

KT-127A

LAFAYETTE

assembly

manual

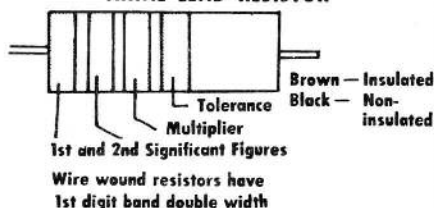
REMOTE CONTROL TRANSMITTER

Price 50c

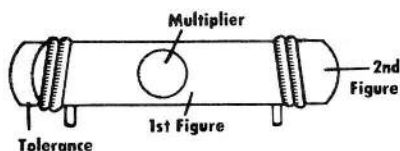
STANDARD COLOR CODE — RESISTORS AND CAPACITORS

INSULATED — UNINSULATED —	FIRST RING BODY COLOR	SECOND RING END COLOR	THIRD RING DOT COLOR	FOURTH RING END COLOR
Color	First Figure	Second Figure	Multiplier	Tolerance
BLACK	0	0	1	
BROWN	1	1	10	
RED	2	2	100	
ORANGE	3	3	1,000	
YELLOW	4	4	10,000	
GREEN	5	5	100,000	
BLUE	6	6	1,000,000	
VIOLET	7	7	10,000,000	
GRAY	8	8	100,000,000	
WHITE	9	9	1,000,000,000	
GOLD				5%
SILVER				10%
NO COLOR				20%

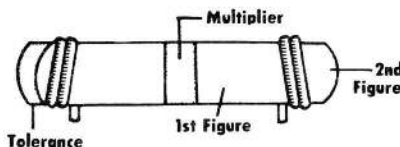
AXIAL LEAD RESISTOR



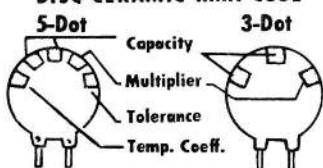
RADIAL LEAD DOT RESISTOR



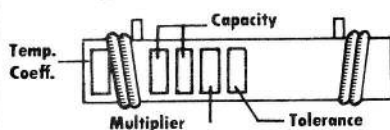
RADIAL LEAD (BAND) RESISTOR



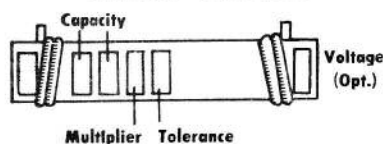
DISC CERAMIC RMA CODE



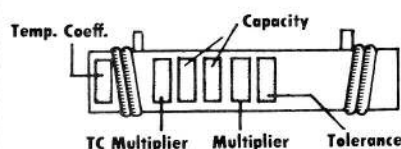
5-DOT RADIAL LEAD CERAMIC CAPACITOR



BY-PASS COUPLING CERAMIC CAPACITOR



EXTENDED RANGE TC CERAMIC HICAP

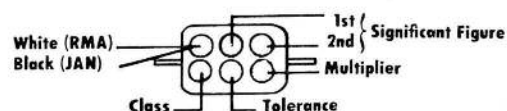


AXIAL LEAD CERAMIC CAPACITOR

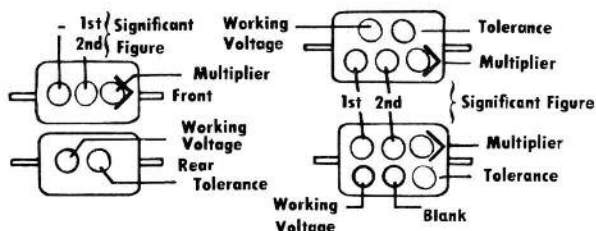


MOLDED MICA TYPE CAPACITORS

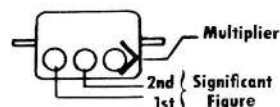
CURRENT STANDARD CODE



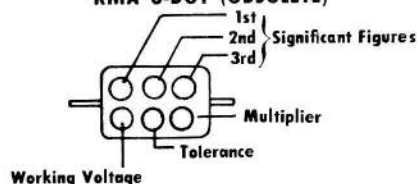
RMA (5-DOT OBSOLETE CODE)



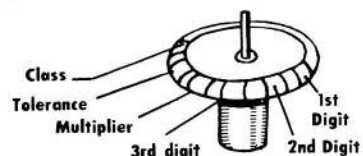
RMA 3-DOT (OBSOLETE) RATED 500 W.V.D.C. ± 20% TOL.



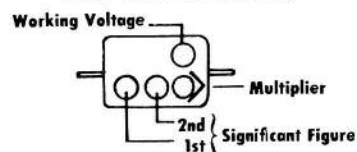
RMA 6-DOT (OBSOLETE)



BUTTON SILVER MICA CAPACITOR

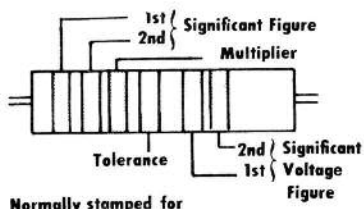


RMA 4-DOT (OBSOLETE)



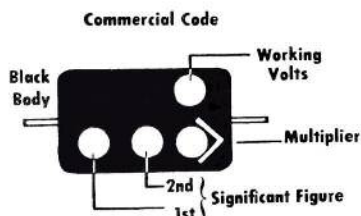
MOLDED PAPER TYPE CAPACITORS

TUBULAR CAPACITOR

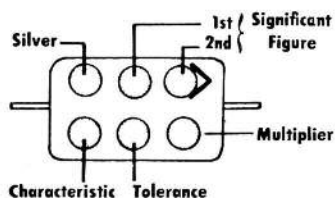


A 2 digit voltage rating indicates more than 900 V. Add 2 zeros to end of 2 digit number.

MOLDED FLAT CAPACITOR



JAN. CODE CAPACITOR



Tolerance: Color Code indicates %.
For example, green = 5% (10% is Silver).
Voltage Rating: Color value × 100 in Volts.

INTRODUCTION AND GENERAL DESCRIPTION

The KT-127 Remote Control Transmitter, when assembled, operates on a frequency of 27.255 Mc. When tuned and operated according to instructions, over one mile line of sight transmission is possible. Stability of the transmitter is assured by the use of a crystal in the circuit, a feature which prevents frequency drift and also provides ease of tuning. The meter which is built into the case, allows a constant check to be kept upon the working of the equipment and the condition of the batteries, as well as providing a means of accurately tuning the transmitter for maximum output. The telescopic antenna measures approximately 60 inches when fully extended, this length providing adequate radiation for good control.

The KT-127 will operate in conjunction with the Lafayette Radio Control Receiver F-208, or with any radio control receiver tuned to 27.255 MC. Full instructions regarding the operation of the transmitter may be found in the section under OPERATION.

CITIZENS RADIO LICENSE

Before operating the KT-127 it will be necessary to obtain an FCC license. There is no examination to take, but the enclosed form must be filled in and mailed to the nearest office of the FCC. Within a short time, usually a week or two, the license will be returned and you will then be ready for legal operation.

Anyone of any age may operate the transmitter provided that: (1) The operator is over 18 years of age and has obtained an FCC license, or, (2) If the operator is under this age, he is accompanied by a licensed operator.

Only U.S. citizens may obtain a Citizen Radio License.

SPECIFICATIONS

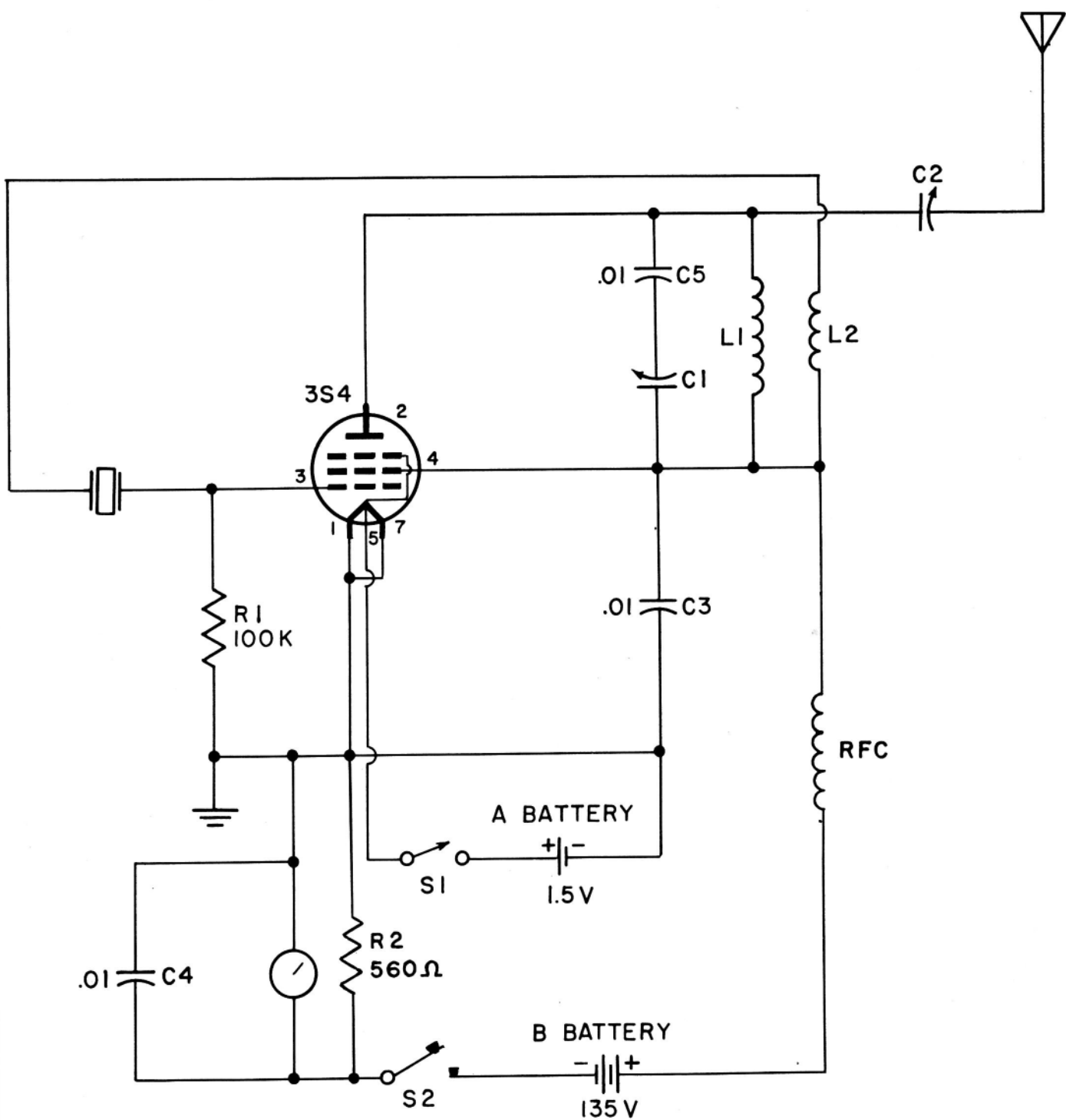
TYPE - - - - - Crystal Controlled
FREQUENCY - - - - - 27.255 MC
TUBE - - - - - 3S4 Power Pentode
SIZE - - - - - 10" High x 2 1/2" Deep x 4" Wide.
SHIPPING WEIGHT - - - - - 5 lbs.
BATTERIES - - - - - "B" - Two 67 1/2 volts, RCA VS218
or BURGESS P45
"A" - One 1 1/2 volts, RCA VS036
or BURGESS No. 2R

DAMAGE IN SHIPMENT

If your kit was damaged in shipment, please notify us immediately, describing the damage, and get in touch with the carrier so that you can make a claim. We will cooperate fully in such cases, but please note that only you can recover from the carrier.

SHIPPING INSTRUCTIONS

If the kit must be returned for service, pack it carefully, making sure that separate or loose parts are adequately covered to prevent damage and movement. The carton in which the equipment was shipped may be used, provided shredded paper or excelsior is used around the unit. Mark the shipment FRAGILE. Ship by prepaid express if possible. Shipment to you will be by express collect. Bear in mind that the carrier will disclaim responsibility for damage if in his opinion it was caused by improper packing.



SCHEMATIC DIAGRAM

REPLACEMENT WARRANTY

In accordance with the terms of the industry-wide Electronics Industry Association (EIA) warranty, Lafayette Radio will replace, free of charge, any defective parts returned to us within 90 days from the date of purchase of this kit by the original purchaser. Such replacement will be made only in cases where parts were defective at the time of sale or became defective in normal operation during the 90-day warranty period. Parts damaged during kit construction or through customer's wiring error are not subject to replacement.

PARTS LIST

CAPACITORS

PART NO.	PART DESIGNATION	DESCRIPTION	QUANTITY
12-8	C3, C5, C4	0.01 μ f ceramic disc capacitor	3
12-76	C1	Variable capacitor	1
12-77	C2	2.7 - 30 μ f antenna trimmer capacitor	1

RESISTORS

13-1	R1	100K ohm 1/2 watt 10% resistor	1
13-49	R2	560 ohm 1/2 watt 10% resistor	1

COILS

23-14	L1	Air wound coil	1
23-6		RF choke	1

SWITCHES

14-7	S1	Toggle switch	1
14-10	S2	Push Button switch	1

MISCELLANEOUS

19-17		7 Pin miniature tube socket	1
19-39		Crystal socket	1
20-95		Telescopic antenna	1
20-128		Antenna clip	1
20-96		Meter, 0-25 ma DC	1
20-73		3-Lug terminal post	2
20-210		1/4" Rubber grommet	3
20-100		Dual solder lug	2
20-52		Single solder lug	1
20-102		Male Battery clip	2
20-103		Female Battery clip	2
20-129		Alignment Tool	1
17-14		27.255 MC Crystal	1

TUBE

		3S4 Power Pentode	1
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HARDWARE

22-10		4-40 x 1/4" machine screw	6
22-14		4-40 Hex nut	4
22-16		#4 Internal tooth lockwasher	4
22-66		2-56 x 1/2" Round head machine screw	1
22-46		2-56 Hex nut	1
22-50		#6 x 1/4" Self-tapping screw	6

PART NO.	DESCRIPTION	QUANTITY
22-20	3/8" x 32 Hex nut	1
22-67	1/2" x 32 Hex nut	1
CABINET PARTS		
10-58	Cabinet	1
10-59	Back Plate	1
10-60	Chassis	1
WIRE		
21-41	Yellow lead (stranded)	12 inches
21-40	Blue lead (stranded)	24 inches
21-16	Red lead (solid)	36 inches
21-15	Black lead (solid)	24 inches
21-17	Bare Wire	12 inches

STEP-BY-STEP INSTRUCTIONS

The instructions which follow have been carefully planned and arranged in the most logical and practical sequence possible. Skilled engineers and technical writers have prepared these instructions while actually assembling samples of this kit. We are certain we have provided you with the best and fastest method of assembling your REMOTE CONTROL TRANSMITTER.

Each instructional step should be read and thoroughly understood before it is performed. In this way, errors will be avoided. Check off each step in the check space () provided. In this way you will avoid omitting any steps. You might also use a colored pencil to cross out each wire and component on the wiring pictorials after insertion.

Assembly and wiring pictorials have been provided to assist you in following the step-by-step instructions. All components have been assigned letter and/or number designations. Those components which also appear on the schematic diagram have generally been assigned the same designations on the wiring pictorials. Other components, such as terminal posts, solder lugs, etc., have been assigned letter and/or number designations.

TOOLS YOU WILL NEED

Just a few standard tools are all you will need to successfully assemble this kit. You should use a small iron (about 25 to 50 watts) for soldering. A pair of long-nose pliers; a pair of diagonal or side-cutting pliers; a small screwdriver and a small adjustable wrench complete your tool requirements.

READ CAREFULLY BEFORE PROCEEDING

NOTES ON WIRING

Each KT-127 kit is supplied with more than enough hookup wire for complete wiring. A length of insulated hook-up wire, unless otherwise specified, should have about 1/4" of insulation removed or "stripped" from each end. Excessive wire exposure increases the possibility of shorts to nearby wiring or terminals. Use a razor blade or sharp knife to cut off the insulation; during this operation, be sure not to cut into the wire itself. The length to which each hook-up wire is to be cut is specified in the step-by-step instructions, and allowance has been made for the removal of the insulation from each end. The hook-up wire supplied is solid wire, but some of the leads are stranded; the latter should be tinned (coated with solder) before connecting to the specified point. To prepare these leads, remove a 1/4" length of insulation from the end of the lead, twist all the strands together with your fingers, and tin the end. To connect a wire to a lug as specified in the step by step instructions, put about three-quarters of the bared end of the wire through the hole in the lug, and then, using the long-nose pliers, wrap the wire around the lug.

NOTES ON SOLDERING

The importance of good soldering technique in the construction of fine quality kits such as the KT-127 cannot be overemphasized. Good solder joints are essential if you are to realize the quality and stability of performance that has been engineered into this unit. If you are inexperienced in soldering, we suggest that you spend a little time practicing with pieces of scrap wire and an old tube socket or terminal strip before attempting to do any soldering on your kit. The purpose of soldering an electrical connection is to provide

a permanent electrical bond between the wires and terminals to be joined. This prevents the formation of corrosion which insulates or produces unwanted resistance between the joined parts. It is not at all difficult to make a good solder connection that will provide the required electrical bond if you will simply observe a few basic rules for good soldering.

1. Use only good quality, rosin-core solder made specifically for radio and television use; a good composition is 60 per cent tin and 40 per cent lead (usually indicated as 60/40). Acid core solder or paste flux must NOT, under any circumstances, be used, as the corrosive effects of these materials will cause much damage to the circuit components.

CAUTION

THE USE OF ACID CORE SOLDER OR PASTE FLUX ON THIS KIT OR ANY PORTION THEREOF AUTOMATICALLY VOIDS OUR WARRANTY COVERAGE.

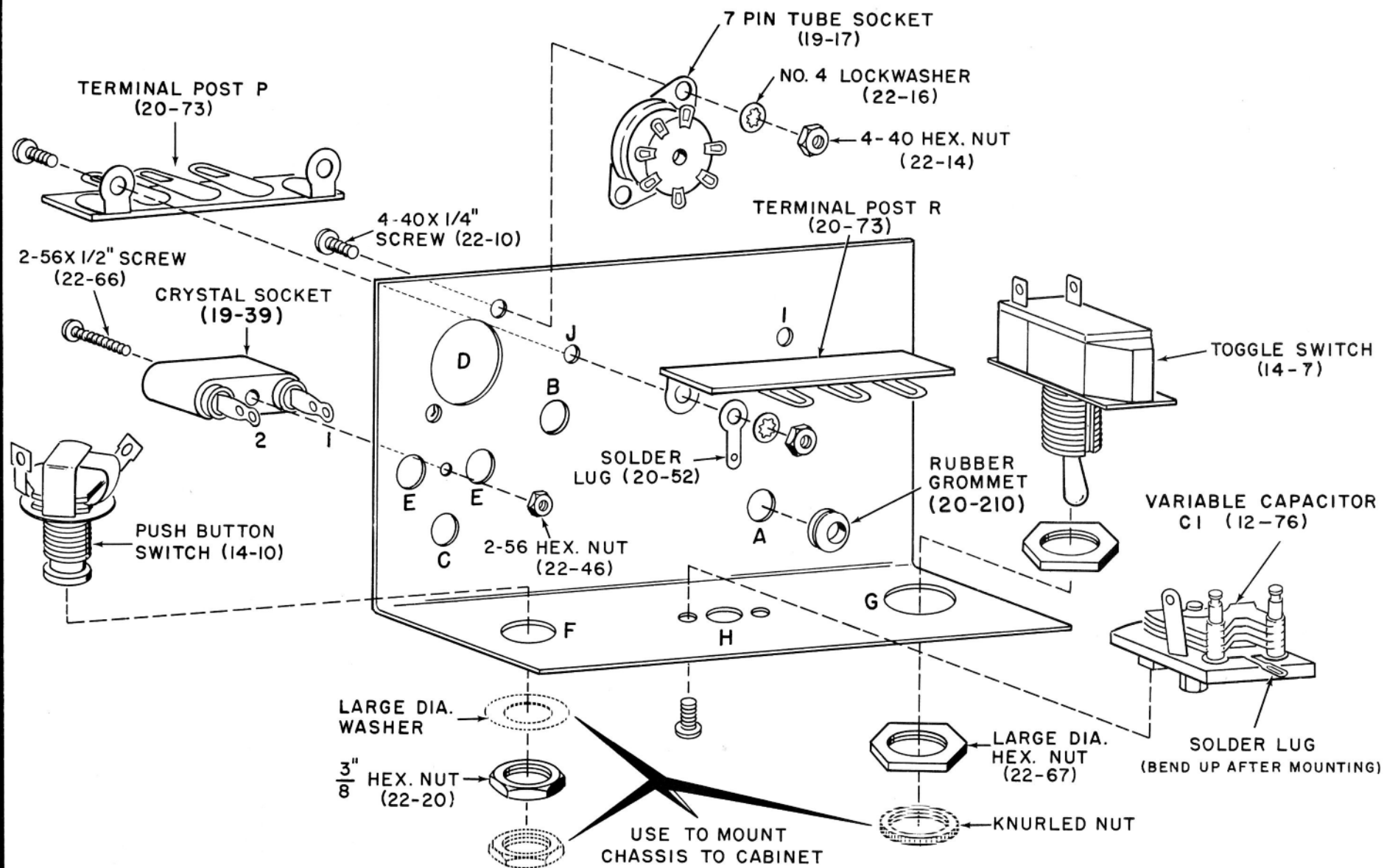
2. Use a good soldering iron, 25-50 watts. The tip of the iron must be kept clean and well tinned, in accordance with the instructions of the soldering iron manufacturer, to obtain consistently good connections. The tip should present a bright appearance and be free of excess solder. An old rag or a pad of steel wool may be used to wipe the hot tip clean occasionally during use.
3. Be sure leads and terminals to be joined are clean and free of wax or corrosion before soldering. The solder will not adhere properly to the joint if the leads and terminals are dirty or corroded. This will usually result in a "cold" or high resistance connection.
4. A good mechanical connection should always be made before soldering, by crimping the leads on the terminals with your pliers. Do not rely on solder alone for physical strength. Stranded hook-up wire should always be tinned with solder before being connected.
5. To solder properly, apply the iron to the joint for a few seconds; then apply the solder and hold the iron on the connection until the solder flows freely. The solder must flow completely over the connection. Simply melting drops of solder onto the connection will not produce the desired results, but will result in a "cold" solder connection. This presents a dull and pitted or "grainy" appearance. A good connection will have a smooth and shiny appearance. Remember, the joint itself must be heated sufficiently to melt solder before the solder will flow smoothly and freely in and around the connection; however you must be careful not to apply heat too long. Excessive heat from the iron may damage components and insulation on wires connected to the joint. When soldering a joint having a small component connected to it (a 1/2 watt resistor, for example) the component may be protected from excessive heat from the iron by grasping the lead between the joint and the component with long-nose pliers. The pliers will then conduct most of the heat away from the component, preventing overheating. Do not use too much solder when making a connection. Use only enough to completely cover all leads and to fill lug or terminal holes. Excessive use of solder may result in the formation of solder "bridges" or shorts between adjacent terminals or nearby wiring, particularly on tube sockets and switch terminals. Also, solder may flow into the switch contacts, destroying switch action.

The instructions tell you when to solder and when not to solder a connection. When you see "No Solder" (NS) after or during a step, simply wrap or "crimp" the lead to the terminal and proceed to the next step. When all leads have been connected to this terminal, a solder designation (S) will follow. The figures which appear with these designations indicate the number of connections which have been made to that terminal or lug when the "Solder" or "No Solder" instruction is given.

MECHANICAL ASSEMBLY

To assist you in assembling this kit mechanical assembly views are shown which supplement the step-by-step instructions. In order to clarify the drawings not all the mounting hardware is shown. The amount of hardware used to assemble each part is specified in the step-by-step instructions.

NOTE: 4-40 Hardware (2) means to use two 4-40 x 1/4" screws, two #4 lockwashers, and two 4-40 x 1/4" hex nuts to mount the part.



PICTORIAL 1

REFER TO PICTORIAL 1

1. () Select the chassis (part #10-60) and mount the three rubber grommets (part #20-210) at holes A, B and C.
2. () Mount the 7 pin miniature tube socket (part #19-17) at hole D, using 4-40 Hardware (2). Make sure the wide space between the socket pins is located in the position shown.
3. () Mount the crystal socket (part #19-39) at holes E, using (1) 2-56 x 1/2" screw and nut. Orient socket as shown, with terminal 2 at the left hand side.
4. () Select the push button switch (part #14-10), and remove the 3/8" securing nut and washer, if attached. Mount the switch at hole F, using a 3/8" hex nut (part #22-20) to secure the switch. The washer and nut previously removed from the switch should be put aside temporarily.
5. () Select the toggle switch (part #14-7). Remove the knurled nut and the 1/2" hex nuts if attached. Screw one of the hex nuts partway onto the shaft, positioning it at a distance of 3/16" from the face of the switch. The method of mounting this nut is shown in Pictorial 2.
6. () Mount the toggle switch at hole G, using the remaining 1/2" hex nut to secure the switch to the chassis. The knurled nut must be put aside temporarily.
7. () Mount the variable capacitor C1, (part #12-76) at hole H, using (2) 4-40 x 1/4 screws. Orient as shown in Pictorial 1. Bend the short solder lug up towards the moving plates of the capacitor.
8. () Select two 3-lug terminal posts (part #20-73) and the single solder lug (part #20-52). Mount these at holes J and I as shown in the Pictorial. Use one 4-40 screw, nut and lockwasher at each hole. The single solder lug is mounted to the screw at hole J; the 3-lug terminal posts are mounted on opposite sides of the chassis and must be oriented as shown.

This completes the mechanical assembly.

WIRING INSTRUCTIONS

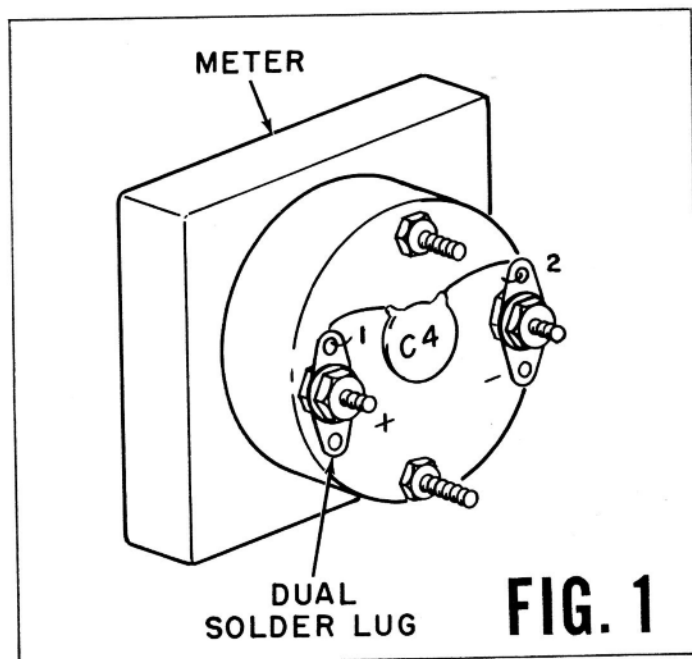
REFER TO PICTORIAL 2.

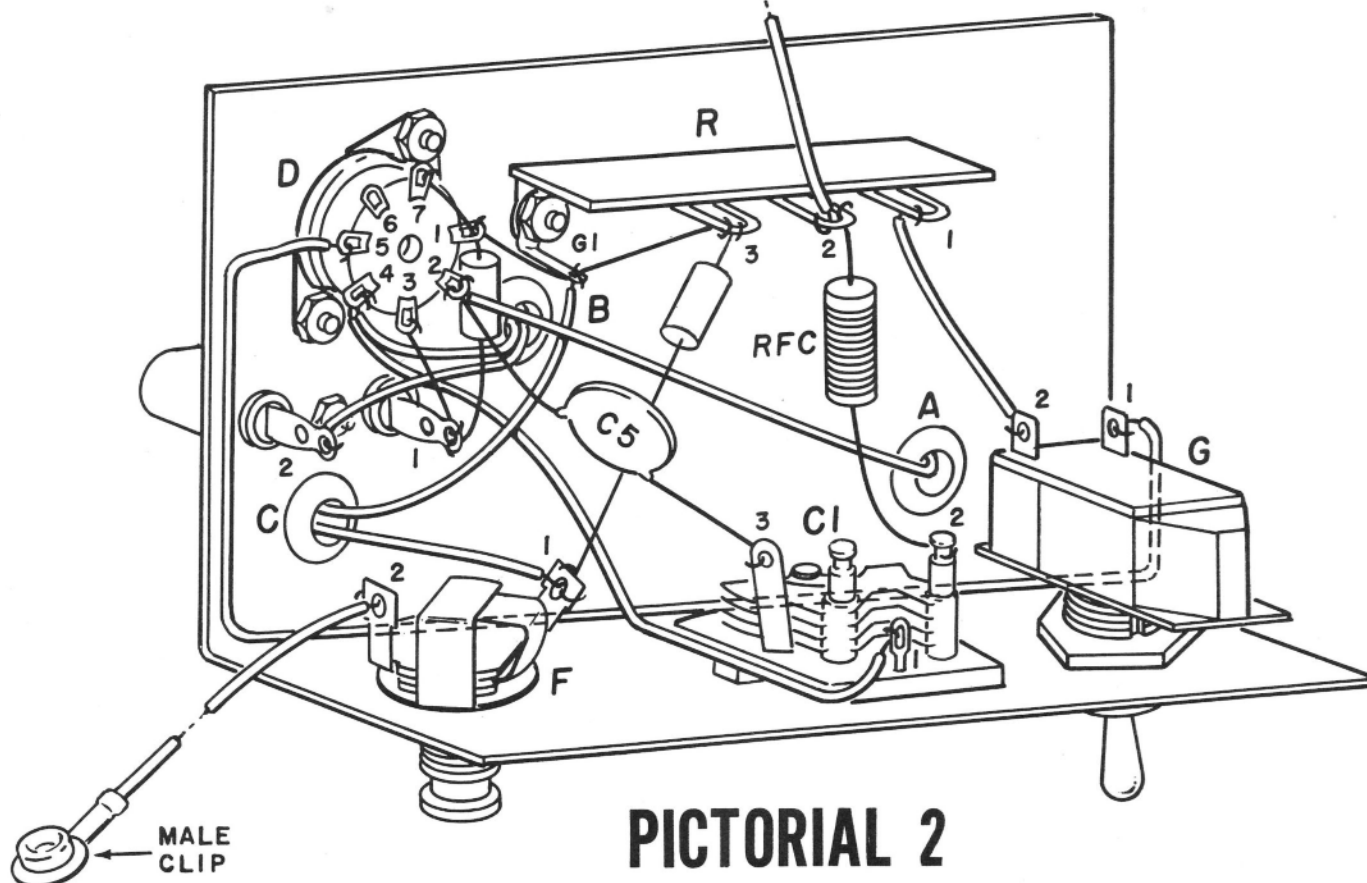
9. () Select the air wound coil L1 (part #23-14) and cut each wire end to 1/2" in length. Bend up each end to form a hook, and insert one end through terminal post P, lug 1, the other end through lug 3 of terminal post P. Crimp the wire ends around the lugs and apply a small amount of solder - enough to secure the coil, but leaving the lug holes clear for the insertion of another lead.
10. () Connect one end of a 7 1/4" length of red lead to terminal post P, lug 3 (NS2). Wind the remaining length tightly around coil L1 as shown, making three closely wound turns and connect the end to terminal post P, lug 2 (NS1). NOTE. This red lead must be wound in the opposite direction to the windings of coil L1.
11. () Connect one end of a 4" length of red lead to terminal post P, lug 1 (NS2). Insert the other end through the grommet at hole A, and connect to socket D pin 2 (NS1).
12. () Select a 0.01 μ f capacitor (part #12-8) and cut each wire end to 1/2" in length. Connect one end to the variable capacitor C1, lug 3 (S1), and the other end to socket D, pin 2 (S2).
13. () Connect one end of a 7" length of black lead to socket D, pin 5 (S1). Dress the lead as shown and connect the other end to switch G, lug 1 (S1).
14. () Connect one end of a 3 3/4" length of red lead to socket D, pin 4 (NS1). Connect the other end to the variable capacitor C1, lug 1 (S1). Dress the lead as shown.
15. () Connect one end of a 2 1/2" length of red lead to terminal post P, lug 3 (NS3). Insert the other end of the lead through the grommet at hole B and connect to socket D, pin 4 (S2).

- 16.() Select a 0.01 μ f capacitor (part #12-8) and cut one wire end to 3/4" in length, the other end to 1/2" in length. Connect the 3/4" end to terminal post P, lug 3 (S4). Solder the other end to the mounting lug on the terminal post, and position as shown.
- 17.() Connect one end of a 1" length of bare wire to socket D, pin 3 (S1). Connect the other end to the crystal socket, lug 1 (NS1).
- 18.() Select a 100K ohm 1/2 watt 10% resistor (part #13-1) and cut one end to 5/8" in length, the other end to 3/4". Connect the 3/4" end to socket D, through pin 1 (NS1), to pin 7 (S1). Connect the other end to the crystal socket, lug 1 (S2).
- 19.() Connect one end of a 3/4" length of bare wire to socket D, pin 1 (S2). Connect the other end to solder lug G1 (NS1).
- 20.() Connect one end of a 3" length of black lead to the crystal socket, lug 2 (S1). Insert the other end through the grommet at hole B and connect to terminal post P, lug 2 (S2).
- 21.() Cut both wire ends of the RFC coil (part #23-6) to 5/8" in length. Connect one end to variable capacitor C1 lug 2 (S1). Connect the other end to terminal post R, lug 2 (NS1).
- 22.() Connect one end of a 1" length of bare wire to terminal post R, lug 3 (NS1). Connect the other end to solder lug G1 (NS2).
- 22a () Select the 560 ohm 1/2 watt resistor (part #13-49). Cut one wire end to 5/8", the other to 1". Connect the shorter end to switch F lug 1 (NS1). Connect the longer end to terminal post R lug 3 (NS2).
- 23.() Connect one end of a 3" length of black lead to solder lug G1 (S3). Insert the other end through the grommet at hole C and leave temporarily disconnected.
- 24.() Connect one end of a 3 3/4" length of red lead to switch F, lug 1 (S2). Insert the other end through the grommet at hole C and leave temporarily disconnected.
- 25.() Connect one end of a 2 1/2" length of black lead to switch G, lug 2 (S1). Connect the other end to terminal post R, lug 1 (NS1).
- 26.() Insert the bared end of a 4" length of yellow lead between the prongs of a female battery clip (part #20-103) and crimp together over the wire (S). Connect the other end to terminal post R, lug 2 (S2).
- 27.() Insert the bared end of a 4" length of blue lead between the prongs of a male battery clip (part #20-102) and crimp together over the wire (S1). Connect the other end to switch F, lug 2 (S1).

This completes the wiring of the chassis, which must now be put aside temporarily.

- 28.() Select the 0-25 ma DC meter (part #29-96). Remove the nuts and washers from the positive and negative terminals.
- 29.() Remove the U shaped mounting bracket and nuts, and put these aside temporarily.
- 30.() Mount one dual solder lug (part #20-100) on each of the meter terminals, using the nuts and washers removed in step 28. Position the solder lugs as shown in Figure 1.
- 31.() Cut each wire end of a 0.01 μ f capacitor (part #12-8) to 3/4" in length. Connect one end to lug 1 (S1) of the dual solder lug mounted on the positive terminal. Connect the other end to lug 2 (S1) of the dual solder lug mounted on the negative terminal.





PICTORIAL 2



- 32.() Select the cabinet (part #10-58), and remove the protecting tape covering the A battery contacts.
 - 33.() Mount the meter into the front of the cabinet, using the U shaped bracket and nuts to secure the meter from within the cabinet as shown in Pictorial 3.
 - 34.() Select the antenna (part #20-95), and the antenna clip (part #20-128). Connect one end of a 1 1/4" length of bare wire to the lug on the antenna clip (S1), and insert the clip into the socket within the upper mounting shaft (protruding from the stand-off insulator). See Pictorial 3.
 - 35.() After removing the securing nuts and washers, mount the antenna to the side of the cabinet. Use the nuts and washers to secure the antenna firmly. Adjust the mast so that no more than 1/4" protrudes from the bottom of the lower stand-off insulator.
 - 36.() Mount the chassis into the cabinet, allowing the shafts of the switches to protrude through the holes on the front of the cabinet. To secure the chassis, use the knurled nut (previously set aside) on the toggle switch shaft, and the 3/8 hex nut and washer (also previously set aside) on the push button switch shaft. Make sure all securing nuts are tight.
 - 37.() Feed the free end of the red lead from the grommet at hole C between the meter and the bracket and connect to lug 4 (S1) of the dual solder lug. Refer to Pictorial 3.
 - 38.() Connect the free end of the black lead from the grommet at hole C to lug 3 (S1) of the dual solder lug.
 - 39.() Select the trimmer capacitor C2 (part #12-77), and bend the solder lugs outwards until they form a straight line with the body of the capacitor. Cutoff the two small mounting tabs.
 - 40.() With the capacitor in the position shown in Pictorial 3, solder one end to terminal post P, lug 1 (S3). Use the lower eyelet of the terminal post lug. Use sufficient solder for a strong connection. Do not use the end with the spade shaped lug to make this connection.
 - 41.() Insert the free end of the bare wire from the antenna clip through the lug at the other end of the trimmer capacitor. Wrap the wire around the lug and after cutting off excess wire, solder.
 - 42.() Connect one end of a 2 1/4" length yellow lead to terminal post R, lug 1 (S2). Connect the other end to the A battery holder, lug 1 (S1).
 - 43.() Connect one end of an 8" length of blue lead to terminal post R, lug 3 (S3). Connect the other end to the A battery holder, lug 2 (S1). Dress the lead as shown in Pictorial 3.
- This completes the wiring of the KT-127.
- 44.() Insert the crystal (part #17-14) into the socket.
 - 45.() Insert the 3S4 vacuum tube into the socket. Make sure the wide space between pins lines up with the similar space on the sockets, otherwise damage to pins may result.
 - 46.() Insert the bared end of a 3" length of blue lead between the prongs of a male battery clip (part # 20-102) and crimp together over the wire (S1). Similarly, connect a female battery clip (part # 20-103) to the other end of the lead, (S1). Put aside temporarily.

PRELIMINARY CHECKS

The construction of your KT-127 is now completed. Before proceeding any further, check over the wiring carefully to make sure that you have not made any errors or have left any connections unsoldered. If possible, have a friend check the construction with you, as there is a tendency for a person to repeat his errors.

MOUNTING OF BATTERIES

- 1.() With the ON-OFF switch in the OFF position, mount the 1 1/2 volt A battery, with the positive terminal uppermost. Disregard any polarity markings that may appear on the battery holder itself.
- 2.() Select the blue lead terminated with a battery clip at each end (previously prepared in step 46). Connect the male clip to the B-terminal of one 67 1/2 volt B battery, and the female clip to the B + terminal of the second B battery.
- 3.() Placing the B batteries against each other, as shown in Pictorial 3, connect the free end of the blue lead terminated with a battery clip to the remaining B-terminal. Connect the free end of yellow lead terminated with a battery clip to the remaining B + terminal.
- 4.() Mount the two batteries in position as shown.

INITIAL CALIBRATION

1. Extend the antenna to its full length.
2. Fully close the antenna trimmer capacitor C2 (inside cabinet), then open partway - approximately one and one half turns of the adjusting screw in a counter-clockwise direction. Use the alignment tool provided.
3. Set the switch on the front of the cabinet to the ON position. Allow a period of 1 minute for the transmitter to warm up.
4. Pressing the transmitt button, adjust the tuning capacitor (front of cabinet) for a minimum reading, or sharp dip, using the alignment tool.
5. Adjust the antenna trimmer (inside cabinet) for a further dip in reading.

Repeat steps 4 and 5.

When making adjustments, the meter reading will rise and fall slowly. The dip to tune for in all cases is a sudden drop in reading which will occur at the point of correct loading, or maximum output. When tuning, or when using in the normal manner, care must be taken not to allow the fingers or the hand to touch the antenna at any point, otherwise a high loss in output will result.

6. Mount the back plate (part #10-59) to the rear of the cabinet, using (6) #6 x 1/4" self-tapping screws.

IN THE EVENT OF DIFFICULTY

Carefully recheck all wiring, inspect solder connections, and make sure the batteries are correctly connected. In the event that these checks do not enable you to locate the defect, the KT-127 may be returned to us for repair. The charge for this service is \$2.50 plus the cost of any parts which have been damaged during installation in the kit through improper handling or soldering. Kits which were not wired in accordance with our detailed instructions, or kits wired with acid core solder or paste flux are not eligible for service, and will be returned to you at your expense.

OPERATION

The batteries which may be used to operate the transmitter are listed in the specifications given in the early part of this manual. Although the A batteries will run down first, the B batteries will last for several months with average use, since there is a drain on these batteries only when the push button is pressed. When the transmitter is not in use, always make sure that the ON-OFF switch is in the OFF position, otherwise the A batteries will be rundown needlessly. **CAUTION.** When storing the transmitter for any length of time, always remove the batteries and keep them in a cool dry place in order to prevent their deterioration.

NOTE: It is illegal to operate this transmitter before obtaining an FCC license.

PRELIMINARY TESTS

When moving the transmitter to various locations, the meter readings may vary slightly. This occurs when the ground is radically different from one point to another. Before commencing operations, it is advisable therefore, to re-adjust the front panel trimmer for a minimum reading. For maximum transmission do not operate the transmitter near trees, large hills or buildings.

The transmitter should be taken about 100 feet away from the receiver and a test meter plugged into the receiver. Have someone push the transmitter button, observe the receiver meter reading, and retune the receiver according to the directions furnished by the manufacturer.

Make another check at 500 feet, then at 1,000 feet from the transmitter. If readings are normal at this distance, the model is sure to operate under good control at any distance at which it is still visible.


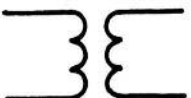


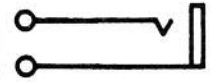




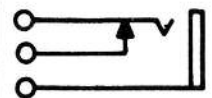
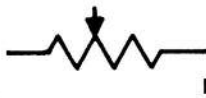







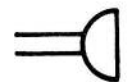



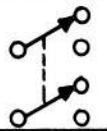
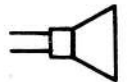
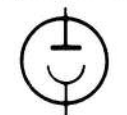

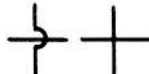



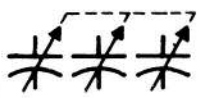













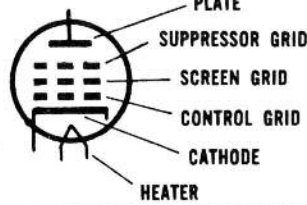
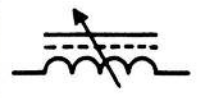
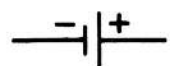


Extremely valuable aids in understanding and using radio controlled models are the books (both available from Lafayette Radio) which are listed below:-

"Model Control by Radio" by Edward L. Stafford Jr., Gernsback Library #43, Lafayette BK-900 at \$1.00

"Radio Control Handbook" by Howard G. McEntee, Gernsback Library #53, Lafayette BK-910 at \$2.25

Those who are new in the field of radio control, and would like to obtain the equipment necessary for this purpose, (in addition to the transmitter) should refer to the Lafayette Catalog. Various types of escapements for use on models are listed, in addition to the F-208 Radio Control Receiver.

SCHEMATIC SYMBOLS

	FIXED RESISTOR		AIR CORE TRANSFORMER		MULTICELL BATTERY		FUSE		OPEN CIRCUIT JACK
	TAPPED RESISTOR		IRON CORE TRANSFORMER		S.P.S.T. SWITCH		KEY		CLOSED CIRCUIT JACK
	VARIABLE RESISTOR OR POTENTIOMETER		CAPACITANCE TUNED I.F. TRANSFORMER		S.P.D.T. SWITCH		THERMISTOR		PHONO JACK
	FIXED CAPACITOR		PERMEABILITY TUNED I.F. TRANSFORMER		D.P.S.T. SWITCH		MICROPHONE		TRANSISTOR
	ELECTROLYTIC CAPACITOR		WIRES JOINED		D.P.D.T. SWITCH		LOUDSPEAKER		PHOTOTUBE
	VARIABLE CAPACITOR		WIRES CROSSED		ROTARY SWITCH		EARPHONES		DIODE
	GANGED CAPACITOR		ANTENNA		GROUND		NEON LAMP		TRIODE
	AIR CORE INDUCTOR		LOOP ANTENNA		PIEZOELECTRIC CRYSTAL		LAMP		PENTODE
	IRON CORE INDUCTOR		DIPOLE ANTENNA		RECTIFIER		METER	TUBE ELEMENT DESIGNATIONS 	
	VARIABLE POWDERED IRON CORE INDUCTOR		SINGLE CELL BATTERY		AC SIGNAL		AC CONNECTOR		

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