MAINTENANCE MANUAL FOR VOTER INTERFACE BOARD (19D438719G1)

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GENERAL THEORY

The Voter Interface Board does the level shifting necessary to allow the GETCs to control the E & M squelch of the associated analog receiver. The RCVNG buffer provides the level shifting necessary to allow the analog voter RCVNG line to inform the digital voter selector when a site is receiving.

The E & M Squelch buffer is made up of two transistors (Q1 and Q2). Transistor Q1 is used as an open-collector driver which is tied to the E & M squelch of the analog voter. Transistor Q2 is controlled by the line from the Digital Receiver GETC at J1-2.

Another buffer is used to control the RCVNG line going to the Selector GETC. Transistor Q3 is driven by the RCVNG line (J2-2) from the analog voter. When this line goes high, the RCVNG line (JI-3) going to the GETC is pulled low.

TEST PROCEDURE

The procedure for testing the Voter Interface Board is given in the following table. Use this procedure after a repair is made to the board to verify proper operation. This procedure may also be used during troubleshooting to locate a defective component.

EQUIPMENT REQUIRED

- 13.8 Vdc Power Supply
- 100K Resistor
- Jumpers

PROCEDURE

TEST PROCEDURE

NO.	INSTRUCTION	OBSERVATION
1.	Apply + 13.8 ±0.1 Vdc to J1-10	
2.	Connect power supply ground to J1-7	
3.	Connect 100K resistor from J2-1 to ground	J2-1 > 13.0 Vdc Supply current < 5mA
4.	Connect Jl-2 to ground	J2-1 < 0.1 Vdc
5.	Remove ground from J1-2	J1-2 > 13 Vdc
6.	Apply + 13.8 Vdc to J2-2	J1-3 > 0.4 Vdc

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Ericsson GE Mobile Communications Inc.
Mountain View Road • Lynchburg, Virginia 24502

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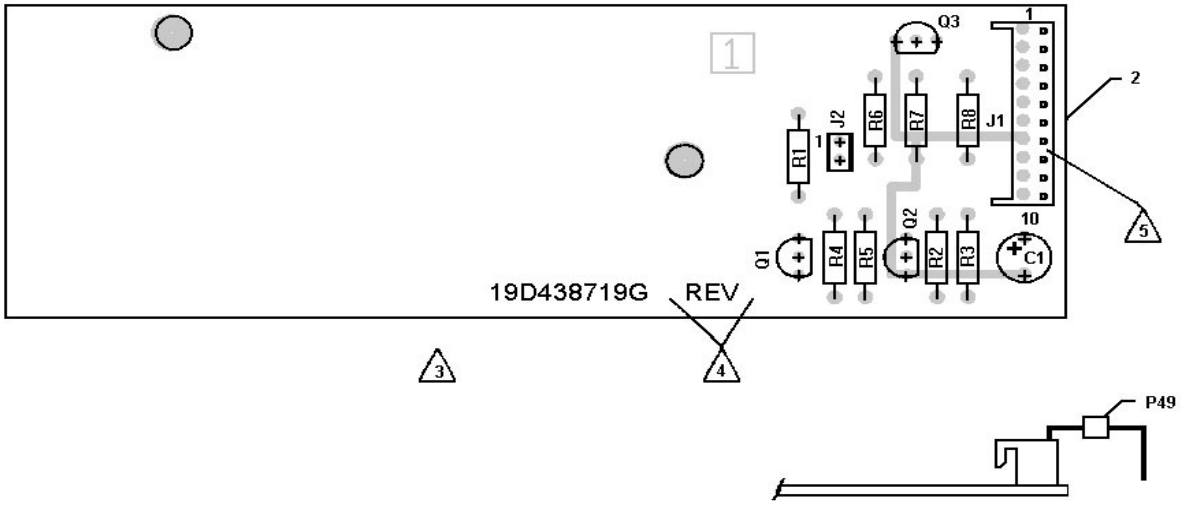
INTERFACE BOARD
19D438719G1
ISSUE 1

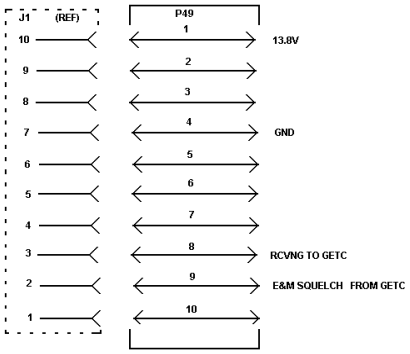
SYMBOL	PART NO.	DESCRIPTION
		- - - - - - - - - CAPACITORS - - - - - - - - -
C1	19A701534P8	Tantalum: 22 µF ±20%, 16 VDCW.
		- - - - - - - - - JACKS - - - - - - - - -
J1	19A704779P59	Connector, printed wiring: 10 contacts; sim to Molex 22-18-2103.
J2	19A704852P1	Connector, printed wire, two part: 2 contacts, sim to Molex 22-10-2021.
		- - - - - - - - - PLUGS - - - - - - - - - -
P49	19B801359P4	Connector.
		- - - - - - - -TRANSISTORS - - - - - - -
Q1	19A700022P2	Silicon, PNP; sim to 2N3906.
Q2 and Q3	19A700023P2	Silicon, NPN; sim to 2N3904
		- - - - - - - - - RESISTORS - - - - - - - - - -
R1	H212CRP247C	Deposited carbon: 4.7K ohms ±5%, 1/4 w.
R2	H212CRP147C	Deposited carbon: 470 ohms ±5%, 1/4 w.
R3	H212CRP327C	Deposited carbon: 27K ohms ±5%, 1/4 w.
R4	H212CRP222C	Deposited carbon: 2.2K ohms ±5%, 1/4 w.
R5	H212CRP327C	Deposited carbon: 27K ohms ±5%, 1/4 w.
R6	H212CRP347C	Deposited carbon: 47K ohms ±5%, 1/4 w.
R7 and R8	H212CRP310C	Deposited carbon: 10K ohms ±5%, 1/4 w.

*COMPONENTS, ADDED, DELETED, OR CHANGED BY PRODUCTION CHANGES



VOTER INTERFACE BOARD

(19D438719, Sh. 1, Rev. 1)
(19D438729, Sh. 1, Rev. 1)



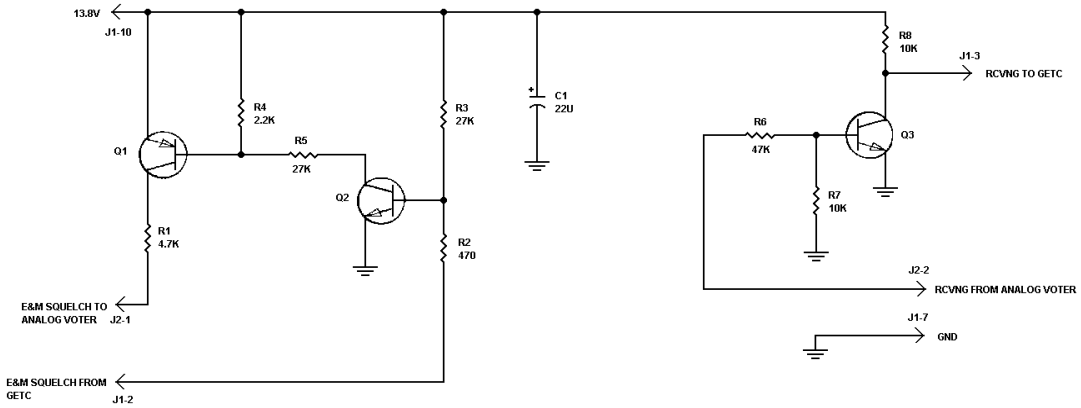
ALL RESISTORS ARE 1/4 WATT UNLESS OTHERWISE SPECIFIED AND RESISTOR VALUES IN OHMS UNLESS FOLLOWED BY MULTIPLIER K OR M.
CAPACITOR VALUES IN F UNLESS FOLLOWED BY MULTIPLIER U, N OR P.
INDUCTANCE VALUES IN H UNLESS FOLLOWED BY MULTIPLIER M OR U.

UNLESS MARKED

OTHERWISE, ALL R.S ARE +/- 5%

ALL POLARIZED CAPS ARE +/- 20%

ALL OTHER CAPS ARE +/- 10%



VOTER INTERFACE BOARD

(19C337197, Sh. 1, Rev. 0)