

INSTRUCTION MANUAL

**GONSET
G-43
COMMUNICATIONS RECEIVER**

MODEL #3241

**GONSET DIVISION
YOUNG SPRING & WIRE CORP.**

801 S. MAIN ST.



BURBANK, CALIF.

OPERATING INSTRUCTIONS FOR YOUR GONSET

G-43 COMMUNICATIONS RECEIVER

Model #3241

Your GONSET G-43 communications receiver provides all of the features required for outstanding reception of amateur radio and shortwave transmissions in the 1.9-30 Mc. range, and for superior broadcast-band operation from .54 to 1.6 mc. The receiver circuit features an "S-meter" for signal strength monitoring, a separate beat-frequency oscillator for stable reception of code (CW) and single-sideband (SSB) voice transmissions, and a highly effective automatic noise limiter to suppress pulse-type ignition noise or other similar interference.

The high-frequency range (1.9-30 mc.) is covered in five bands, which are individually displayed on a drum-dial as the BAND switch is rotated. Any small portion of these major bands, such as one of the amateur radio bands, can be "fine-tuned" with electrical bandspread; this makes it easy for you to separate stations. The bandspread portion of each drum-dial scale is accurately calibrated for the frequency-spread of the high-frequency amateur radio band appearing in the main tuning range, permitting close tuning calibration within these bands. In addition, each bandspread range has a supplementary logging scale, particularly useful when tuning the shortwave broadcast bands or other small segments of the main ranges. The bandspread tuning shaft is mechanically loaded with a high-inertia flywheel for excellent "tuning feel" and smooth, stable tuning action.

The receiver uses three 1650 kc IF amplifier stages and 12 tuned circuits at the intermediate frequency. Coupling between these circuits is designed for optimum band-pass characteristics and "steep-skirt" response.

The overall intermediate-frequency band-pass response results in excellent audio intelligibility with sufficient selectivity to reduce interference from adjacent signals to a minimum.

Improved sound quality is assured if the Gonset companion external speaker, model 3285, is used with the receiver in place of the internal speaker supplied with the receiver. The speaker assembly includes a tone control switch that inserts filter elements into the audio line to create optimum frequency response for music, voice, or code reception. When the speaker assembly is used, the speaker plug is inserted in the PHONES-EXT. SPKR. jack on the rear of the G43 cabinet. As this plug is inserted, the internal speaker is automatically silenced. The plug for a set of headphones may also be inserted into this jack.

The receiver may be externally muted by connecting a switch, a pair of normally-closed relay contacts, or other similar device across the EXT MUTE terminals on the rear of the cabinet. These terminals are in parallel with the RECEIVE-STANDBY switch contacts. With the RECEIVE-STANDBY switch in STANDBY position, the receiver will be silenced

when the external contacts are open, and will operate normally with these contacts connected. The Mute terminals are both above chassis potential, and so, neither should be grounded. However, there is no D.C. voltage or other shock hazard at the terminals.

CRYSTAL CALIBRATOR

The receiver chassis has a socket for plugging in the Gonset Model #3269 100 kc crystal calibrator as an accessory. This unit provides an accurate check signal at each 100 kc point throughout the G-43 tuning range. The calibrator is particularly useful when "setting up" the amateur radio bandspread scale, since the lower frequency end of each band is at an exact 100kc point.

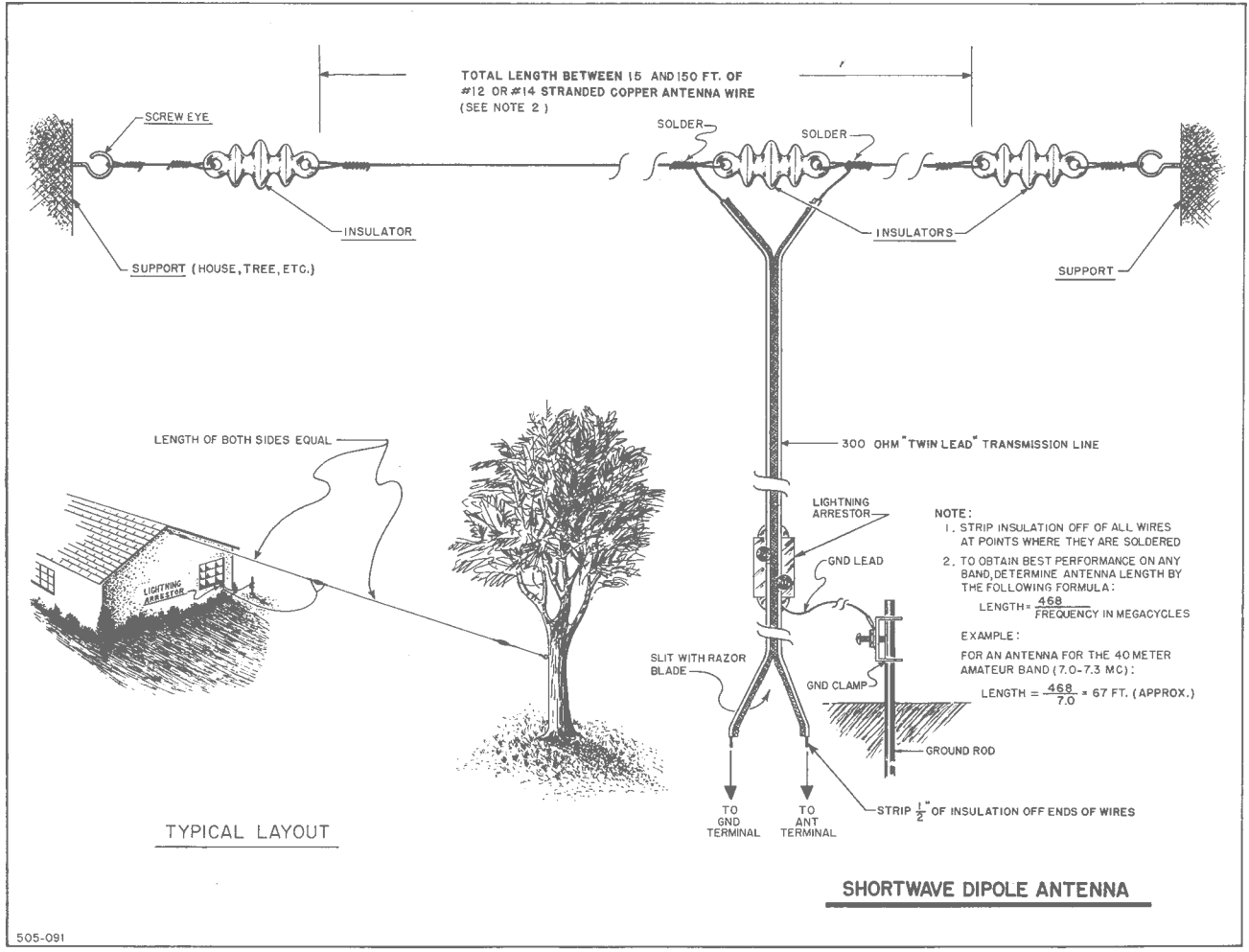
The 100 kc calibrator is turned on and off as desired with a front-panel control switch.

ANTENNA INSTALLATION

The G-43 receiver requires an external antenna. For a simple installation, a piece of wire (30-40 ft.) can be connected to the ANT. terminal on the rear of the receiver, and the GND terminal connected to a good ground point (such as a water pipe or radiator) with a short piece of wire. The antenna wire should be stretched out to its full length, and may be run vertically, horizontally, or in a "bent" configuration, as convenient. When the receiver is located inside a house or building with a metallic frame, the antenna must be run outside the building for as much of its length as possible.

The G43 input circuits are designed for a low-impedance line from the antenna, either balanced or unbalanced. The accompanying illustration shows a typical dipole antenna installation. The G-43 has a built-in TVI Low Pass Filter which has been optimized around an antenna input of fifty ohms. Therefore, the filter will function best when coaxial line lead-in is used for high frequency band reception. For single-band operation (optimum reception over a narrow range of frequencies), low-impedance transmission line such as 75-ohm "twin lead", or coaxial line, should be used in preference to the 300 ohm line shown.

When the receiver is used in conjunction with a transmitter for amateur-band station operation, best results are usually obtained if the same antenna is used for both transmitting and receiving. This requires the addition of an external antenna change-over relay or "T-R" tube type relay. The relay may be actuated by the normal station transmit-receive function switch. The receiver antenna input terminals must be protected from high RF voltages while transmitting. This is usually accomplished by shorting out the antenna terminals with "back contacts" on the transmit-receive relay during transmitting periods.



RECEIVER OPERATION

Operation of the receiver is extremely easy once you understand the function of the various controls, as explained in the following paragraphs.

VOLUME-AC OFF control:

This is a standard power switch and audio volume control combination. The control is turned clockwise from the AC OFF position to turn on the receiver and adjust the audio volume level in the speaker.

SENSITIVITY control:

This control, often called the "RF GAIN" control, adjusts the sensitivity of the IF amplifier stages. When listening to AM radiotelephone signals, this control is ordinarily left in the extreme clockwise position ("Full open"), since the AVC circuit adjusts the sensitivity automatically when a steady carrier is present. During reception of radiotelegraph (CW) and single-sideband-suppressed-carrier signals (while there is no steady carrier for proper AVC action), volume level is ordinarily adjusted with the SENSITIVITY control, while the VOLUME control is left two-thirds or further towards full clockwise. Additional information regarding adjustment of this control is included in the paragraphs labelled "TYPES OF SIGNALS AND HOW TO TUNE THEM IN."

When the volume level is adjusted with the SENSITIVITY control, the panel meter ("S" meter) will have a steady up-scale reading that varies with the setting of the control. The "S" meter reads correctly only when the sensitivity control is at full clockwise position.

ANTENNA CONTROL:

This control adjusts the resonant frequency of the receiver antenna coils to compensate for various types of antennas. Adjust the control for strongest signal level, or, in the absence of a signal, adjust or "peak" the control for maximum background noise.

ANL OFF-ON — XTAL CALIB. switch:

This is a combination switch for operating the automatic noise limiter and the optional crystal calibrator, when used. The control is normally left in ANL-OFF position. When pulse-type noise interference (such as automobile ignition noise) is present, the interference will be greatly reduced by switching to the ANL-ON (center) position. When a crystal calibrator is installed, the unit may be turned on by setting this switch to XTAL CALIB position. When the calibrator is operating, a signal from it appears at every exact 100 kc. point throughout the tuning range of the receiver.

PHONE — CW SSB switch:

This switch establishes the operating conditions for the reception of either AM radio-telephone signals or CW (code) and SSB (single-sideband-suppressed-carrier) signals. When in PHONE position, the beat-frequency oscillator (BFO) is off, and the automatic-volume-control circuit is operating. When the switch

is in CW-SSB position, the BFO is turned on and the AVC circuit is disabled.

RECEIVE-STANDBY switch:

This switch silences the receiver during standby conditions, as during transmission periods in an amateur radio station. When the switch is in RECEIVE position, the receiver is operating normally. When the switch is in STANDBY position, one lead to the speaker is opened, silencing the audio output.

The switch terminals are in parallel with the MUTE terminals on the rear of the receiver cabinet. When an external switching circuit is used in place of the front panel switch, the switch is left in STANDBY position. The audio lead is then opened and closed by the external contacts.

BAND SELECTOR, BANDSPREAD, and MAIN TUNING controls:

The detailed operation of these controls is explained for two general cases under the heading TUNING SIGNALS.

The BAND SELECTOR control switches in the proper coils in the RF Tuner, and simultaneously rotates the drum-dial to display the applicable main tuning and bandspread dial scales.

The MAIN TUNING control rotates the main tuning capacitor (and the corresponding slide-rule dial indicator) for fast-rate tuning of the entire corresponding frequency spread.

The BANDSPREAD control rotates the bandspread tuning capacitor (and the corresponding slide-rule dial indicator) for slow-rate tuning of any small portion of the main tuning frequency spread.

"S" METER

The G-43 panel meter indicates the relative strength of received signals. The meter will indicate properly only when the SENSITIVITY control is full clockwise. The "S Units" (1 to 9) on the meter are approximately 6 db apart. Calibrations above S9 are marked directly in db.

S-METER ZERO ADJUSTMENT

The G-43 S-Meter may require a zero adjustment from time to time as a result of tube and component aging. To make this adjustment, perform the following steps:

1. Set up the receiver for AM operation on any frequency. Be sure the SENSITIVITY control is fully clockwise.
2. Disconnect the antenna from the terminal board on the rear of the receiver cabinet.
3. With a slim screwdriver (approximately 1/8 inch wide), engage the slot in the S-meter adjustment potentiometer. The access hole for this control is labeled on the cabinet back-plate.
4. While observing the meter, adjust the control until the meter reading is precisely zero (exact left-hand end of meter scale).
5. Reconnect the antenna. The adjustment procedure is complete.

TUNING SIGNALS

The BAND SELECTOR, MAIN TUNING, and BANDSPREAD controls are used to tune your receiver to any frequency within the frequency range. Whenever the receiver is tuned with the MAIN TUNING control, the BANDSPREAD control should be adjusted until the left-hand slide indicator is over the mark labelled SET on the logging scale. Ordinarily, the BANDSPREAD control is not used when tuning the standard broadcast band (.54-1.6), and should be

left at the SET point. When tuning all other bands, the main tuning control is ordinarily adjusted so that the pointer is set to a specific spot on the righthand scale, and then small portions of the main band, such as the amateur radio bands, are tuned with the BANDSPREAD control and pointer on the left-hand scale. The necessary steps to tune any of the amateur radio bands or the short-wave broadcast bands with the BANDSPREAD control are explained in the following paragraphs.

STEPS TO TUNE THE 5 AMATEUR RADIO BANDS

Refer to the accompanying diagram. Each of the amateur radio bands may be tuned in the same way by performing the following steps:

STEP 1. Set the BAND SELECTOR control to the position corresponding to the general coverage band containing the desired amateur radio band:

BAND SELECTOR POSITION	AMATEUR RADIO BAND
1.9 — 5.7	80 METER BAND
5.7 — 13.0	40 METER BAND
13.0 — 20.0	20 METER BAND
20.0 — 25.0	15 METER BAND
25.0 — 30	10 METER BAND

In the accompanying illustration, the BAND SELECTOR control is set at the 1.9-5.7 mc. position, as required to tune the 80 METER band.

STEP 2. Adjust the MAIN TUNING control until the right-hand pointer is positioned directly over the circle containing the number (80,

40, 20, 15, or 10) of the desired band. The pointer should approximately "cut through" the middle of the circle. On the diagram, the slider is positioned across the "80" circle, setting up the receiver to tune the 80 meter amateur band.

NOTE: For an exact setting of the Main Tuning pointer, set the BANDSPREAD pointer to indicate the frequency of a known signal within the band (or to any 100 kc. signal, when the crystal calibrator is used). Then adjust the MAIN TUNING control carefully until the known signal is exactly tuned in. (See STEP 3 below).

STEP 3. After adjusting the BAND SELECTOR and MAIN TUNING controls, signals in the amateur radio band are tuned by rotating the BANDSPREAD control. The left-hand pointer indicates the actual frequency tuned on the appropriate scale. In the illustration, the receiver is tuned to approximately 3.560 mc (3560 kc). This frequency corresponds to about 30 on the logging scale.

STEPS TO TUNE THE SHORT-WAVE BROADCAST BANDS

Refer to the accompanying diagram. Each of the short-wave broadcast bands may be tuned in the same way by performing the following steps:

STEP 1. Set the BAND SELECTOR control to the position corresponding to the general coverage band containing the desired short-wave broadcast band:

BAND SELECTOR POSITION	SHORT-WAVE BROADCAST BANDS
5.7 — 13.0	49 METERS, 31 METERS or 25 METERS
13 — 20.0	19 METERS or 16 METERS
20 — 25.0	13 METERS

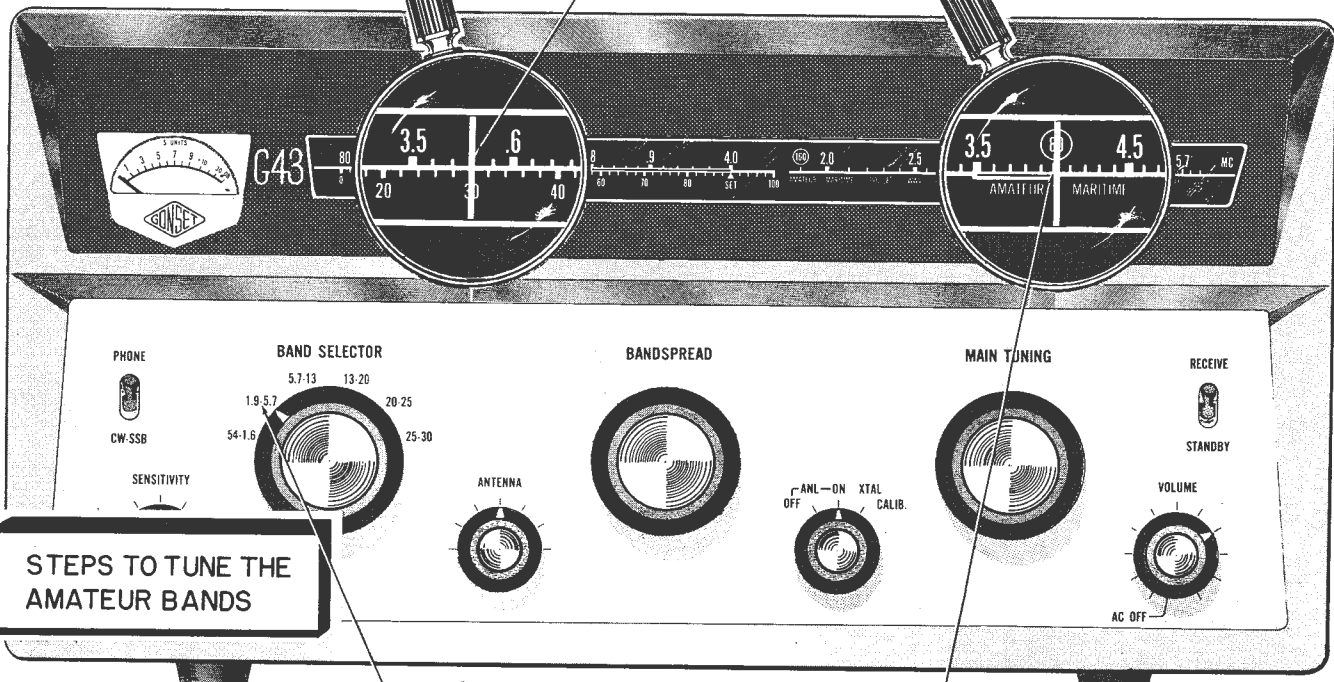
STEP 2. Adjust the MAIN TUNING control until the right hand pointer is positioned directly over the right-hand edge of the heavy stripe indicating the desired short-wave band. In the illustration, the controls are adjusted to set-up the receiver to tune the 31

METER short-wave broadcast band on general coverage of 5.7-13.0 mc.

STEP 3. After adjusting the BAND SELECTOR and MAIN TUNING controls, stations in the SHORT-WAVE BROADCAST band are tuned by rotating the BANDSPREAD control slowly as the left-hand pointer moves across its range. Disregard the amateur radio band calibrations while tuning the short-wave broadcast bands. The location of various stations heard can be noted, if desired, by reference to the 0-100 logging scale beneath the amateur band calibration scales. Do not touch the MAIN TUNING control again until you are ready to tune to another band. While tuning the short-wave broadcast bands, the SENSITIVITY control should be left in PHONE position (full clockwise past the click). When a station is heard, always rotate the Antenna control until the station is loudest and is heard most clearly.

STEP 3

TUNE BAND WITH BANDSPREAD KNOB (SHOWN ON 3560, KC, 30 ON LOGGING SCALE.)



STEPS TO TUNE THE AMATEUR BANDS

STEP 1

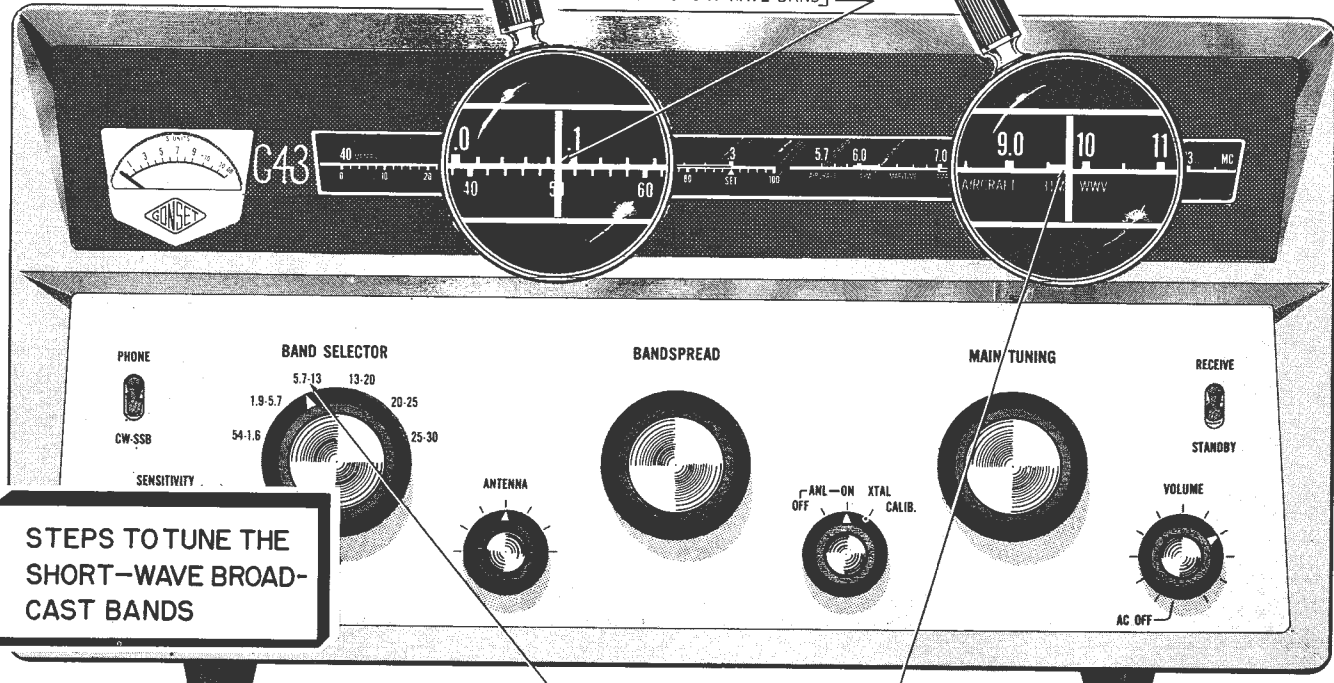
SET BAND SELECTOR KNOB TO DESIRED POSITION (SHOWN ON 1.9-5.7 MC. BAND)

STEP 2

SET POINTER DIRECTLY OVER BAND INDICATOR WITH MAIN TUNING KNOB (SHOWN ON 80 METER BAND)

STEP 3

TUNE BAND WITH BANDSPREAD KNOB. USE LOGGING SCALE AS REFERENCE [SHOWN AT APPROX. CENTER (50) OF SHORT WAVE BAND]



STEPS TO TUNE THE SHORT-WAVE BROADCAST BANDS

STEP 1

SET BAND SELECTOR KNOB TO DESIRED POSITION (SHOWN ON 5.7-13 MC. BAND)

STEP 2

SET POINTER OVER RIGHT HAND EDGE OF HEAVY LINE INDICATING S W BAND (SHOWN ON 31 METER BAND)

TYPES OF SIGNALS AND HOW TO TUNE THEM IN

TUNING AM SIGNALS

The standard broadcast band and other AM transmissions are tuned in exactly the same manner as with any conventional radio, except that the SENSITIVITY control must be extreme clockwise. If the control is not in this position, the AVC will not work properly. Also, the PHONE — CW SSB switch must be in the PHONE position.

TUNING RADIOTELEGRAPH (CW) SIGNALS

To tune these signals properly, perform the following steps:

- (1) Turn the SENSITIVITY control fully counterclockwise. The receiver will become silent. Turn the PHONE — CW SSB switch to CW-SSB position.
- (2) Turn the VOLUME control to between three quarters and full volume in a clockwise direction.
- (3) Turn the SENSITIVITY control slowly clockwise (to increase the RF gain) until signals are heard at a comfortable listening level. Radiotelegraph signals will now be heard as tones forming a series of dots and dashes. The pitch of the tones is varied by careful adjustment of the BANDSPREAD control.

TUNING SINGLE-SIDEBAND-SUPPRESSED-CARRIER (SSB) SIGNALS

Single-sideband-suppressed-carrier signals are now in fairly common use on the amateur bands. When the receiver is set up for AM operation, these transmissions have a peculiar nasal quality that sounds quite "bassy," and the voice cannot be understood. To tune these signals, perform the following steps:

- (1) Set up the receiver in exactly the same way as for tuning radiotelegraph (CW) signals, as explained in steps (1), (2) and (3) of the above paragraph.
- (2) Tune VERY CAREFULLY AND SLOWLY through the signal, using the BANDSPREAD control, until the voice can be understood and sounds natural. This will occur at *only one spot* as you tune. When you are not on this exact spot, but very near it, the voice will sound either very high-pitched or very low-pitched, but you will be able to understand it. If the SSB signal is quite strong, rotate the SENSITIVITY control counterclockwise to adjust the volume, leaving the VOLUME control at about two-thirds of the way through its range. It will require some practice to tune these signals correctly, but after a few "tries" you will be able to do it if you have followed these instructions carefully. After tuning in an SSB signal, it may be necessary to retune occasionally to keep the voice sounding natural.

USING HEADPHONES OR AN EXTERNAL SPEAKER

The PHONES - EXT. SPEAKER jack on the rear of the receiver mates with a standard headphone plug, sometimes called a "PL 55" in accordance with the military designation. (Any standard low or high impedance headphones may be used). Most headphones come equipped with the proper plug, but if your headphones have "tip-jacks" instead, the correct mating plug can be obtained from most electronics parts stores. While using headphones, the VOLUME control will have to be turned down (counterclockwise) appreciably. As soon as the headphone plug is inserted, the speaker will silence.

An external speaker of 3 to 6 ohms impedance, such as the Gonset Speaker console model 3285, may be used in place of the one included in the receiver. To connect any other external speaker, solder two wires to the *voice coil* terminals on the external speaker, and connect the other ends of the two wires to the terminals of a type PL-55 mating plug, or its equivalent. As soon as the plug is inserted, the internal speaker will silence, and only the external speaker will be heard.

SPECIAL FEATURES OF THE G-43 FOR AMATEUR RADIO STATIONS

VHF CONVERTERS

The G-43 may be used as a selective RF, IF, and audio amplifier following VHF converters for the 6 meter (50-54 mc.) and 2 meter (144-148 mc.) amateur bands. Calibrations are provided on the

G-43 (25-30 mc. range) for crystal controlled converters having an I.F. output range of 26 mc. to 30 mc. Installation and operation instructions for such units are supplied by the converter manufacturer.

SHORT-WAVE LISTENING GUIDE

SHORT-WAVE BROADCAST stations from all parts of the globe, international time signals, Russian satellites, and numerous other interesting transmissions may be heard under favorable conditions with the GONSET G-43 receiver. The actual stations and other transmissions that can be heard at any given time depend on numerous factors such as the time of day, the frequency, your location, and the weather.

On the lowest frequency band, 1.9-5.7 megacycles, you will hear coastal weather stations, small ships-at-sea, shore stations, and various public services such as police and fire stations. On these frequencies, distant stations (over a few hundred miles) are heard only at night. At exactly 5.0 megacycles is the National Bureau of Standards radio Station, WWV, transmitting time signals, one-second clicks, and voice announcements. WWV transmissions may also be heard at 2.5 mc., 10.0 mc., 15.0 mc., 20 mc., 25 mc., and 30 mc. The 80 METER amateur radio band is tuned between 3.5 and 4 megacycles with the BANDSPREAD control. Voice operations by amateurs (AM and SSB transmissions) will be heard between 3.8 and 4.0 megacycles on this band.

English-language and foreign language broadcast stations operate mainly in the 13, 16, 19, 25, 31, and

49 meter bands, as marked on the slide-rule scales. Daytime reception is best on the 13, 16, and 19 meter bands, while evening and nighttime reception is best on the 25, 31, and 49 meter bands. The principal cities of the world operating high-power transmitters in the various bands are listed on the accompanying chart as a guide for identifying stations heard. Further information for locating stations on these bands is available in numerous publications that can be obtained from most retail electronics supply houses and many bookstores and magazine stands.

Some satellites transmit on a frequency very near 20.000 megacycles. WWV transmits on a frequency of exactly 20.000 megacycles, just above or below the satellite frequency. If a satellite is passing in your vicinity, it may be monitored by tuning in WWV at 20 mc. and then tuning very carefully to "one side" of the WWV signal (try both "sides"). When you are at approximately the correct frequency, the WWV signal will still be audible but nearly "tuned out." The satellite signal is best tuned like a "CW" signal, using the BFO to establish a "whistle" or heterodyne on the satellite signal. Satellite transmissions are usually a series of short tones, but may be a series of repetitions of some regular pattern, such as a morse code letter.

SHORT-WAVE BROADCAST BAND TUNING CHART

BAND	CITIES ORIGINATING TRANSMISSIONS	BAND	CITIES ORIGINATING TRANSMISSIONS
49 METER BAND (5.950-6.200 MC)	Montreal New South Wales Port Moresby New Caledonia Moscow Halifax Havana Honolulu Madrid Lima Copenhagen Rome Tangier Teheran Cologne Montreal Bucharest Quito Buenos Aries Cairo Budapest London	25 METER BAND (11.700-11.975 MC)	Cairo Monrovia Vatican City Angola Wellington Paris Quito Sydney Moscow Rome
31 METER BAND (9.500-9.775 MC)	Delhi Mexico City Melbourne Rome Berne Brussels Singapore	19 METER BAND (15.10-15.45 MC)	Tokyo Wellington Moscow London Lisbon Mexico City
		16 METER BAND (17.70-17.90 MC)	London Karachi Moscow Tokyo Lisbon New Delhi Melbourne
		13 METER BAND (21.45-21.75 MC)	Voice of America London Stockholm Moscow Prague

SERVICE NOTES

ALIGNMENT, GENERAL:

Connect a VTVM DC probe (-3 volt scale) to the AVC bus. A convenient tie-in for this bus is the appropriate contact on the PHONE - CW SSB switch. Leave the switch in PHONE position so that the AVC bus is not grounded. Set the SENSITIVITY control maximum clockwise. During alignment, the signal generator output should be adjusted so that the AVC voltage falls between -1.5 and -2 volts. Alignment tool is General Cement type 8606 or equivalent.

ALIGNMENT, IF:

Set the signal generator to 1650 kc and inject signal on the mixer control grid, pin of V1. Adjust both slugs of T4, T3, T2, and T1, in that order, for maximum AVC level. If signal will not pass initially because of bad misalignment, work back from injection at the control grid (pin 1) of V3 and of V2 until sufficient AVC level is obtained with mixer injection.

When IF transformers are aligned, inject 1650 kc signal at antenna terminals. Adjust signal level for 1.5-2 volts AVC. Adjust the slug in the 1650 kc trap L7 (in series with the antenna lead) for a pronounced minimum, or "dip", in the AVC level.

ALIGNMENT, BROADCAST BAND.

Set up receiver for operation on broadcast band,

with BANDSPREAD dial set to "SET" point (90). Set MAIN TUNING dial at 600 kc (60). Inject 600 kc signal at antenna terminals and adjust slug of L1B (BAND A oscillator coil) for max VTVM level. Set MAIN TUNING dial at 1600 kc (160), inject 1600 kc signal, and adjust oscillator trimmer C6 (adjacent to L1B) for maximum VTVM level. Recheck 600 kc point. Repeat above adjustment until 600 kc and 1600 kc dial points correspond exactly to appropriate signal generator frequencies.

When oscillator is correctly aligned, "touch up" antenna coil L1A (with ANTENNA trimmer at middle of range) for maximum VTVM reading.

ALIGNMENT, BANDS B, C, D, E, and F:

Coil designations are marked on the RF coil assembly board. Alignment of the higher frequency bands consists, in all cases, of adjusting the oscillator coil to frequency, then "peaking" the antenna coil for maximum VTVM reading (max. AVC voltage). To avoid spurious and image responses while adjusting the slugs in the oscillator coils, the oscillator frequency should be set with a calibrated receiver or accurate grid-dip meter to approximate frequency, as listed, and then "trimmed" to exact frequency with a signal generator and VTVM on the AVC line in the normal manner.

BAND	Freq.	BAND- SPREAD*	MAIN TUNING**	Oscillator frequency	Oscillator coil	Antenna coil
B	2.0 - 5.7 mc.	4.0 mc.	4.0 mc. (80)	5650 kc.	L2B	L2A
C	5.7 - 13 mc.	7.3 mc.	7.3 mc. (40)	8950 kc.	L3B	L3A
D	13 - 20 mc.	14.4 mc.	14.4 mc. (20)	16050 kc.	L4B	L4A
E	20 - 25 mc.	21.45 mc.	21.45 mc. (15)	23100 kc.	L5B	L5A
F	25 - 30 mc.	29.7 mc.	29.7 mc. (10)	31350 kc.	L6B	L6A

*SET point (90 on logging scale)

**Directly across BAND INDICATING circle

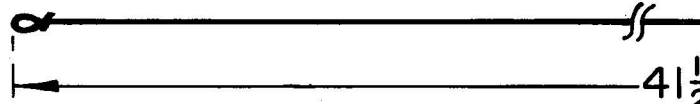
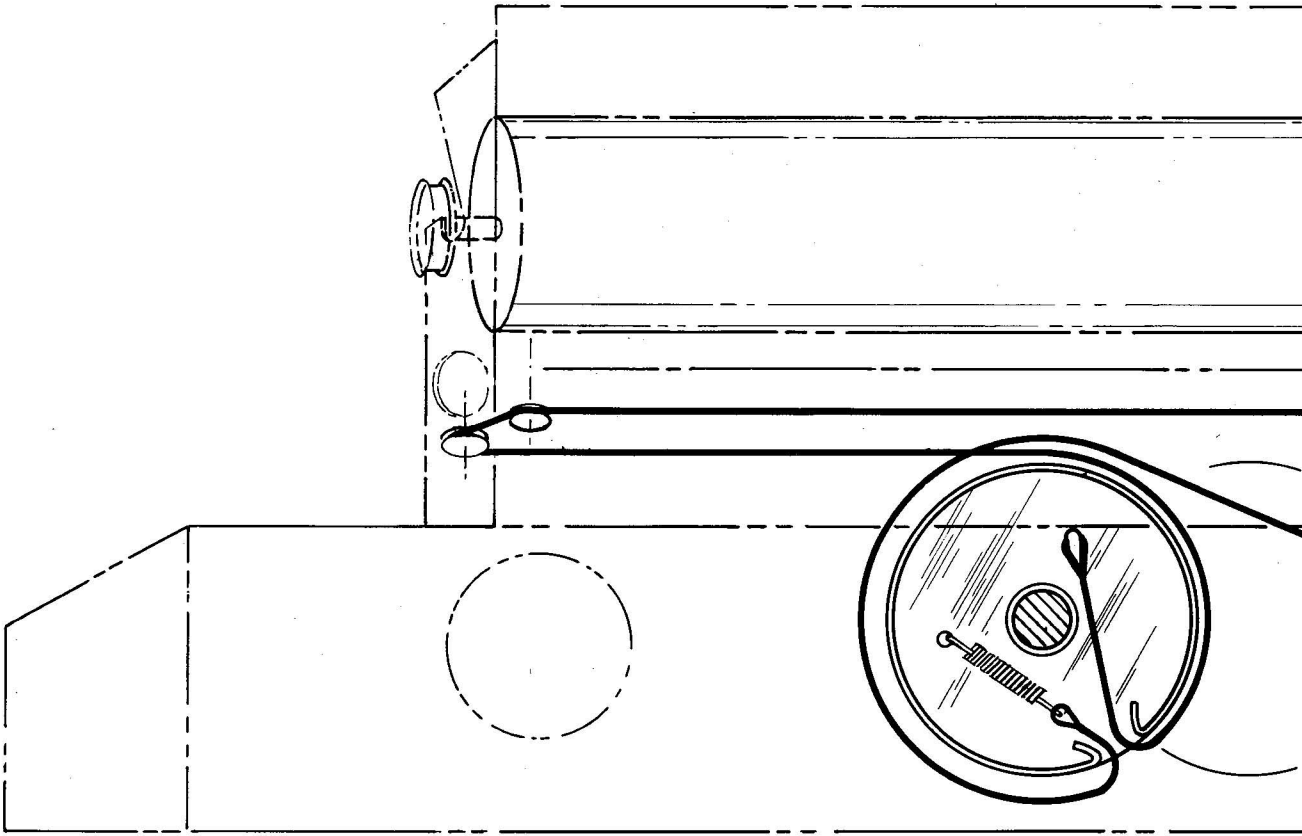
REPLACEMENT PARTS

Replacement parts and "pacs" may be ordered directly from Gonset Division, 801 So. Main St., Burbank, California, by part number, as listed on the schematic diagram. When replacing "pac" assemblies,

be extremely careful not to damage other parts or the printed circuit board during the replacement procedure. Ordinarily, the faulty "pac" is cut loose, and the tip-ends then unsoldered individually from the board.

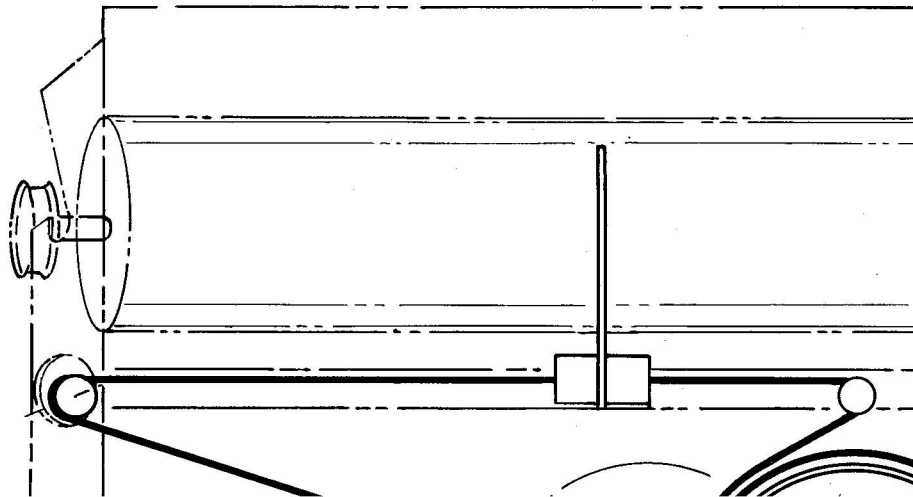
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GENERAL COVERA



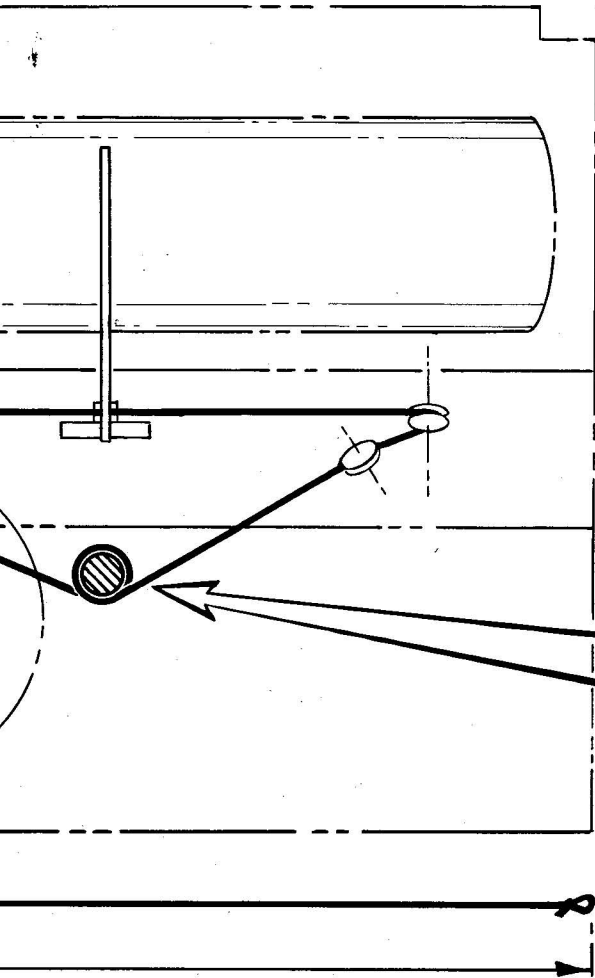
STARTING LENGTH OF GENERAL COVERAGE

BAND - SPREAD



2

DIAL



CORD.

AL

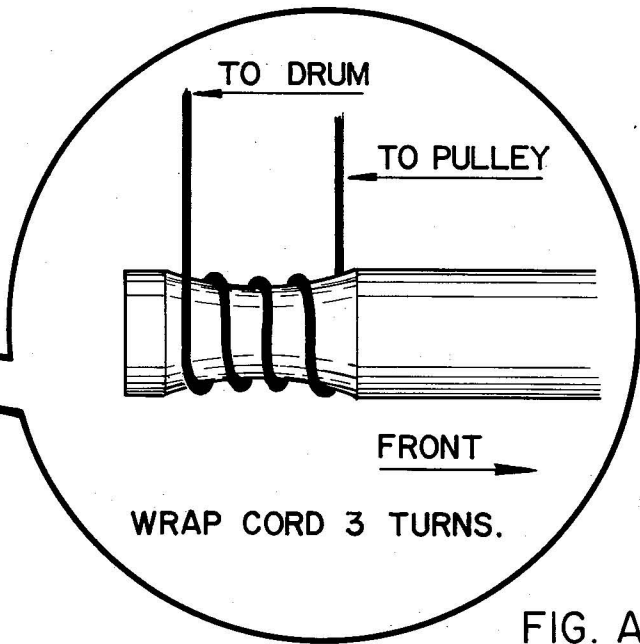
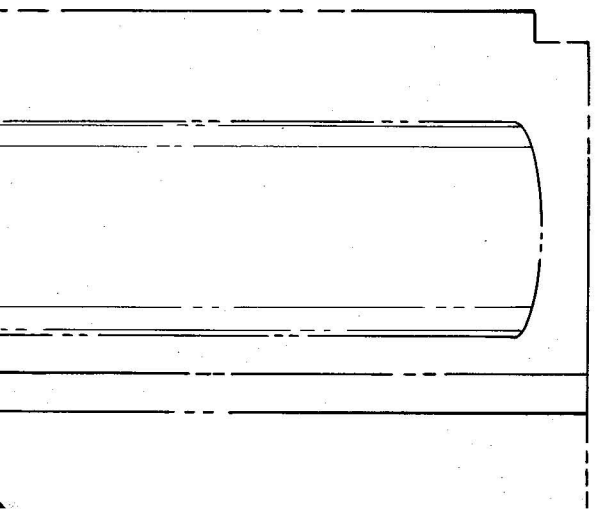
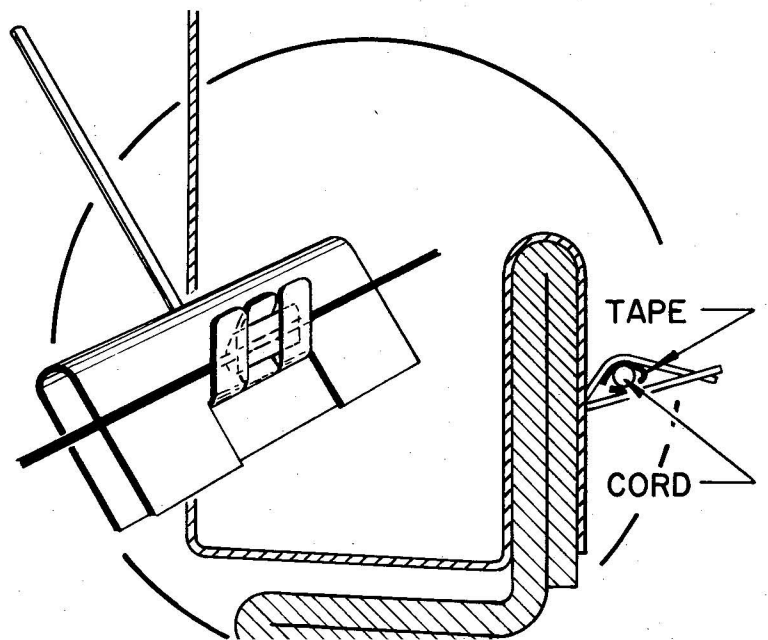


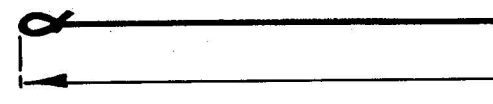
FIG. A



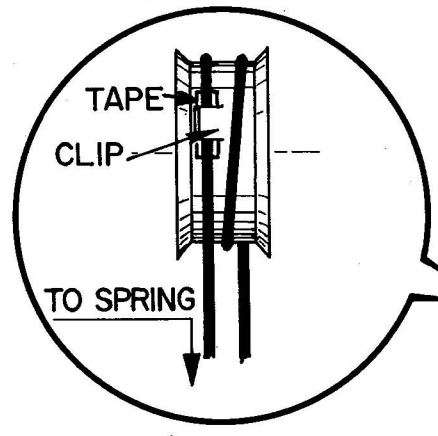
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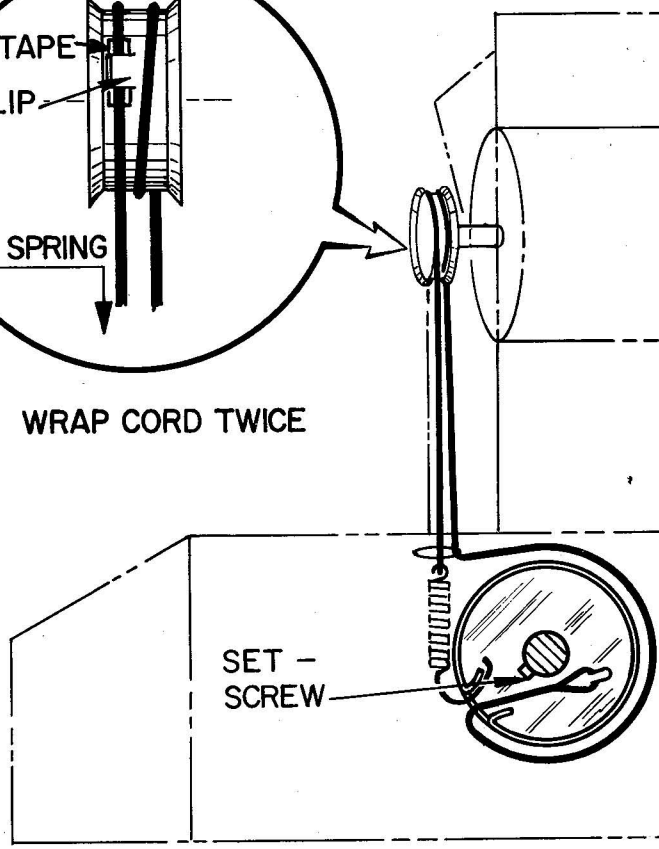
WRAP CORD 3 TURNS AS IN FIG 'A'



STARTING LENGTH OF BAND

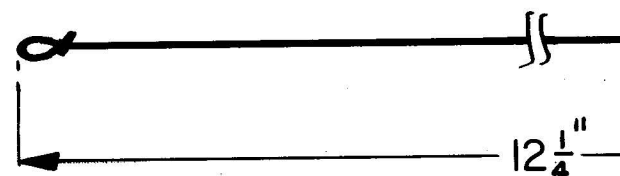


WRAP CORD TWICE

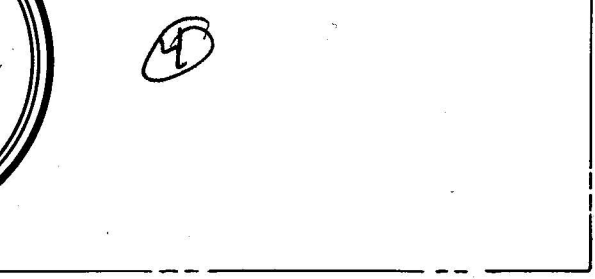


STEPS.

1. LOOSEN SET SCREW ON LARGE PULLEY
2. INSTALL CORD WITH PULLEYS IN POSITION
3. SET BAND-SWITCH TO 25-30 MC (1000 CYCLES PER SECOND). ROTATE DRUM UNTIL 25-30 MC SCREW IS ON DRUM. TIGHTEN SET-SCREW ON DRUM.



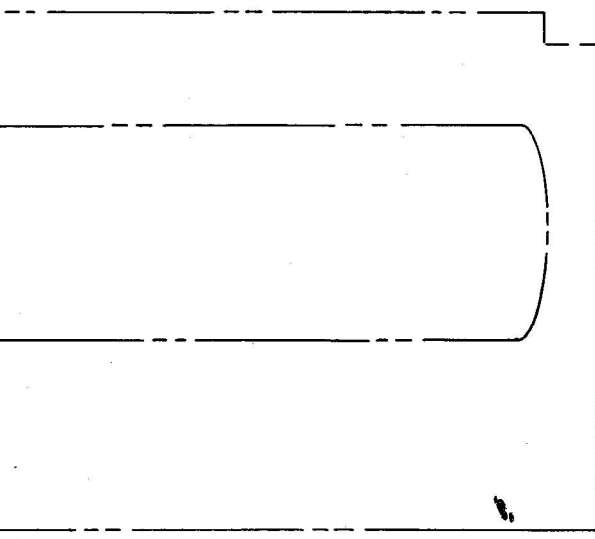
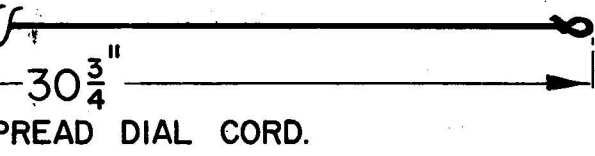
STARTING LENGTH OF BAND-SWITCH



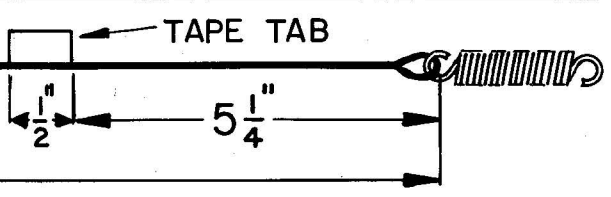
METHOD OF ATTACHING
CORD TO DIAL POINTER.

NOTE.

ATTACH POINTER AFTER
CORD IS INSTALLED.

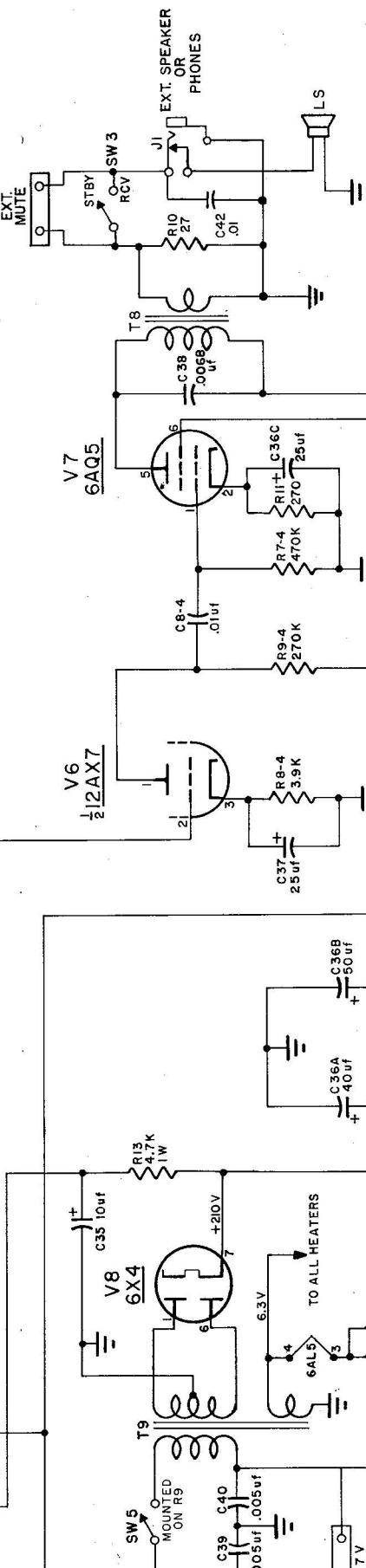
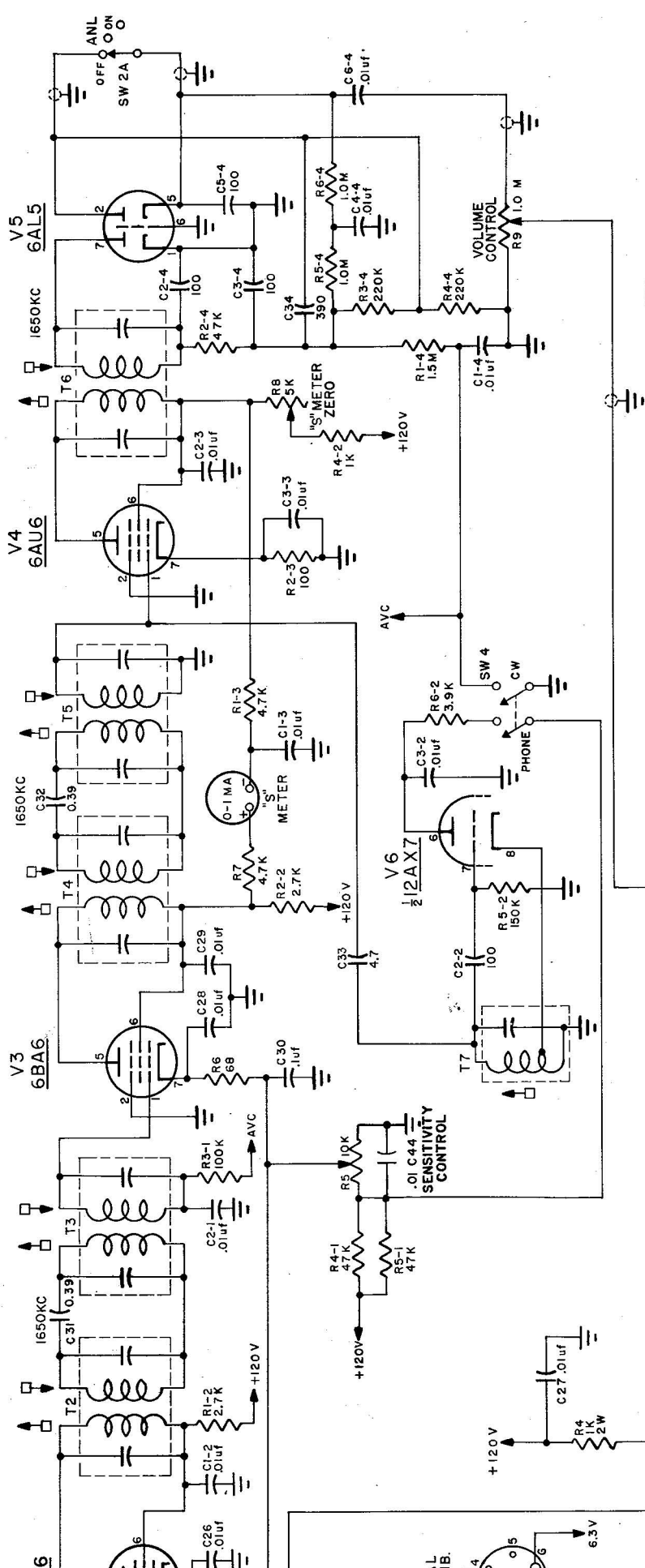
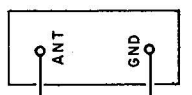


Y.
APPROXIMATE POSITIONS SHOWN.
(METER) POSITION.
IS CENTERED IN FRONT OF
LARGE PULLEY.



DRUM CORD.

GONSET BURBANK. CALIF.	
DIAL STRINGING DIAGRAM. MODEL G 43	
DWN. ANR	APP.
1-20-59.	DWG. NO. 505 - 185



1200
5W



DIVISION OF
YOUNG SPRING & WIRE CORP.
ALHAMBRA, CALIF.

ENG. H.G.J.
DWN. C.H.H.
CHK. G.P.H.
REV. 2/24-53
APP. 11-12-53
S.C.U.

- SCHEMATIC -
RECEIVER, G-43
MODEL NO. 3241

SHEET 1 OF 2
510-056

CAPACITOR LIST

- C21 5-50 μF, ANTENNA TRIMMER, GPN 071-023
- C25 .01 μF, K.L. Disc CERAMIC
- C26 .01 μF, Disc CERAMIC
- C27 .01 μF, Disc CERAMIC
- C28 .01 μF, K.L. Disc CERAMIC
- C29 .01 μF, K.L. Disc CERAMIC
- C30 .1 μF, Disc CERAMIC
- C31 0.30 μF, TUBULAR 10%
- C32 0.30 μF, TUBULAR 10%
- C33 4.7 μF, TUBULAR 10%
- C34 350 μF, Disc CERAMIC
- C35 10 μF, 250 V, ELECTROLYTIC
- C36 A 10 μF, 250 V, ELECTROLYTIC
- C37 25 μF, 25 V,) ELECTROLYTIC, GPN 073-019
- C38 25 μF, 25 V,)
- C39 .0068 μF, 600 V, TUBULAR
- C40 .005 μF, 1 KV Disc
- C41 97 μF, TUBULAR 10% GPSP
- C42 .01 μF, Disc
- C43 200 μF, TUBULAR 10% GPSP
- C44 .01 μF, CERAMIC Disc
- C45 7 - 60 TRIMMER, GPN 089-020

- C21 5-50 μF, ANTENNA TRIMMER, GPN 071-023
- C25 .01 μF, K.L. Disc CERAMIC
- C26 .01 μF, Disc CERAMIC
- C27 .01 μF, Disc CERAMIC
- C28 .01 μF, K.L. Disc CERAMIC
- C29 .01 μF, K.L. Disc CERAMIC
- C30 .1 μF, Disc CERAMIC
- C31 0.30 μF, TUBULAR 10%
- C32 0.30 μF, TUBULAR 10%
- C33 4.7 μF, TUBULAR 10%
- C34 350 μF, Disc CERAMIC
- C35 10 μF, 250 V, ELECTROLYTIC
- C36 A 10 μF, 250 V, ELECTROLYTIC
- C37 25 μF, 25 V,) ELECTROLYTIC, GPN 073-019
- C38 25 μF, 25 V,)
- C39 .0068 μF, 600 V, TUBULAR
- C40 .005 μF, 1 KV Disc
- C41 97 μF, TUBULAR 10% GPSP
- C42 .01 μF, Disc
- C43 200 μF, TUBULAR 10% GPSP
- C44 .01 μF, CERAMIC Disc
- C45 7 - 60 TRIMMER, GPN 089-020

COIL LIST

- L1A ANTENNA COIL, GPN 012-166
- L2A ANTENNA COIL, GPN 012-056
- L3A ANTENNA COIL, GPN 012-057
- L4A ANTENNA COIL, GPN 012-058
- L5A ANTENNA COIL, GPN 012-059
- L6A ANTENNA COIL, GPN 012-060
- L7B OSCILLATOR COIL, GPN 012-061
- L8B OSCILLATOR COIL, GPN 012-062
- L9B OSCILLATOR COIL, GPN 012-063
- L10B OSCILLATOR COIL, GPN 012-064
- L11B OSCILLATOR COIL, GPN 012-065
- L12B OSCILLATOR COIL, GPN 012-066
- L13B TRAP, 1650 K.C., GPN 012-066
- L14B .39 μH, RF CHOKE 10% GPN 027-076
- L15B .600 μH RF CHOKE 10% GPN 027-076
- L16 I.F. TRANSFORMER, 1650 K.C., GPN 011-013
- L17 I.F. TRANSFORMER, 1650 K.C., GPN 011-029
- L18 I.F. TRANSFORMER, 1650 K.C., GPN 011-029
- L19 I.F. TRANSFORMER, 1650 K.C., GPN 011-029
- L20 I.F. TRANSFORMER, 1650 K.C., GPN 011-029
- L21 I.F. TRANSFORMER, 1650 K.C., GPN 011-013
- L22 BFO TRANSFORMER, GPN 011-028
- L23 OUTPUT TRANSFORMER, GPN 272-011
- L24 POWER TRANSFORMER, GPN 271-004

CAPACITOR LIST (CONT'D)

- R1 .22K Ω ± WATT 10%
- R2 4.7K Ω ± WATT 10%
- R3 68 Ω ± WATT 10%
- R4 1K Ω ± WATT 10%
- R5 10K Ω L.T. POTENTIOMETER, GPN 052-025
- R6 68 Ω ± WATT 10%
- R7 4.7K Ω ± WATT 10%
- R8 5K Ω POTENTIOMETER, GPN 052-030
- R9 1.0 MEG. Ω A.T. POTENTIOMETER w/A.C. SWITCH, GPN 052-026
- R10 27 Ω ± WATT 10%
- R11 270 Ω ± WATT 10%
- R12 1200 Ω ± WATT 10%
- R13 4.7K Ω ± WATT 10%
- R14 1 MEG Ω ± WATT 10%

MECHANICAL PARTS

GONSET PART NO.	NO. REQUIRED PER UNIT	DESCRIPTION
417-010	1	SHAFT RETAINING SPRING
465-033	1	CABINET BEZEL
468-001	1	FRONT WINDOW
509-005	1	FRONT PANEL
509-064	1	BAND SPREAD TUNING SHAFT
453-130	1	MAIN TUNING SHAFT
453-131	1	FLY WHEEL
255-010	1	REAR COVER
453-199	1	MAIN TUNING POINTER
213-005	1	BAND SPREAD POINTER
218-006	1	DRUM DIAL
505-019	1	BAND SELECTOR KNOB
211-017	1	BAND SPREAD AND MAIN TUNING KNOBS
212-017	2	SENSITIVITY, ANTENNA, FUNCTION, AND VOLUME CONTROL KNOBS
211-016	4	PRINTED CIRCUIT BOARD (HF SECTION)
515-001	1	S METER
515-003	1	BAND SELECTOR SWITCH
112-005	1	FUNCTION SWITCH
171-001	1	LOUD SPEAKER
152-033	1	PILOT LAMP (DIAL ILLUMINATION)
471-003	3	ANTENNA BINDING POST STRIP
147-010	1	MUTING BINDING POST STRIP
255-006	2	LARGE DIAL CORD PULLEY
255-003	6	SMALL DIAL CORD PULLEY
217-003	3	DIAL CORD SPRING
255-011	1	TUNING CONDENSER PULLEY
351-009	3	DIAL LAMP SOCKET
956-002	1	AC CORD
222-001	4	RUBBER FEET
431-001	0	DIAL WINDOW FELT PADS
231-004	2	CHASSIS SPACER FELT PADS

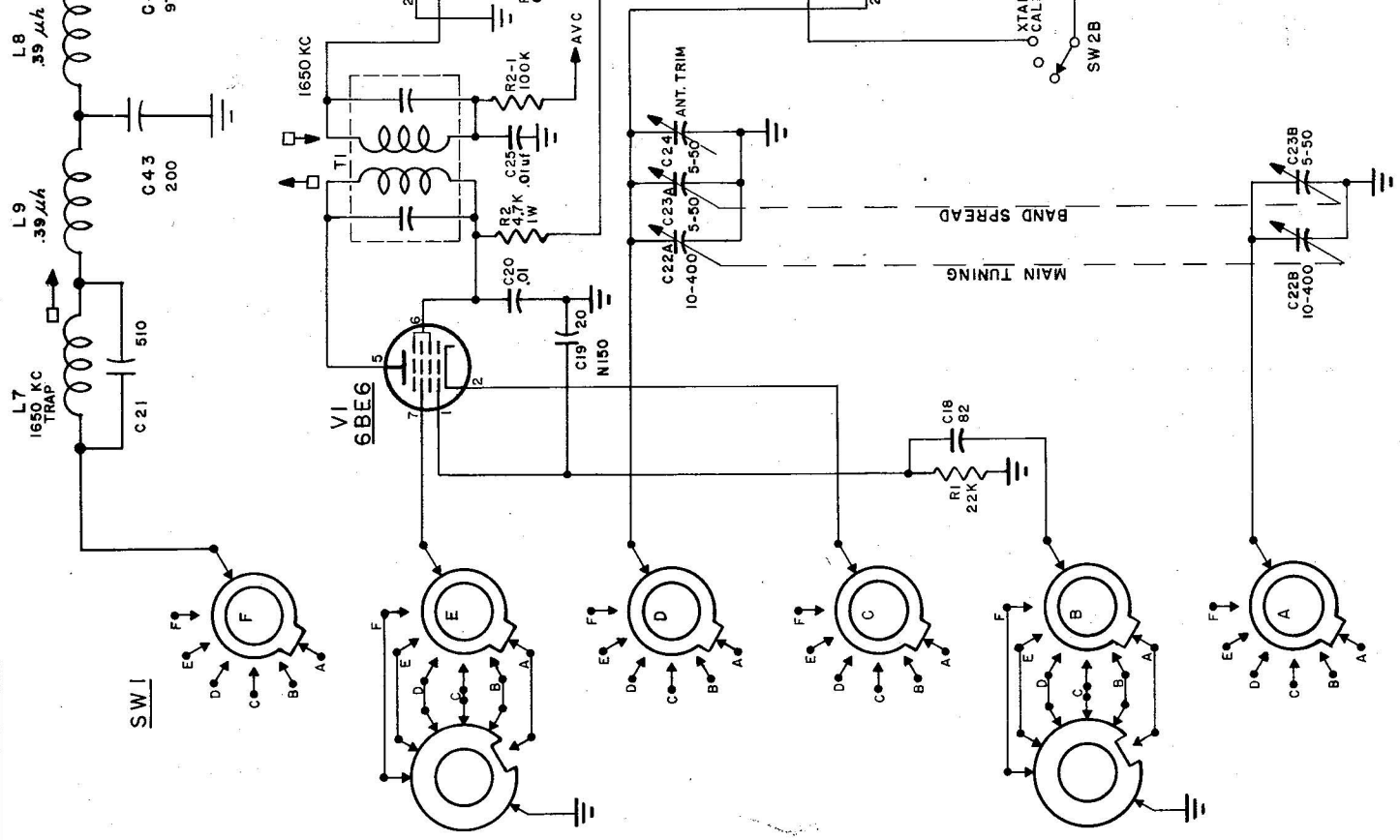
- SW1 BANDSWITCH, GPN 171-001
- SW2 SWITCH, ANL-CALIB., GPN 171-033
- SW3 SWITCH, ROT.-STBY., GPN 172-010
- SW4 SWITCH, PHONE-CM, GPN 172-011
- SPEAKER, GPN 152-003

RESISTOR LIST

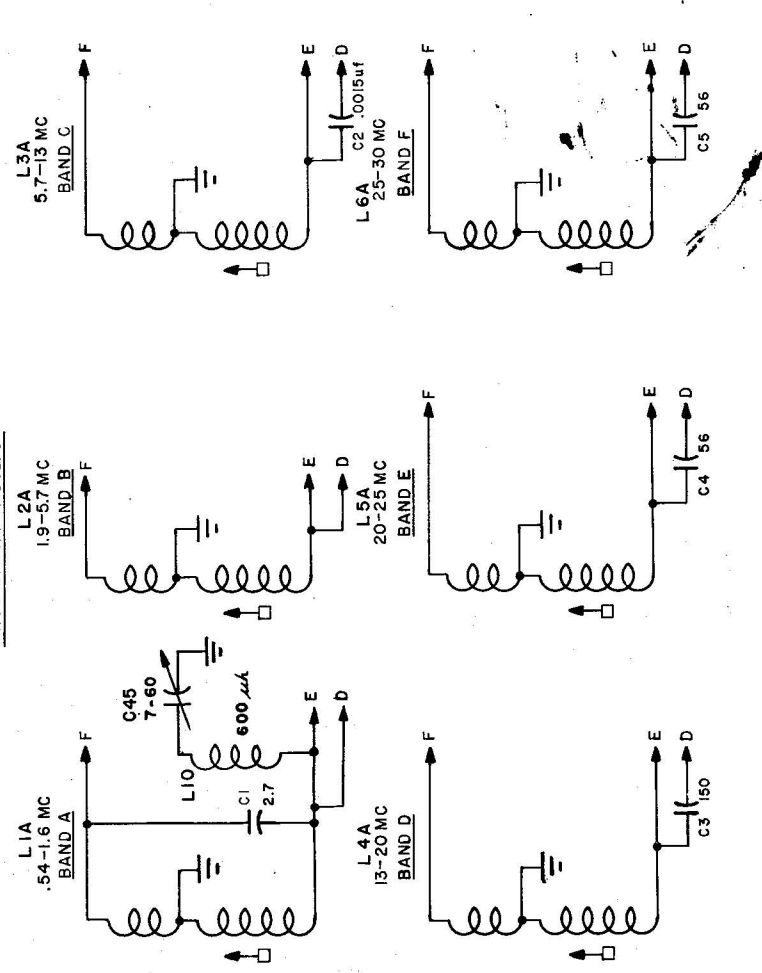
- R1 .22K Ω ± WATT 10%
- R2 4.7K Ω ± WATT 10%
- R3 68 Ω ± WATT 10%
- R4 1K Ω ± WATT 10%
- R5 10K Ω L.T. POTENTIOMETER, GPN 052-025
- R6 68 Ω ± WATT 10%
- R7 4.7K Ω ± WATT 10%
- R8 5K Ω POTENTIOMETER, GPN 052-030
- R9 1.0 MEG. Ω A.T. POTENTIOMETER w/A.C. SWITCH, GPN 052-026
- R10 27 Ω ± WATT 10%
- R11 270 Ω ± WATT 10%
- R12 1200 Ω ± WATT 10%
- R13 4.7K Ω ± WATT 10%
- R14 1 MEG Ω ± WATT 10%

6

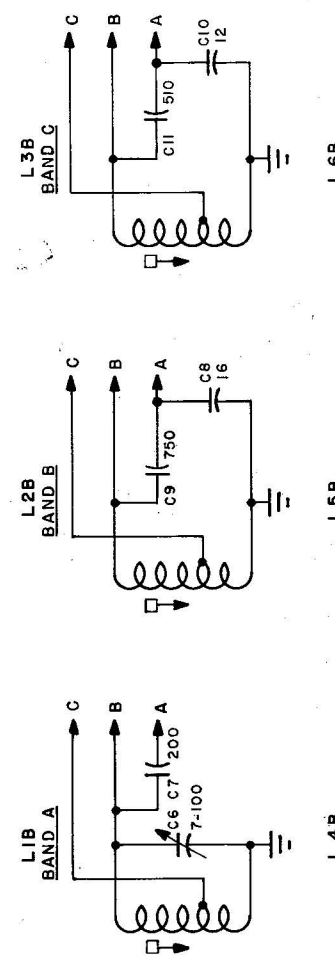
7



ANTENNA COILS



OSCILLATOR COILS



BAND SPREAD

MAIN TUNING

SW1

SW2B

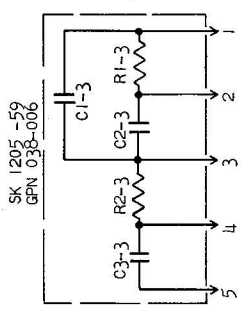
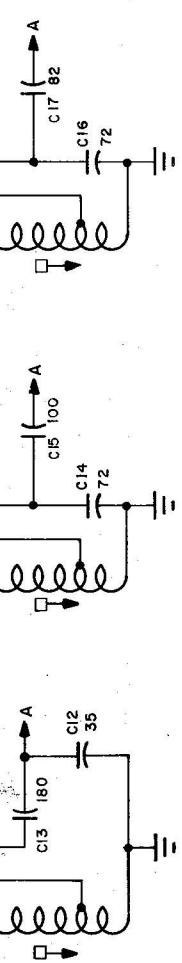
L3B BAND F

L5B BAND E

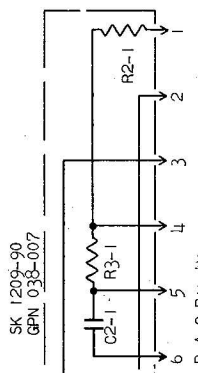
L4B BAND D

8

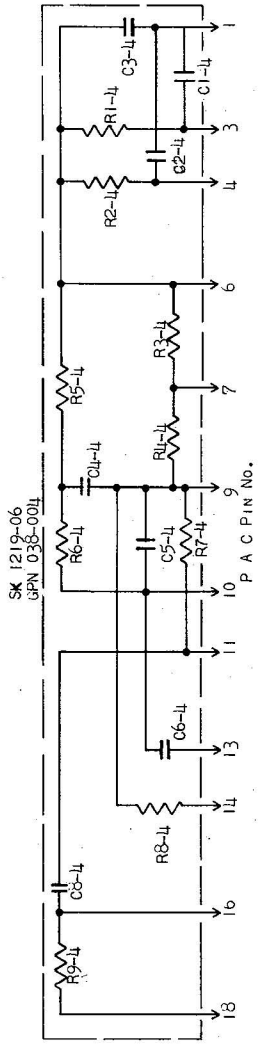
C1
C2
C3
C4
C5
C6
C7
C8
C9
C10
C11
C12
C13
C14
C15
C16
C17
C18
C19
C20
C21
C22A
C23A



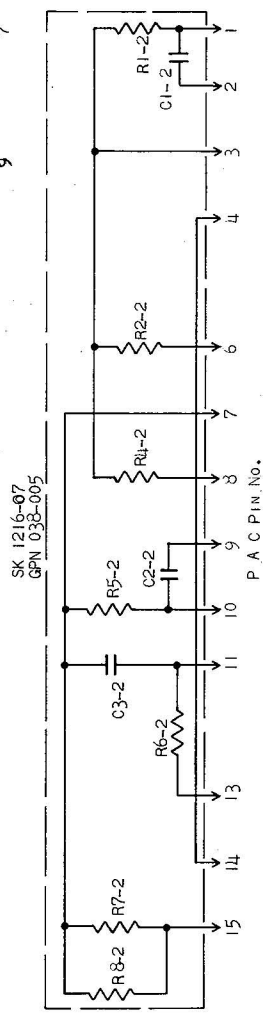
R1-3 4.7 KΩ
R2-3 100 Ω
C1-3 .01 μF
C2-3 .01 μF
C3-3 .01 μF



R2-1 100 KΩ
R3-1 100 KΩ
R4-1 47 KΩ
R5-1 47 KΩ
C2-1 .01 μF



R1-4 1.5 MEG Ω
R2-4 17 K Ω
R3-4 220 K Ω
R4-4 220 K Ω
R5-4 1.0 MEG Ω
R6-4 1.0 MEG Ω
R7-4 470 K Ω
R8-4 3.5 K Ω
R9-4 270 K Ω
C1-4 .01 μF
C2-4 100 μF
C3-4 .01 μF
C4-4 .01 μF
C5-4 100 μF
C6-4 .01 μF
C7-4 .01 μF



R1-2 2.7 KΩ
R2-2 2.7 KΩ
R3-2 1.0 KΩ
R4-2 150 KΩ
R5-2 3.9 KΩ
R6-2 20 Ω
R7-2 20 Ω
R8-2 20 Ω
R9-2 20 Ω
C1-2 .01 μF
C2-2 100 μF
C3-2 .01 μF

SK 1219-06
GPN 038-004
P A C P I N N O .

SK 1205-59
GPN 038-006
P A C P I N N O .

SK 1209-90
GPN 038-007
P A C P I N N O .

SK 1216-07
GPN 038-005
P A C P I N N O .

- SCHEMATIC -
RECEIVER, G-43
MODEL NO. 3241

SHEET 2 OF 2
510-056