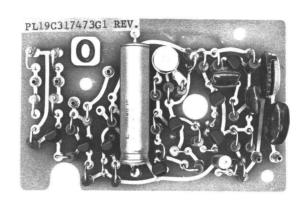


MASTR® PROGRESS LINE

CARRIER CONTROL TIMER BOARD 19C317473 G1
WITH CARRIER CONTROL TIMER KITS 19A127875 G1 thru G6



SPECIFICATIONS *

TIMING CYCLE:

Standard

1 Minute

Optional

Adjustable from 15 seconds

to 5 minutes

INPUT:

13.6 Volts @ 100 mA Maximum

60 mA Nominal

SILICON TRANSISTORS:

9

DIMENSIONS (H X W X D):

2 1/4" X 3 1/2" X 7/8"

OPTIONS

Option No.	GE Part No.	Application
7347	19A127875G1	MASTR Professional Mobile
7348	19A127875G2	MASTR ROYAL Professional & Imperial Mobile
8306	19A127875G3	MASTR Executive Mobile
8307	19A127875G4	MASTR ROYAL Executive Mobile
8308	19A127875G5	MASTR Executive Station
8309	19A127875G6	MASTR ROYAL Executive Station
7349	19B209358P112	Modification for adjustable timing cycle

^{*}These specifications are intended primarily for the use of the serviceman. Refer to the appropriate Specification Sheet for the complete specifications.

TABLE OF CONTENTS

SPECIFICATIONS	Cover
DESCRIPTION	1
INSTALLATION	1
CIRCUIT ANALYSIS	1
MAINTENANCE	1
Disassembly	1
Adjustment	1
OUTLINE & SCHEMATIC DIAGRAMS	3
PARTS LIST	. 4
INSTALLATION DIAGRAMS	
MASTR Royal & Tubed Professional Mobile	5
MASTR Executive Tubed Mobile	5
MASTR Royal Executive Mobile	5
MASTR Executive Tubed Station	6
MASTR Royal Executive Station	6

- WARNING -

No one should be permitted to handle any portion of the equipment that is supplied with high voltage; or to connect any external apparatus to the units while the units are supplied with power. KEEP AWAY FROM LIVE CIRCUITS.

DESCRIPTION

General Electric Carrier Control Timer Models 19A127875-G1 through -G6 were designed to shut off the transmitter after a one minute timing cycle, and to alert the operator that the transmitter is off by means of an alarm tone in the speaker.

The transmitter can be turned on again by releasing and rekeying the push-to-talk switch on the microphone. An optional potentiometer is available that permits the timing cycle (transmitter keyed time) to be adjusted from 15 seconds to 5 minutes.

The Carrier Control Timer can be used with all MASTR combinations except the three or four frequency MASTR Executive Tubed Mobiles or Stations.

INSTALLATION

For field installation of the Carrier Control Timer, refer to the appropriate installation instruction as listed in the Table of Contents.

CIRCUIT ANALYSIS

The Carrier Control Timer consists of a voltage switch (Ql and Q2), a timing circuit (Q3 and Q4), a transmitter keying circuit (Q5 and Q6), a multivibrator (Q7 and Q9), and a transistor switch (Q8). The timer is supplied with a continuous +13.6 Volts.

Pressing the push-to-talk switch on the microphone ground J2 on negative ground units or J1 on positive ground units causing Q1 to turn on. Q1 turning on causes Q2 to turn on applying +13.6 volts to voltage regulator VR1. R4, VR1, and C1 regulates the voltage to +10 volts. When voltage is applied to the base of Q6 through R12 and R11, Q6 turns on keying the transmitter. At the same time voltage is applied to the base of Q8 through R14 and CR8 causing Q8 to turn on. Q8 turning on grounds the base of Q7 to keep the multivibrator from running.

The instant voltage is applied to R6, C2 starts charging through R6. Timing transistors Q3 and Q4 operate as a compound-connected emitter-follower. As C2 slowly charges up, the output voltage of the emitter follower rises proportionally. At the end of the timing cycle, the charge on C2 is sufficient to cause the emitter-follower output to axceed the breakdown voltage of zener diode VR2, turning on Q5. When Q5 turns on, its collector potential drops to near ground potential, turning off Q6 and Q8. Turning off Q6 opens the PTT ground

path and switches off the transmitter.

Turning off Q8 allows the 700-Hz multivibrator to start. The output at J6 is applied to the base of the receiver audio output stage which in turn alerts the operator that the transmitter has been turned off. The transmitter can be keyed again by releasing and repressing the PTT switch. Releasing the PTT switch turns off the alarm tone to the speaker and also allows C2 to discharge rapidly through R5 to reset the timing cycle. R21 is used to adjust the alarm tone level at the speaker.

On a standard unit, the timing cycle (Transmitter Keyed Time) will be one minute. When the option is factory-installed, the timer board is shipped with the timing cycle set for one minute. For field installation, holes are provided in the printed circuit board so R6 can be directly replaced with the potentiometer. Instructions for setting the potentiometer are contained in the adjustment section below. R6 may also be replaced by a resistor of a different value. Decreasing the value of R6 decreases the timing cycle, while increasing the value of R6 increases the timing cycle.

MAINTENANCE

DISASSEMBLY

To gain access to the carrier control timer, refer to the appropriate Installation Diagram for the location of the timer board.

ADJUSTMENT

Timing Cycle Adjustment

If the carrier control timer is equipped with the optional potentiometer, the potentiometer may be adjusted as follows:

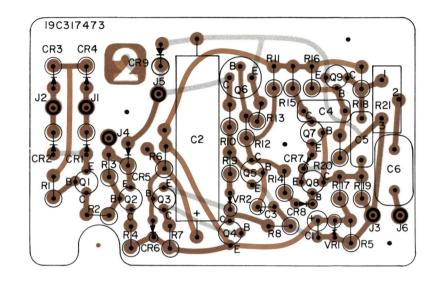
- Key the transmitter into a 50-ohm load. Keep the transmitter keyed until the carrier control timer unkeys the transmitter and the alarm tone is heard in the speaker.
- 2. Then, adjust the potentiometer (19B209358-P112) for more resistance if a longer timing cycle is desired, or decrease the resistance of the potentiometer if a shorter timing cycle is desired.

Alarm Tone Adjustment

Repeat Step 1 of Timing Cycle Adjustment. Adjust potentiometer R21 for an alarm tone level as desired.

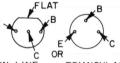
SCHEMATIC DIAGRAM

OUTLINE DIAGRAM



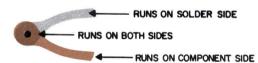
(19B219092, Rev. 1) (19B216971, Sh. 1, Rev. 2) (19B216971, Sh. 2, Rev. 2)

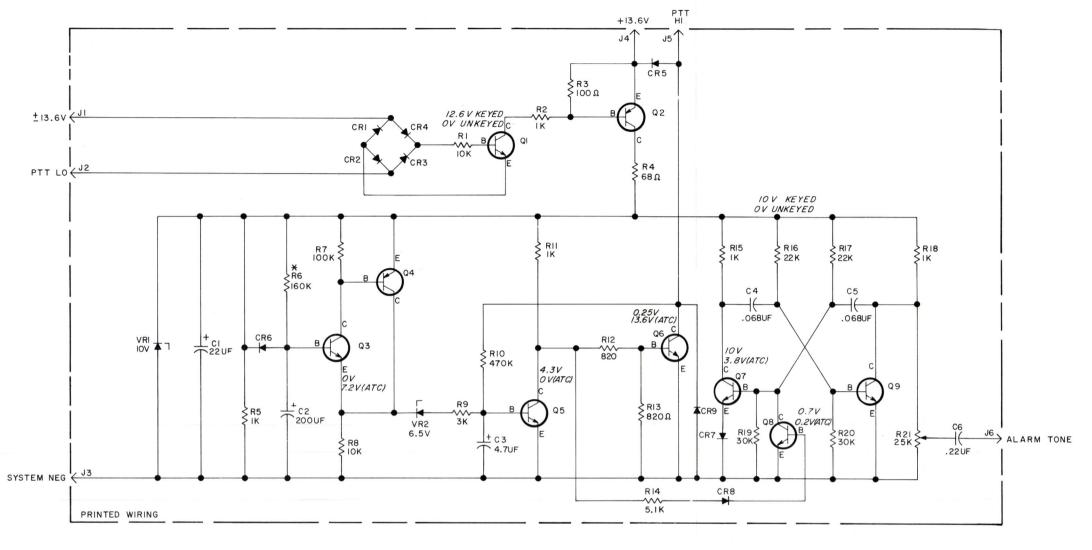
LEAD IDENTIFICATION FOR QI THRU Q9



IN-LINE TRIANGULAR VIEW FROM LEAD END

NOTE: LEAD ARRANGEMENT, AND NOT CASE SHAPE, IS DETERMINING FACTOR FOR LEAD IDENTIFICATION.





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.

ALL RESISTORS ARE 1/2 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.

SEE APPLICABLE PRODUCTION CHANGE SHEETS IN INSTRUCTION BOOK SECTION DEALING WITH THIS UNIT, FOR DESCRIPTION OF CHANGES UNDER EACH REVISION LETTER.

THIS ELEM DIAG APPLIES TO MODEL NO REV LETTER PLIGC317473GI

* THE VALUE SHOWN FOR R6 IS FOR A ONE MINUTE TIME CYCLE. IF R6 IS REPLACED BY POTENTIOMETER 198209358PII2 (OPTION 7349) THE TIMING CYCLE CAN BE VARIED FROM IS SECONDS TO 5 MINUTES.

VOLTAGE READINGS

READINGS ARE MEASURED TO MAIN CHASSIS GROUND WITH A 20,000 OHM-PER-VOLT METER. READINGS WITH NO LEGEND TAKEN DURING TIMING CYCLE READINGS FOLLOWED BY (ATC) TAKEN AFTER TIMING CYCLE.

(19D413628, Rev. 3)

SCHEMATIC & OUTLINE DIAGRAM

CARRIER CONTROL TIMER BOARD 19C317473G1

LBI4138

PARTS LIST

LBI4137C

CARRIER CONTROL TIMER 19C317473G1

19A115680P10 23 5496267P5 24 19A116080P6 25 19A116080P9 26 19A116080P9 27 19A115250P1 28 19A115250P1 28 19A115123P1 29 19A115768P1 20 19A115768P1 21 19A115768P1 22 19A115768P1 23 19A115123P1 24 19A115768P1 25 19A115123P1 26 19A115123P1 27 3877P102K 28 3877P102K 28 3877P102K 29 3877P102K 20 3877P102K 20 3877P102K 21 3877P102K 22 3877P102K 23 3877P102K 24 3877P104K 25 3877P104K 26 3877P104K 27 3877P104K 28 3877P103K 29 3877P103K 29 3877P103K 20 3877P103K	Tantalum: 22 µf ±20%, 15 VDCW; sim to Sprague Type 150D. Electrolytic: 200 µf +150% -10%, 18 VDCW; sim to Mallory Type TTX. Tantalum: 4.7 µf ±20%, 10 VDCW; sim to Sprague Type 150D. Polyester: 0.068 µf ±20%, 50 VDCW. Polyester: 0.22 µf ±20%, 50 VDCW. DIODES AND RECTIFIERS Silicon, 1000 mA, 400 PIV. Silicon, fast recovery, 225 mA, 50 PIV. Silicon, 1000 mA, 400 PIV. Added by REV B. JACKS AND RECEPTACLES Contact, electrical: sim to Bead Chain L93-3.
19A115680P10 23 5496267P5 24 19A116080P6 25 19A116080P9 26 19A116080P9 27 4037822P1 28 19A115250P1 28 28 4037822P1 29 19A115123P1 29 19A115768P1 20 19A115123P1 21 19A115123P1 22 19A115768P1 23 19A115123P1 24 19A115123P1 25 19A115123P1 26 19A115123P1 27 3877P102K 28 3877P102K 29 3877P102K 20 3877P102K 20 3877P102K 21 3877P102K 21 3877P102K 22 3877P102K 23 3877P102K 24 3877P102K 25 3877P102K 26 3877P103K 27 3877P103K 28 3877P103K 29 3877P103K	Sprague Type 150D. Electrolytic: 200 µf +150% -10%, 18 VDCW; sim to Mallory Type TTX. Tantalum: 4.7 µf ±20%, 10 VDCW; sim to Sprague Type 150D. Polyester: 0.068 µf ±20%, 50 VDCW. Polyester: 0.22 µf ±20%, 50 VDCW. DIODES AND RECTIFIERS Silicon, 1000 mA, 400 PIV. Silicon, fast recovery, 225 mA, 50 PIV. Silicon, 1000 mA, 400 PIV. Added by REV B.
5496267P5 24 19A116080P6 26 19A116080P9 27 28 28 28 28 28 28 28 28 28 28 28 28 28	Electrolytic: 200 µf +150% -10%, 18 VDCW; sim to Mallory Type TTX. Tantalum: 4.7 µf ±20%, 10 VDCW; sim to Sprague Type 150D. Polyester: 0.068 µf ±20%, 50 VDCW. Polyester: 0.22 µf ±20%, 50 VDCW. DIODES AND RECTIFIERS Silicon, 1000 mA, 400 PIV. Silicon, fast recovery, 225 mA, 50 PIV. Silicon, 1000 mA, 400 PIV. Added by REV B.
C4	Tantalum: 4.7 µf ±20%, 10 VDCW; sim to Sprague Type 150D. Polyester: 0.068 µf ±20%, 50 VDCW. Polyester: 0.22 µf ±20%, 50 VDCW. DIODES AND RECTIFIERS Silicon, 1000 mA, 400 PIV. Silicon, fast recovery, 225 mA, 50 PIV. Silicon, 1000 mA, 400 PIV. Added by REV B.
and C5 C6 19A116080P9 CR1 thru CR5 19A115080P9 CR6 19A115250P1 CR8 4037822P1 J1 4033513P4 J6 19A115123P1 Q2 19A115768P1 Q3 19A115123P1 Q4 19A115768P1 19A115123P1 19A115123P1 19A115123P1 Q6 19A115300P4 Q7 19A115123P1 R8 3R77P102K R8 3R77P102K R8 3R77P102K R8 3R77P102K R8 3R77P104K R8 3R77P103K R8 3R77P103K R8 3R77P103K R8 3R77P103K	Polyester: 0.22 µf ±20%, 50 VDCW. DIODES AND RECTIFIERS Silicon, 1000 mA, 400 PIV. Silicon, fast recovery, 225 mA, 50 PIV. Silicon, 1000 mA, 400 PIV. Added by REV B. JACKS AND RECEPTACLES
CR1 thru CR5 CR1 thru CR5 CR6 19A115250P1 4037822P1 4037822P1 4037822P1 4037822P1 4037822P1 4037822P1 4033513P4 4033513P4 19A115123P1 19A115768P1 19A115768P1 19A115768P1 19A115123P1 19A115123P1 19A115123P1 26 19A115123P1 19A115123P1 27 19A115123P1 28 3877P102K 3877P102K 3877P102K 3877P102K 3877P104K 3877P104K 3877P104K 3877P104K 3877P103K 3877P103K 3877P103K	DIODES AND RECTIFIERS Silicon, 1000 mA, 400 PIV. Silicon, fast recovery, 225 mA, 50 PIV. Silicon, 1000 mA, 400 PIV. Added by REV B.
thru CRS CR6 19A115250P1 thru CR8 CR9* 4037822P1 4037822P1 4033513P4 40315123P1 4034115123P1 4033513P4 4037822P1 404115723P1 4037822P1	Silicon, 1000 mA, 400 PIV. Silicon, fast recovery, 225 mA, 50 PIV. Silicon, 1000 mA, 400 PIV. Added by REV B.
thru CR5 CR6 thru CR8 CR9* 4037822P1 J1 thru J6 Q1 19A115123P1 Q2 19A115768P1 Q3 19A115123P1 Q4 19A115123P1 Q5* 19A115123P1 Q9 R1 3R77P103K R2 3R77P102K R3 3R77P102K R4 3R77P102K R6* 3R77P103K R7 3R77P103K R8 3R77P103K R8 3R77P103K R8 3R77P103K	Silicon, fast recovery, 225 mA, 50 PIV. Silicon, 1000 mA, 400 PIV. Added by REV B.
CR6 thru CR8 CR9* 4037822P1 4037822P1 4033513P4 4033513P4 Q1 Q1 Q2 19A115123P1 Q2 19A115768P1 19A115768P1 19A115123P1 Q5* 19A115362P1 19A115123P1 Q9 R1 3R77P103K R2 3R77P102K R3 3R77P102K R4 3R77P104J R5 3R77P104J R6* 3R77P104K R8 3R77P103K R8 3R77P103K R8 3R77P103K R8 3R77P103K	Silicon, 1000 mA, 400 PIV. Added by REV B.
CR9* 4037822P1 J1 4033513P4 Q1 19A115123P1 Q2 19A115768P1 Q3 19A115123P1 Q4 19A115362P1 19A115362P1 19A115123P1 19A115123P1 19A115123P1 Q6 19A115123P1 Q7 thru Q9 R1 3R77P103K R2 3R77P102K R3 3R77P102K R4 3R77P680J R5 3R77P102K R6* 3R77P104J R6* 3R77P104K R8 3R77P103K R8 3R77P103K R9 3R77P103K	JACKS AND RECEPTACLES
thru J6 Q1	
thru J6 Q1	Contact, electrical: sim to Bead Chain L93-3.
Q1 19A115123P1 Q2 19A115768P1 Q3 19A115123P1 Q4 19A115362P1 Q5* 19A115362P1 Q6 19A115123P1 Q7 thru Q9 19A115123P1 R1 3R77P103K R2 3R77P101K R4 3R7P680J R5 3R77P102K R6* 3R77P102K R6* 3R77P104L R6* 3R77P104L R7 3R77P104L R8 3R77P104L R8 3R77P104L R8 3R77P104L	
Q2 19A115768P1 Q3 19A115123P1 Q4 19A115768P1 Q5* 19A115362P1	
Q3 19A115123P1 Q4 19A115768P1 Q5* 19A115362P1 19A115123P1 Q6 19A115300P4 Q7 19A115123P1 R1 3R77P103K R2 3R77P102K R3 3R77P101K R4 3R77P680J R5 3R77P164J R6* 3R77P164J R7 3R77P104K R8 3R77P104K R8 3R77P103K	Silicon, NPN.
Q4 19A115768P1 Q5* 19A115362P1 19A115123P1 Q6 19A115123P1 Q9 19A115123P1 R1 3R77P103K R2 3R77P102K R3 3R77P101K R4 3R77P680J R5 3R77P102K R6* 3R77P104J R7 3R77P104J R8 3R77P104K R8 3R77P103K R9 3R77P103K	Silicon, PNP; sim to Type 2N3702.
Q5* 19A115362P1 19A115123P1 1	Silicon, NPN.
19A115123P1 Q6 19A115300P4 Q7 19A115123P1 R1 3R77P103K R2 3R77P102K R3 3R77P101K R4 3R77P680J R5 3R77P102K 3R77P164J 3R77P184J 3R77P184J R7 3R77P103K R8 3R77P103K	Silicon, PNP; sim to Type 2N3702.
Q6 19A115300P4 19A115123P1 R1 3R77P103K R2 3R77P102K R3 3R77P101K R4 3R77P680J R5 3R77P102K R6* 3R77P164J R7 3R77P184J R7 3R77P104K R8 3R77P103K R9 3R77P302J	Silicon, NPN; sim to Type 2N2925.
Q6 19A115300P4 19A115123P1 R1 3R77P103K R2 3R77P102K R3 3R77P101K R4 3R77P680J R5 3R77P102K R6* 3R77P164J R7 3R77P184J R7 3R77P104K R8 3R77P103K R9 3R77P302J	Earlier than REV A:
Q7 thru Q9 R1	Silicon, NPN.
### ##################################	Silicon, NPN.
R2 3R77P102K R3 3R77P101K R4 3R77P680J R5 3R77P102K R6+ 3R77P164J 3R77P184J R7 3R77P104K R8 3R77P103K R9 3R77P302J	Silicon, NPN.
R2 3R77P102K R3 3R77P101K R4 3R77P680J R5 3R77P102K R6+ 3R77P164J 3R77P184J R7 3R77P104K R8 3R77P103K R9 3R77P302J	
R3 3R77P101K R4 3R77P680J R5 3R77P102K R6* 3R77P164J 3R77P184J R7 3R77P104K R8 3R77P103K R9 3R77P302J	Composition: 10K ohms ±10%, 1/2 w.
R4 3R77P680J R5 3R77P102K R6* 3R77P164J 3R77P184J R7 3R77P104K R8 3R77P103K R9 3R77P302J	Composition: 1K ohms ±10%, 1/2 w.
R5 3R77P102K R6* 3R77P164J 3R77P184J R7 3R77P104K R8 3R77P103K R9 3R77P302J	Composition: 100 ohms $\pm 10\%$, 1/2 w.
3R77P164J 3R77P184J R7 3R77P104K R8 3R77P103K R9 3R77P302J	Composition: 68 ohms ±5%, 1/2 w.
3R77P184J R7 3R77P104K R8 3R77P103K R9 3R77P302J	Composition: 1K ohms $\pm 10\%$, 1/2 w.
R7 3R77P104K R8 3R77P103K R9 3R77P302J	Composition: 160K ohms ±5%, 1/2 w.
R7 3R77P104K R8 3R77P103K R9 3R77P302J	Earlier than REV A:
R8 3R77P103K R9 3R77P302J	Composition: 180K ohms ±5%, 1/2 w.
R9 3R77P302J	Composition: 100K ohms ±10%, 1/2 w.
1	Composition: 10K ohms ±10%, 1/2 w.
R10* 3R77P474K	Composition: 3K ohms ±5%, 1/2 w.
	Composition: 470K ohms ±10%, 1/2 w.
	Earlier than REV A:
3R77P684K	Composition: 680K ohms ±10%, 1/2 w.
R11* 3R77P102K	Composition: 1K ohms ±10%, 1/2 w.
3R77P152K	Earlier than REV A:
	Composition: 1.5K ohms ±10%, 1/2 w.

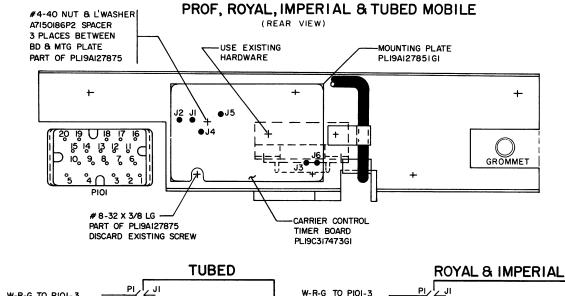
SYMBOL	GE PART NO.	DESCRIPTION
R12*	3R77P821K	Composition: 820 ohms $\pm 10\%$, $1/2$ w. Earlier than REV A:
	3R77P102K	Composition: 1K ohms ±10%, 1/2 w.
R13	3R77P821K	Composition: 820 ohms ±10%, 1/2 w.
R14	3R77P512J	Composition: 5.1K ohms ±5%, 1/2 w.
R15	3R77P102K	Composition: 1K ohms ±10%, 1/2 w.
R16 and R17	3R77P223K	Composition: 22K ohms ±10%, 1/2 w.
R18	3R77P102K	Composition: 1K ohms ±10%, 1/2 w.
R19 and R20	3R77P303J	Composition: 30K ohms ±5%, 1/2 w.
R21	19B209358P107	Variable, carbon film: approx 800 to 25K ohms ±10%, 0.25 w; sim to CTS Type X-201.
VR1	4036887P11	Zener: 500 mW, 10.0 v. nominal.
VR2	4036887P6	Zener: 500 mW, 6.5 v. nominal.
:	4036555Pl	MISCELLANEOUS

^{4 *}COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES.

PRODUCTION CHANGES

Changes in the equipment to improve performance or to simplify circuits are identified by a "Revision Letter", which is stamped after the model number of the unit. The revision stamped on the unit includes all previous revisions. Refer to the Parts List for descriptions of parts affected by these revisions.

- REV. A To compensate for transistor variation. Changed Q5, R6, R10, R11, and R12.
- REV. B To reduce failure of Q6 caused by negative voltage spikes from vehicles electrical systems. Added CR9 across Q6.



BK TO PIOI-13

W-R TO PIOI-3

W-O-BK TO PIOI-7

AUDIO OUTPUT TRANSISTOR BASE

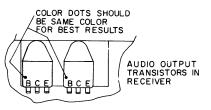
W-BL TO RCVR

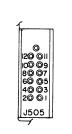
W-R-G TO PIOI-3 P2) J2 W-O-R TO PIOI-2 P3 | J3 CARRIER CONTROL BK TO PIOI-13 TIMER BOARD P4/ J4 W-R TO J505-6 PLI9C3I7473G1 P5 | J5 W-O-BK TO J505-12 P6/1/ J6 W-BL TO RCVR AUDIO OUTPUT TRANSISTOR BASE

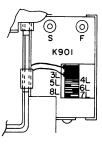
CONNECTIONS FOR 19A127875GI

INSTRUCTIONS

- REMOVE N24 O-BK WIRE BETWEEN PIOI-2 AND J505-12.
- 2. REMOVE #18 BR-Y WIRE BETWEEN TB901-3 AND K901-F.
 3. CONNECT V20 BR WIRE BETWEEN K901-F AND P443-11.







CARRIER CONTROL TIMER BOARD PLI9C317473GI

RECEIVER CONNECTOR P443

Q505

VIEW OF Q504

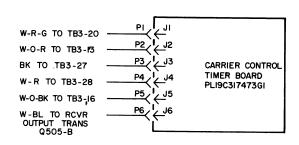
-CARRIER CONTROL TIMER BOARD PL19C317473GI #4-40 X3/16 LG (3 PLACES) PART OF PLI9AI27875 J3⊕ ĭ

> 585 ◙ TB3

EXEC. TUBED MOBILE

INSTRUCTIONS. DISCONNECT THE N22 BR WIRE FROM TB3-20 AND CONNECT TO TB3-28. THE OTHER END OF THIS WIRE IS ALREADY CONNECTED TO K501-5.

DISCONNECT THE N22 W-R-BK WIRE FROM TB3-I3 AND CONNECT TO TB3-I6. THE OTHER END OF THIS WIRE IS ALREADY CONNECTED TO K50I-4.



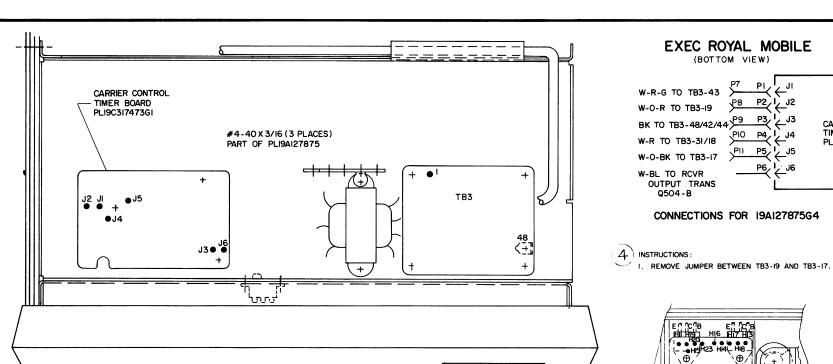
CONNECTIONS FOR 19A127875G3

NOTES: (FOR SHEETS | 8.2)

- I. SOLDER ALL ELECTRICAL CONNECTIONS.
- ALL WIRE IS SF24 UNLESS SPECIFIED OTHERWISE. WIRES ARE CALLED FOR ON PLISA127875.
- PI THRU P6 ARE FEMALE CONTACTS CALLED FOR ON PLI9AI27875.

INSTALLATION DIAGRAM

MASTR ROYAL & TUBED PROFESSIONAL MOBILE MASTR EXECUTIVE TUBED MOBILE MASTR ROYAL EXECUTIVE MOBILE



P2/LJ2

P3/1/J3

P4 J4

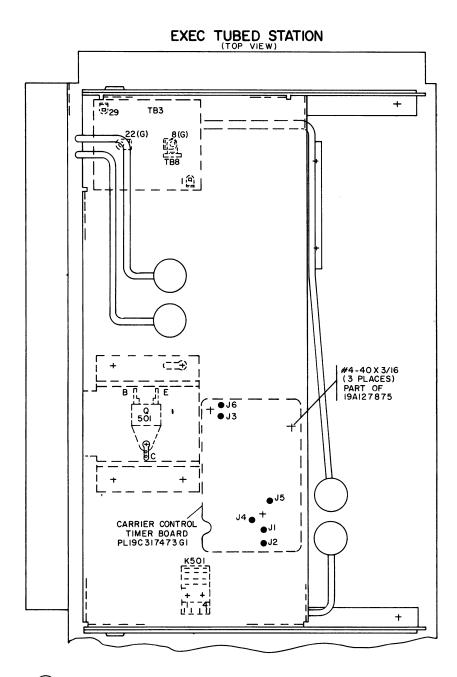
P5 J5

CONNECTIONS FOR 19A127875G2

REMOVE SF24 W-O-R WIRE FROM J505-4 (OTHER END GOES TO P703-18) AND CONNECT TO J505-12.

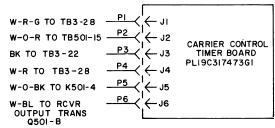
CARRIER CONTROL

TIMER BOARD PLI9C3I7473GI



5 INSTRUCTIONS: . REMOVE N22 W-R-BK BETWEEN TB501-15 AND K501-4.

CONNECTIONS FOR 19A127875G5



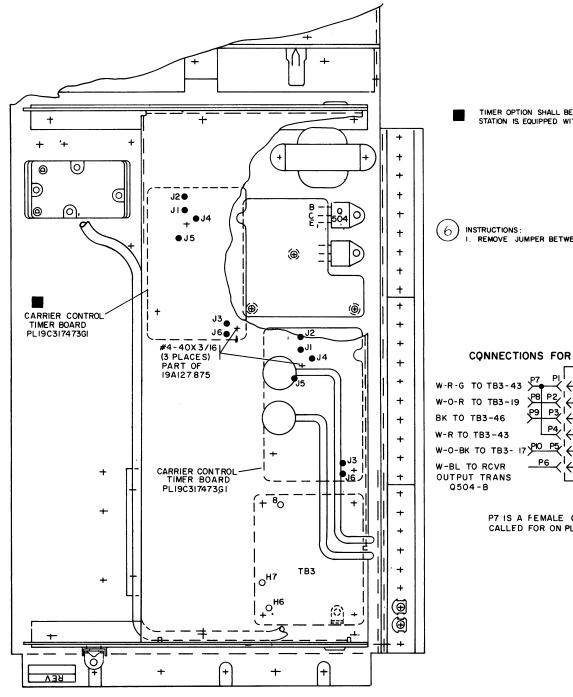
INSTALLATION DIAGRAM

MASTR EXECUTIVE TUBED STATION MASTR ROYAL EXECUTIVE STATION

Issue 3

(19D413639, Sh. 2, Rev. 3)

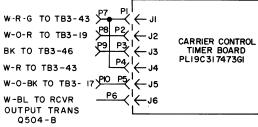
EXEC ROYAL STATION (TOP VIEW)



TIMER OPTION SHALL BE ASSEMBLED IN THIS LOCATION WHEN STATION IS EQUIPPED WITH REMOTE CONTROL OPTION

I. REMOVE JUMPER BETWEEN TB3-I7 AND TB3-I9.

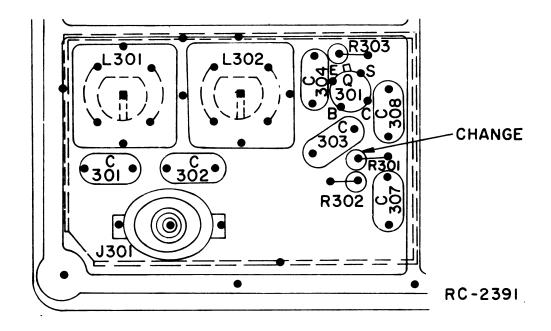
CQNNECTIONS FOR 19A127875G6



P7 IS A FEMALE CONTACT (A4029840PI) CALLED FOR ON PLI9AI27875G6

INSTRUCTIONS

This modification for 406-470 MHz receivers Types ER-49-A and ER-50-A reduces the susceptibility of these receivers to intermodulation interference by decreasing the receiver sensitivity.



PROCEDURE

- 1. Remove the top cover from the receiver.
- 2. Locate and replace R301 (see Figure 1) with a 1.5 K ohm, 5% 1/4 Watt resistor (GE PART NO. 3R152P152J).
- 3. Replace the top cover.

TEST SPECIFICATIONS

1. Receiver specification changes are as follows:

12-dB SINAD

Tune L302 for maximum receiver quieting. SINAD should be 0.8 microvolts or less. unchanged (-60 dB)

EIA Intermodulation

2. More receiver sensitivity degradation can be obtained by decreasing the value of the 1.5 K ohm resistor in small increments.

MODIFICATION INSTRUCTIONS

Reduction of Intermodulation Interference (Option 8302)

INSTRUCTIONS

This modification for 132-174 MHz receivers Type ER-48-C reduces the susceptibility of the receiver to intermodulation interference by decreasing the receiver sensitivity.

PROCEDURE

- 1. Remove the top cover from the receiver.
- 2. Unsolder the lead of capacitor C305 (see Figure 1) and solder one lead of a 39-ohm, 5%, 1/4-watt resistor (GE Part No. 3R152P390J) into the hole from which the capacitor lead was removed.
- 3. Solder the other lead of the resistor and capacitor together as shown in View "A".
- 4. Replace the top cover.

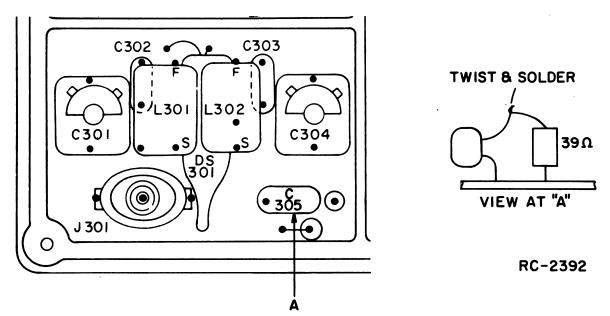


Figure 1 - Installation Diagram

TEST SPECIFICATIONS

1. Receiver specification changes are as follows:

20-dB Quieting 0.6 microvolts
12-dB SINAD 0.4 microvolts
EIA Intermodulation unchanged (-70 dB)
Critical Squelch less than 12-dB SINAD

 More receiver sensitivity degradation can be obtained by increasing the value of the 39-ohm resistor in small increments.

MODIFICATION INSTRUCTIONS

Reduction of Intermodulation Interference (Option 8302)