

DF-4061

PRODUCTION CHANGE SHEET
FOR
CONTROL UNITS
MODELS 4EC44A10, 11, 12, REV. G
MODEL 4EC44A13, REV. F

The changes listed below are identified by the letter following the Model Number on the front mounting plate.

REV. A

Purpose

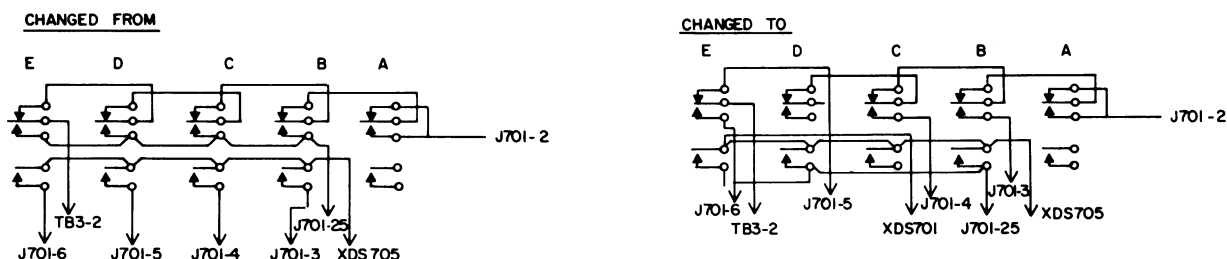
To eliminate output on more than one channel when 2 or more push buttons are depressed, and to eliminate keying B-plus in standby condition.

Changes

J701-25 rewired from S701-3B, C, D, E to S701-5B, C, D, E.
 J701-3 rewired from S701-5B to S701-3B
 J701-4 rewired from S701-5C to S701-3C
 J701-5 rewired from S701-5D to S701-3D
 J701-6 rewired from S701-5E to S701-3E

Wire deleted between J701-16 and J701-30.
 Wire added between J701-15 and J701-16.

Wiring Diagram Changes



REV. B (Models 4EC44A10, 11, 12 only)

General mechanical changes to improve the Control Unit.

REV. C (Models 4EC44A10, 11, 12)

REV. B (Models 4EC44A13)Purpose

1. To eliminate Control Unit wiring changes due to ignition system polarity.
2. To provide minimum audio level at the earpiece.
3. To reduce feedback.
4. To eliminate standby function in Model 4EC44A12.
5. To provide mounting holes and terminals for options.

Changes

1. (a) A diode (CR702) was connected between J701-16 and J701-30 (4EC44A11, 13) to prevent solenoid lock-up when S703 is turned to OFF position.
(b) A diode (CR701) was connected between TB3-4 and TB3-1 (from XDS702 to J701-13 in 4EC44A10) to prevent Transmitter keying through sneak circuits when switching to Standby function.
2. A 3-ohm resistor was connected in series with the earpiece control (R703), between R703-1 and TB1-3, to provide a minimum audio level at the earpiece.
3. Handset 4EM22B10 is used in place of 4EM22A10 to reduce feedback.
4. A jumper was connected between the "ON" and STANDBY positions of S703 (terminals COIL and ACC) to eliminate the STANDBY function (Model 4EC44A12 only).
5. Mechanical changes were made to provide mounting facilities for future options.

Parts List Changes

<u>Symbol</u>	<u>Description</u>
CR701 (Added)	Diode, silicon. G-E 5490415-P2 (Model 4EC44A10 only).
CR702 (Added)	Diode, silicon. G-E 5490415-P2 (Models 4EC44A11, 13 only).
R704 (Added)	Resistor, wirewound; 3-ohm $\pm 10\%$, 1/2-w. G-E 3R18-P68.
TB3 (Deleted)	Terminal board; 3 terminals. G-E 7775500-P7.

REV. C and REV. B (Cont'd)

<u>Symbol</u>	<u>Description</u>
TB3 (Added)	Terminal board; 5 terminals. G-E 7775500-P11.
TB4 (Added)	Terminal board; 5 terminals. Models 4EC44A11, 13 only. G-E 7487424-P7.
TB5 (Added)	Terminal board; 4 terminals. Models 4EC44A10, 12 only. G-E 7775500-P10.

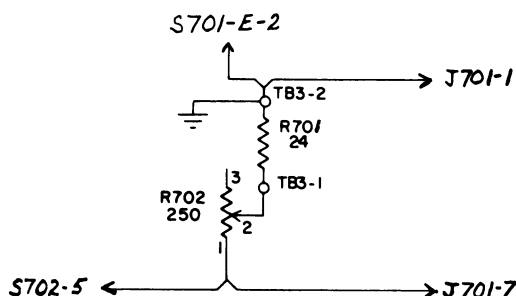
REV. D (Models 4EC44A10, 11, 12)
REV. C (Model 4EC44A13)

Purpose

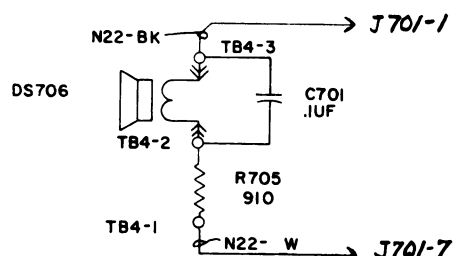
To provide delayed reverting circuits in the dial units (Models 4EC44A10, 12); to disconnect sounder circuit from handset earpiece and provide a sounder in the control unit (all models) to alert the operator.

Circuit Changes

Delayed reverting component board A701 was added to Models 4EC44A10 and 4EC44A12. The earpiece level control R702 was removed (all models) and the SOUNDER (DS706) was added as shown below:



ORIGINAL CIRCUIT



MODIFIED CIRCUIT

Parts List Changes

<u>Symbol</u>	<u>Description</u>
A701 (Added)	Component Board Assembly PL-19B204011-P1, consisting of the following components: (Models 4EC44A10 and 4EC44A12 only). C1 - Electrolytic capacitor; 30- μ f +100% -50%, 25-VDCW. Sim to Sprague S45553. G-E 5491000-P1.

REV. D and REV. C (Cont'd)

<u>Symbol</u>	<u>Description</u>
	CR3 - Diode, silicon. G-E 5490415-P2. thru CR6
	K1 - Relay, sealed reed: resistance 1000 ohms, $\pm 15\%$, 12-VDC. 1 form A contact, rated 4 watts, 250-v max. Sim to Struthers Dunn MRR1A. G-E 19C307002-P1.
	R1 - Resistor, composition; 91 ohms $\pm 5\%$, 2-w. G-E 3R79-P910J.
	S1 - Switch, slide; DPDT, 200-VDC at 15-ma, 12-VDC at 30-ma. Sim to OAK 1964059. G-E 19A115004-P1.
	XK2 - Socket, relay; white nylon, 10 con- tacts. Sim to Allied Control 30054-1. G-E 5491595-P4.
C701 (Added)	Capacitor, disc type; 0.1- μ f $+80\%$ -20% , 50-VDCW. Sim to Sprague 36C172. G-E 7161189-P2.
DS706 (Added)	Earset, midget (magnetic receiver); 500 ohms impedance, max. input 25 milliwatts. Sim to Telex 60136. G-E 5495088-P7.
K702 (Added)	Relay; 6-VDC, 52 ohms, 2 form C contacts. Sim to Allied Control T154-C-C. G-E 5491595-P21. (Models 4EC44A10 and 4EC44A12 only).
R701 (Deleted)	Resistor, fixed composition; 24 ohms $\pm 10\%$, 1/2-w. G-E 3R77-P240K.
R702 (Deleted)	Potentiometer, (carbon film); 250 ohms $\pm 20\%$, linear taper, 0.30-w. Sim to Chicago Tele- phone Supply 70. G-E 5491537-P3.
R705 (Added)	Resistor, fixed composition; 910 ohms $\pm 10\%$, 1/2-w. G-E 3R77-P911J.

REV. E (Model 4EC44A11)

REV. D (Model 4EC44A13)

Purpose

To facilitate manufacturing.

Change

Added connectors J702 and P702 in the lead between J701-18 and S702-4.

Parts List Changes

<u>Symbol</u>	<u>Description</u>
J702 (Added)	Connector; 1 male contact. Sim to Winchester Electronics 21803. G-E 7147199-P1.
P702 (Added)	Connector; 1 female contact. Sim to Winchester Electronics 21804.

REV. E (Models 4EC44A10, 12)

Purpose

To facilitate manufacturing.

Changes

Added connectors J702 and P702 in the lead between J701-18 and S702-4. Rerouted the S1-5 ground lead from J701-1 to J701-20.

Parts List Changes

<u>Symbol</u>	<u>Description</u>
J702 (Added)	Connector; 1 male contact. Sim to Winchester Electronics 21803. G-E 7147199-P1.
P702 (Added)	Connector; 1 female contact. Sim to Winchester Electronics 21804. G-E 7147199-P1.

REV. F (Models 4EC44A10, 11, 12)

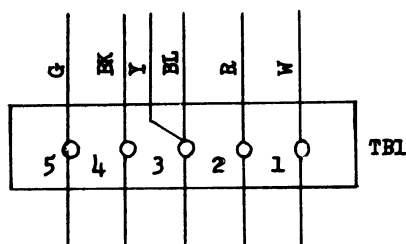
REV. E (Models 4EC44A13)

Purpose

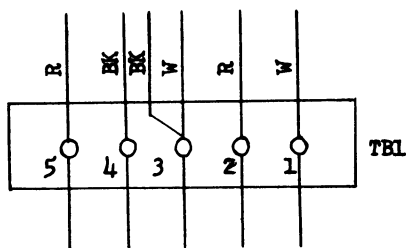
The wiring diagrams, D-5499905 and D-5499906, were modified to

REV. F and REV. E (Cont'd)

indicate new color coding of wires from the Model 4EM22B10 Handset.

Wiring Diagram Changes

ORIGINAL CIRCUIT



MODIFIED CIRCUIT

REV. G (Models 4EC44A10, 11, 12)

REV. F (Model 4EC44A13)

Purpose

To facilitate manufacturing and to provide an improved switch.

Change

Replace rectifiers with smaller component and replace key switch.

Parts List Changes

<u>Unit</u>	<u>Symbol</u>	<u>Was</u>	<u>Changed To</u>
4EC44A10	CR701	Rectifier: silicon; G-E Part No. 5490415-P2.	Rectifier: silicon; G-E Part No. 4037822-P1.
4EC44A11	CR702	Same	Same
4EC44A12	CR3 thru CR6	Same	Same
4EC44A13	CR702	Same	Same
4EC44A10 thru 4EC44A13	S703	Switch, rotary: on-off- on, 30 amps at 12 VDC; G-E Part 19B200150-P2.	Switch, rotary: on-off- on, 30 amps at 12 VDC; G-E Part No. 19B200150-P4.

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