref. No.	Description	Hallicrafter's Part No.
C18	68 μ f, \pm 10%, 500 vdcw; neg. temp. coeff. 0.0075 μ f/ μ f/deg.C;	CC25UK680K ceramic
C55	47 μ f, \pm 20%, 500VDC, Mica	CM20A470M
T17	BF0 coil; 455 kc; shielded	54B033-2

Hallicrafters SP-44 AND SX-42

These models appear on pages 17-1 to 17-5 and 17-6 to 17-16 respectively of *Rider's Volume XVII*. When the SX-42 is used with the SP-44 Panadaptor on the low-frequency band, it appears to motor boat. To correct this condition, do the following.

The connecting cable between the SP-44 and the SX-42 is shielded and the shield is connected to the SX-42 ground. Disconnect the shield from the SX-42 ground and place a 50- μ f capacitor between the shield and the SX-42 chassis. Be sure that the SX-42 chassis is well grounded. A shielded antenna lead, or a balanced antenna, on the SX-42 may also help.

The following modifications should be made on the SP-44 unit. A strip of bonding braid, 3/8 inch wide, may

be connected to the No. 1 grounded pin of the 6AC7 tube, going around the choke coil and connecting to the right side of the chassis. The braid should be insulated with a piece of spaghetti and should lie parallel to the front panel. Two pieces of braid 1/4 inch wide, or a copper strap may also be used.

A piece of copper or steel sheet about 2 1/2 inches wide may be screwed or soldered across the bottom so that it is attached to both edges of the chassis. This plate should be centered over the bottom of the 6AC7 tube.

Hallicrafters SX-42

This model appears on pages 17-6 to 17-16 of *Rider's Volume XVII*. It has been found that there is unsatisfactory image ratio on the 10-meter band. This can be corrected in two ways, one of which provides for the change or replacement of four parts and the other provides for no change in the oscillator coil.

The first method is as follows:

1. The band 4 oscillator coil should be removed and replaced with a new coil, part number 50-837D.
2. Resistor R24, now 56 ohms, should be removed and replaced with a 22-ohm resistor, part number RC20AE22OM.
3. Remove the main tuning dial scale, part number 83C265, and replace with new scale, part number 83C325.
4. Remove antenna coil, part number 51B827-C, and replace it with antenna coil, part number 51B827-D.
5. Align the receiver in the normal manner, making certain that the image falls on the high-frequency side of the signal frequency.

The second method is as follows:

1. Remove the oscillator trimmer capacitor C-42.
2. Calibrate the main tuning dial at 28 megacycles, with slug S-33, making certain that the image falls on the high-frequency side of the fundamental.
3. Calibrate the bandspread as outlined on page 17-16 of *Rider's Volume 17*, except that slug S-33 should be used instead of trimmer C-42.

It will be noticed that in this method the calibration of the low-frequency end of the number 4 band has been neglected entirely, since this cannot be accomplished without the use of trimmer C-42. The oscillator coil would have to be replaced to allow the use of this trimmer.

International Detrola 339, 340, 340-1

These models appear on page 12-4 of *Rider's Volume XII*. The 30-ohm resistor used in these models is the resistor with 5% tolerance, part number 8158.

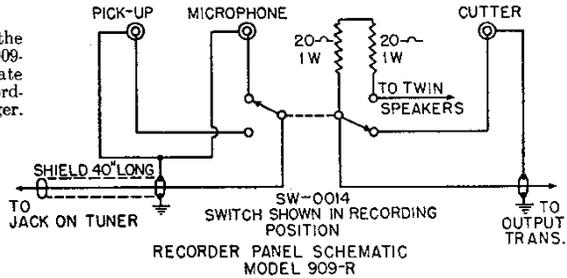
International Detrola 2744

This model is the same as Model 274 appearing on page 10-9 of *Rider's Volume X*.

Howard 909MR

This model is similar to Model 909M appearing on pages 17-34 to 17-37 of *Rider's Volume XVII*, except that recording units were added. The General Industries Model

The wiring in the Howard Model 909-MR to accommodate the GI-RC130 recorder and record changer.



Majestic 8FM783, Chassis 8B07D

This model is the same as Model 8FM776, Chassis 8B07D, appearing on pages 17-17 to 17-23 of *Rider's Volume XVII*, except that "solid doors" are used instead of metal gridded frame doors. The parts list should be changed to read as follows:

Part No.	Description
115-48	Cabinet, console combination, mahogany or walnut (state color)

Montgomery Ward 04BR-420B

This model is the same as Model 93BR-420A appearing on pages 11-25 and 11-26 of *Rider's Volume XI*.

Montgomery Ward 14WG-635B

This model is the same as Model 14WG-624A appearing on pages 13-53 and 13-54 of *Rider's Volume XIII*.

Montgomery Ward 64WG-1050D, 74WG-1050B

These models are similar to the 64WG-1050A shown on pages 15-75 to 15-77 of *Rider's Volume XV* with the following changes. The 0.1-µf capacitor (C-11) is connected to B— from pin 1 of the 1R5 socket instead of to chassis ground. A 1000-ohm resistor (R-13) is connected from pin 7 of the 354 output tube to B—.

Montgomery Ward 64WG-1804B, 74WG-1804B

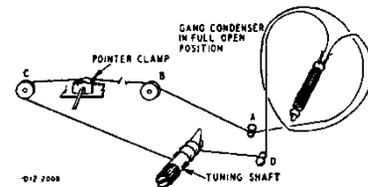
These two models are similar to Model 64WG-1804A shown on pages 15-88 to 15-90 of *Rider's Volume XV*, except for the following changes.

The frequency range has been slightly contracted to 540-1600 kc. A 47-ohm dropping resistor (R-20) has been inserted between B+ and the junction of the primary winding of the first i-f transformer (T-3), the screen grids of the 12SA7 mixer, the screen-grid of the 12SK7 r-f amplifier, and resistor R-1. A 0.05-µf bypass capacitor is connected from this junction to the point marked "X" in the filament line of the schematic shown on page 15-88 of *Rider's Volume XV*.

The drive cord length has been increased for these models and the fol-

GI-RC130 recorder and record changer combination was used to make this change. The recorder unit was added without disturbing the wiring of the radio chassis. The wiring necessary for the addition is shown in the accompanying diagram.

lowing drive cord replacement instruc-



Winding for the new longer drive cord for Models 64WG-1804B and 74WG-1804B.

tions should be observed. Turn the gang capacitor to the fully open position. Use a new drive cord 42 inches long and tie one end to the tension spring. Hook the other end of the tension spring over the tab on the drive pulley rim and continue around pulley 1/2 turn counterclockwise. Pass cord around stud D and wind three turns clockwise (from front of chassis) around the turning shaft. Turns must progress away from chassis. Pass cord around pulleys C and B and stud A. Pass cord under drive pulley and wind 1 1/2 turns counterclockwise around drive pulley. Stretch tension spring and tie free end of cord to spring. Cut off any excess string. Attach the dial pointer to the cord and position as instructed on page 15-89 of *Rider's Volume XV*.

The components used in the Models 64WG-1804B and 74WG-1804B are the same as those enumerated on page 15-90 of *Rider's Volume XV*, except for the following.

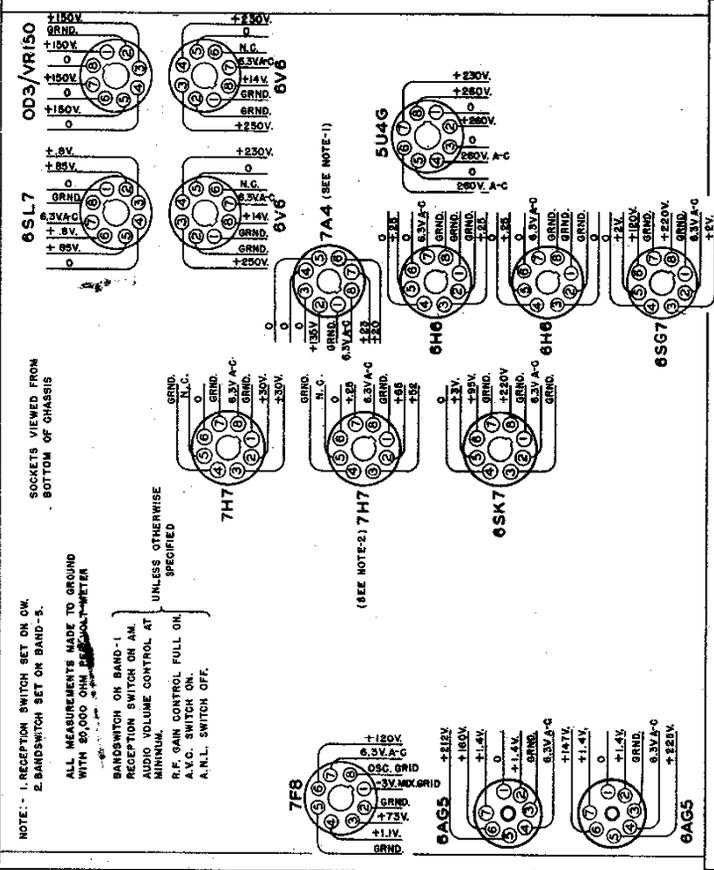
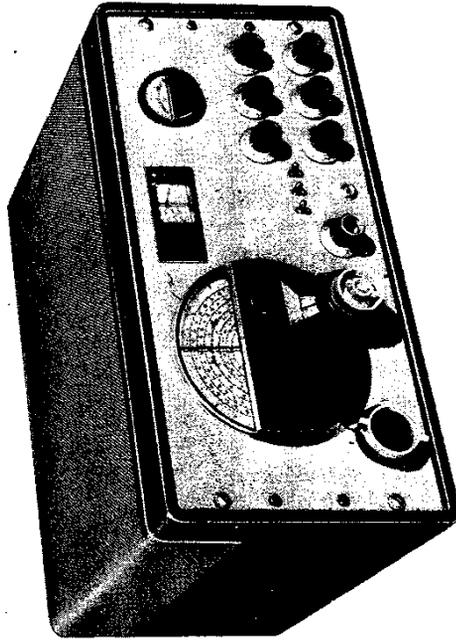
Ref. No.	Part No.	Description
C-1	D67102	0.001µf, 400 v. tubular
C-14	B67403	0.04µf, 200 v. tubular
C-15	B67602	0.006µf, 200 v. tubular
C-19	B67253	0.025µf, 200 v. tubular
C-22	B67204	0.2µf, 200 v. tubular
C-24	17A123	1.5-12µf, trimmer
C-28	B67503	0.05µf, 200 v. tubular
R-14	B54274	270,000Ω, 0.5 watt, carbon L L
R-20	B85471	470Ω, 0.5 watt, carbon
	20X329	Capacitor cushion stud in gang capacitor mounting
	28X95	Drive cord tension spring

MODEL SX-42

THE HALLICRAFTERS CO.

FREQUENCY BAND	COVERAGE	TYPE OF RECEPTION
1	540 to 1620 kilocycles	AM/CW
2	1.62 to 5 megacycles	AM/CW
3	5 to 15 megacycles	AM/CW
4	15 to 30 megacycles	AM/CW
5	27 to 55 megacycles	AM/FM/CW
6	55 to 110 megacycles	AM/FM/CW

Adequate overlap is provided at ends of all bands.



HOW TO RESTRING DIAL CORD

To restring the main tuning dial cord, cut a 25" length of 18 lb. test dial cord and tie one end to the tension spring of the main tuning capacitor drive pulley at position "1", Fig. #2. Follow the numbers "1" through "14", wind the cord on the pulley and knob drive shaft. At position "14", stretch the tension spring and tie cord securely. Cut off excess cord. To restring the bandspread tuning dial cord, follow the same procedure as explained above except start at position "A" and proceed through position "N" on tension spring.

VOLTAGE CHART

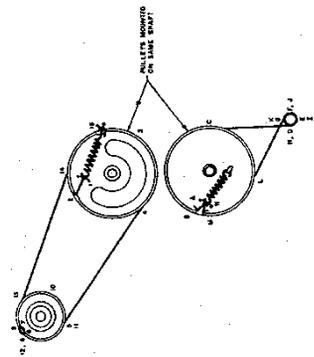
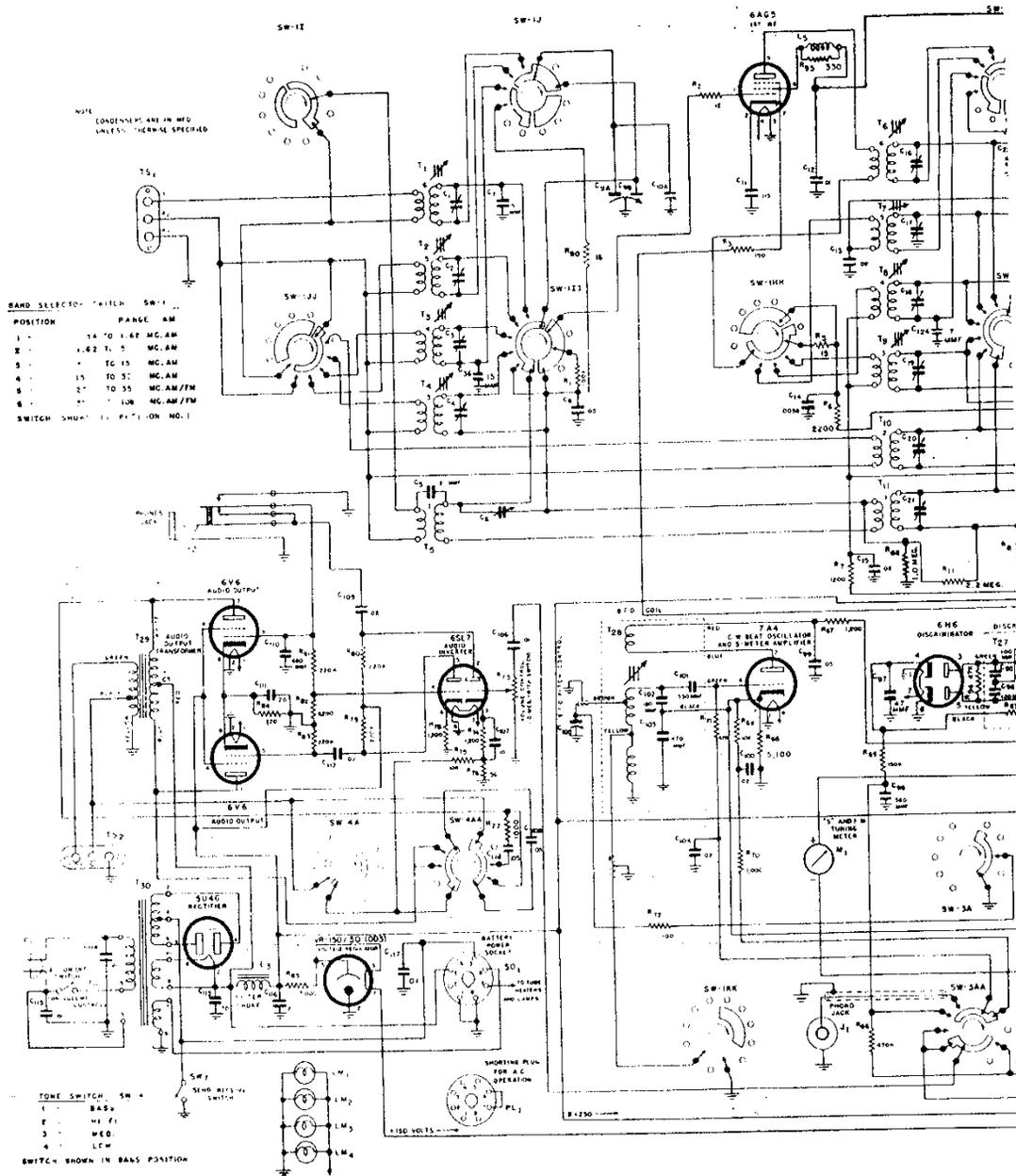


FIG. 2. DIAL CABLE STRINGING PROCEDURE

17-7.8

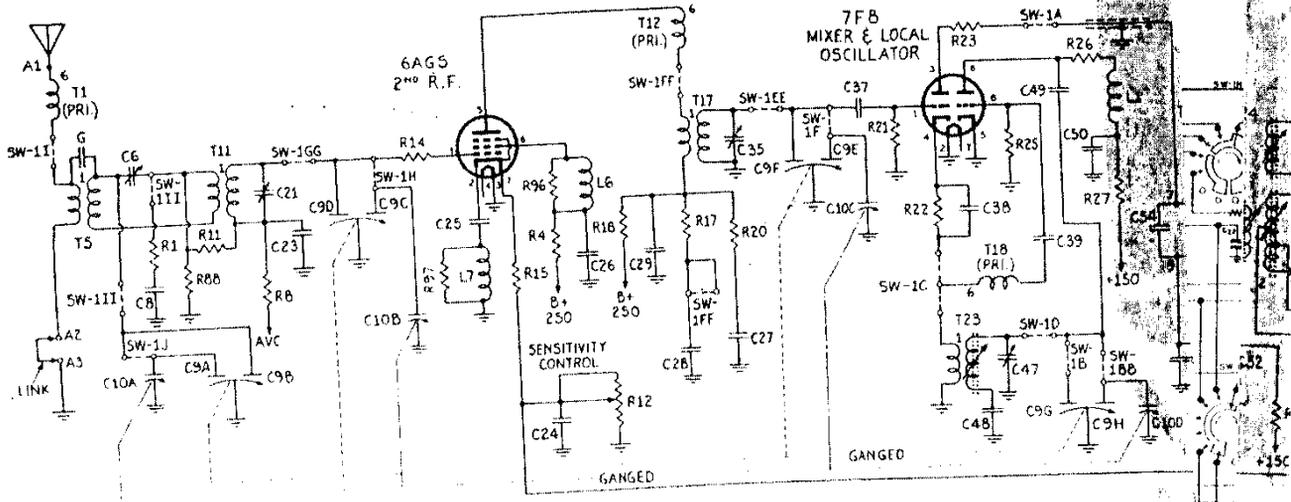
THE HA



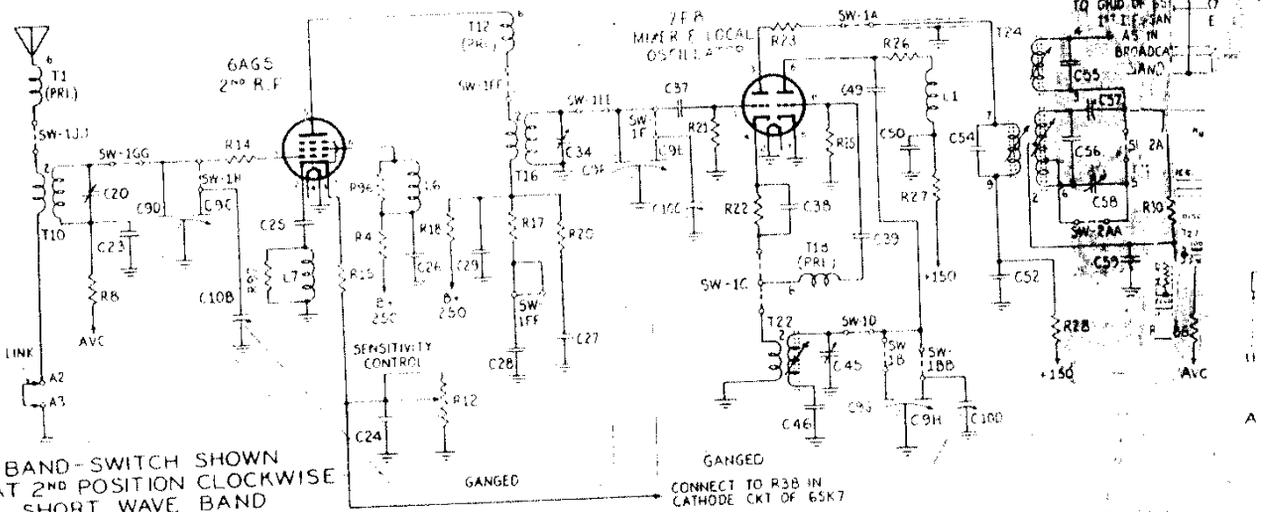
DC operation - filament 6.3 volts at 5 amperes; "B" supply 270 volts at 150 ma. (The 6 drain for vibrator type supply for "B" voltage will run about 16 amperes.)

POWER SUPPLY DATA: AC operation - 105 to 125 volts, 50/60 cycles single phase source. (A 150/220/250 volt, 25 to 60 cycles single phase source with special power transformer avail crafters part no. 52C131.) Power consumption is 110 watts at 117 volts a-c.

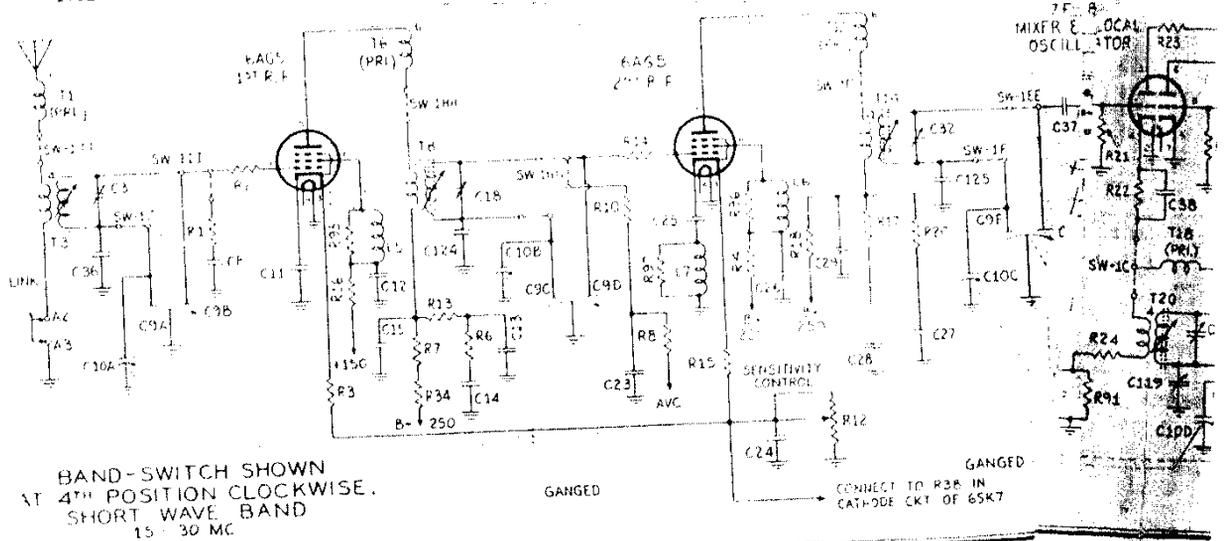
MODEL SX-42



BAND-SWITCH SHOWN AT 2ND POSITION CLOCKWISE SHORT WAVE BAND 1.62 - 5 MC.

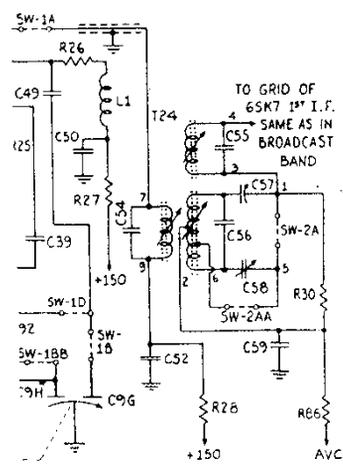
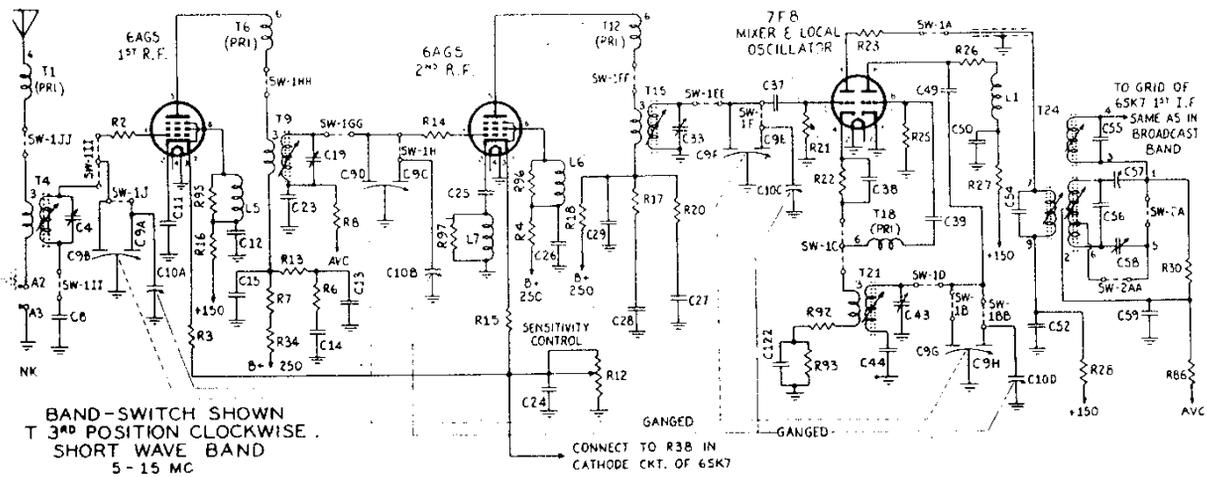
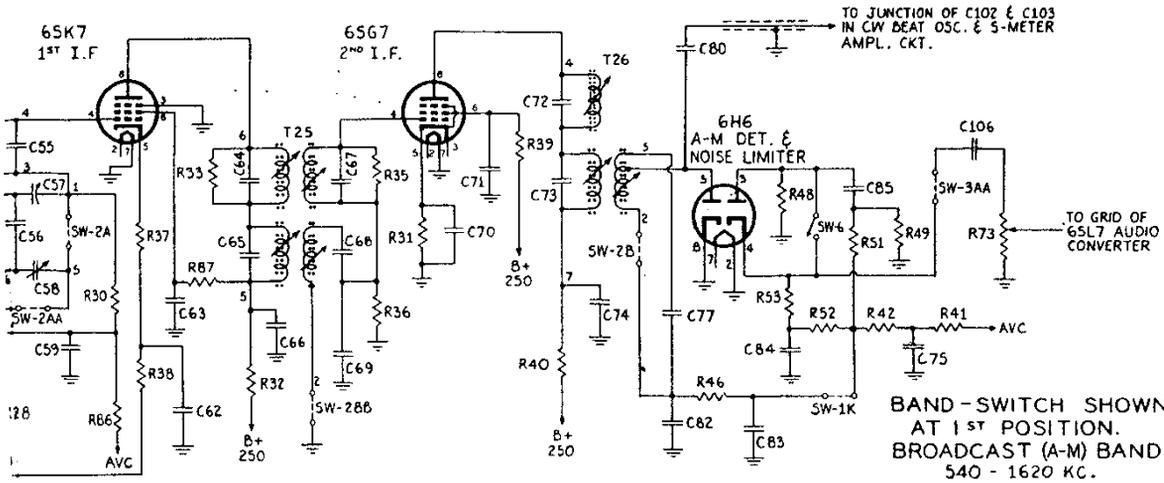


BAND-SWITCH SHOWN AT 4TH POSITION CLOCKWISE. SHORT WAVE BAND 15 - 30 MC.



BAND-SWITCH SHOWN AT 4TH POSITION CLOCKWISE. SHORT WAVE BAND 15 - 30 MC.

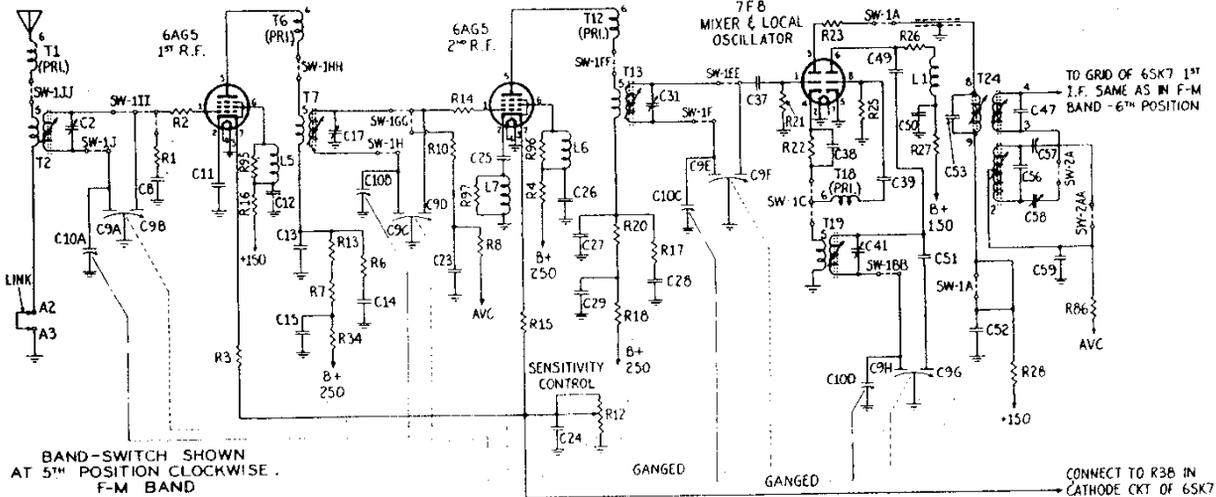
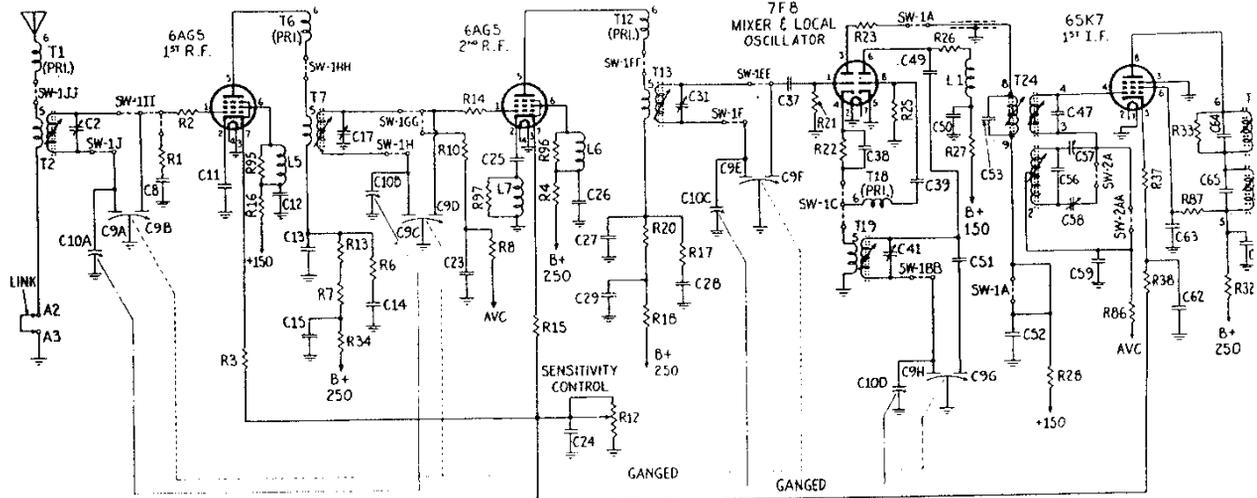
AFTERS CO.



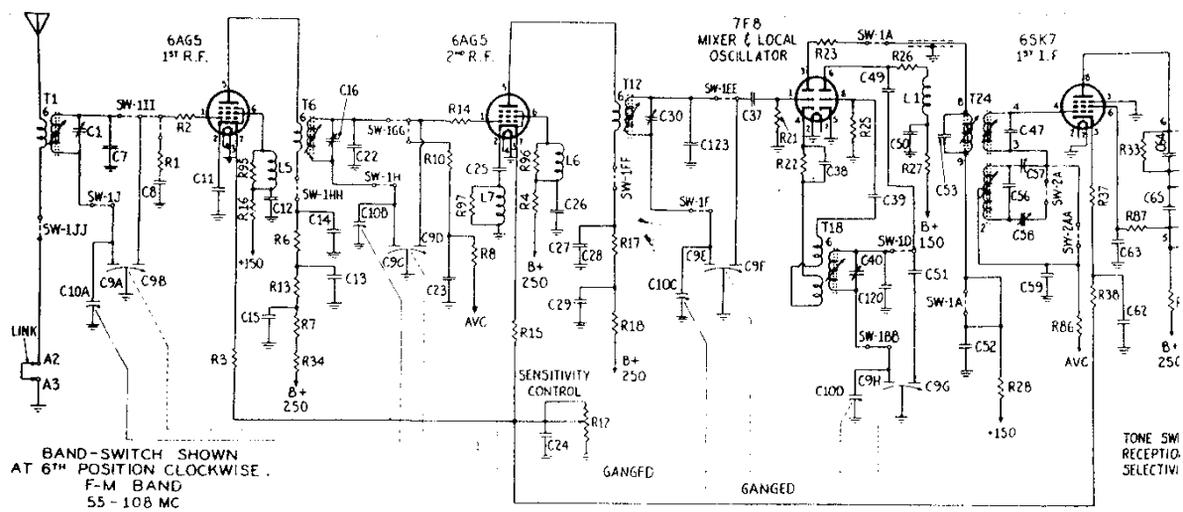
NOTES

- TONE SWITCH (SW-4) IS SHOWN IN POSITION 2 (HI F)
- RECEPTION SWITCH (SW-3) IS SHOWN IN POSITION 2 (A.M.)
- SELECTIVITY SWITCH (SW-2) IS SHOWN IN POSITION 3 (NORMAL SHARP)

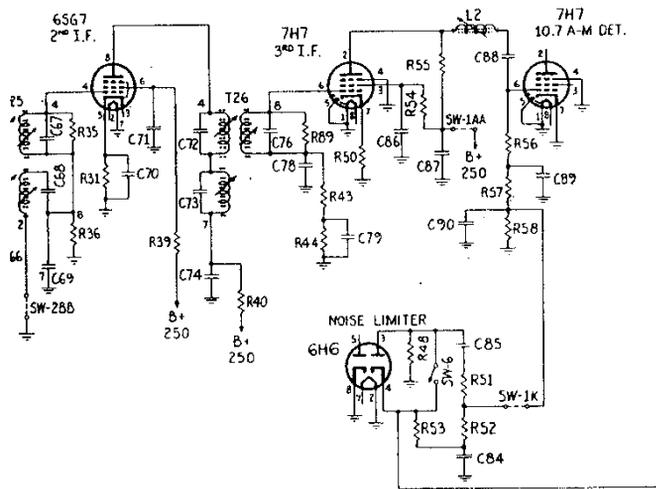
17-11, 12



BAND-SWITCH SHOWN AT 5th POSITION CLOCKWISE. F-M BAND 27-55 MC



BAND-SWITCH SHOWN AT 6th POSITION CLOCKWISE. F-M BAND 55-108 MC

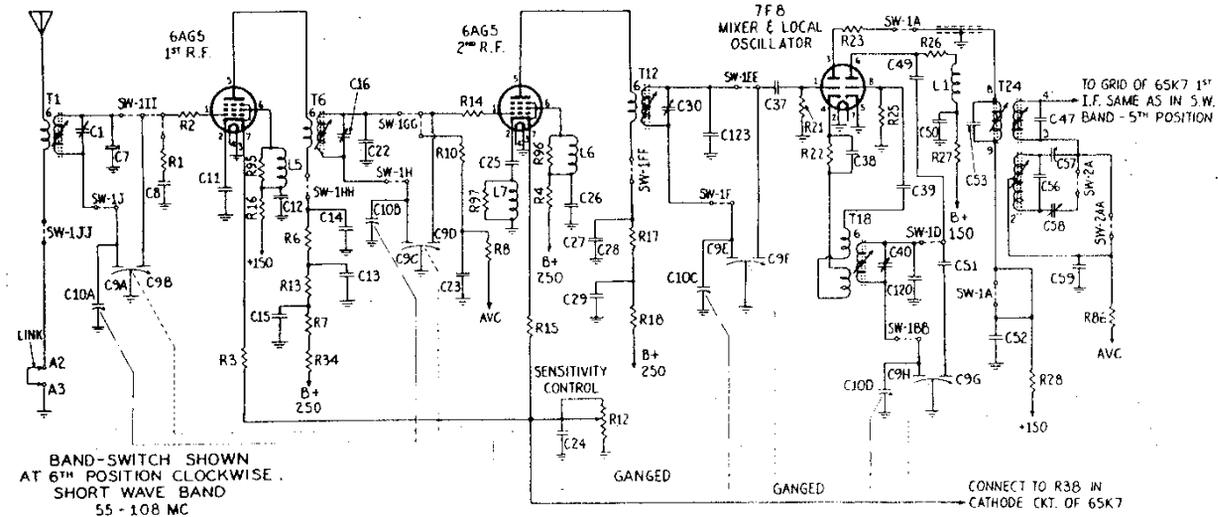


(FOR 5TH & 6TH S.W. POSITIONS)

NOTES

1. TONE SWITCH (SW-4) IS SHOWN IN POSITION 2 (HI F)
2. RECEPTION SWITCH (SW-3) IS SHOWN IN POSITION 2 (A.M.)
3. SELECTIVITY SWITCH (SW-2) IS SHOWN IN POSITION 3 (NORMAL SHARP)

BAND-SWITCH SHOWN AT 5TH POSITION CLOCKWISE. SHORT WAVE BAND - 27 - 55 MC

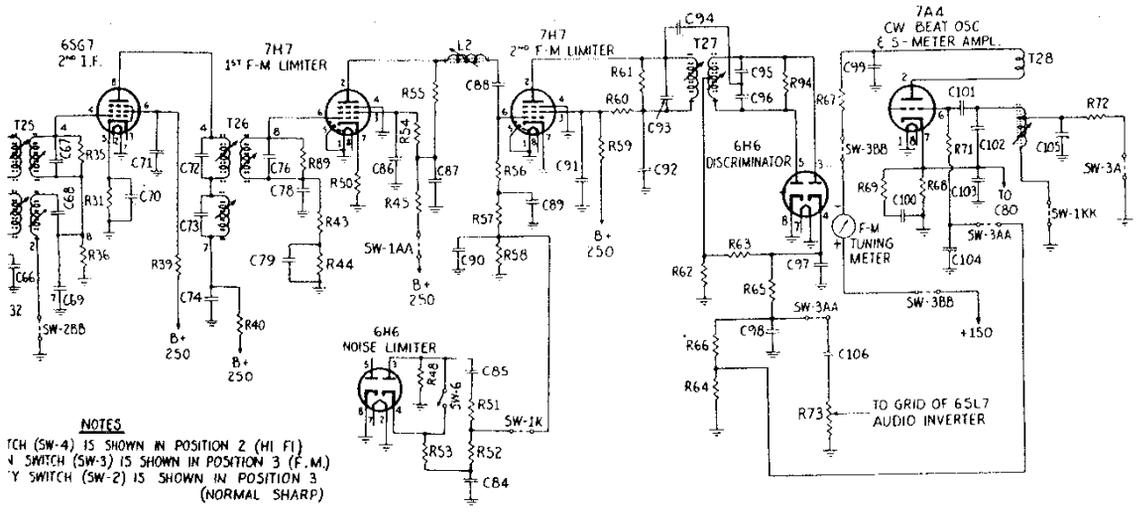


BAND-SWITCH SHOWN AT 6TH POSITION CLOCKWISE. SHORT WAVE BAND 55 - 108 MC

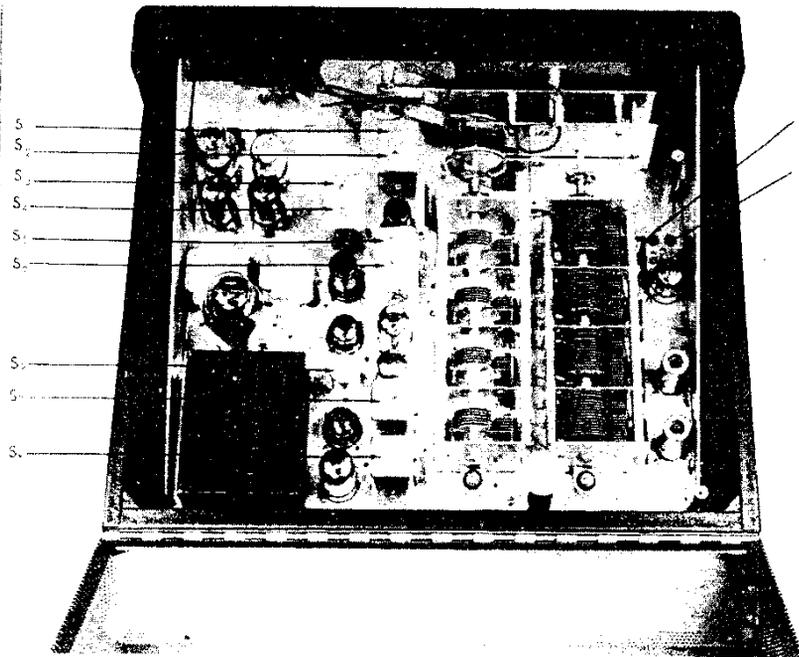
GANGED

GANGED

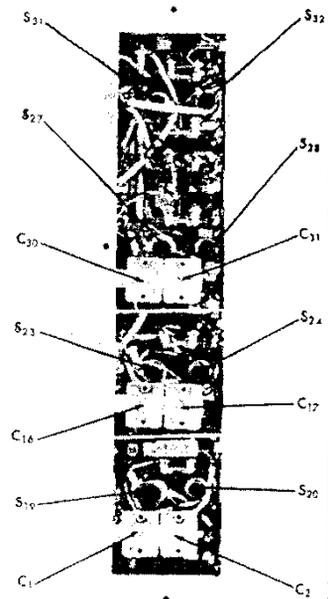
CONNECT TO R3B IN CATHODE CKT. OF 6SK7



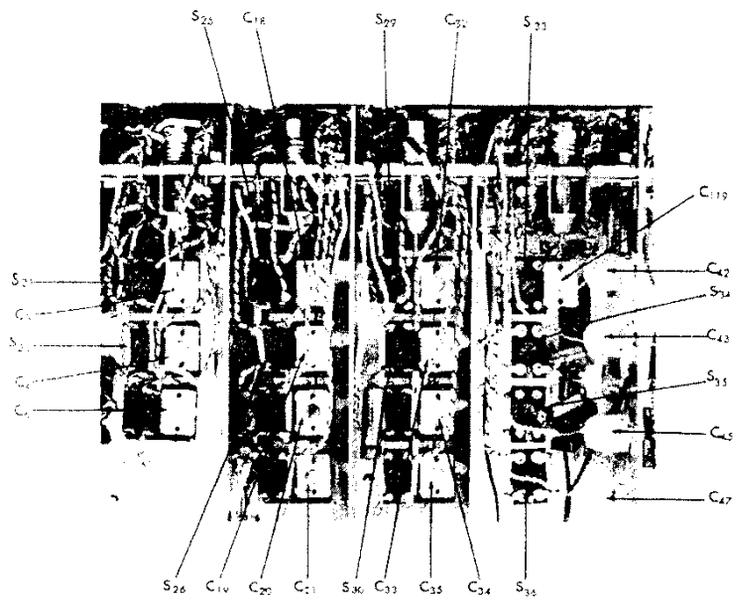
NOTES
1. TONE SWITCH (SW-4) IS SHOWN IN POSITION 2 (HI F)
2. RECEPTION SWITCH (SW-3) IS SHOWN IN POSITION 3 (F.M.)
3. SELECTIVITY SWITCH (SW-2) IS SHOWN IN POSITION 3 (NORMAL SHARP)



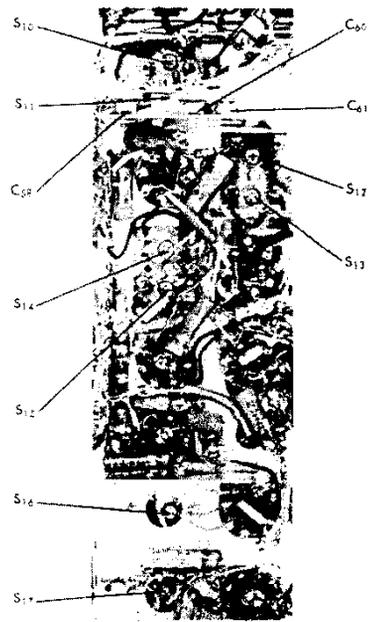
TOP VIEW



SIDE VIEW



BOTTOM VIEW



BOTTOM VIEW

TOP, BOTTOM AND SIDE VIEWS SHOWING ADJUSTMENT POINTS

MODEL SX-42

THE HALLICRAFTERS CO.

ALIGNMENT INSTRUCTIONS

to the receiver chassis; the "hot" lead is connected as indicated in the chart. Connect the output meter across the 500 ohm speaker terminals.

CONTROL SETTINGS: Turn VOLUME control clockwise and allow about 15 minutes for tubes to heat up, then set the receiver controls as follows:

- VOLUME maximum
- SENSITIVITY maximum
- ALC off
- REC. LIMITER noise
- CRYSTAL PHASING 0
- CR. I.F. CH. 0
- TONE optional
- *SELECTIVITY crystal
- RECEIVE-STANDBY receive sharp

* For f-m alignment set RECEPTION control at Rv and SELECTIVITY switch at normal broad.

RADIO RECEIVER MODEL SI-42 I-F ALIGNMENT INSTRUCTIONS

While slowly adjusting SJO, "rock" the signal generator until the output, as observed on the output meter, increases and then slowly increases. Tune the generator to the other side of zero beat and adjust crystal phasing knob for the null point.

Crystal phasing is left now in this position for this and following adjustments. At the point of minimum output, the slug SJO is correctly set. This occurs between two maximum outputs, with slug turned further in, and one with slug turned further out.

Next turn to sharp crystal and with C61 at near minimum capacity, slowly turn trimmer (increase capacity) while "rocking" the signal generator and adjust for maximum output meter reading. It may be necessary to reduce the trimmer gain to prevent needle on output meter from reaching right hand stop. This is done by turning the R.F. sensitivity control down as well as reducing sensitivity control to prevent overload. Volume control knob is turned on. After maximum output has been reached, turn sharp crystal adjustment, turn trimmer further inward until a drop of about 2 dB occurs. At this point the sharp crystal will have very good selectivity without sacrificing too much gain.

Next, tune I-F generator to exact crystal frequency and by using the R.F. sensitivity control, adjust for an output meter reading of about 3/4 of full scale reading. Now turn to broad crystal and note the drop and its reading on the output meter. Then switch to receive sharp crystal and with C61 at near minimum capacity, adjust the trimmer for increase in capacity, while rocking generator. When the output meter reaches the point that is

EQUIPMENT.

1. Signal generator capable of the ranges indicated in the alignment chart, including a 400 cycle audio modulator.
2. Output meter capable of handling 1.5 watts of audio power.
3. Standard RMA dummy antenna—Consisting of a 200 PAF coil in series with a 20 ohm R.F. choke substituted by a 400 PAF condenser in series with 300 OHM resistor.
4. Non-metallic screw driver.
5. One 300 ohm carbon resistor (Dummy ant for bands 4b and 6.)

CONNECTIONS: Connect the generator "cold" lead

455 K.C. I-F ALIGNMENT:

- A. Set Controls as follows:
 1. Bandswitch on "A" Band.
 2. K.T. Dial set to approximately 1 m.c.
 3. R. F. gain full on.
 4. ALC off, AMV off, Standby on.
 5. PH-AM switch on Ah.
 6. Tone control on RHPi.
 7. I.F. Selectivity switch on sharp I-F.
- B. Connect output meter to 500 ohm speaker terminal.
- C. Use where small mica capacitor C37, only, from *P1 to R.F. mixer, exc. stage and connect hot side of I-F generator thru a .1 capacitor to the *P1 pin. Connect cold side of generator to the receiver chassis.
- D. Increase generator output until a signal is heard and then align slug S1, S3, S5, S10, S12, and S14 for maximum output.
- E. Turn on BFO and adjust pitch control knob to zero and the adjacent S4 until the beat note is heard. Continue to turn S4 until the beat note is zero beat with the generator signal.
- F. Next adjust pitch control knob until the BFO note is about 1000 cycles off zero beat.
- G. Turn selectivity knob to broad crystal and

REF. NO.	DESCRIPTION	HALLICRAFTER'S PART NUMBER
TS-1	Antenna-ground connections Same as TS-1; speaker connections	89A567
TS-2		

REF. NO.	DESCRIPTION	HALLICRAFTER'S PART NUMBER
M-1	Carrier level; tuning meter	82B100
R-1	465 kc crystal assembly	19A123

REF. NO.	DESCRIPTION	HALLICRAFTER'S PART NUMBER
L-1	PHONE jack	29A000
L-2	PHONES jack	32B000

REF. NO.	DESCRIPTION	HALLICRAFTER'S PART NUMBER
L-1	R-f choke; oscillator	53B008
L-2	Filter coupling coil	53B104
L-3	Screen choke	53B067
L-4	R-f choke; filament	53A104
L-5	Screen choke	53A117
L-6	Screen choke	53A116
L-7	Cathode Choke	53A118

REF. NO.	DESCRIPTION	HALLICRAFTER'S PART NUMBER
L-1	A-c line cord with two prong plug	87A076

REF. NO.	DESCRIPTION	HALLICRAFTER'S PART NUMBER
S-1	Tube sockets; metal type; plain	6A005
S-2	Tube sockets; silver	6A102
S-3	Tube sockets; bakelite	6A103
S-4	Tube sockets; metal type; mica	6A228
S-5	Filter light socket; main tuning	6A258
S-6	Filter light socket; logging	6A259
S-7	Filter light socket; bandspread	6A260
S-8	Filter light socket; tuning meter	6A262

REF. NO.	DESCRIPTION	HALLICRAFTER'S PART NUMBER
V-1	VOLUME control knob assembly	151000
V-2	PITCH CONTROL and CRYSTAL PHASING knob assembly	15A001
V-3	RECEPTION control knob assembly	15A002
V-4	SELECTIVITY control knob assembly	15A003
V-5	TONE control knob assembly	15A004
V-6	SENSITIVITY control knob assembly	15A005
V-7	MAIN TUNING knob and dial assembly 0-100 Div.	15A007
V-8	BANDSPREAD knob	15A008

REF. NO.	DESCRIPTION	HALLICRAFTER'S PART NUMBER
W-1	Tube shield (Walastru tube)	69A005
W-2	Adjustable tuning core	71C000
W-3	Gear drive assembly	83C005
W-4	Main tuning dial	83B007
W-5	Bandspread dial	79A019
W-6	Bandspread dial escutcheon lens window	22A160
W-7	Main tuning dial escutcheon lens pointer	70A000
W-8	Main tuning pointer	82A11C
W-9	Main tuning dial escutcheon fastener clip	76A084
W-10	Bandspread escutcheon fastener clip	76A030

THE HALLICRAFTERS CO.

MODEL SX-42

DUMMY ANT. IN SERIES WITH SIG. GENERATOR	CONNECTION OF SIG. GENERATOR OUTPUT TO RECEIVER	SIGNAL GEN. FREQUENCY SETTING	BAND #4 ADJUSTMENT		RECEIVER SWITCH DIAL SETTING	ADJUST. SLUG, PADDER, OR TRIMMER TRIMMER NO.	TYPE OF ADJUSTMENT - MAKE ADJUSTMENT FOR:
			28 MC	18 MC			
RMA	A-1 ON ANT. STRIP AND GROUND	28 MC	15-30	10 Meter	BS dot	C42	osc. Calibration
RMA	"	18 MC	15-30	1.8 MC		S88	osc. Calibration

NOTE: If the above two adjustments have been made correctly, it will be found that 28 MC on the bandspread dial will be exactly on calibration when the main tuning dial is set on the 10 meter bandspread dial. Now turn the bandspread dial to 28 MC and note if 28 MC falls high or low in calibration. If 28 MC is high in calibration trimmer C119 must be set at a higher capacity, after which the above two calibration adjustments must be repeated. If 28 MC is low in calibration trimmer C119 must be decreased in capacity, after which the above two calibration adjustments must be repeated.

DUMMY ANT. IN SERIES WITH SIG. GENERATOR	CONNECTION OF SIG. GENERATOR OUTPUT TO RECEIVER	SIGNAL GEN. FREQUENCY SETTING	BAND #5 ADJUSTMENT		RECEIVER SWITCH DIAL SETTING	ADJUST. SLUG, PADDER, OR TRIMMER TRIMMER NO.	TYPE OF ADJUSTMENT - MAKE ADJUSTMENT FOR:
			50 MC	30 MC			
300 ohms	A-1 ON ANT. STRIP AND GROUND	50 MC	28-55	6 Meter	BS dot	C41	osc. Calibration
300 ohms	"	30 MC	28-55	30 MC		S82	osc. Calibration
300 ohms	"	50 MC	28-55	50 MC		C8	osc. Calibration
300 ohms	"	50 MC	28-55	50 MC		C17	osc. Calibration
300 ohms	"	50 MC	28-55	50 MC		C31	osc. Calibration
300 ohms	"	30 MC	28-55	30 MC		S80	osc. Calibration
300 ohms	"	30 MC	28-55	30 MC		S84	osc. Calibration
300 ohms	"	30 MC	28-55	30 MC		S85	osc. Calibration
300 ohms	"	30 MC	28-55	30 MC		S86	osc. Calibration

NOTE: Remove plate from left side of chassis for Band #5 and #6 R.F. adjustment.

DUMMY ANT. IN SERIES WITH SIG. GENERATOR	CONNECTION OF SIG. GENERATOR OUTPUT TO RECEIVER	SIGNAL GEN. FREQUENCY SETTING	BAND #6 ADJUSTMENT		RECEIVER SWITCH DIAL SETTING	ADJUST. SLUG, PADDER, OR TRIMMER TRIMMER NO.	TYPE OF ADJUSTMENT - MAKE ADJUSTMENT FOR:
			105 MC	60 MC			
300 ohms	A-1 ON ANT. STRIP AND GROUND	105 MC	55-108	105 MC		C40	osc. Calibration
300 ohms	"	60 MC	55-108	60 MC		S81	osc. Calibration
300 ohms	"	105 MC	55-108	105 MC		C11	osc. Calibration
300 ohms	"	105 MC	55-108	105 MC		C16	osc. Calibration
300 ohms	"	105 MC	55-108	105 MC		C80	osc. Calibration
300 ohms	"	60 MC	55-108	60 MC		S19	osc. Calibration
300 ohms	"	60 MC	55-108	60 MC		S23	osc. Calibration
300 ohms	"	60 MC	55-108	60 MC		S27	osc. Calibration

generator for maximum output (adjust R-F sensitivity control for a suitable reading). When the signal generator is on exact crystal frequency, switch over to sharp I-F and repeat slugs S1, S3, S4, S12, S14, and C88 for maximum output.

ceived, switch over to CW on and adjust slug S17 (after having set the pitch control knob to zero on dial) for zero beat. The RFO adjustment is now complete.

Switch to FM position on AM-FM switch and adjust slug S16 for maximum output. Then adjust slug S7 for null, or minimum output, as indicated on output meter. Next, slowly rock signal generator either side of 10.7 mc. and observe the maximum output readings obtained. If the outputs, either side of center are unequal, they may be equalized by adjusting slug S16. When the balance has been obtained the FM adjustment is complete. Note: Make sure that the output meter is not off full scale when checking balance. Control this by reducing R-F sensitivity.

DUMMY ANT. IN SERIES WITH SIG. GENERATOR	CONNECTION OF SIG. GENERATOR OUTPUT TO RECEIVER	SIGNAL GEN. FREQUENCY SETTING	BAND #1 ADJUSTMENT		RECEIVER SWITCH DIAL SETTING	ADJUST. SLUG, PADDER, OR TRIMMER TRIMMER NO.	TYPE OF ADJUSTMENT - MAKE ADJUSTMENT FOR:
			1.4 MC	1.4 MC			
RMA	A-1 ON ANT. STRIP AND GROUND	1.4 MC	54-1.62	1.4 MC		C47	osc. Calibration
RMA	"	1.4 MC	54-1.62	1.4 MC		S86	osc. Calibration
RMA	"	1.4 MC	54-1.62	1.4 MC		C6	osc. Calibration
RMA	"	1.4 MC	54-1.62	1.4 MC		C21	osc. Calibration
RMA	"	1.4 MC	54-1.62	1.4 MC		C85	osc. Calibration

DUMMY ANT. IN SERIES WITH SIG. GENERATOR	CONNECTION OF SIG. GENERATOR OUTPUT TO RECEIVER	SIGNAL GEN. FREQUENCY SETTING	BAND #2 ADJUSTMENT		RECEIVER SWITCH DIAL SETTING	ADJUST. SLUG, PADDER, OR TRIMMER TRIMMER NO.	TYPE OF ADJUSTMENT - MAKE ADJUSTMENT FOR:
			4.0 MC	4.0 MC			
RMA	A-1 ON ANT. STRIP AND GROUND	4.0 MC	1.62-5.0	4.0 MC		C45	osc. Calibration
RMA	"	4.0 MC	1.62-5.0	4.0 MC		S85	osc. Calibration
RMA	"	4.0 MC	1.62-5.0	4.0 MC		C90	osc. Calibration
RMA	"	4.0 MC	1.62-5.0	4.0 MC		C84	osc. Calibration

DUMMY ANT. IN SERIES WITH SIG. GENERATOR	CONNECTION OF SIG. GENERATOR OUTPUT TO RECEIVER	SIGNAL GEN. FREQUENCY SETTING	BAND #3 ADJUSTMENT		RECEIVER SWITCH DIAL SETTING	ADJUST. SLUG, PADDER, OR TRIMMER TRIMMER NO.	TYPE OF ADJUSTMENT - MAKE ADJUSTMENT FOR:
			14.0 MC	7.0 MC			
RMA	A-1 ON ANT. STRIP AND GROUND	14.0 MC	5-15	14.0 MC		C43	osc. Calibration
RMA	"	7.0 MC	5-15	7.0 MC		S84	osc. Calibration
RMA	"	14.0 MC	5-15	14.0 MC		C4	osc. Calibration
RMA	"	14.0 MC	5-15	14.0 MC		C19	osc. Calibration
RMA	"	14.0 MC	5-15	14.0 MC		C88	osc. Calibration
RMA	"	7.0 MC	5-15	7.0 MC		S22	osc. Calibration
RMA	"	7.0 MC	5-15	7.0 MC		S28	osc. Calibration
RMA	"	7.0 MC	5-15	7.0 MC		S80	osc. Calibration

