MOBILE RADIO

# INSTRUCTIONS

# FOR

# PE VEHICULAR CHARGER COMBINATIONS

# DEAD BATTERY OPTION KIT 19A137095G1

CONTENTS



## DESCRIPTION

Dead Battery Option Kit 19A137095G1 provides a voltage regulator circuit for use in a PE 3-hour vehicular charger combination. This regulator circuit provides a regulated 7.5 volts, from the vehicular battery, to operate the PE radio when the PE radio battery is less than 7.5 volts.

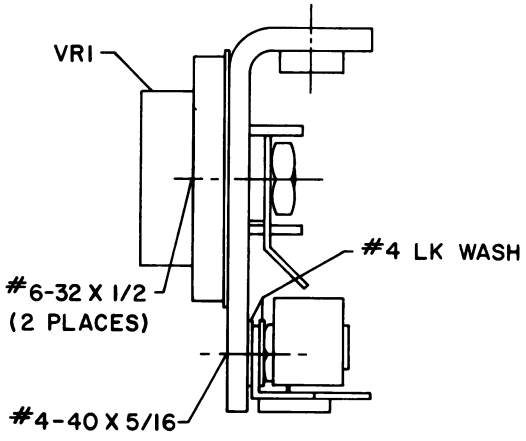
## CIRCUIT ANALYSIS

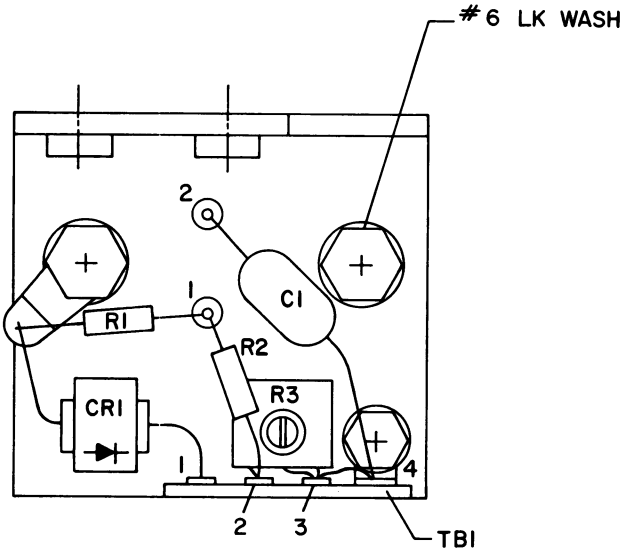
Integrated circuit module VR1 is a voltage regulator. With 13.8 volts on VR1-2, R3 is set for 7.5 volts at TB1-1. An increase in voltage on the CASE of VR1 causes an increase in voltage on VR1-1. An increase in voltage on VR1-1 is sensed by VR1 and the voltage on the CASE is reduced. A decrease in voltage on the CASE of VR1 causes a decrease in voltage at VR1-1. A decrease in voltage at VR1-1 increases the voltage on the CASE of VR1. This process keeps the voltage output at TB1-1 constant.

When the battery voltage is larger than 7.5 volts, diode CR1 is back biased and the voltage from the regulator circuit is blocked.

NOTE

Resistor R3 is normally adjusted at the factory. However, should R3 need adjusting because of component replacement, etc., set R3 so that 7.5 volts +150 MV at 1.5 amps is read at TB1-1.

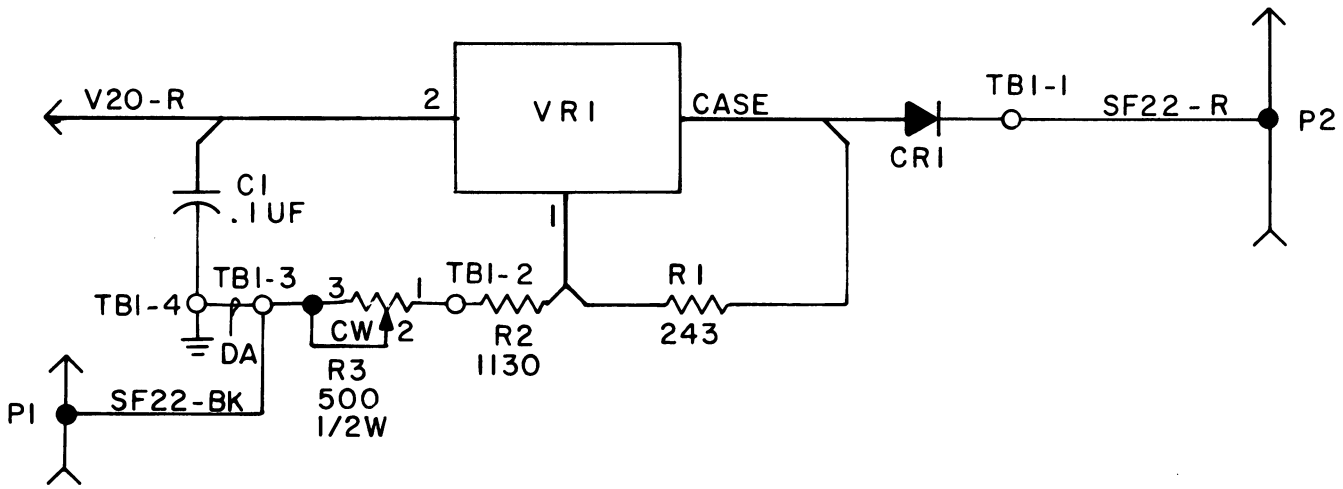



(19B232298, Rev. 0)

# OUTLINE DIAGRAM

## DEAD BATTERY OPTION KIT




| THIS ELEM DIAG APPLIES TO | |
|---|---|
| MODEL NO | REV LETTER |
| PL 19B227993G1 | |

ALL RESISTORS ARE 1/4 WATT UNLESS OTHERWISE SPECIFIED AND RESISTOR VALUES IN OHMS UNLESS FOLLOWED BY K=1000 OHMS OR MEG = 1,000,000 OHMS. CAPACITOR VALUES IN PICOFARADS (EQUAL TO MICROMICROFARADS) UNLESS FOLLOWED BY UF = MICROFARADS. INDUCTANCE VALUES IN MICROHENRYS UNLESS FOLLOWED BY MH = MILLIHENRYS OR H = HENRYS.

IN ORDER TO RETAIN RATED EQUIPMENT PERFORMANCE, REPLACEMENT OF ANY SERVICE PART SHOULD BE MADE ONLY WITH A COMPONENT HAVING THE SPECIFICATIONS SHOWN ON THE PARTS LIST FOR THAT PART.

(19B227995, Rev. 0)

# SCHEMATIC DIAGRAM

DEAD BATTERY OPTION KIT

## PARTS LIST

LBI-30522

DEAD BATTERY OPTION MODIFICATION KIT
19A137095G1

| SYMBOL | GE PART NO. | DESCRIPTION |
|---|---|---|
| | | DEAD BATTERY OPTION ASSEMBLY 19B227993G1 |
| | | - - - - - - - - - - CAPACITORS - - - - - - - - - - |
| C1 | 19A116080P107 | Polyester: 0.1 µf ±10%, 50 VDCW. |
| | | - - - - - - - - DIODES AND RECTIFIERS - - - - - - |
| CR1 | 19A116783P1 | Silicon. |
| | | - - - - - - - - - - - PLUGS - - - - - - - - - - |
| P1 and P2 | 4033348P1 | Contact, electrical: sim to Bead Chain M125-34. |
| | | - - - - - - - - - - RESISTORS - - - - - - - - - - |
| R1 | 19C314256P22430 | Metal film: 243 ohms ±1%, 1/4 w. |
| R2 | 19C314256P21131 | Metal film: 1130 ohms ±1%, 1/4 w. |
| R3 | 19A116559P205 | Variable, cermet: 500 ohms ±20%, .5 w; sim to CTS Series 360. |
| | | - - - - - - - - TERMINAL BOARDS - - - - - - - - - |
| TB1 | 7487424P18 | Miniature, phen: 3 terminals. |
| | | - - - - - - - - VOLTAGE REGULATORS - - - - - - - |
| VR1 | 19A134471P1 | Integrated Circuit, linear: adjustable regulator; sim to LM217K. |
| | | - - - - - - - - - - MISCELLANEOUS - - - - - - - - |
| | 19A115221P1 | Insulator. (Located under VR1). |
| | 19A121882P1 | Washer, shield. (Used with VR1). |
| | 4036994P1 | Solderless terminal: sim to Zierick Mfg Corp 505. (Used with VR1). |
| | N80P9005C6 | Machine screw: No. 4-40 x 5/16. (Secures Dead Battery Option Assembly). |
| | N404P11C6 | Lockwasher, internal tooth: No. 4. (Secures Dead Battery Option Assembly). |



*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES

# ORDERING SERVICE PARTS

Each component appearing on the schematic diagram is identified by a symbol number to simplify locating it in the parts list. Each component is listed by symbol number, followed by its description and GE Part Number.

Service parts may be obtained from Authorized GE Communication Equipment Service Stations or through any GE Radio Communication Equipment Sales Office. When ordering a part, be sure to give:

1. GE Part Number for component
2. Description of part
3. Model number of equipment
4. Revision letter stamped on unit

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These instructions do not purport to cover all details or variations in equipment nor to provide for every possible contingency to be met in connection with installation, operation or maintenance.

Should further information be desired, or should particular problems arise which are not covered sufficiently for the purchaser's purposes, contact the nearest Radio Communication Equipment Sales Office of the General Electric Company.

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Printed in U.S.A

ECP-824