MAINTENANCE MANUAL

POWER CONVERTER PANELS 19C320687G1 & G2 (OPTIONS 5256 & 5257)

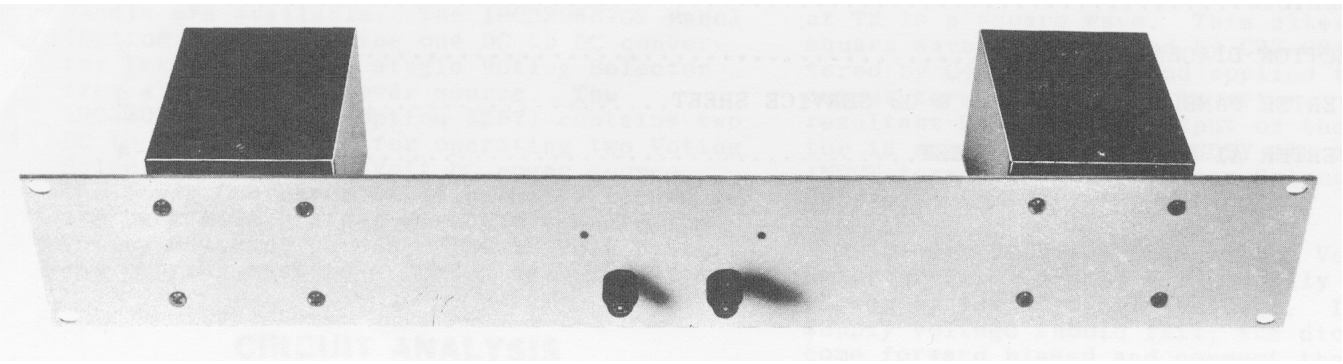
TABLE OF CONTENTS

(Last updated February 16, 1999)

SPECIFICATIONS*

Used With	Voting Selector
Power Input	11.5 - 15 Vdc
Power Output	27.5 Vdc ±10% *(13.8 Vdc Input)*
Dimensions	(2) 19-inch rack units
Temperature Range	-30°C to +60°C (-22°F to +140°F)

ERICSSON



Power Converter Panel

NOTE

Repairs to this equipment should be made only by an authorized service technician or facility designated by the supplier. Any repairs, alterations or substitution of recommended parts made by the user to this equipment not approved by the manufacturer could void the user's authority to operate the equipment in addition to the manufacturer's warranty.

DESCRIPTION

Power Converter Panel 19C320687 provides approximately 24 Volts DC (Vdc) for operating the Ericsson Voting Selector in the event of failure of the AC Power source to the Selector. Two Power Converter Panels are available. The 19C320687G2 panel (Option 5256) contains one DC to DC converter for operating a single Voting Selector from a 12 Vdc power source. The 19C320687G1 Panel (Option 5257) contains two DC to DC converters for operating two Voting Selectors from a 12 Vdc power source. The Power Converter Panel normally mounts in the Desk Mate cabinet directly beneath the Voting Selector panels. The 12 volt battery charger must be supplied by the customer.

CIRCUIT ANALYSIS

The 12 Vdc battery voltage is applied to the input terminals of the power converter. Each converter input is protected by a 5 Ampere, quick-blowing fuse. The power converters are rated for continuous duty.

The input current is connected first to on-half of timing transformer T1 and then to the other half by the switching action of transistors Q1 and Q2. The resultant output at T2 is a square wave. This alternating square wave is rectified by diodes CR3 and CR4, filtered by capacitors C4 and C5 and inductor L1, then applied to the output terminals of the inverter. The resultant 24 Vdc output of the converter is applied to the STANDBY PWR INPUT (+24V) terminal on the Voting Selector Power Supply.

Diodes CR15 and CR16 in the Voting Selector Panel Supply are normally back biased by the AC supply voltage. If the supply voltage should fail, the diodes become forward biased and connect the Power Converter Panel output to the Selector Power circuit. When the AC power source is restored, the diodes are again reverse biased and the Power Converter Panel is automatically disconnected.

POWER CONVERTER PANEL 19C320687G1 & G2

19C320687G1 DOUBLE POWER SUPPLY 19C320687G2 SINGLE POWER SUPPLY

SYMBOL	PART NUMBER	DISCRIPTION
A1* and A2*	19B209414P1	Power Supply: DC to DC Converter, 13.8 Vdc input, 27.5 Vdc output with 2 amp load; sim to CE PB2379.
		- - - - FUSES - - - -
F1 and F2	1R16P8	Quick Blowing: 5 amp @ 250 v; sim to Littelfuse 312005 or Bussmann MTH-5.
		- - - TERMINAL BOARDS - - -
TB1	19C301086P6	Feed-thru, phen: 4 terminals; sim to GE CR151D.
		- - - - SOCKETS - - - -
XF1 and XF2	19B209005P1	Fuseholder: 15 amps @ 250 v; sim to Littelfuse 342012.
		- - HARNESS ASSEMBLY - - (Includes TB1)
	19C320687G3	Double Power Supply.
	19C320687G4	Single Power Supply.
		* Refer to vendor parts list.

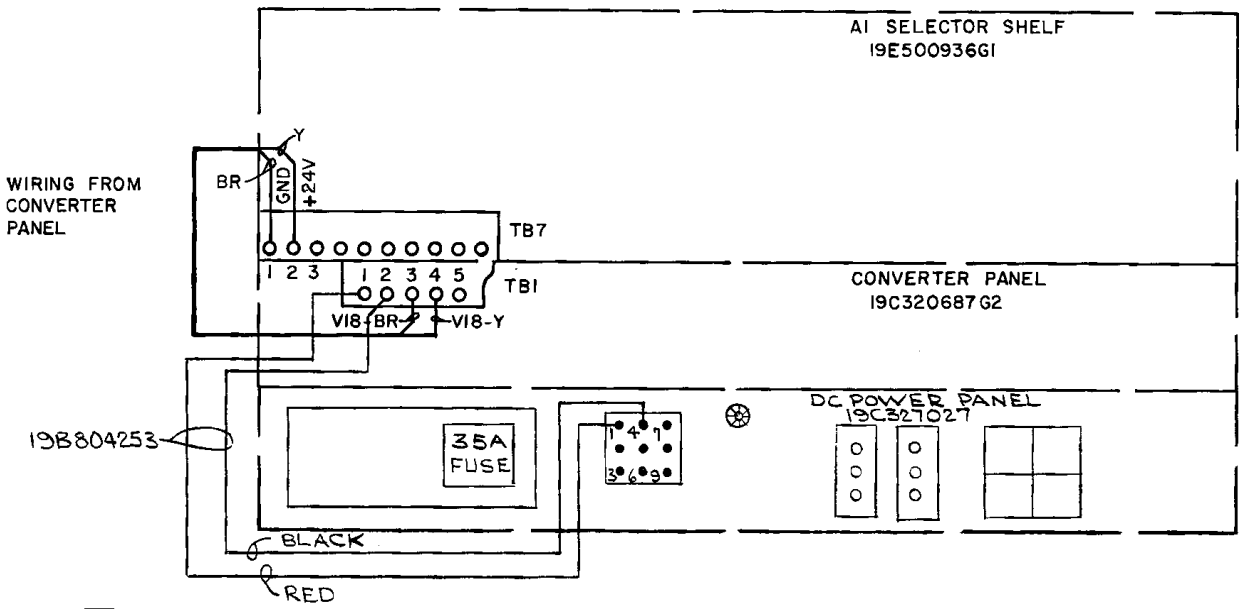
NOTE: COMPONENTS ARE ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES

POWER CONVERTER (A1 & A2) 19B209414P1

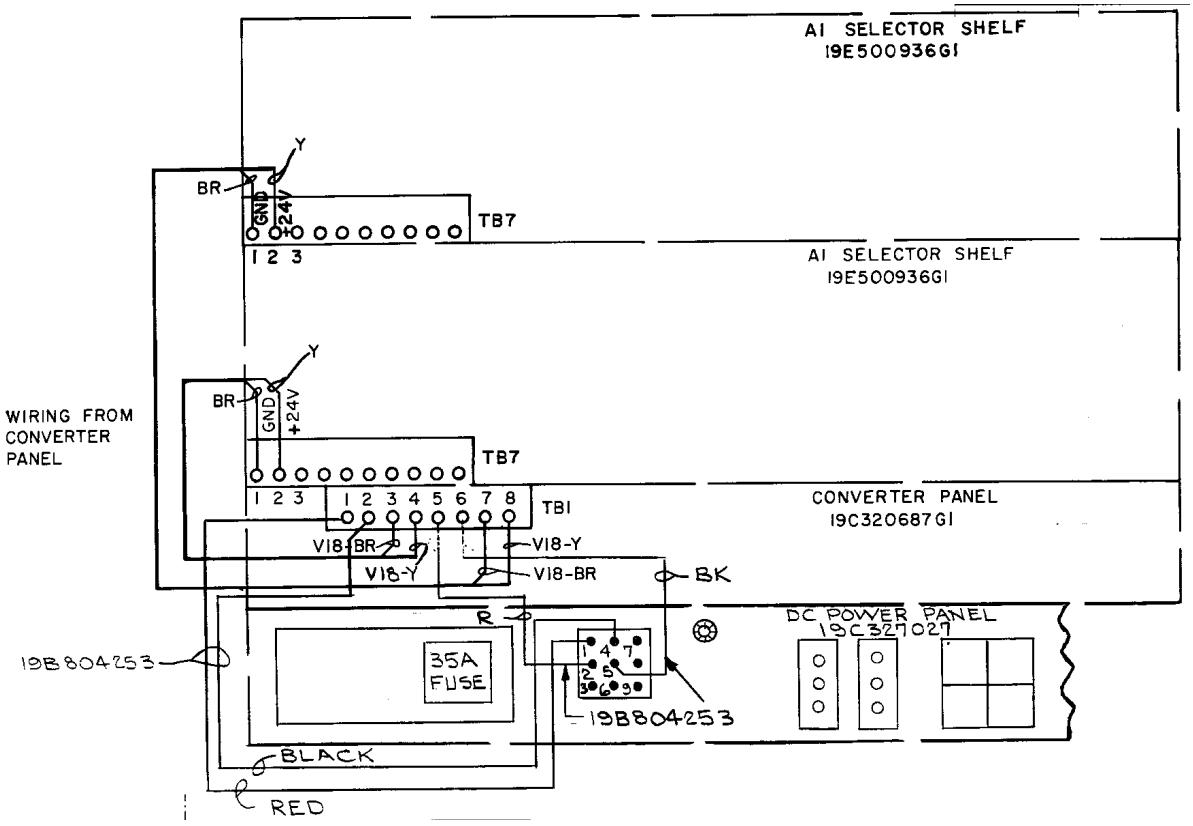
SYMBOL	DESCRIPTION	MFR.	MFR. PART NO.
	- - CAPACITORS- -		
C1	Electrolytic: 250 µF @ 25V	Cornell Dubilier	NLW250-25
C4 and C5	Electrolytic, fixed: 100 µF @ 50V	Cornell Dubilier	NLW100-50
C6 thru C9	Electrolytic, fixed: 0.05 µF @ 500 V.	Spraque	5GA-850
C10	Electrolytic, fixed: 10 µF @ 50 V.	Cornell Dubilier	NLW10-50
	- - - - DIODES - - -		
CR1	Diode	RCA	40109
CR2	Diode	RCA	10B1
CR3	Bridge Rectifier	Semtect	SCAJ05F
	- - - INDUCTOR - - -		
L1	Inductor	CEA	A2343
	- TRANSISTORS -		
Q1 and Q2	Transistors	Motorola	MJ3771
	- - RESISTORS - -		
R1	Composition: 47k Ohms, 1/4 watt.	Allen-Bradley	
	-TRANSFORMERS-		
T1	Transformer	CEA	A2380
T2	Transformer	CEA	A2416

ORDER PARTS FROM:

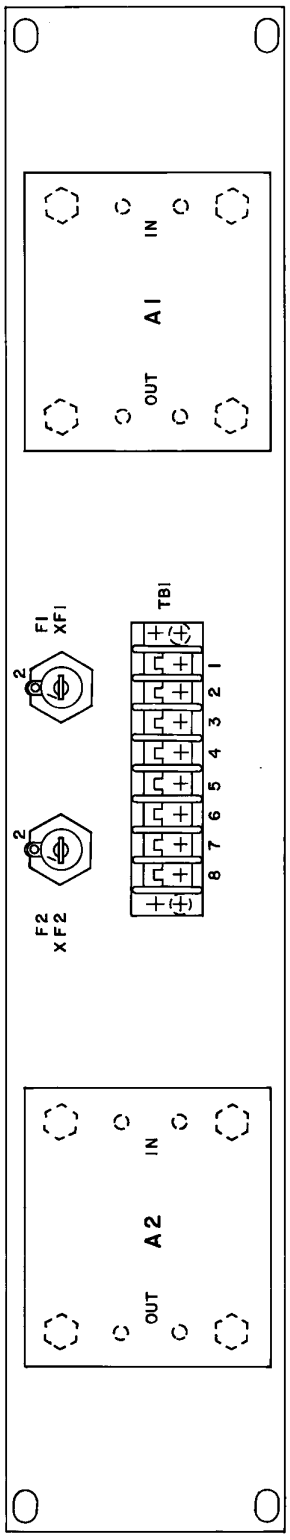
CEA-1 AEROVISTA PARK
SAN LUIS OBISPO, CALIFORNIA 93401



SINGLE SELECTOR SHELF
(19B226080, Sh. 1, Rev. 1A)

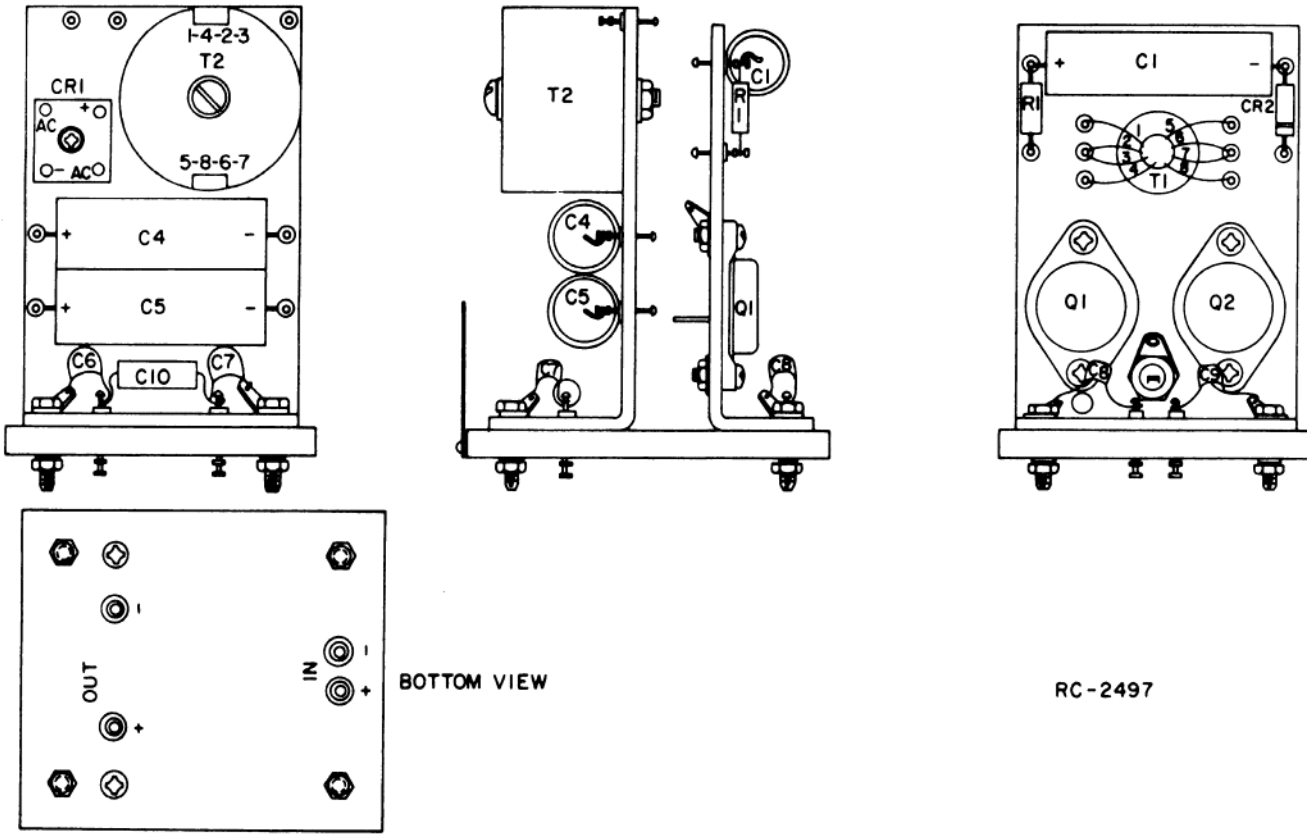


DOUBLE SELECTOR SHELVES
(19B226080, Sh. 2, Rev. 1A)

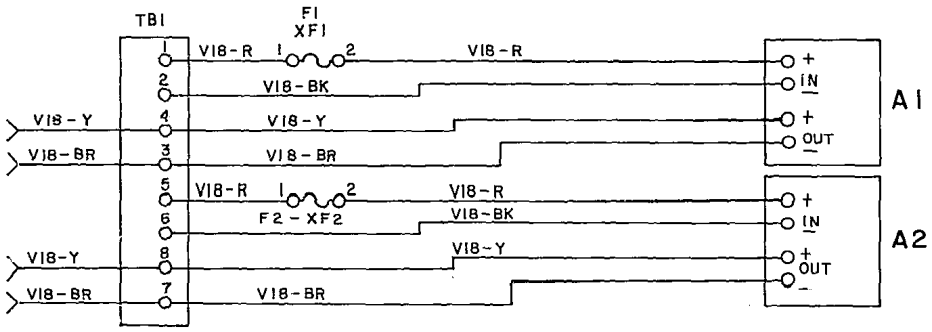


NOTE:
A2 AND F2 PRESENT IN GR. I ONLY.

POWER CONVERTERS PANELS
19C320687 G1 & G2
(19C321011, Rev. 0)



POWER CONVERTER (A1 & A2)
19B209414P1
(RC-2497)



NOTES:

1. F2 & A2 WITH ASSOCIATED CIRCUITRY PRESENT IN GR. 1 & 5.
2. WIRES FROM TB1-3,4,7 & 8 TERMINATED WITH 19B209268P2, CONNECTIONS AT TB1 TO BE SOLDERED.

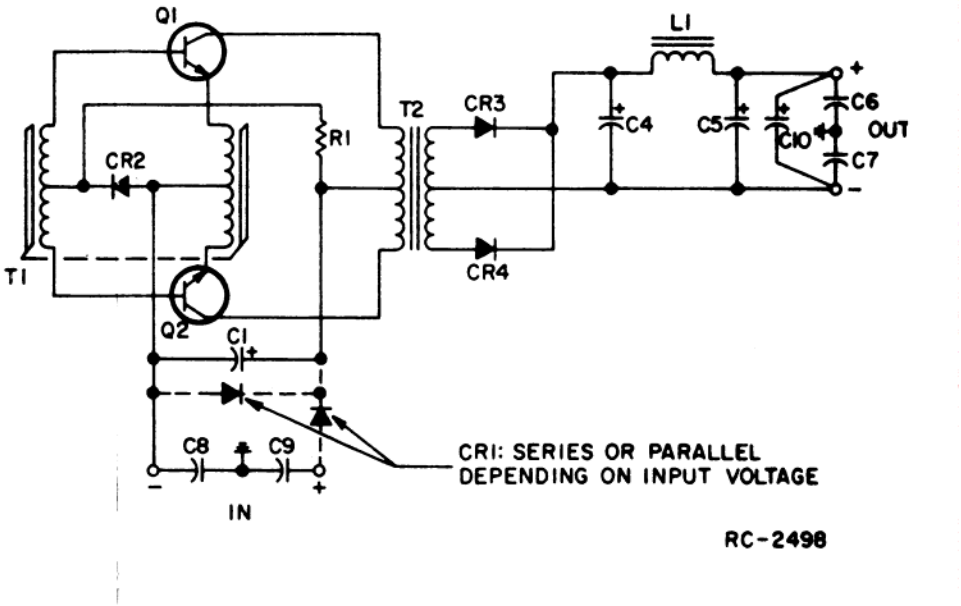
SEE APPLICABLE PRODUCTION CHANGE SHEETS IN INSTRUCTION BOOK SECTION DEALING WITH THIS UNIT, FOR DESCRIPTION OF CHANGES UNDER EACH REVISION LETTER.

THIS ELEM DIAG APPLIES TO	
MODEL NO	REV LETTER
PLI9C320687G1	
PLI9C320687G2	
PL19C320687G5	
PL19C320687G6	

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.

POWER CONVERTER PANELS
19C320687G1 & G2

(19B226044, Rev 4)



POWER CONVERTER (A1 & A2)
19B209414P1

(RC-2498)

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Ericsson Inc.
Private Radio Systems
Mountain View Road
Lynchburg, Virginia 24502
1-800-528-7711 (Outside USA, 804-592-7711)

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