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INSTRUCTION MANUAL CITIZEN'S COMMUNICATOR MODEL G-15



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FEDERAL COMMUNICATIONS COMMISSION (FCC) REGULATIONS

IMPORTANT NOTICE

BEFORE THE TRANSMITTER IS OPERATED, IT IS NECESSARY TO OBTAIN A STATION LICENSE AND CALL SIGN FROM THE FEDERAL COMMUNICA-TIONS COMMISSION. AFTER READING PART 19 OF THE FCC RULES AND REG-ULATIONS, FILL OUT FCC FORM NO. 505 AND SUBMIT IT TO THE FCC. A COPY OF FORM NO. 505 IS INCLUDED IN THE PACKING BOX WITH THE UNIT. IT IS ILLEGAL TO OPERATE THE TRANSMITTER UNTIL A VALID LICENSE AND CALL SIGN HAVE BEEN RECEIVED FROM THE FCC.

It is required that the section of the FCC Rules and Regulations which deals with CONELRAD be read and understood before the transmitter is operated. The FCC Rules, Part 19, contain this information under Subpart I—CONELRAD.

Following is an excerpt from Volume VI, Part 19, of FCC Rules and Regulations which will acquaint the operator with fundamental requirements, definitions and restrictions:

"SUBPART A—GENERAL"

19.1 BASIS AND PURPOSE

The rules and regulations set forth in this part are issued pursuant to the provisions of Title III of the Communications Act of 1934, as amended, which vests authority in the Federal Communications Commission to regulate radio transmissions and to issue licenses for radio stations. The rules in this part are designed to provide for private short-distance radio communications, radio signalling, and the control of remote objects or devices by means of radio, and to provide procedures whereby manufacturers of radio equipment to be used or operated in the Citizens Radio Service may obtain type acceptance and/or type approval of such equipment as may be appropriate.

19.2 DEFINITIONS

For the purpose of this part, the following definitions shall be applicable. For other definitions, refer to Part 2 of this chapter.

(a) Definitions of services.

Citizens Radio Service. A radio communications service of fixed, land, and mobile stations intended for personal or business radio-communication, radio signalling, control of remote objects or devices by means of radio, and other purposes not specifically prohibited in this part.

Fixed Service. A service of radio-communication between specified fixed points.

Mobile Service. A service of radio-communication between mobile and land stations or between mobile stations.

(b) Definitions of Stations.

Base station. A land station in the land mobile service carrying on a service with land mobile stations.

Class A station. A station in the Citizens Radio Service operating on an assigned frequency available to that service in the 460-470 MC frequency band, with an authorized plate input power of 60 watts or less. (Class A stations are authorized to operate as mobile stations, as base stations, or as fixed stations.)

Class B station. A mobile station in the Citizens Radio Service operating on an authorized frequency available to that service in the 460-470 MC frequency band with an authorized plate input power of 5 watts or less. (Class B stations are authorized to be operated as mobile stations only; however, they may be operated at fixed locations in accordance with other provisions of this part.)

Class C station. A mobile station in the Citizens Radio Service operating on an authorized frequency in the 26.96-27.23 MC frequency band, or on the frequency 27.255 MC, for the control of remote objects or devices by radio, or for the remote actuation of devices which are used solely as a means of attracting attention. (Class C stations are authorized to operate as mobile stations only; however, they may be operated at fixed locations in accordance with other provisions of this part.)

Class D station. A mobile station in the Citizens Radio Service operating on an authorized frequency in the 26.96-27.23 MC frequency band, or on the frequency 27.255 MC, with an authorized plate input power of 5 watts or less for radiotele-phony only. (Class D stations are authorized to operate as mobile stations only; however, they may be operated at fixed locations in accordance with other provisions of this part.)

Fixed station. A station in the fixed service.

Land station. A station in the mobile service not intended for operation while in motion. (Of the various types of land stations, only the base station is pertinent to this part.)

Mobile station. A station in the mobile service intended to be used while in motion or during halts at unspecified points. (For the purposes of this part, the term includes hand-carried and pack-carried units.)

(c) Miscellaneous definitions.

Antenna structure. The term "antenna structure" includes the radiating system, its supporting structures, and any surrounding appurtenances.

Assigned frequency. The frequency appearing on a station authorization, from which the carrier frequency may deviate by an amount not to exceed that permitted by the frequency tolerance.

Authorized bandwidth. The maximum width of the band frequencies, as specified in the authorization, to be occupied by an emission.

Bandwidth occupied by an emission. The band of frequencies comprising 99 percent of the total radiated power extended to include any descrete frequency on which the power is at least 0.25% of the total radiated power.

Harmful inferference. Any radiation or any induction which endangers the functioning of a radio-navigation service or of a safety service, or obstructs or repeatedly interrupts a radio service operating in accordance with applicable laws, treaties, and regulations.

Landing area. A landing area means any locality, either of land or water, including airports and intermediate landing fields, which is used or approved for use for the landing and take-off of aircraft, whether or not facilities are provided for the shelter, servicing, or repair of aircraft, or for receiving or discharging passengers or cargo.

Remote control. The term "remote control" when applied to the use or operation of a Citizens Radio Station, means control of the transmitting equipment of that station from any place other than the location of the transmitting equipment, except that direct mechanical control or direct electrical control by wired connections of transmitting equipment from some other point on the same premises, craft or vehicle shall not be considered to be remote control. (Authorization for the use or operation of any transmitting equipment by remote control in the Citizens Radio Service is granted only in the case of Class A base or fixed stations.)

Station authorization. Any construction permit, license, or special temporary authorization issued by the Commission.

19.3 POLICY GOVERNING THE ASSIGNMENT OF FREQUENCIES

- (a) The frequencies which may be assigned to Class A stations in the Citizens Radio Service, and the frequencies which are available for use by Class B, C, or D stations, are listed in Subpart C. All applicants for, and licensees of, stations in this service shall cooperate in the selection and use of the frequencies assigned or authorized, in order to minimize interference and thereby obtain the most effective use of the authorized facilities. Each frequency available for assignment to, or use by, stations in this service is available on a shared basis only, and will not be assigned for the exclusive use of any one applicant; such areas may also be restricted to one or more specified geographical areas.
- (b) In no case will more than one frequency be assigned to Class A stations for the use of a single applicant in any given area until it has been demonstrated conclusively to the Commission that the assignment of an additional frequency is essential to the operation proposed.

19.4 GENERAL CITIZENSHIP RESTRICTIONS

A station license may not be granted to or held by:

- (a) Any alien or the representative of any alien;
- (b) Any foreign government or the representative thereof;
- (c) Any corporation organized under the laws of any foreign government;

- (d) Any corporation of which any officer or director is an alien;
- (e) Any corporation of which more than one-fifth of the capital stock is owned of record or voted by: Aliens or their representatives; a foreign government or representative thereof; or any corporation organized under the laws of a foreign country;
- (f) Any corporation directly or indirectly controlled by any other corporation of which any officer or more than one-fourth of the directors are aliens, if the Commission finds that the public interest will be served by the refusal or revocation of such licenses; or
- (g) Any corporation directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by: Aliens or their representatives; a foreign government or representatives thereof; or any corporation organized under the laws of a foreign government or a representative thereof; or any corporation organized under the laws of a foreign government, if the Commission finds that the public interest will be served by the refusal or revocation of such license.

This equipment complies with Paragraph 19.71(d) of the FCC Rules. Do not break the seal on the transmitter crystal holder or the crystal trimmer capacitor seal unless you hold a first or second-class commercial radio operator's license. No such license is required for the other adjustments, such as the amplifier loading, tuning, etc.

It is no longer possible to supply Part 19 of the FCC Rules with each equipment, because Part 19 no longer is available separately. It is mandatory for the purchaser to order a copy of Volume VI of the FCC Rules in order to obtain Part 19.

This should be ordered from:

Superintendent of Documents U. S. Government Printing Office Washington 25, D. C.

The price of \$1.25 (check, money order or coin—no stamps) includes supplement service to keep the volume up-to-date indefinitely as amendments are later adopted.

CONELRAD REGULATIONS

IMPORTANT NOTICE

"SUBPART I—CONELRAD"

All licensed transmitting stations are required to visually or audibly monitor the authorized Conelrad station. In the event of a Conelrad alert, the station will "break" its carrier three times, then follow this break with a voice announcement. It is illegal to transmit during a Conelrad alert.

GENERAL DESCRIPTION

The G-15 Citizen's Communicator is a complete two-way radio station, designed for operation in the 11-meter Citizen's Band. The transmitter is crystal-controlled, with provisions for four channels, switched from the front panel. Each of the four crystal-controlled transmitting channels may be individually adjusted to its proper operating frequency.

The supply-line power input requirement is 70 watts. The output circuit is a "Pi-network" type that can be used efficiently with a wide variety of antenna installations. The final output adjustments are accessible from the outside of the cabinet. A tuning and modulation meter is provided on the front panel. Amplitude modulation is used, with complete push-to-talk functions controlled by a push button switch on the microphone.

The receiver is a dual conversion superheterodyne, which achieves a high degree of selectivity without adjacent channel interference. An RF stage and a gated squelch circuit are added features. A tuning test point, on the AVC circuit, is accessible on the top of the chassis. A full three watts of audio is available at the speaker with only 2μ V input. The receiver portion of the unit may be operated either in the crystal-controlled or manual tune mode. The receiver is provided with a SPOT function in order that the operator may "see" his own transmitter frequency when operating in the manual-tune mode.

The G-15 is offered in two models:

Model 3429—For operation on either 117-VAC or 12-VDC input

Model 3428—For operation on either 117-VAC or 6-VDC input

Switching from 117-VAC operation to 12-VDC operation or from 117-VAC operation to 6-VDC operation is accomplished in the particular cable plug used. No alterations in the unit itself are required.

Both models are type accepted, under Part 19 of the FCC Rules and Regulations, Class D, Citizens Radio Service.

TRANSMITTER PERFORMANCE SPECIFICATIONS

Power input to final amplifier: Power output:

Frequency stability:

Audio response:

Modulation:

Four channel:

5 watts

2.5 to 3.0 watts

0.005% overall per

FCC requirements 300 to 3,000 cycles

100% amplitude

Crystal controlled

RECEIVER PERFORMANCE SPECIFICATIONS

Sensitivity:

Image and spurious:

Adjacent channel rejection:

IF Selectivity

Audio output:

Gated squelch:

Tuning range:

Oscillator (manual tune mode) stability:

1 µV or less modulated 30% provides 10 db signal plus noise to noise ratio

Image 40 db down. All other spurious responses, more than 60 db down

At least 50 db down

6 db points 6 KC wide 20 db points 10 KC wide 50 db points 20 KC wide 80 db points 30 KC wide

3 watts with 2 µV input 30% modulation

 $0.5\,\mu V$ to 200 μV

Channels 1 through 23

0.05% drift from start to full warm-up

INSTALLATION AND OPERATION

CAUTION

Protect the equipment from excessive moisture and dust, but do not under any circumstances enclose the cabinet, or in any way block off the air from the perforated cabinet. Blocking the perforations will prevent free air circulation, cause the unit to become overheated, and result in damage to components.

FIXED STATION INSTALLATION

For permanent fixed-station, general coverage applications, when the station is used with one or more mobile units, a good vertical ground plane is recommended. It is also recommended that RG-8/U coaxial cable be used for line lengths in excess of 100 feet. (RG-58/U is satisfactory for shorter lengths.) The antenna may be mounted on any surface, such as a roof-top, providing that the upper end of the antenna does not extend more than 20 feet above the highest point of the building or structure on which the antenna is mounted (FCC Regulation). For example, the antenna base may not be mounted on top of a tower placed on the roof for this purpose, but it is permissible to mount the antenna on top of a chimney that is a permanent part of the building.

For "point-to-point" communication between two or more fixed stations, a BEAM AN-TENNA is recommended. This antenna will greatly increase the range of stations operating between fixed locations, since it concentrates the transmitter power and receiver pick-up in the desired direction, thus increasing the effective range and reducing interference. General instructions included with the antenna describe both vertical and horizontal mounting.

For maximum reliable communications with mobile units which normally employ vertical antennas, it is recommended that the fixed station antenna be of the same polarization.

The same FCC requirements apply to height for the beam antenna as for the vertical antenna. When more than one fixed station is to be contacted, the beam antenna must be equipped with a rotator so that it may be aimed in the direction of the station to be contacted.

- 1. Select a location for the antenna and locate the station as near as possible to a 117-VAC power outlet.
- 2. Erect the antenna according to the instructions supplied. Route the coaxial transmission line from the antenna to the station location, bringing the line into the building through a window or other access hole. If the transmission line is too long and it must be cut to length, be sure that the connector on the transmitter end is properly installed.
- 3. Plug the unit power input cable into the AC outlet. Plug the transmission line into the jack on the rear of the station cabinet. Turn the unit on using the "VOLUME-OFF" control knob and allow approximately 30 seconds for warm-up. Press the microphone push button. Refer to Figures 2 and 3 for the location of adjustments used in the following tuning procedure. Using a screwdriver, gently tighten the RF LOADING CAPACITOR fully clockwise. Then, alternately adjust the RF AMPLIFIER TUNING CAPACITOR and the RF OUTPUT LOADING CAPACITOR, in small increments, to obtain maximum deflection of the tuning meter. Work back and forth between the adjustments several times until no further increase in deflection can be obtained. Release the microphone button.
- 4. Rotate the function switch to the XTAL position. Turn the VOLUME and SQUELCH controls fully clockwise. A loud rushing noise will be heard in the speaker. Reduce the VOLUME control for a comfortable listening level. Slowly turn the SQUELCH control counter-clockwise until a point is reached at which the background noise disappears. This is the squelch "Threshold". An S-Meter to indicate relative received signal strength is provided on the front panel. The S-units on the meter are approximately 6db apart, with S9 corresponding to about a 50 microvolt received signal strength.

5. If it is desired to operate the receiver in the manual tuning mode, rotate the "function" or "receiver" switch to the MAN. position and the squelch control to the maximum clockwise stop. Manual mode operation is intended to allow the operator to "search" the band for activity and to listen on frequencies other than those for which the unit is crystal-controlled. The channel indication on the manual tuning dial is intended to serve as a reference only, i.e., the actual and the indicated channel may be slightly different. For this reason, if it is desired to establish reliable point-to-point communications between two units of the same channel designation, it is recommended that the XTAL position be used.

To "spot" the transmitter frequency of the unit on the manual tuning dial, rotate the function switch to the SPOT position and turn the tuning dial until minimum noise is heard. Since some dial inaccuracy is inherent in the manual tuning mechanism, *do not* readjust transmitter frequency to correspond to that channel designation read on the manual tuning dial.

6. Press the microphone button and talk approximately 4" from the microphone. The tuning meter should deflect with modulation. The equipment is now ready for service

MOBILE STATION INSTALLATION.

- 1. Choose the desired installation location of the unit in the vehicle. The usual mounting position is beneath the dashboard, near the driver's side. The antenna is normally mounted on one of the front fenders, in place of the present broadcast whip antenna, or on the fender, at least 12 inches away from the windshield. The antenna and communicator must not be separated by more than the length of the transmission line supplied with the antenna. Temporarily place the communicator on the car seat or other convenient location for transmitter loading adjustments.
- 2. Install the antenna, according to the instructions supplied. Route the coaxial transmission line from the antenna base to the cabinet and through the nearest access hole to the car interior. When possible, a full-sized 8½ to 9-foot flexible whip antenna should be used for mobile work. This is a common item, stocked by most radio parts stores and G-15 dealers. Be sure the shield braid of the RG-58/U coaxial cable makes a good ground connection to the car at the base of the insulated whip antenna.



The presence of the car body causes a mobile antenna to radiate and receive better in some directions than others, and the relative position of the car, with respect to the station being contacted, will affect the strength of the transmitted and received signal.

- 3. Connect the antenna plug to the jack on the rear of the transmitter. Connect the spade lug on the end of the power cable to an accessory terminal on the ignition switch.
- 4. Refer to Paragraphs 3 through 6 under "FIXED STATION INSTALLATION" and follow the loading and test procedure.

5. Hold the unit in place under the dashboard and adjust the mounting bracket. Using the mounting bracket as a template, mark the mounting hole locations on the dashboard. Locate the mounting holes so that the unit is mounted as rigidly as possible. Remove the bracket, and drill the holes with a No. 30 (1/8-inch) drill. Reposition the unit and bracket, and install sheet-metal screws to hold the bracket in place. Reconnect the antenna and power cable, and recheck operation. A grounding terminal with wing nut is provided on the rear of the G-15 equipment. A short direct wire or strap should be connected to the nearest conductive point on the vehicle. Installation is now complete.

IMPORTANT NOTICE

All of the mobile units in a given system must have a properly filled out identity tag attached to the unit. This tag is supplied with each unit.

VEHICULAR NOISE SUPPRESSION

Even though a noise-clipper is built into the receiver, it is desirable to minimize the amount of noise generated in the vehicle in which the communicator is installed. In many cases, simply installing resistor type plugs will suffice. It also is desirable to make sure that when the car hood is closed it makes a good electrical ground at several points. Grounding fingers designed for this purpose can be obtained at radio parts stores. Generator noise can be reduced by shielding the generator wires and grounding the shields at both ends.

OPERATION ON OTHER CHANNELS

Your communicator can be operated on channels other than the ones for which it was set at the factory. This can be accomplished by replacing the crystals in the transmitter and in the receiver with another pair for the channel of your choice. The actual transmitter crystal frequency is exactly ½ of the operating frequency, since the transmitter employs frequency doubling in the oscillator. The receiver crystal is an overtone type that oscillates at a frequency that is 1.65 MC higher than the channel frequency. The manual-tuning receiver oscillator operates 1.65 MC below the channel frequency.

The FCC has authorized the following channel frequencies for Class D Citizen's operation:

MC	MC	MC	MC
26.965	27.035	27.115	27.175
26.975	27.055	27.125	27.185
26.985	27.065	27.135	27.205
27.005	27.075	27.155	27.215
27.015	27.085	27.165	27.225
27.025	27.105		

Additional crystals are available from your authorized dealer, or they may be obtained directly from the factory. After installation of new crystals, it is essential that the transmitter crystal be adjusted to channel frequency.

CAUTION

Adjustment of the transmitting frequency must be made with FCC approved frequency-measuring equipment under the supervision of a technician holding a first or second-class FCC radiotelephone license.

RECEIVER ALIGNMENT

Connect a DC VTVM to the AVC test point of the receiver.

Inject a 455-KC signal, through a 0.01μ F condenser to pin 7 of V3 (6BE6) tube. Align top and bottom slugs of T2, T3 and T4 for maximum output reading on VTVM. The AVC reading should be kept at approximately -2 volts DC by decreasing the generator output as final alignment is achieved. It is recommended that a good narrow band sweeper be used for final alignment so that the "nose" and skirts of the response curve may be adjusted for symmetry.

Next, inject a 1650-KC signal into the same point (pin 7 of V3) and adjust oscillator coil L13 for maximum output. Check the coil with a frequency meter to determine that the correct frequency has been set (2105 KC). This can also be checked by injecting a 2560-KC signal (image frequency) into the same point. If a signal is not found at 2560-KC the oscillator is incorrectly set to frequency.

Next, inject a 1650-KC signal into the grid of V2 (6U8A) through a 0.01μ F condenser. Carefully adjust top and bottom slugs of T1 for maximum output on the AVC test point while maintaining an approximately -2 VDC AVC voltage.

Align the RF stage by feeding a low-level 27.1 MC signal into pin 1 of V1 (6BZ6) through a 0.01μ F condenser and adjusting L5 for maximum AVC voltage. The 27.1 MC signal will be located by using the manual-tune mode only. The sensitivity at this point should be 1μ V or less to double the AVC reading on the VTVM.

To calibrate the manual-tuned oscillator, rotate the function switch to the MAN. position, set the receiver dial to a channel near the center of the dial (e.g., channel 11 or 15), and inject an appropriate signal at the antenna receptacle (a channel number frequency table appears in this instruction manual). Adjust L2 for maximum signal, as indicated on the front-panel S-meter. There will be two positions of the slug of L2 that yield about equal signal strength. Use the lowest frequency setting (i.e., slug should be as far as possible into the winding of L2, consistent with reception of the signal). A check on the proper positioning of the slug is afforded by checking the image frequency at the channel frequency minus 3.3 MC. If a moderate amount of signal cannot be heard at this image frequency, the slug is not positioned properly. Be sure to leave the dial set at the proper channel frequency when making this check (change the signal generator frequency only). Some "touch-up" will be required when the receiver is inserted in the cabinet. A hole is provided on the bottom of the cabinet for this purpose.

The antenna stage (C2 and C3) is aligned next. This is accomplished by adjusting C2 and C3 for maximum transmitter output as indicated on the front panel tuning meter. (See

"Transmitter Adjustment"). Final sensitivity should be 1μ V or less for a 10 db signal and noise ratio with 30% modulation.

TRANSMITTER ADJUSTMENT

CAUTION

The transmitter must be adjusted and aligned by an FCC licensed, secondclass or better, radiotelephone operator.

With the desired proper channel crystals in place, a dummy 50-ohm load is connected to the antenna jack. Press the push-to-talk button and adjust L10 for maximum output on the front-panel meter. Adjust the coil on the centermost frequency in use. Also adjust C2 and C3 for maximum output, repeating for maximum reading on meter. The output should be between 2.5 to 3 watts.

The frequency of each crystal must be adjusted to within 0.005% tolerance per FCC regulations. Only qualified frequency-measuring equipment must be used for this adjustment. Adjust trimmers C62, C63, C64 or C65 with each associated crystal for exact center frequency for each channel. The unit may now be connected to a proper antenna for final antenna adjustment.

With the push-to-talk switch in the "ON" position, readjust C2 and C3 for maximum deflection of the tuning meter on the front panel; center adjustments for center frequency in use.

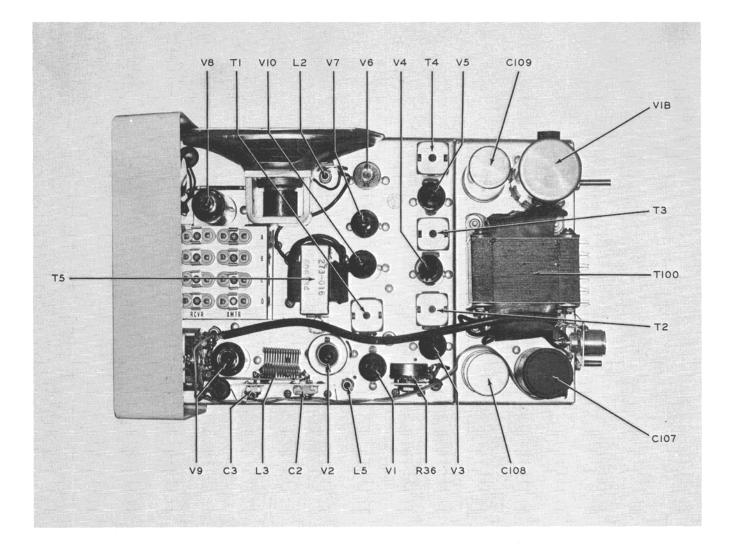


Figure 2. Model G-15 Citizen's Communicator, Top Chassis View

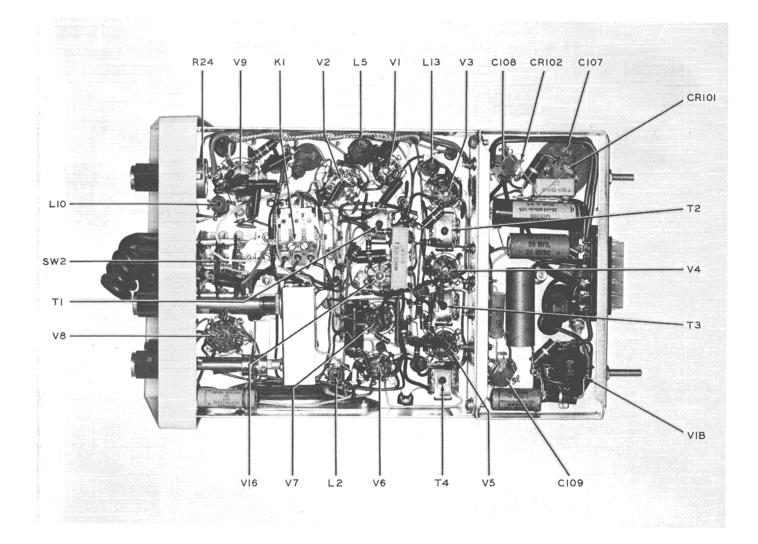


Figure 3. Model G-15 Citizen's Communicator, Bottom Chassis View

REPLACEMENT PARTS LIST - XMTR/RCVR CHASSIS, G-15

C1C2C3C4C5C6 **C**7 **C8** C9 C10 C11 C13 C14 C15 C16 C17 C19 C20 C21 C22 C23C24 C25 C26 C27 C28 C29 C30 C31 C32 C33 C34 C35 Č36 C37 C38 C39 C40 C41 C42 C43C44 C45C46 C47 C48 C49 C50C54C55C56 C57C58C59 C60 C61 C62 C64

C65

 $100\mu\mu$ f Silver Mica $\pm 5\%$ 110-580 $\mu\mu$ f Trimmer 4-40μμf Trimmer 2.2 $\mu\mu$ f Tubular .01 μ f Disc .01 μ f Disc .02 μ f Disc $27\mu\mu f$ Disc $.01\mu f$ Disc .01µf Disc $100\mu\mu$ f Silver Mica $\pm 5\%$.01µf Disc .01µf Disc $.01 \mu f$ Disc $.01\mu f$ Disc $.01\mu f$ Disc .001µf Disc .01^µf Disc $100\mu\mu$ f Silver Mica $\pm 5\%$ $82\mu\mu f$ Disc .01µf Disc .001µµf Disc .1µf Tubular .1µf Disc $.002\mu f$ Disc $.002 \mu f$ Disc $470\mu\mu f$ Disc .001µµf Disc Electrolytic $25\mu f @ 25WV$ $470\mu\mu f$ Tubular $.001 \mu f$ Disc $.001\mu f$ Disc $.001\mu f$ Disc $.01\mu f$ Disc $51\mu\mu f$ Disc .01/1 Disc 2.2µµf Tubular $68\mu\mu f$ Disc $.01\mu f$ Disc 3pf Tubular 8.2pf Silver Mica $\pm 5\%$ $30\mu\mu$ f Disc .01µf Disc $68\mu\mu f$ Disc $3-35\mu\mu$ f Trimmer $3-35\mu\mu$ f Trimmer $3-35\mu\mu$ f Trimmer $3-35\mu\mu$ f Trimmer .01µf Disc $.01\mu f$ Disc $22\mu\mu$ f Disc 82µµf Silver Mica .01µf Disc 2.5-5.3pf Variable $.01\mu f$ Disc .01µf Disc $22p\mu f$ $.01\mu f$ Disc .01µf Disc $100\mu\mu f$ Disc

GONSET PART NO. 088-017 089-024 089-005 071-039 072-169 072-169 072-125 or 072-203 072-210 072-169 072-169 088-017 072-169 072-169 072-169 072-169 072-169 072-112 072-169 088-017 084-208 072-169 072-108 085-002 072-233 072-111 072-111 072-137 072-108 073-127 071-125 072-112 072-112 072-176 084-230 072-169 071-039 084-236 072-169 084-028 088-201 084-231 072-169 084-229 089-006 089-006 089-006 089-006 072-169 072-169 084-102 088-002 072-169 074 - 112072-169 072-169 084-188 072-169 072-169 072-208

GONSET PART NO.

R1	22KΩ, 1/2 W.	042-223
R2		
	91 meg Ω , 1/2 W.	042-916
R3	$6.8 \operatorname{meg} \Omega, 1/2 \mathrm{W}.$	042-685
$\mathbf{R4}$	$1 \operatorname{meg} \Omega, 1/2 \mathrm{W}.$	041-105
R5	4.7 meg Ω , 1/2 W.	042-475
R6	$1 \operatorname{meg} \Omega, 1/2 \mathrm{W}.$	
	$1 \operatorname{meg} \Omega, 1/2 \operatorname{w}.$	042-105
R7	220K 1/2 W.	042-224
$\mathbf{R8}$	$22\mathrm{K} \Omega$, $1/2 \mathrm{W}$.	042-223
$\mathbf{R9}$	27K, 1/2 W.	043-273
R10	$100 \text{K} \Omega, 1/2 \text{ W}.$	
		042-104
R11	$82\Omega, 1/2$ W.	042-820
R12	$68 \text{K}\Omega, 1/2 \text{ W}.$	042-683
R13	$10 \text{K}\Omega, 1/2 \text{ W}.$	042-103
R14	$1 \operatorname{meg} \Omega, 1/2 \mathrm{W}.$	042-105
R15	$82\Omega, 1/2$ W.	
		042-820
R16	$68 \text{K}\Omega, 1/2 \text{ W}.$	042-683
R17	$10 \text{K}\Omega, 1/2 \text{ W}$	042-103
R18	$2.2 \operatorname{meg} \Omega, 1/2 \mathrm{W}.$	042-225
R19	$270 \text{K}\Omega, 1/2 \text{ W}.$	
		042-274
R20	$500 \text{K}\Omega$ Potentiometer	052-082
R21	$270 \text{K}\Omega$, $1/2 \text{ W}$.	042-274
R22	$1 \operatorname{meg} \Omega, 1/2 \mathrm{W}.$	042-105
R23	470KΩ, 1/2 W.	042-474
R24	250K() Detentionator	
	250 K Ω Potentiometer	052-081
R25	$1 \operatorname{meg} \Omega, 1/2 \mathrm{W}.$	042-105
R26	$1 K\Omega, 1/2 W.$	042-102
R27	$470 \text{K}\Omega, 1/2 \text{ W}.$	042-474
R 28	220Ω, 2 W.	044-221
R29		
R29	6800Ω, 1 W.	043-682
R30	$2200\Omega, 1/2$ W.	042-222
R31	$47 \text{K}\Omega, 1/2 \text{ W}.$	042-473
R32	$100 \text{K}\Omega$, $1/2 \text{ W}$.	042-104
R33	3900Ω, 1/2 W.	042-392
R34		
	$100\Omega, 2$ W.	044-101
R35	33 K Ω , 1/2 W.	042-333
R36	$50 \mathrm{K}\Omega$ Potentiometer	052-109
R37	$2200\Omega, 5 $ W.	049-093
R38	390 K Ω , $1/2$ W.	042-395
R39	4700 1/9 W	
	470Ω, 1/2 W.	042-471
$\mathbf{R40}$	$150 \text{K}\Omega, 1/2 \text{ W}.$	042-154
R41	$6.8\Omega, 1 \text{ W}.$	043-688
T 1		
L1	R. F. Choke 0.56μ h	027-077
L2	Receiver Osc. Coil	012-544
L3	Final Tank Coil	012-512
L4	R. F. Choke 5.6 μ h	027-028
L_{5}^{14}		
	Mixer Coil	012-414
L6	R. F. Choke 15μ h	027-032
L7	R. F. Choke 0.47μ h	027-073
L8	R. F. Choke $5.6\mu h$	027-028
L9	R. F. Choke 5.6μ h	027-028
$\tilde{L}10$	Doubler Coil	
		012-415
L11	R. F. Choke 5.4μ h	027-004
L13	Oscillator Coil	012-511
(T) 1		
T1	I-F Transformer, 1650KC	014-032
T2	I-F Transformer, 455KC	014-086
T3	I-F Transformer, 455KC	014-086
$\tilde{T}4$	I-F Transformer, 455KC	014-086
T_5	Modulation & Output Transf.	
10	modulation & Output Transi.	273-016

REPLACEMENT PARTS LIST — XMTR/RCVR CHASSIS, G-15 — (continued)

		GONSET PART NO.
SW1 SW2 SW3	250KΩ Potentiometer Crystal Switch Rotary Switch	052-081 171-096 171-134
M1	Meter	112-040
K1 K1	Relay, 6VDC Relay, 12VDC	$\frac{111-090}{111-091}$
J1	Antenna Receptacle	344-189
CR1	Germanium Diode	475-001
Y1 Y2	Crystal, SCD Crystal, SCD	486-101-T 486-101-R
V1 V2 V3 V4 V5 V6 V7 V8 V9 V10	Tube, $6BZ6$ Tube, $6U8$ Tube, $6BE6$ Tube, $6BA6$ Tube, $6BA6$ Tube, $6AV6$ Tube, $6AL5$ Tube, $6CW5$ Tube, $6CX8$ Tube, OBZ	$\begin{array}{r} 472\text{-}041\\ 472\text{-}005\\ 472\text{-}010\\ 472\text{-}004\\ 472\text{-}004\\ 472\text{-}015\\ 472\text{-}006\\ 472\text{-}101\\ 472\text{-}084\\ 472\text{-}032\\ \end{array}$

REPLACEMENT PARTS LIST - POWER SUPPLY, G-15

		Gonset Part No.
C100 C101 C102 C103 C104 C105 C106 C107 C108 C109A C109B	$.1\mu f 200V$ $50\mu f 25V$ $.01\mu f Disc 1.5KV$ $.01\mu f Disc 1.5KV$ $.01\mu f Disc 1.5KV$ $.01\mu f Disc 1.5KV$ $.25\mu f Tubular 600V$ $125\mu f Tubular 200V$ $125\mu f Tubular 200V$ $30\mu f 350V$ $30\mu f 350V$	$\begin{array}{c} 079\text{-}002\\ 073\text{-}118\\ 072\text{-}123\\ 072\text{-}123\\ 072\text{-}123\\ 072\text{-}123\\ 072\text{-}123\\ 085\text{-}091\\ 073\text{-}018\\ 073\text{-}018\\ 073\text{-}119\\ 073\text{-}026\\ 073\text{-}026\\ \end{array}$
R100 R101 R102 R103 R104 R105 J101	1 meg Ω, 1/2 W. 150Ω, 2 W. 150Ω, 2 W. 10Ω, 5 W. 100Ω, 2 W. 330Ω, 5 W. 12 pin Male Connector Recep.	$\begin{array}{c} 042\text{-}105\\ 044\text{-}151\\ 044\text{-}151\\ 049\text{-}090\\ 044\text{-}101\\ 049\text{-}024\\ 344\text{-}171 \end{array}$
F1	Fuse, 1 AMP, 125V	482-055
F2	Fuse, 1 AMP, 125V	482-055
F3	Fuse, 10 AMP, 32V	482-007
P101	12 pin Female Connector	344-172
P101	12 pin Female Connector	344-172
V1B	12V Vibrator	117-003
T100	Power Transformer 12/117V	271-068-F
CR100	Silicon Diode 50PIV	474-004
CR101	Silicon Diode 400PIV	474-010
CR102	Silicon Diode 400PIV	474-010
NOTE: Model 3426 (6/117V) contains the following substitutions:	
C101	250µf 50V	073-078
V18	6V Vibrator	117-008
T100	Power Transformer, 6/117V	271-071C
F3	Fuse, 20 AMP, 32V	482-008

NOTES

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PACKING LIST

1- MODEL 3429, G-15 COMMUNICATOR, 12VDC/117VAC

1- 578-069 DOCUMENT ENVELOPE, CONTAINING:

1-	520-127	Breakage Notice
1-	520-436	FCC form #505-D
1-	520-437	FCC Transmitter Identification Card 452-C
1-	520-627	Instruction Manual
1-	520-619	Radio Communication Message Codes
1-	520-620	Crystal Order Certificate
1-	520-239	Registration Card

1- 578-077 HARDWARE ENVELOPE, CONTAINING:

2- 258-110 2- 265-017 2- 263-105 2- 264-022 6- 264-065 1- 219-006 1- 113-022 1- 67&-03€	10/32 x 1/2 Round Head Machine Screw #10 Washer #10 Lockwasher #6 x 3/8 Phillips Head Sheet Metal Screw #10 x 1/2 Phillips Head Sheet Metal Screw Cable Clamp Microphone Hanger D. C. Power Gord Ass'y. A. C. Power Gord Ass'y.
2- 259-860	Knurled Thumb Screws (Attached to Transceiver Cabinet)
1- 453-390	Base Stand (Attached to Transceiver Cabinet)

PACKED BY

ALL CLAIMS FOR SHORTAGES MUST BE REPORTED IMMEDIATELY, ACCOMPANIED BY THIS LIST

GONSET DIVISION Young Spring & Wire Corporation 801 So. Main St., Burbank, Calif.

520-628 N/C