

INSTRUCTION MANUAL

COMMUNICATIONS RECEIVER

MODEL GR-212

Your GONSET GR-212 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 is transformer operated and features an "S-meter" for signal strength monitoring, a separate tunable beat-frequency oscillator for stable reception of code (CW) and single side-band (SSB) voice transmissions, and a highly effective automatic noise limiter to suppress pulse-type ignition noise or other similar interference.

The receiver uses three 455 kc IF amplifier stages and 12 tuned IF circuits. 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.

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.

TECHNICAL SPECIFICATIONS

Sensitivity: 1 microvolt provides 8 db $\frac{S+N}{N}$ on all hi-frequency bands.
Selectivity: 4.8 kc at 6 db points
12.5 kc at 16.0 db points
Frequency Range: 550 to 1600 kc (Band A)
2.0 to 5.7 mc (Band B)
5.7 to 13 mc (Band C)
13 to 20 mc (Band D)
20 to 25 mc (Band E)
25 to 30 mc (Band F)
Audio Output: 2.0 microvolts 30% modulated produces 2.7 watts output.

Types of Signals Received: AM, CW, SSB

Tube complement: 1 - 6U8 Mixer and Oscillator
2 - 6BA6 I.F. Amplifiers
1 - 6AL5 Detector and Noise Limiter
1 - 6AQ5 Audio Output
1 - 6BE6 Second Converter
1 - 12AX7 Audio Amplifier and B.F.O.
2 - Silicon Diodes as Rectifiers

ANTENNA INSTALLATION

The GR-212 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 GR-212 input circuits are designed for a low-impedance line from the antenna, either balanced or un-balanced. The GR-212 has a built-in 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 300 ohm line.

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.

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 switch:

This is a switch located on the back panel for operating the automatic noise limiter. 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 position.

BFO 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.

This control is normally left in mid position. See "Types of Signals".

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.

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 GR-212 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 GR-212 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 backplate.
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

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.

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.

STEPS TO TUNE THE SHORT-WAVE BROADCAST BANDS

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.

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.

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) Set B.F.O. PITCH control at mid setting.
- (2) Turn the SENSITIVITY control fully counter-clockwise. The receiver will become silent. Turn the PHONE—CW SSB switch to CW-SSB position.
- (3) Turn the VOLUME control to between three quarters and full volume in a clockwise direction.
- (4) Turn the SENSITIVITY control slowly clockwise (to increase the RF gain) until signals are heard at a comfortable listening level. Radio-telegraph 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.

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.

SPECIAL FEATURES OF THE GR-212 FOR AMATEUR RADIO STATIONS

VHF CONVERTERS

The GR-212 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

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 "bassey," 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 radio-telegraph (CW) signals, as explained in steps (2), (3) and (4) of the above paragraph. Set BFO PITCH for upper or lower sideband.
- (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.

An external speaker of 3 to 6 ohms impedance may be used in place of the one included in the receiver. To connect an 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. Insert the PL-55 plug in the phone jack.

GR-212 (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.

If difficulty is experienced with the unit (e.g., low sensitivity, etc.), it is best to first check the tubes before attempting any circuit repairs and/or realignment. It has been found that approximately 90% of all difficulties incurred with communications equipment may be traced to defective tubes.

If the tubes are found to be operating properly and difficulty with the receiver is still experienced, follow the alignment procedure below to insure proper resonant-circuit alignment. The equipment necessary to realign the receiver is:

- (1) Vacuum Tube Voltmeter (VTVM)
- (2) Signal Generator; frequency coverage from 1.65 to 30 mc
- (3) A hexagonal alignment tool (similar to Walco No. 2513)

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, IF:

Step	Generator Setting	Receiver Setting	Procedure
1	455 kc	30 mc	Inject signal through .01 to Pin 7 of V3. Adjust both slugs of T6, T5, T4 for maximum meter reading. Final touch up done with weak enough signal so that noise is present.

2	1650 kc	Approximately 30 mc (signal free)	Inject into switch side of C20. Adjust L11 and both slugs of T1, T2, and T3, as per Step 1.
3	1650 kc	Approximately 30 mc (signal free)	Turn on BFO (CW-SSB switch) and adjust slug of T7 for zero beat with pitch control set at mid-range.
4	1600 kc into antenna terminals	1600 kc	Adjust C6 to tune signal.
5	600 kc	600 kc	Adjust slug of L1B to tune signal. Repeat steps 4 and 5 until no further improvement occurs.
6	1000 kc	1000 kc (tune in generator signal)	Adjust L1A for maximum meter reading with antenna control at mid-setting.
7	1650 kc into antenna terminals	Approximately 1600 kc	Adjust L7 and C45 for minimum meter 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* setting	MAIN TUNING** setting	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.

GONSET[®], INC.
A SUBSIDIARY OF ALTEC LANSING CORPORATION
1515 S. MANCHESTER AVE., ANAHEIM, CALIF.

PARTS LIST

CAPACITOR LIST

C1	2.7 μ f, Min. Tubular GPN 071-042
C2	.0015 μ f, Silver Mica GPN 072-114
C3	150 μ f, Disc GPN 084-042
C4	56 μ f, Disc GPN 084-041
C5	56 μ f, Disc GPN 084-041
C6	7-100 μ f, Trimmer, GPN 089-004
C7	200 μ f, Silver Mica GPN 088-209
C8	16 μ f, Silver Mica GPN 088-205
C9	750 μ f, Silver Mica GPN 088-204
C10	12 μ f, Silver Mica GPN 088-052
C11	510 μ f, Silver Mica GPN 088-208
C12	.35 μ f, Silver Mica GPN 088-141
C13	180 μ f, Silver Mica GPN 088-206
C14	72 μ f, Silver Mica GPN 088-207
C15	100 μ f, Silver Mica GPN 088-120
C16	72 μ f, Silver Mica GPN 088-207
C17	82 μ f, Silver Mica GPN 088-002
C18	82 μ f, Super NPO GPN 084-384
C19	20 μ f, Tubular Ceramic N150 GPN 084-049
C20	.001 μ f, Disc GPN 072-120
C21	510 μ f, Disc GPN 072-154
C22A & B	10-400 μ f, Main Tuning GPN 074-021
C23A & B	5-50 μ f, Band Spread, GPN 074-022
C24	5-50 μ f, Antenna Trimmer, GPN 074-023
C25	.01 μ f, K.L. Disc, GPN 072-116
C26	.01 μ f, Disc GPN 072-169
C27	.01 μ f, Disc GPN 072-169
C28	.01 μ f, Disc GPN 072-169
C29	.01 μ f, K.L. Disc GPN 072-116
C30	.01 μ f, Disc GPN 072-169
C31	0.39 μ f, Tubular GPN 071-048
C32	2 μ f QC Type GPN 071-028
C33	3.0 μ f QC Type GPN 071-069
C34	390 μ f, Disc GPN 072-170
C35	.001 μ f Disc GPN 072-120
C36 A	40 μ f, 300V)
B	50 μ f, 250V) Electrolytic, GPN 073-019
C	25 μ f, 25 V)
C37	25 μ f, 25V. Electrolytic, GPN 073-002
C38	.0068 μ f, 600V Tubular, GPN 085-052
C39	.005 μ f, 1 KV Disc, GPN 072-115
C40	.005 μ f, 1 KV Disc, GPN 072-115
C41	100 μ f Super NPO, GPN 084-206
C42	.01 μ f, Disc, GPN 072-169
C43	200 μ f, Tubular GPN 084-383
C44	.01 μ f, Disc, GPN 072-169
C45	7-60 Trimmer, GPN 089-020
C46	.001 μ f Disc, GPN 072-120
C47	.01 μ f Disc, GPN 072-169
C48	0.1 μ f Disc, GPN 072-174
C49	100 μ f Super NPO, GPN 084-206
C51	.001 μ f Disc, GPN 072-120
C52	.01 μ f, Disc, GPN 072-169

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
L1B	Oscillator Coil, GPN 012-061
L2B	Oscillator Coil, GPN 012-062

COIL LIST (continued)

L3B	Oscillator Coil, GPN 012-063
L4B	Oscillator Coil, GPN 012-064
L5B	Oscillator Coil, GPN 012-065
L6B	Oscillator Coil, GPN 012-066
L7	Trap, 1650KC GPN 012-106
L8	.39 μ h, RF Choke 10% GPN 027-076
L9	.39 μ h, RF Choke 10% GPN 027-076
L10	600 μ h RF Choke GPN 027-019
L11	Coil, GPN 012-553
T1	I.F. Transformer, 1650KC, GPN 014-095
T2	I.F. Transformer, 1650KC, GPN 014-095
T3	I.F. Transformer, 1650KC, GPN 014-095
T4	I.F. Transformer, 455KC, GPN 014-093
T5	I.F. Transformer, 455KC, GPN 014-094
T6	I.F. Transformer, 455KC, GPN 014-093
T7	BFO Coil, GPN 012-554
T8	Output Transformer, GPN 272-011
T9	Power Transformer, GPN 271-004

RESISTORS

(All Resistors 10% Tolerance)

R1	47K, 1/2 W. GPN 042-473
R2	1 meg, 1/2 W. GPN 042-105
R3	68 Ω 1/2 W. GPN 042-680
R4	1K Ω 2 W. GPN 044-102
R5	10K Ω L.T. Pot. GPN 052-025
R6	100K 1/2 W. GPN 042-104
R7	100K 1/2 W. GPN 042-104
R8	5K Ω Potentiometer, GPN 052-030
R9	1.0 meg Ω A.T. Pot. w/A.C. Switch GPN 052-026
R10	27 Ω 1/2 W. GPN 042-270
R11	270 Ω 1/2 W. GPN 042-271
R12	1200 Ω 5 W. GPN 049-005
R13	1 meg 1/2 W. GPN 042-105
R14	1 meg Ω 1/2 W. GPN 042-105
R15	22K 1/2 W. GPN 042-223
R16	100K 1/2 W. GPN 042-104
R17	39K 1/2 W. GPN 042-393
R18	270 Ω 1/2 W. GPN 042-271

MISCELLANEOUS

S1	Bandswitch, GPN 171-001
S2	Switch, ANL, GPN 172-001
S3	Switch, Rcv-Stby., GPN 172-010
S4	Switch, Phone-Cw, GPN 172-011
	Printed Ckt. Brd. (RF sec.) 515-001
	Printed Ckt. Brd. (IF sec.) 515-003
	S Meter, GPN 112-040-2
	Loud Speaker, GPN 152-003
	Pilot Lamp (Dial Illumination) GPN 471-003 qty 2
	Antenna Binding Post Strip, GPN 147-005 qty 1
	Muting Binding Post Strip, GPN 147-010 qty 1
	Large Dial Cord Pulley GPN 255-006 qty 2
	Small Dial Cord Pulley GPN 255-003 qty 6
	Dial Cord Spring, GPN 217-003 qty 2
	Dial Lamp Socket, GPN 351-009 qty 2
	AC Cord, GPN 696-006 qty 1
	Jack, Closed Circuit (J6) GPN 342-007 qty 1

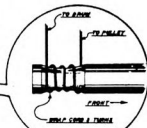
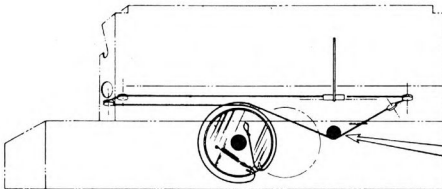
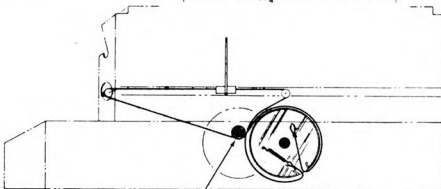
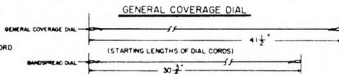


FIG. 'A'

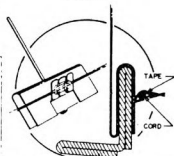
NOTE :

ATTACH POINTER AFTER CORD
IS INSTALLED

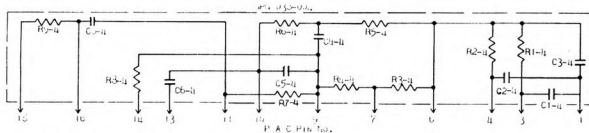


DIAL CORD & TURN AS IN FIG. 'A'

BANDSPREAD DIAL

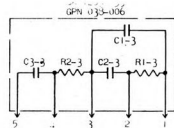


METHOD OF ATTACHING CORD TO
DIAL POINTER

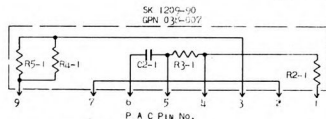


R1-11 1.0 MEG ω ω
 R2-11 1.0 K ω ω
 R3-11 200 K ω ω
 R4-11 200 K ω ω
 R5-11 1.0 MEG ω ω
 R6-11 1.0 MEG ω ω
 R7-11 1.0 K ω ω
 R8-11 3.9 K ω ω
 R9-11 270 K ω ω

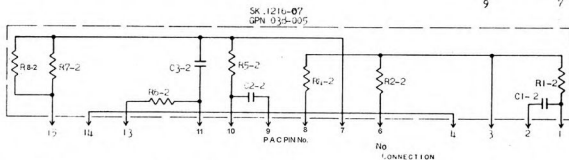
C1-11 .01 μ F
 C2-11 100 μ F
 C3-11 100 μ F
 C4-11 .01 μ F
 C5-11 100 μ F
 C6-11 .01 μ F
 C7-11 .01 μ F



R1-3 1.7 K ω ω
 R2-3 100 K ω ω
 R3-3 1.0 K ω ω
 R4-3 1.0 K ω ω
 C1-3 .01 μ F
 C2-3 .01 μ F
 C3-3 .01 μ F
 C4-3 .01 μ F



R2-1 100 K ω ω
 R3-1 100 K ω ω
 R4-1 1.0 K ω ω
 R5-1 1.0 K ω ω
 C1-1 .01 μ F
 C2-1 .01 μ F
 C3-1 .01 μ F



R1-2 2.7 K ω ω
 R2-2 2.7 K ω ω
 R3-2 1.0 K ω ω
 R4-2 100 K ω ω
 R5-2 3.9 K ω ω
 R6-2 20 K ω ω
 R7-2 20 K ω ω
 R8-2 20 K ω ω

C1-2 .01 μ F
 C2-2 100 μ F
 C3-2 .01 μ F

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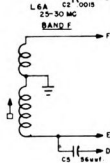
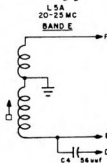
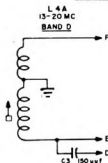
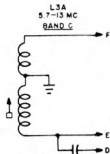
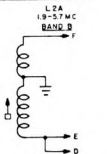
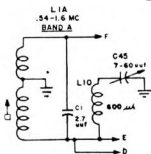
GONSET, INC.
 ANAHEIM, CALIFORNIA

- SCHEMATIC -
 RECEIVER

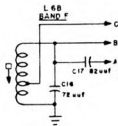
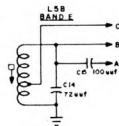
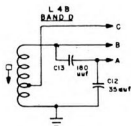
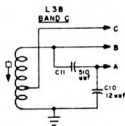
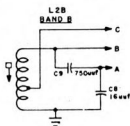
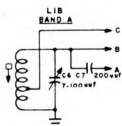
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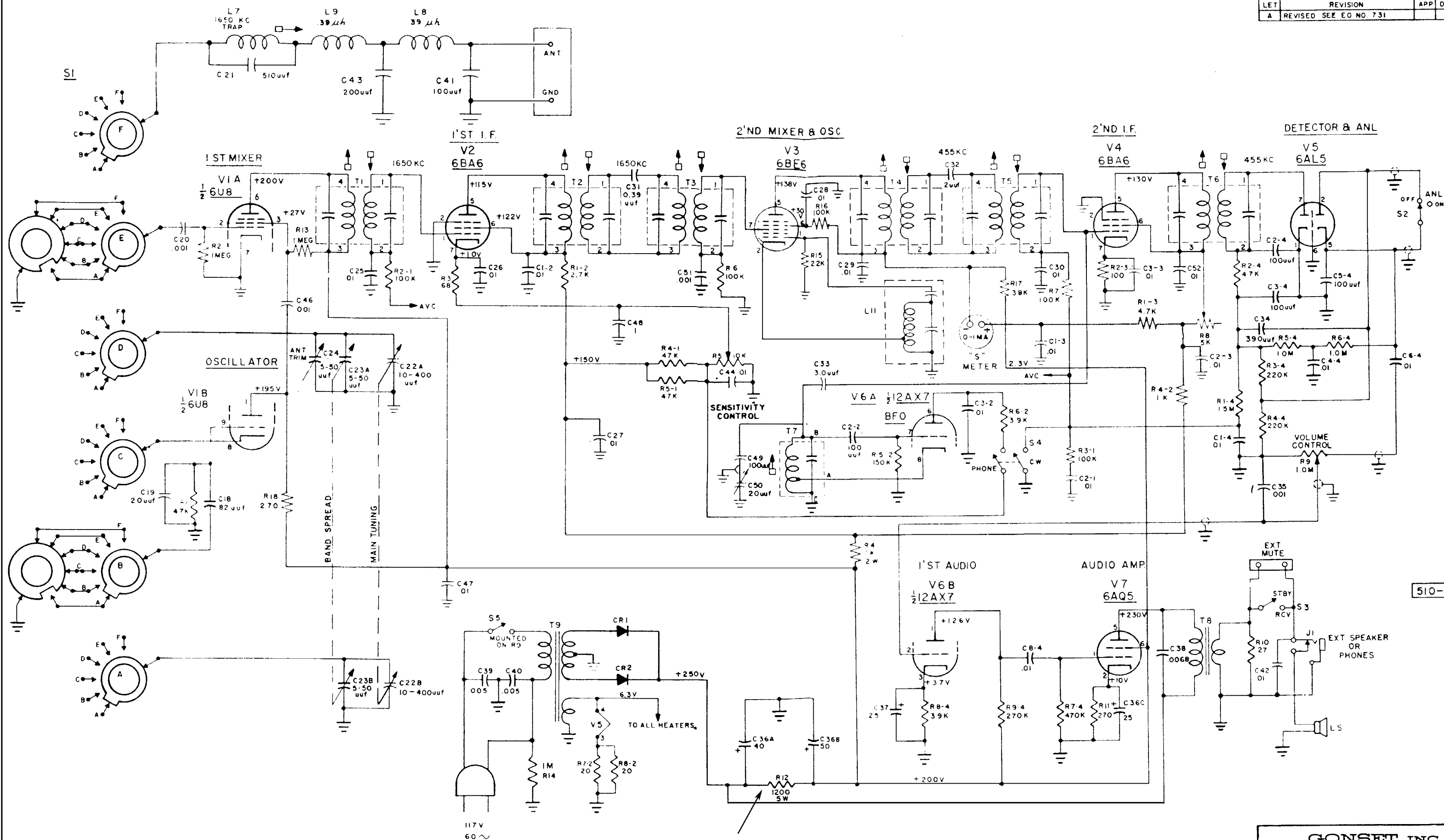
SHEET 2 OF 2
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ANTENNA COILS



OSCILLATOR COILS





3. OSCILLATOR COILS OPERATE 650KC ABOVE
INCOMING FREQUENCY ON ALL BANDS
2. ALL RESISTORS ARE IN OHMS, 1/2 WATT ±10%
1. ALL CAPACITORS ARE IN MICROFARADS

Photocopy had light marks (X?) on either end of the resistor looking as if this was to be removed from the set. Couldn't be 100% sure.
dlbarnhart (14 apr 01)

GONSET, INC.
ANAHEIM, CALIFORNIA

-SCHEMATIC-
RECEIVER, GR-212

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SHEET 1 OF 2
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