

DESCRIPTION AND MAINTENANCE

MASTR® II REPEATER STATION CONTROL SHELF

LB130701D
(DF4098)

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DESCRIPTION

The General Electric MASTR® II Repeater Station Control Shelf is a 3-rack unit card shelf with a mother board containing jacks to interconnect the plug-in repeater, audio and regulator boards. The mother board provides the station interconnect jacks and the printed wiring runs between these jacks. The control shelf is located in the 7-rack unit radio panel and is accessed by opening the receiver/exciter door.

ADJUSTMENT

In stations equipped with Channel Guard, the CG Decoder board should be removed to make the following adjustments. Operating the CG DISABLE switch in local/repeat combinations does not disable the repeater function but only allows monitoring the receiver on noise squelch.

A. DROP OUT DELAY TIMER ADJUST

1. Using the station SQUELCH control, unsquelch and squelch the receiver. Note the time required for the transmitter to unkey.

2. If an adjustment is necessary, turn the DROP OUT DELAY TIMER control R14 clockwise to increase the delay time or counterclockwise to decrease the delay time.

B. 3-MINUTE LIMIT TIMER ADJUST

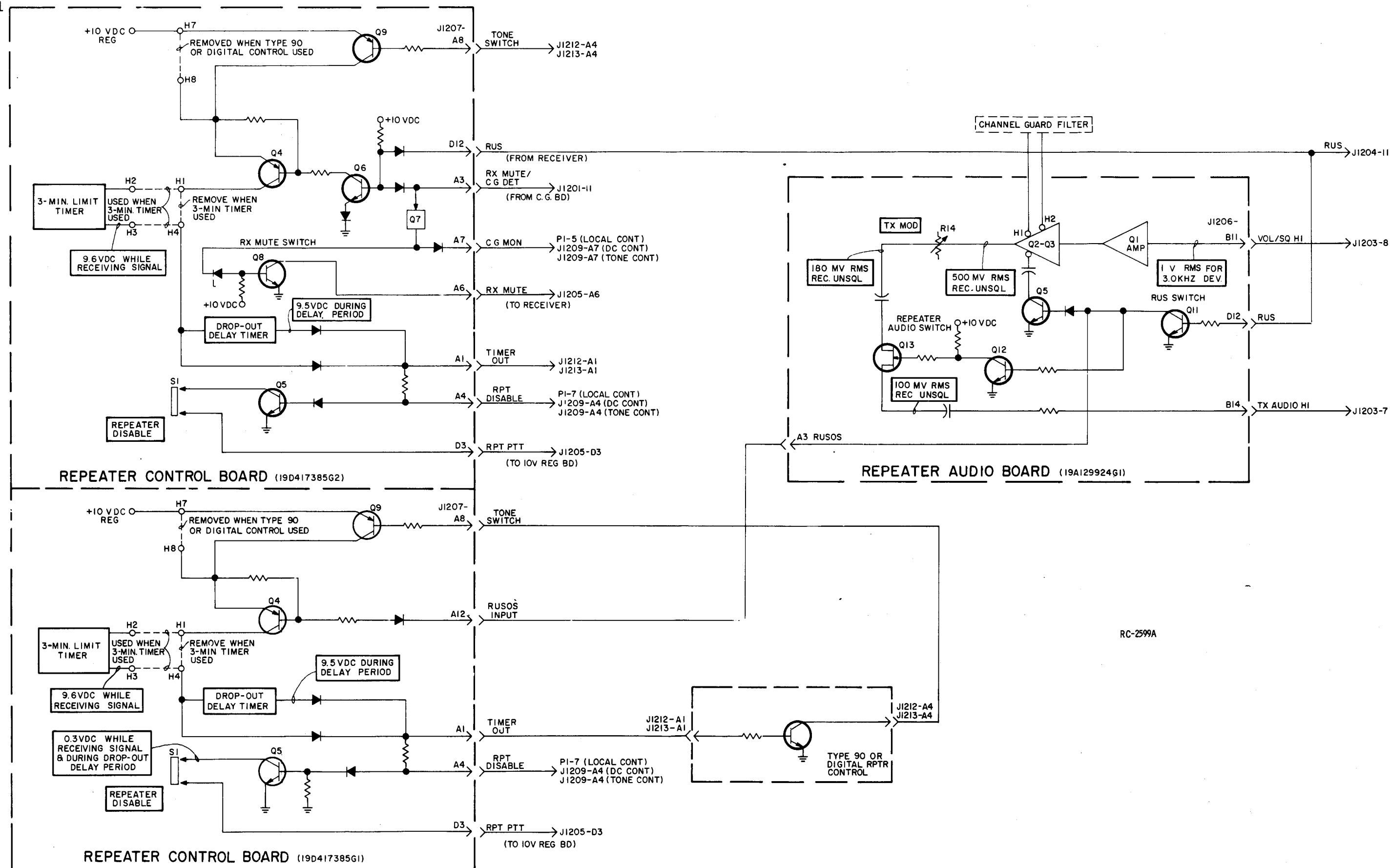
1. Unsquelch the receiver with the station SQUELCH control and note the time for the transmitter to unkey.
2. If an adjustment is necessary, turn the LIMIT TIMER control R8 clockwise to increase the timing cycle or counterclockwise to decrease the timing cycle.

MAINTENANCE

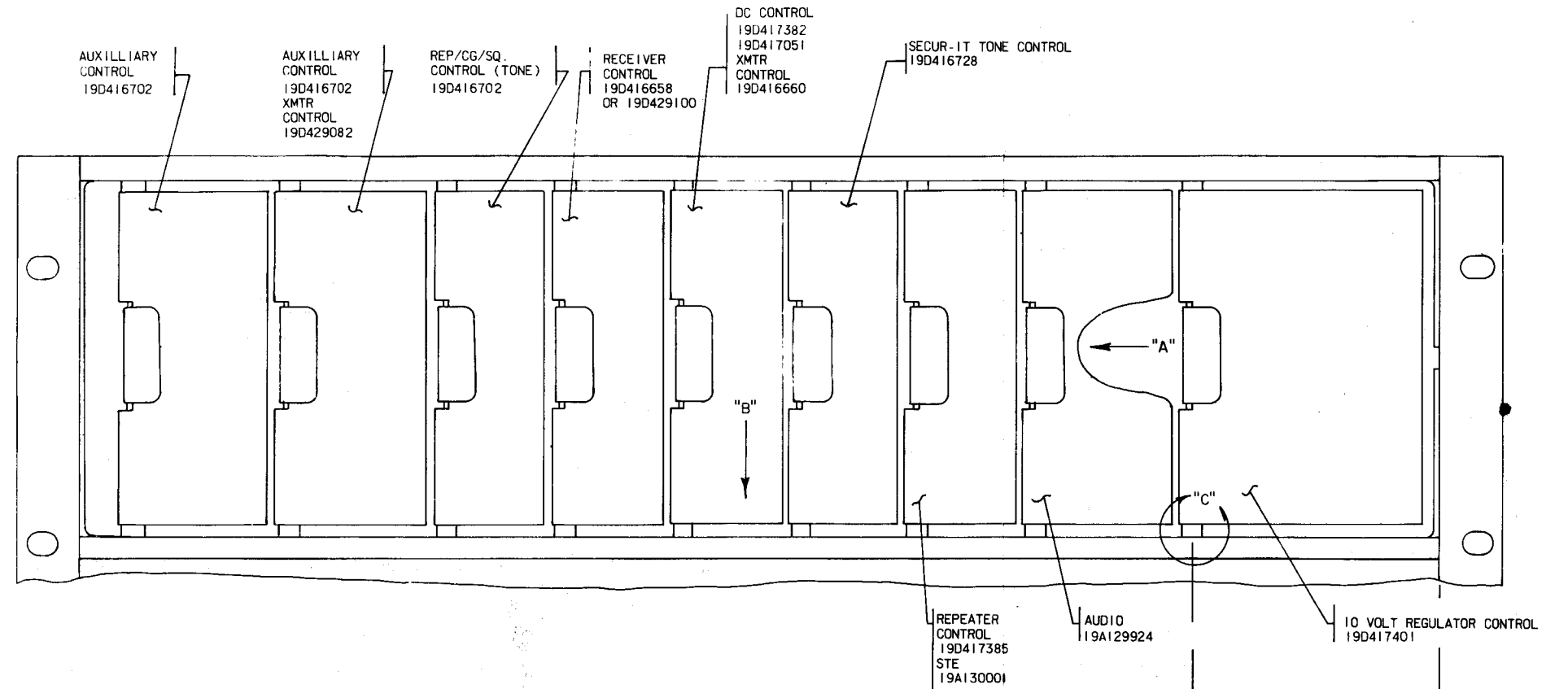
The Repeater Control Shelf is designed for ease of servicing and minimum maintenance. All circuit modules can be easily removed for routine inspection. An Extender Board (19D417458G1, Option 9544) is recommended for servicing any of the modules out of the shelf while maintaining circuit connections. Refer to the Troubleshooting Procedure (see Table of Contents) when maintenance becomes necessary.

GENERAL ELECTRIC COMPANY • MOBILE COMMUNICATIONS DIVISION
WORLD HEADQUARTERS • LYNCHBURG, VIRGINIA 24502 U.S.A.

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REPEATER CONTROL SYSTEM AND TROUBLESHOOTING

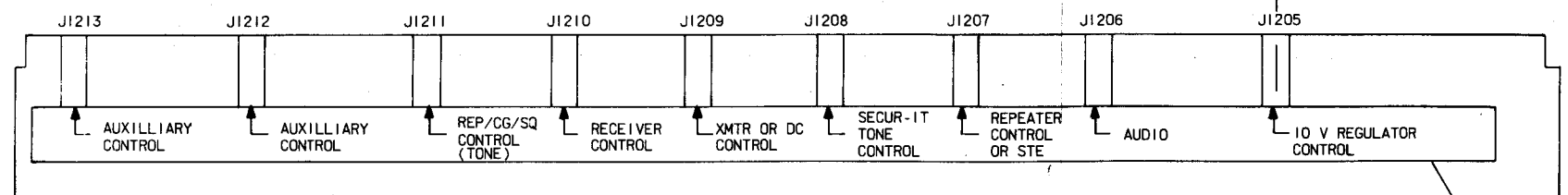


VIEW OF CONTROL MODULES
(DOOR REMOVED)

19C315963P1
CARD GUIDE
(18 PLACES)
(SEE NOTE 1)

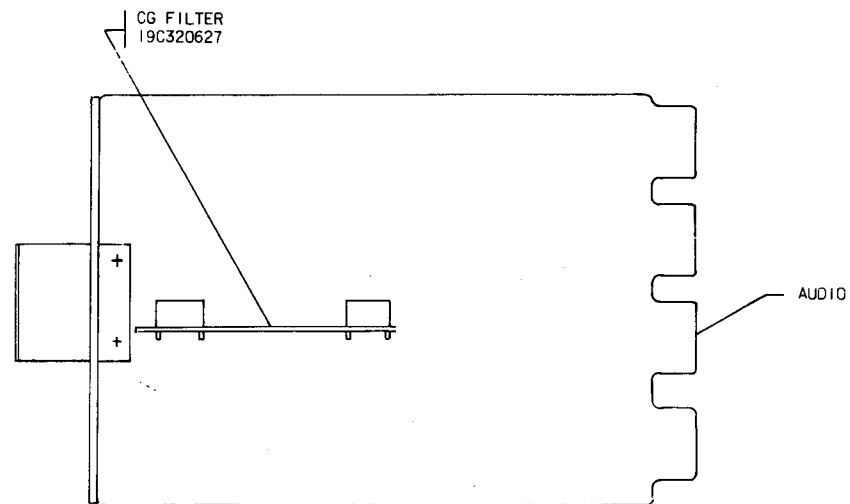
DETAIL "C"

3.18
REF.



VIEW AT "B"

LABEL
NP276439
(SEE NOTE 2)



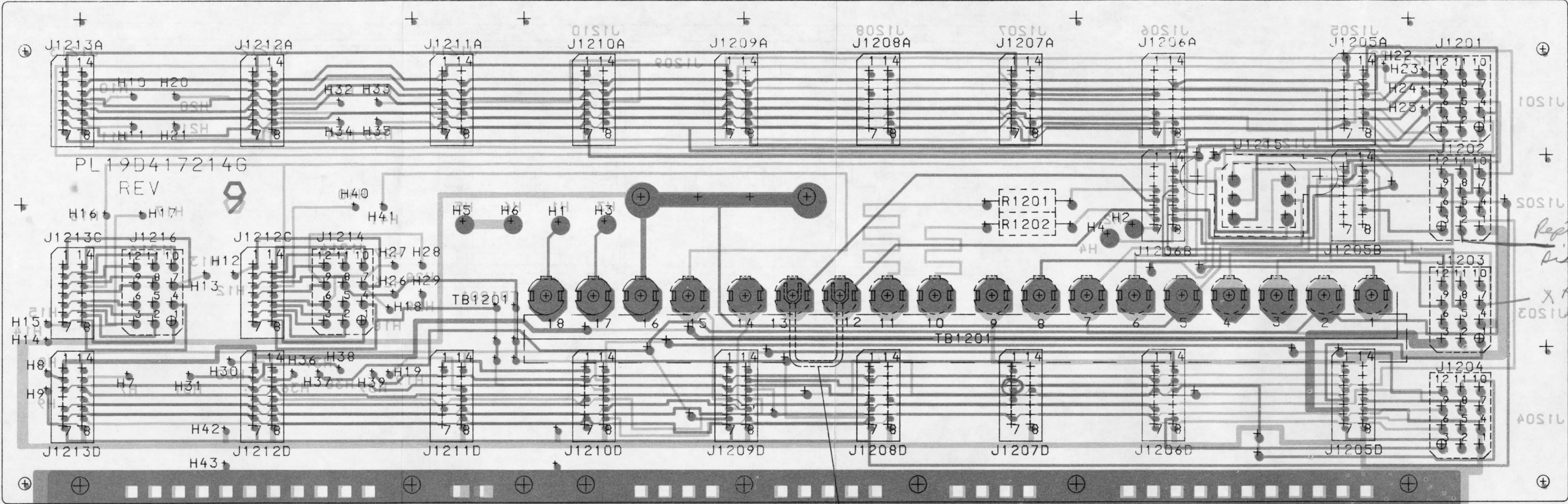
VIEW AT "A"

- NOTES:
1. PART OF MOTHER BD. HDW. KIT PL19A130031G3
 2. ALIGN ARROW WITH CENTER OF FIRST GUIDE WITHIN .06.

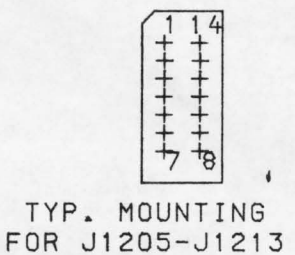
RC-3223A

OUTLINE DIAGRAM

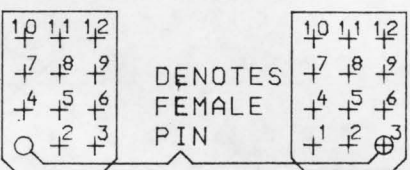
CONTROL SHELF



Rept
Disable
X Audio
EOSIU

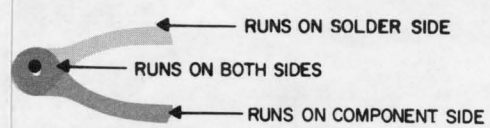


TYP. MOUNTING
FOR J1205-J1213



TYP. MOUNTING
FOR J1202&1204
FARSIDE VIEW

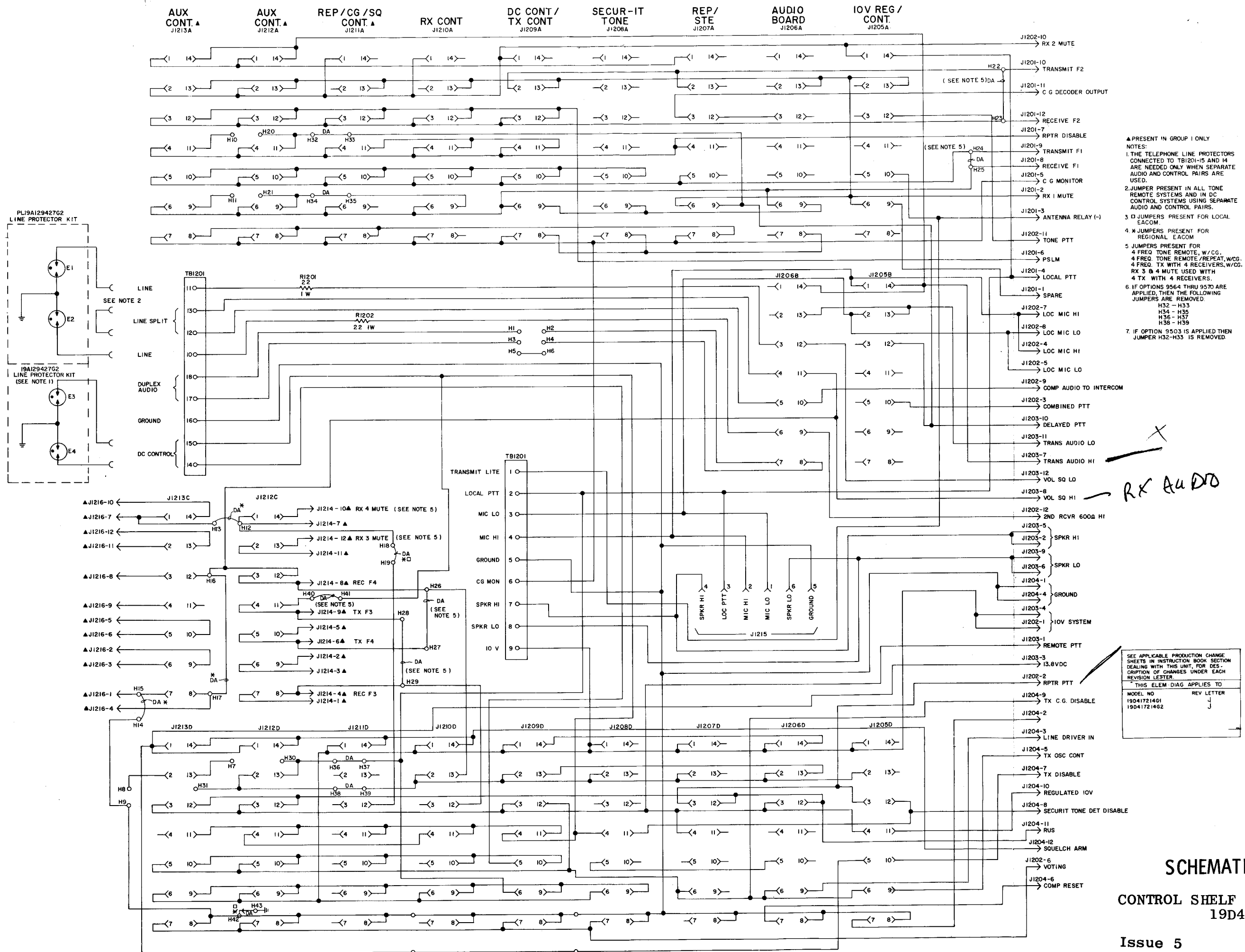
DENOTES
FEMALE
PIN



(19D423897, Rev. 7)
(RC-2943)
(19D423597, Sh. 1, Rev. 9)
(19D423597, Sh. 2, Rev. 8)

OUTLINE DIAGRAM

CONTROL SHELF MOTHER BOARD
19D417214G1 & G2



SCHEMATIC DIAGRAM
CONTROL SHELF MOTHER BOARD
19D417214G1 & G2

PARTS LIST

LBI4811B

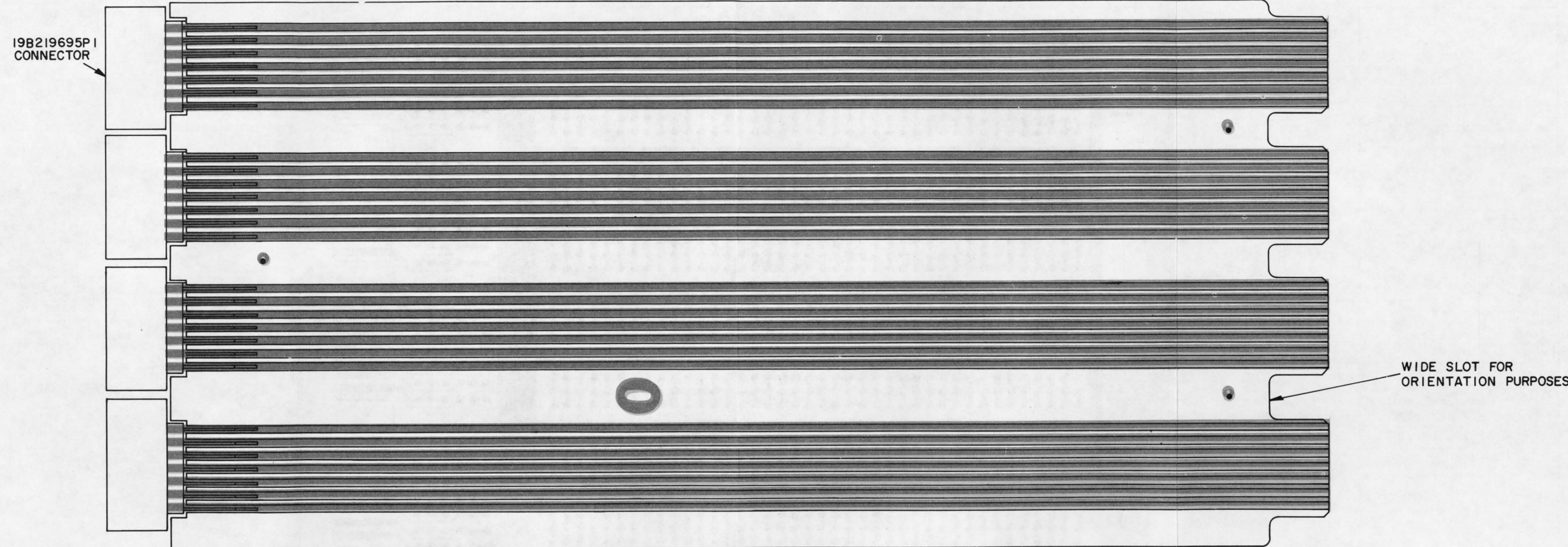
CONTROL SHELF MOTHER BOARD
19D417214G1, G2

PRODUCTION CHANGES

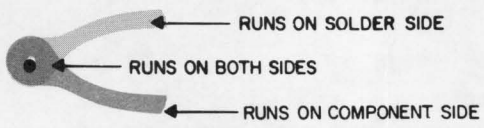
Changes in the equipment to improve performance or to simplify circuits are identified by a "Revision Letter," which is stamped after the model number of the unit. The revision stamped on the unit includes all previous revisions. Refer to the Parts List for descriptions of parts affected by these revisions.

- REV. A - To provide line surge protection and change polarity of DC control leads. Added R1201 and R1202. Reversed connections to J1209-4 and J1209-5.
- REV. B - Changed printed board to provide outputs for EACOM Systems.
- REV. C - Changed board for use in 4-frequency remote systems.
- REV. D - To reduce possibility of falsing on noise. added connection from J1208-D4 to J1209-D4.
- REV. E - Added H37-H39.
- REV. F - Added printed pattern to supply 10 Volts to J1210D-6.
- REV. G - To solve falsing problem, added run from 3 & 4 Frequency Control to Secur-it Tone Board.
- REV. H - To add identity to existing ground run holes (H42 & H43), to improve noise floor in EACOM stations.
- REV. J - Corrected artwork errors at J1212-C, Pins 11 and 12.

SYMBOL	GE PART NO.	DESCRIPTION
----- JACKS AND RECEPTACLES -----		
J1201	19A116647P4	Connector, printed wiring: 12 terminals, sim to Molex 09-18-5121.
J1202	19A116647P6	Connector, printed wiring: 12 terminals, sim to Molex 09-18-5927.
J1203	19A116647P4	Connector, printed wiring: 12 terminals, sim to Molex 09-18-5121.
J1204	19A116647P6	Connector, printed wiring: 12 terminals, sim to Molex 09-18-5927.
J1205A	19A116446P5	Connector, printed wiring: 14 contacts.
J1205B	19A116446P5	Connector, printed wiring: 14 contacts.
J1205D	19A116446P5	Connector, printed wiring: 14 contacts.
J1206A	19A116446P5	Connector, printed wiring: 14 contacts.
J1206B	19A116446P5	Connector, printed wiring: 14 contacts.
J1206D	19A116446P5	Connector, printed wiring: 14 contacts.
J1207A	19A116446P5	Connector, printed wiring: 14 contacts.
J1207D	19A116446P5	Connector, printed wiring: 14 contacts.
J1208A	19A116446P5	Connector, printed wiring: 14 contacts.
J1208D	19A116446P5	Connector, printed wiring: 14 contacts.
J1209A	19A116446P5	Connector, printed wiring: 14 contacts.
J1209D	19A116446P5	Connector, printed wiring: 14 contacts.
J1210A	19A116446P5	Connector, printed wiring: 14 contacts.
J1210D	19A116446P5	Connector, printed wiring: 14 contacts.
J1211A	19A116446P5	Connector, printed wiring: 14 contacts.
J1211D	19A116446P5	Connector, printed wiring: 14 contacts.
J1212A	19A116446P5	Connector, printed wiring: 14 contacts.
J1212C	19A116446P5	Connector, printed wiring: 14 contacts.
J1212D	19A116446P5	Connector, printed wiring: 14 contacts.
J1213A	19A116446P5	Connector, printed wiring: 14 contacts.
J1213C	19A116446P5	Connector, printed wiring: 14 contacts.
J1213D	19A116446P5	Connector, printed wiring: 14 contacts.
J1214	19A116647P4	Connector, printed wiring: 12 terminals, sim to Molex 09-18-5121.
J1215	19B219627G1	Connector: 6 contacts.
J1216	19A116647P4	Connector, printed wiring: 12 terminals, sim to Molex 09-18-5121.
----- RESISTORS -----		
R1201* and R1202*	19A700112P23	Composition: 22 ohms $\pm 5\%$, 1 w. Added by REV A.
----- TERMINAL BOARDS -----		
TB1201	19A116667P3	Plate nut. (Quantity 18).
----- MISCELLANEOUS -----		
	19A129525G3	Cable: approx 3 inches long.

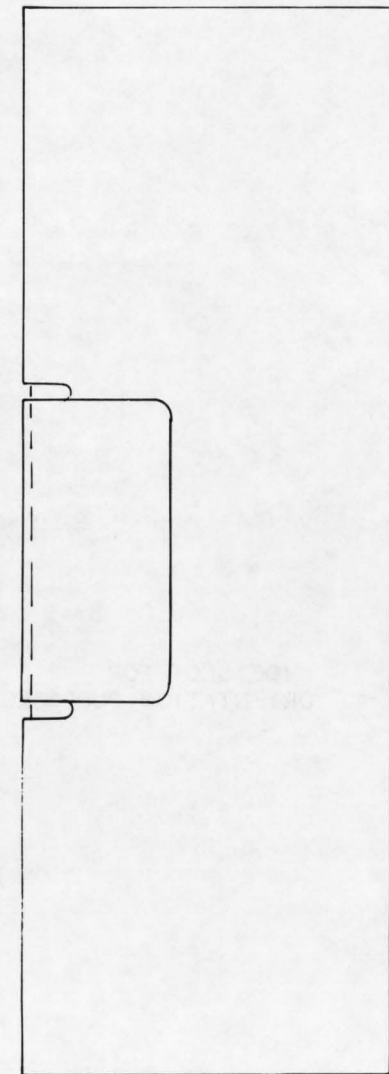


(19D423102, Rev. 0)
(19D417215, Sh. 2, Rev. 0)
(19D417215, Sh. 3, Rev. 0)



OUTLINE DIAGRAM

EXTENDER BOARD 19D417458G1

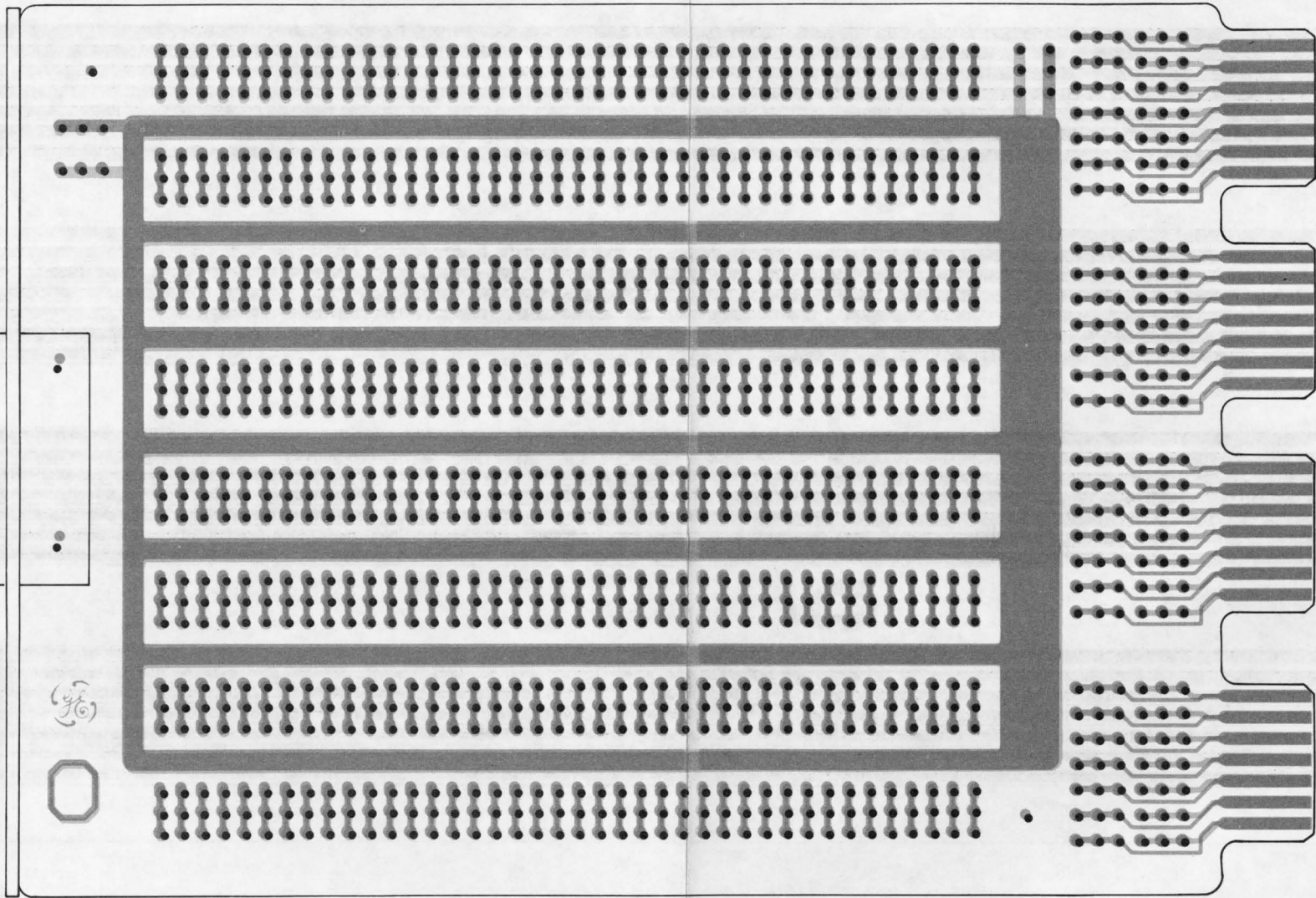


FRONT PANEL: 19D417384 P5
HANDLE: 19B219690GI

OUTLINE DIAGRAM

FIELD APPLICATION MODULE
19D417941

COMPONENT BOARD 19C3209I2PI



(19C321422, Rev. 0)
(19B226246, Sh. 1, Rev. 0)
(19B226246, Sh. 2, Rev. 0)

