

DF-1063

INSTRUCTIONS
FOR
TWO-FREQUENCY MODIFICATION KIT PL-4034595-G1
(For Oscillator Models 4EG12A10 and 4EG12A12)

DESCRIPTION

Modification Kit PL-4034595-G1 provides the components required to convert Oscillator Model 4EG12A10 and Model 4EG12A12 for two-frequency operation. The jumper grounding the emitter of the Channel A oscillator must be removed when the Channel B oscillator is added. The proper frequency can then be selected by the Channel Selector Switch which causes oscillation by grounding the emitter of the desired oscillator.

Since common tuned circuits are used for both channels, the two operating frequencies should not be more than 0.4% of the higher operating frequencies apart, unless special alignment procedures are used.

INSTALLATION

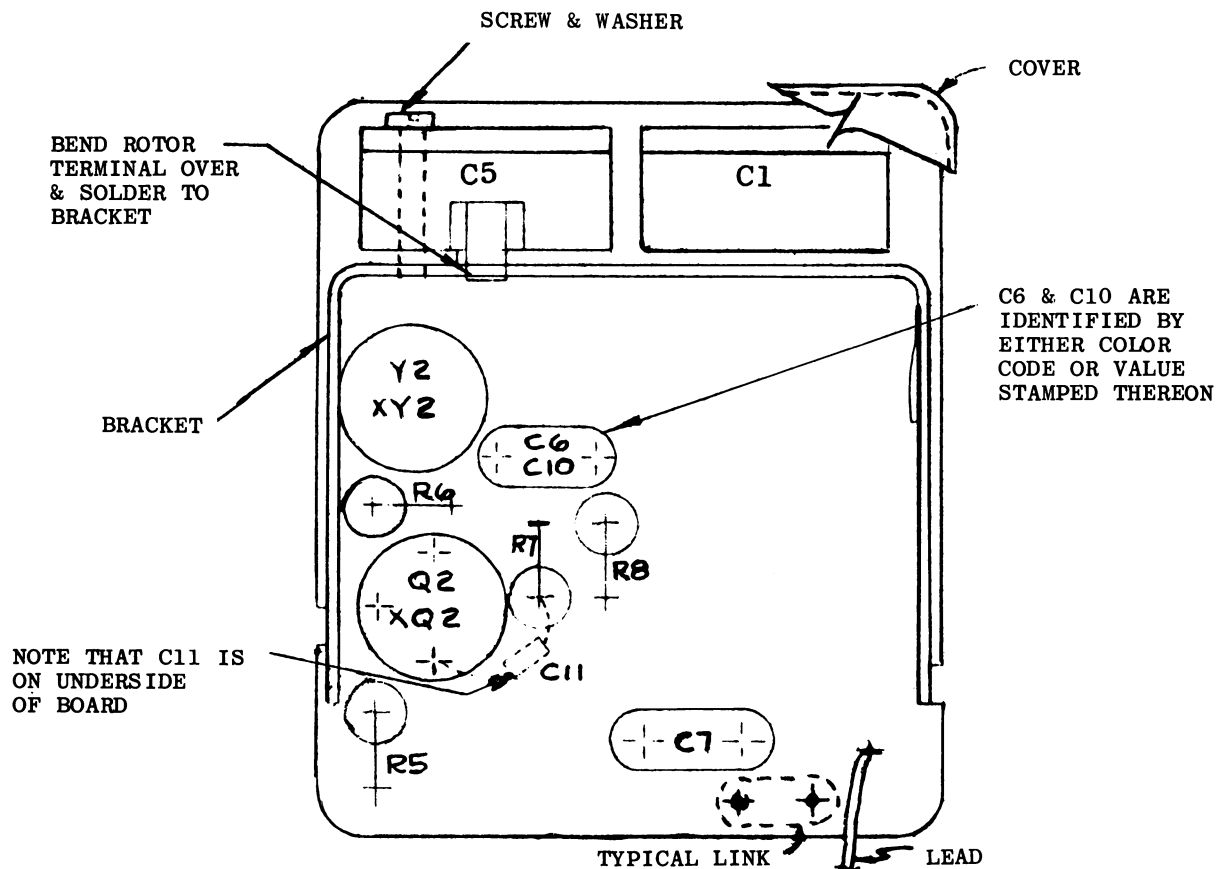
Install the Modification Kit in accordance with the directions on Modification Instructions A-4034571 included in this instruction.

PARTS LIST

<u>Symbol</u>	<u>G-E Part No.</u>	<u>Description</u>
<u>CAPACITORS</u>		
C5	7484389-P66	Ceramic, variable; 7 mmfd to 45 mmfd, 500 VDCW, stator terminal straight out, rotor terminal bent.
C6	5494210-P38	Ceramic disk, insulated, temp compensating, 7.0 mmfd $\pm 5\%$, 500 VDCW.
C7	5494481-P112	High dielectric, ceramic disc, 1000 mmfd $\pm 10\%$, 500 VDCW.
C10	5494210-P44	Ceramic disc, insulated, temp compensating, 15 mmfd $\pm 5\%$, 500 VDCW.
C11	5491601-P13	Fixed, 0.47 mmfd $\pm 5\%$, 500 VDCW.
<u>TRANSISTOR</u>		
Q2	4036830-P2	PNP. Germanium.

<u>Symbol</u>	<u>G-E Part No.</u>	<u>Description</u>
<u>RESISTOR</u>		
R5	3R77-P682J	Composition, 6800 ohms, $\pm 5\%$, 1/2 w.
R6	3R77-P272J	Composition, 2700 ohms, $\pm 5\%$, 1/2 w.
R7	3R77-P471J	Composition, 470 ohms, $\pm 5\%$, 1/2 w.
R8	3R77-P182J	Composition, 1800 ohms, $\pm 5\%$, 1/2 w.
<u>SOCKETS</u>		
XQ2	4036353-P2	Transistor, 4-contacts, stand-off type: Sim to Elco 3308.
XY2	5490277-P1	4-contacts, insulated low-loss mica fill- ed phenolic, contact res .03 ohm max. 1 amp. Sim to Elco 3303.
<u>CRYSTAL</u>		
Y2	4033466-P1	Quartz, anti-resonance, freq. range: 20 to 55.5 MC. When reordering give G-E Dwg. and Part No. and specify exact freq needed. 150-170 MC operation: Crystal Freq - $\frac{(\text{Operating freq} - 8.7)}{3}$. 25-50 MC operation: Crystal freq 4.7.

COMMUNICATION PRODUCTS DEPARTMENT
GENERAL ELECTRIC COMPANY
LYNCHBURG, VIRGINIA



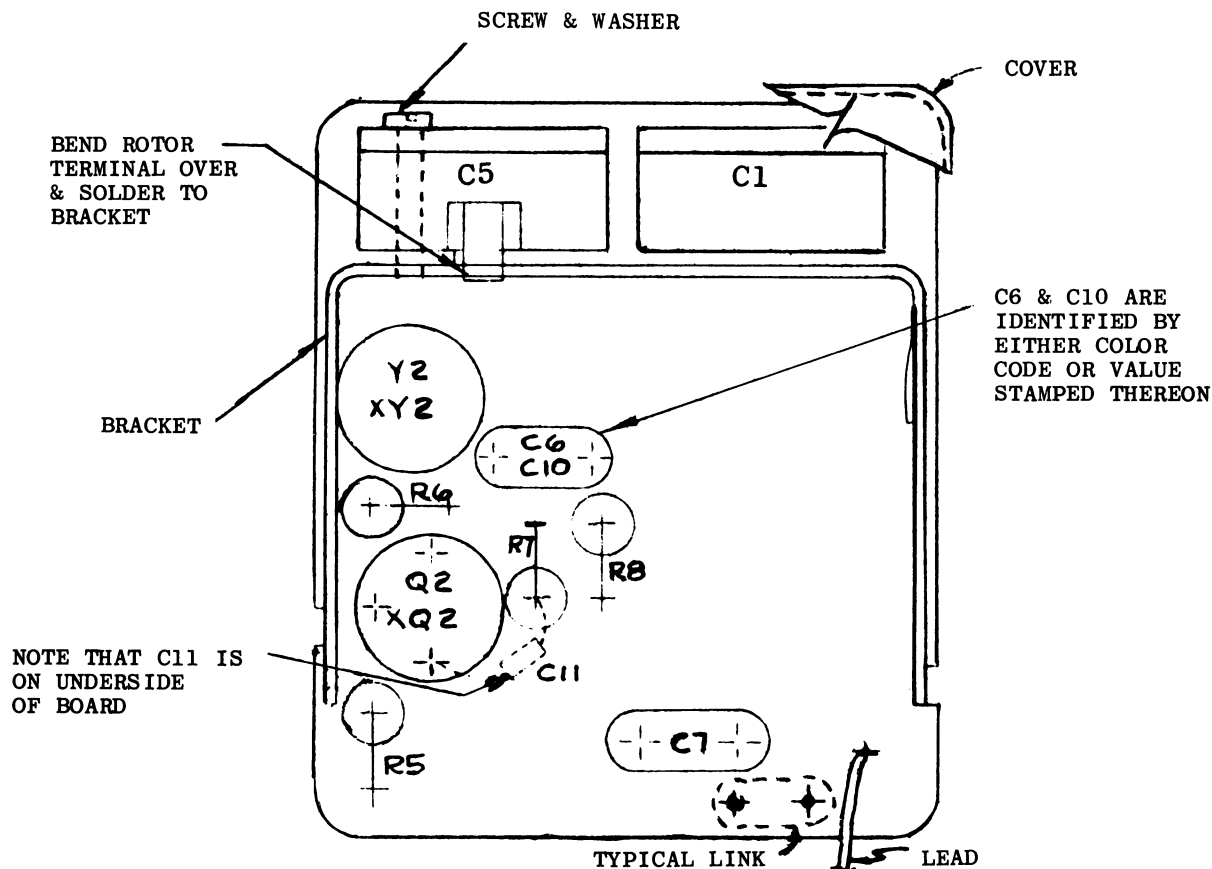
INSTRUCTIONS:

1. REMOVE COVER. UNSOLDER LEAD FROM BOARD NEAR THE PRESENT TRANSISTOR.
2. REMOVE LINKS FROM PINS ON LOWER SIDE OF LARGE BOARD (RF) BY UNSOLDERING.
3. REMOVE FIRST OSCILLATOR ASSEMBLY FROM THE LARGE BOARD.
4. REMOVE SOLDER FROM HOLES WHERE NEW COMPONENTS ARE TO BE ADDED. THIS IS EASILY ACCOMPLISHED BY HOLDING IRON ON LOWER SIDE OF BOARD AT EACH HOLE TO BE CLEARED. WHEN THE SOLDER IS MELTED PUSH A COMMON ROUND TYPE OF TOOTHPICK THROUGH THE HOLE FROM THE TOP SIDE OF THE BOARD. THEN REMOVE IRON BEFORE REMOVING TOOTHPICK.
5. INSTALL COMPONENTS PER ASSEMBLY SHOWN ABOVE. NOTE THAT ONLY C6 OR C10 IS TO BE USED. C6 WILL BE USED ONLY WITH 4EG12A10 WHILE C10 WILL BE USED ONLY WITH 4EG12A12. ASSEMBLE C5 IN A LIKE MANNER TO THAT OF C1 ADJACENT TO IT. MAKE SURE ONLY ONE FIBER WASHER IS USED ON EACH SIDE OF C5. NOTE THAT SOME UNITS AN EXTRA WASHER AND SCREW WILL RESULT. ON EARLIER MODELS THE WASHER AND SCREW WILL NOT EXIST. ON THESE UNITS CARE MUST BE USED IN ASSEMBLING C5 SO AS TO PREVENT DAMAGE TO C5 AND THE HEATER WIRE WRAPPED ABOUT THE BRACKET.
6. CLIP THE WIRE JUMPER THAT EXISTS ON THE CONNECTIONS END OF THE MAIN BOARD (RF).
7. THE WIRING DIAGRAM FOR THIS KIT AND ADJUSTMENT PROCEDURES ARE COVERED IN THE MAIN INSTRUCTION BOOK.

Installation Diagram

TWO-FREQUENCY MODIFICATION INSTRUCTIONS MODELS 4EG12A10 & 12

(A-4034571, Rev. 1)



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2. REMOVE LINKS FROM PINS ON LOWER SIDE OF LARGE BOARD (RF) BY UNSOLDERING.
3. REMOVE FIRST OSCILLATOR ASSEMBLY FROM THE LARGE BOARD.
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