

marantz	model number 250M	bulletin number M-250M-1
	for serial numbers SEE INSTRUCTIONS	
SERVICE BULLETIN SS-MAR0234	subject CORRECT AND UPDATE SERVICE MANUAL	
	engineering approval <i>H. P. Brown</i>	date 9-24-75

This Service Bulletin contains data to correct and update Model 250M Power Amplifier Service Manual, Marantz Part Number 199-2010-000. Print this data in the Service Manual when you receive this bulletin to ensure current reference information. Tape or staple a copy of this bulletin to the inside front cover of the Service Manual as a "Manual Revision Highlights" page.

INSTRUCTIONS – ALL UNITS

Correct the Service Manual text as follows:

- Page 2. Last sentence and word under A. paragraph 4 –
Delete V/V after 21.
Third line under B. METER RANGE CIRCUIT –
Insert "of" after the word damping.
- Page 3. Schematic –
Print the designation 1N967B under CR501 and CR502 of each channel.
NOTE: TRANSISTOR SPECIFICATIONS chart data will be expanded
in a separate Service Bulletin to follow.
- Page 9. Third line under E. MAXIMUM POWER OUTPUT –
Correct 20 kHz to 2 kHz.
- Page 17. Parts List –
Print after CR501, CR502 nomenclature, 1N967B
- Page 18. Parts List –
Correct Q507 type from 2N3931 to S39613.
Draw a line through the first Q508 description (typographical error);
Change Q508 type from S40447 to SJ2582.
Correct Q510 type from S40445 to SJ2586.
Correct Q511 type from S40446 to SJ2585.
Correct Q518 type from MPS6514 to MPS6519.
- Page 19. Parts List –
Print additional items at the bottom of the right column:
Part Number 199-2008 HANDBOOK OF INSTRUCTIONS
Part Number 249-2002-1 ACCESSORY KIT.

INSTRUCTIONS – NOTE SERIAL NUMBER EFFECTIVITIES

- Page 3. Schematic –
Print **3** to the left of R501, R503.
Print under NOTES: **3** R501, R503, 10K, serial no. 2101 and up.

(Cont'd)

INSTRUCTIONS – NOTE SERIAL NUMBER EFFECTIVITIES (Cont'd)

Page 15. Parts List Right-Hand Column –

Print * to the left of Part Number 153-2001 Meter Lamp Panel.

Print at bottom of Parts List * P/N 200-2032, serial number 4501 and up.

Albert Almeida, Manager
Technical Services

marantz.	model number 250M	bulletin number M-250M-2
	for serial numbers ALL	
	subject TRANSISTOR REPLACEMENT	
SERVICE BULLETIN SS-MAR0234	engineering approval <i>H.C. Brauer</i>	date 8-19-75

This bulletin is intended for use when ordering replacement transistors for Marantz Model 250M.

THE INFORMATION LISTED BELOW PERTAINS TO ONLY THOSE TRANSISTORS LISTED IN THE REFERENCE DESIGNATION COLUMN AND SUPERSEDES ANY SERVICE MANUAL REFERENCE TO PART NUMBER, BETA RANGE, COLOR CODE OR PAIRING OF THOSE TRANSISTORS.

To provide correct beta matching, the last three (3) digits of the Marantz part number (DASH NO.) must reference the beta color code of the transistor being replaced.

REF. DES.	VENDOR PART NO.	MARANTZ PART NO.	DASH NO.	(hFE) BETA RANGE	COLOR CODE
Q507	SS9306	461-1003-	-100	70 - 140	Orange
	2N5680	461-1044-	-200	140 - 150	Red
	SJ2583	461-1047-	-300	150 - 300	Yellow
	S39613	461-1056-			
Q508	SS9305	462-1004-	-100	70 - 140	Orange
	2N5682	462-1052-	-200	140 - 150	Red
	SJ2582	462-1053-	-300	150 - 300	Yellow
	S40447	462-1068-			
Q510	SJ2515	462-1040-	-100	50 - 80	Orange
	SJ2586	462-1054-	-200	80 - 110	Red
	S40445	462-1054-	-300	110 - 150	Yellow
Q511	SJ2516	461-1034-	-100	50 - 80	Orange
	SJ2585	461-1046-	-200	80 - 110	Red
	S40446	461-1046-	-300	110 - 150	Yellow
Q802 Q804	SJ2520	461-1031-	-100	25 - 50	Orange
			-200	50 - 100	Yellow
Q803 Q805	SJ2519	462-1036-	-100	25 - 50	Orange
			-200	50 - 100	Yellow

August 19, 1975

NOTES:

1. TRANSISTOR PAIRING


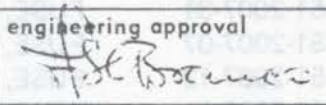
- a. Q802 and Q804 to be matched in same beta range.
- b. Q803 and Q805 to be matched in same beta range.
- c. Q507 and Q508 to be matched within one beta range.
- d. Q510 and Q511 to be matched within one beta range.

2. For transistors having a beta color code not listed on the above chart it is recommended that the transistor pair (the defective and its matching transistor) be replaced. The last three (3) digits of the part number should correspond to the middle beta range shown for that transistor.

3. After transistor replacement perform the Bias Adjustment and Harmonic Distortion Tests described in the Service Manual.



Albert Almeida, Manager
Technical Services

 SERVICE BULLETIN SS-MAR0234	model number 250M	bulletin number M-250M-3
	for serial numbers ALL	
	subject UPDATE SERVICE MANUAL	
	engineering approval 	date 10-22-75

This Service Bulletin contains data to update the Model 250M Service Manual. Primary areas include replacement parts list changes and additions not previously listed. Print this data in the Service Manual when you receive this bulletin to ensure current reference and identification data.

Correct and expand the Service Manual text as follows:

Page 12. Figure 8.

Insert Typical after Figure 8.

Page 15. Parts List, Left Column

Change Part No. (P/N) on FUSE F2 from 451-1020 to 451-2002-22.

Change P/N on METER M1, M2 from 865-2001 to 865-2002.

Change P/N on TERMINAL BOARD TB2 from 363-2000 to 363-1003.

Change P/N on METER BRACKET from 132-2018 to 132-2005.

Page 16. Parts List, Left Column

Top line, change screw length from 1/4- to 1/2-inch.

Sixth line from bottom, delete 672-4400 entire line.

Page 17. Parts List, Left Column

Change P/N on S401, S402 from 453-2005 to 453-2014.

Page 19. Parts List, Right Column

List in upper right hand corner:

(C) CANADA

(E) EUROPE

(J) JAPAN

(U) USA

Under PACKING SET, change P/N on HALF INSERT from 196-2000 to 196-2002.

Under OUTER CARTON add P/N 196-2005 FILLER, INSERT.

Add to bottom of right column:

CONVERSION DATA


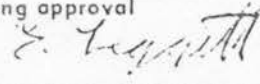
	103-2000-CSA	CONVERSION KIT, CSA (C)
F3	451-2003-15	FUSE, 7.0 AMPS, 125V, FAST-BLOW (C)
TB3	362-1006-1	TERMINAL STRIP, W/.199 HOLES (C)
	199-2027	HANDBOOK OF INSTRUCTIONS, TRILINGUAL (C)
	103-2000-220V	CONVERSION KIT (E)
F1	451-1003	FUSE, 4.0 AMPS, 250V, SLOW-BLOW (E)
	199-2027	HANDBOOK OF INSTRUCTIONS, TRILINGUAL (E)

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Page 2

	103-2000-100V	CONVERSION KIT (J)
F1	451-2007-31	FUSE, 8.0 AMPS, 250V, SLOW-BLOW (J)
F2	451-2007-07	FUSE, 2.0 AMPS, 250V, SLOW-BLOW (J)
F3	451-2007-12	FUSE, 10.0 AMPS, 250V, SLOW-BLOW (J)
T1	440-2008-1	TRANSFORMER, POWER (J)
TB2	360-2000	TERMINAL BLOCK, SPEAKER (J)
W1	361-2004	CORD, A.C. (J)

Almeida
 Albert Almeida, Manager
 Technical Services



 SERVICE BULLETIN <small>SS-MAR0234</small>	model number 250M	bulletin number M-250M-4
	for serial numbers 3691 and later	
	subject NEW VU METER	
	engineering approval 	date 5/28/76

Beginning with serial number 3691, a new VU Meter will be incorporated in the Marantz Model 250M. The new meter and associated parts are described below:

<u>REF.</u>	<u>OLD PART NO.</u>	<u>NEW PART NO.</u>	<u>DESCRIPTION</u>
M1, M2	865-2001	865-2003	Meter, VU
	153-2001	200-2032	Meter Lamp Panel
	132-2005	132-2022	Bracket, Meter Mount



Albert Almeida, Manager
 Technical Services

 SERVICE BULLETIN <small>SS-MAR0234</small>	model number 250M	bulletin number M-250M-5
	for serial numbers SEE BELOW	
	subject POWER AMPLIFIER MODIFICATION PROCEDURE	
	engineering approval 	date 7/26/76

This modification procedure is applicable only for units bearing the following serial numbers:

<u>Market</u>	<u>Serial Number</u>
U.S.A.	below 3756
Europe	below 30001
Japan	below 50001

Should you receive a Model 250M Amplifier for repair in which the failure of the unit is directly attributable to the failure of one or more output, driver or pre-driver devices, proceed as follows;

A. Determine the application of the unit.

Verify, by contacting the customer, if the unit is operated in the home or if it is in commercial use e. g., recording studio, discotheque, theater, etc.

B. Units in commercial use.

Do not proceed with this modification. Send the unit to the nearest Marantz Branch Service Center listed below.

CALIFORNIA:
California Service Center
20525 Nordhoff Street
Chatsworth, California 91311

ILLINOIS:
Superscope Chicago, Inc.
1300 Norwood Avenue
Itasca, Illinois 60143

NEW YORK METROPOLITAN AREA:
Superscope New York, Inc.
56-08 37th Avenue
Woodside, New York 11377

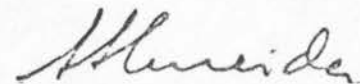
WASHINGTON:
Superscope Northwest, Inc.
12842 N.E. 15th Place
Bellevue, Washington 98005

MINNESOTA:
Minnesota Service Center
12004 12th Avenue South
Burnsville, Minnesota 55337

NEW ENGLAND:
Superscope New England, Inc.
14 Cummings Park
Woburn, Massachusetts 01801

MICHIGAN:
Superscope Detroit, Inc.
591 Executive Drive
Troy, Michigan 48084

C. Proceed with this modification only on those units NOT in commercial use.



Albert Almeida, Manager
Technical Services

SCOPE OF MODIFICATION

This modification provides for increased amplifier reliability by the replacement of existing pre-driver, driver and output devices with improved versions and by the addition of flyback diodes to both channels of the amplifier.

IMPORTANT

BOTH amplifier channels must be modified in accordance with this modification procedure although only one channel may be defective.

A. PARTS REQUIRED

The following parts are required in the performance of this modification and should be ordered directly from the Marantz Parts Department.

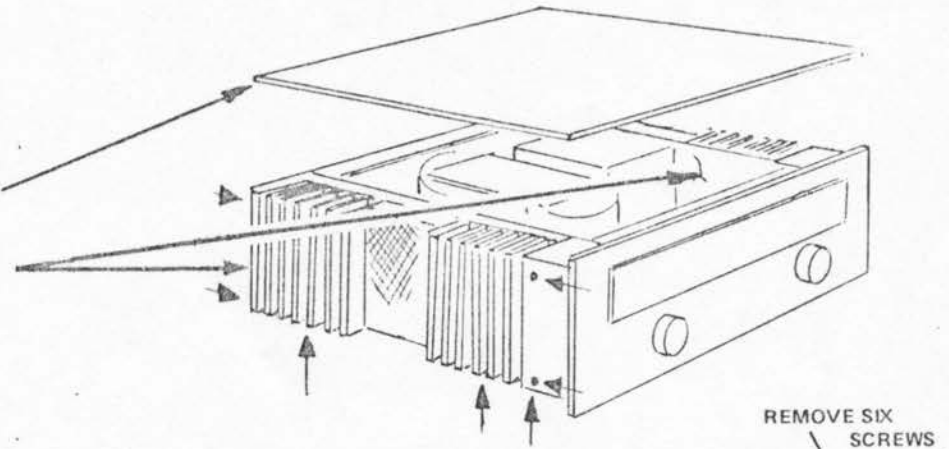
THE SUBSTITUTION OF ANY PARTS OTHER THAN THOSE LISTED BELOW IS NOT AUTHORIZED.

ITEM	PART NO.	QTY.	DESCRIPTION	REF. DESIG.
1	461-2010-000	4	Output Transistor, PNP, SJ6267 or S42573	Q802, Q804
2	462-2021-000	4	Output Transistor, NPN, SJ6266 or S42572	Q803, Q805
3	461-2011-000	2	Driver Transistor, PNP, SJ6270 or S42575	Q511
4	462-2022-000	2	Driver Transistor, NPN, SJ6269 or S42574	Q510
5	462-2016-000	2	Pre-Driver Transistor, NPN, 2N3440	Q508
6	461-2003-000	2	Pre-Driver Transistor, PNP, 2N5415	Q507
7	460-2000-000	4	Diode, 1N4003	CR505, 506 (Additions)

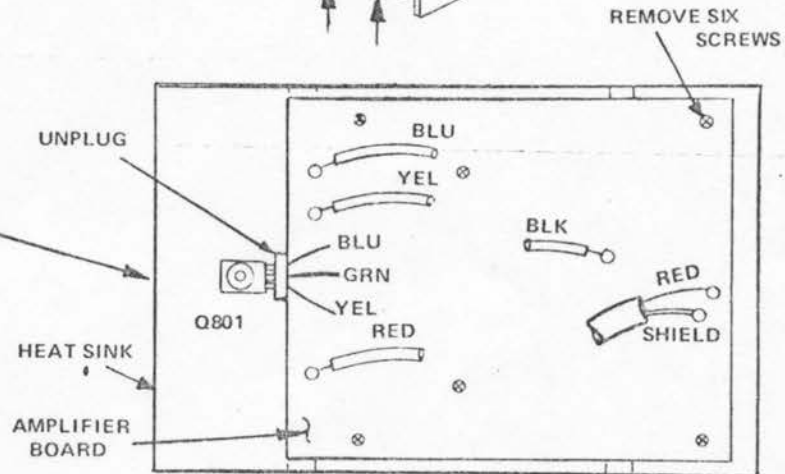
NOTE: The thermal compound used in this modification is available by ordering part number 637-1002-000.

B DISASSEMBLY

1. Remove the Model 250M Top Cover.
2. Remove the seven screws securing each Heatsink Assembly to the chassis.

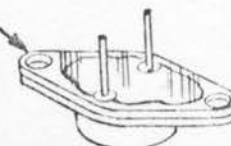
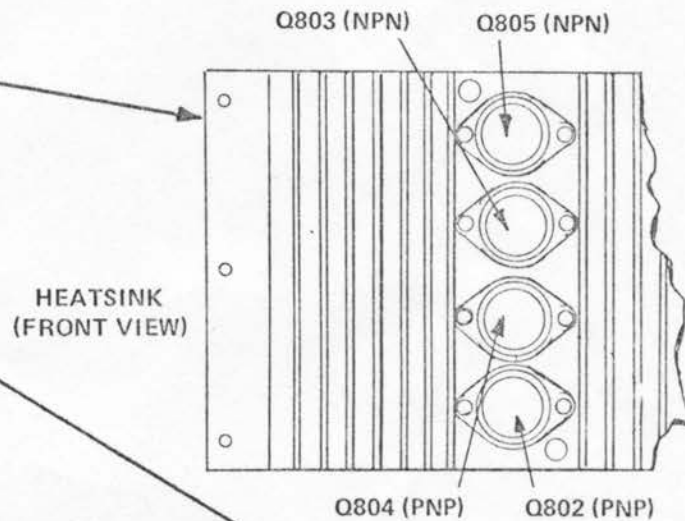


3. Separate the Amplifier Board from each heatsink.



C OUTPUT TRANSISTOR REPLACEMENT

1. Position each heatsink as shown.
2. Remove the screws holding the top transistor on each heatsink.
3. Remove the old transistor and retain the mica insulator and hardware.
4. Select the correct replacement output transistor (NPN or PNP) and apply a thin layer of thermal compound to the transistor surface.
5. Add the mica insulator and apply thermal compound as necessary to the insulator.
6. Mount the transistor with mica insulator onto the heatsink using the hardware previously removed in step C-3.
7. Repeat steps C-2 through C-6 for each output transistor on both heatsinks.



CAUTION

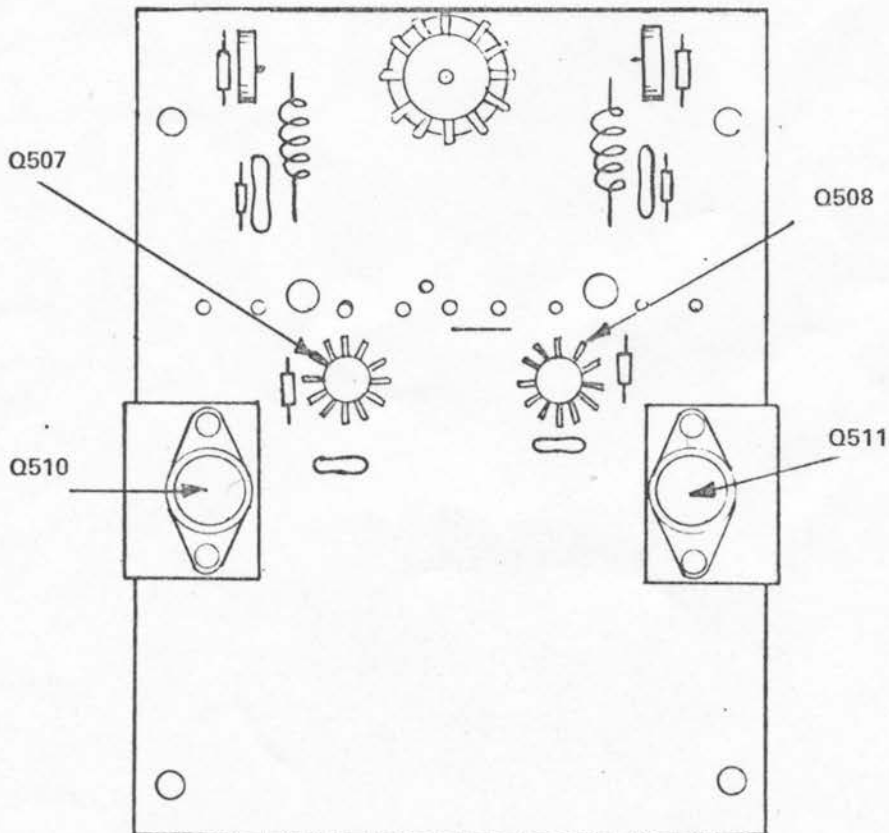
Be absolutely sure that the NPN and PNP transistors are mounted in the

D POWER AMPLIFIER BOARD MODIFICATION

Using the Amplifier Board (component side) illustration for reference, remove each component listed in "REMOVE" columns one at a time, and replace with new components listed in the corresponding "Replace With" columns.

- NOTE:
1. Apply thermal compound to the surface of the driver transistors and mica insulators.
 2. Remove the heatsink from the old pre-driver transistor, apply thermal compound to the TO-5 case of the replacement pre-driver transistor and attach heatsink.

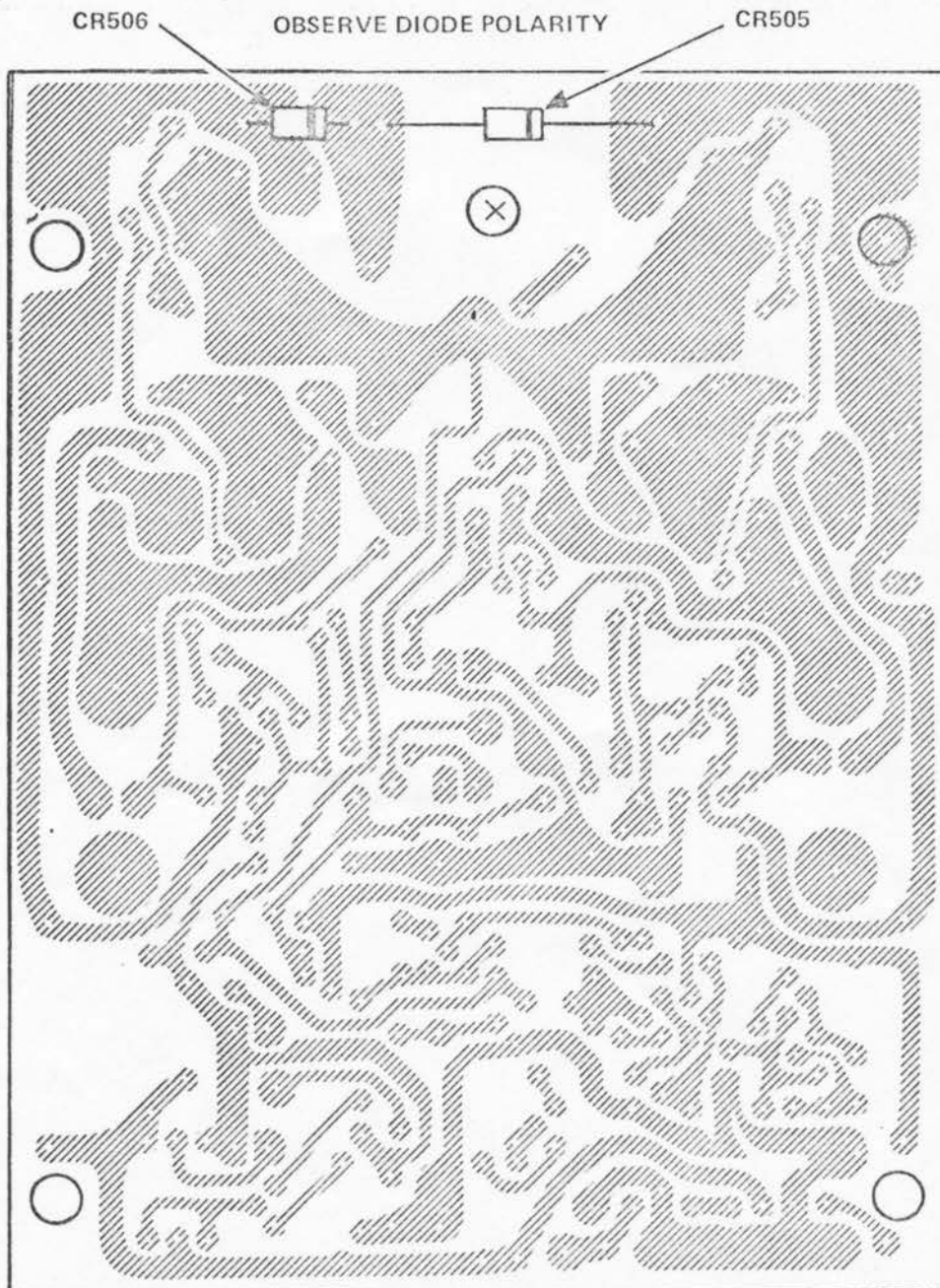
REMOVE			REPLACE WITH		
REF. DESIG.	PART NUMBER	DESCRIPTION	NEW REF. DESIG.	NEW PART NUMBER	DESCRIPTION
Q507	461-1056-000	Pre-Driver Transistor, PNP	same	461-2003-000	Pre-Driver Transistor, PNP, 2N5415
Q508	462-1068-000	Pre-Driver Transistor, NPN	same	462-2016-000	Pre-Driver Transistor, NPN, 2N3440
Q510	462-1054-000	Driver Transistor, NPN	same	462-2022-000	Driver Transistor, NPN, SJ6269 OR S42574
Q511	461-1046-000	Driver Transistor, PNP	same	461-2011-000	Driver Transistor, PNP, SJ6270 OR S42575



AMPLIFIER BOARD (COMPONENT SIDE)

- E Using the Amplifier Board (foil side) illustration for reference, add the following new components to the foil side of each Amplifier Board.

REF. DESIG.	PART NUMBER	DESCRIPTION
CR505	460-2000-000	Diode, 1N4003
CR506	460-2000-000	Diode, 1N4003



AMPLIFIER BOARD (FOIL SIDE)

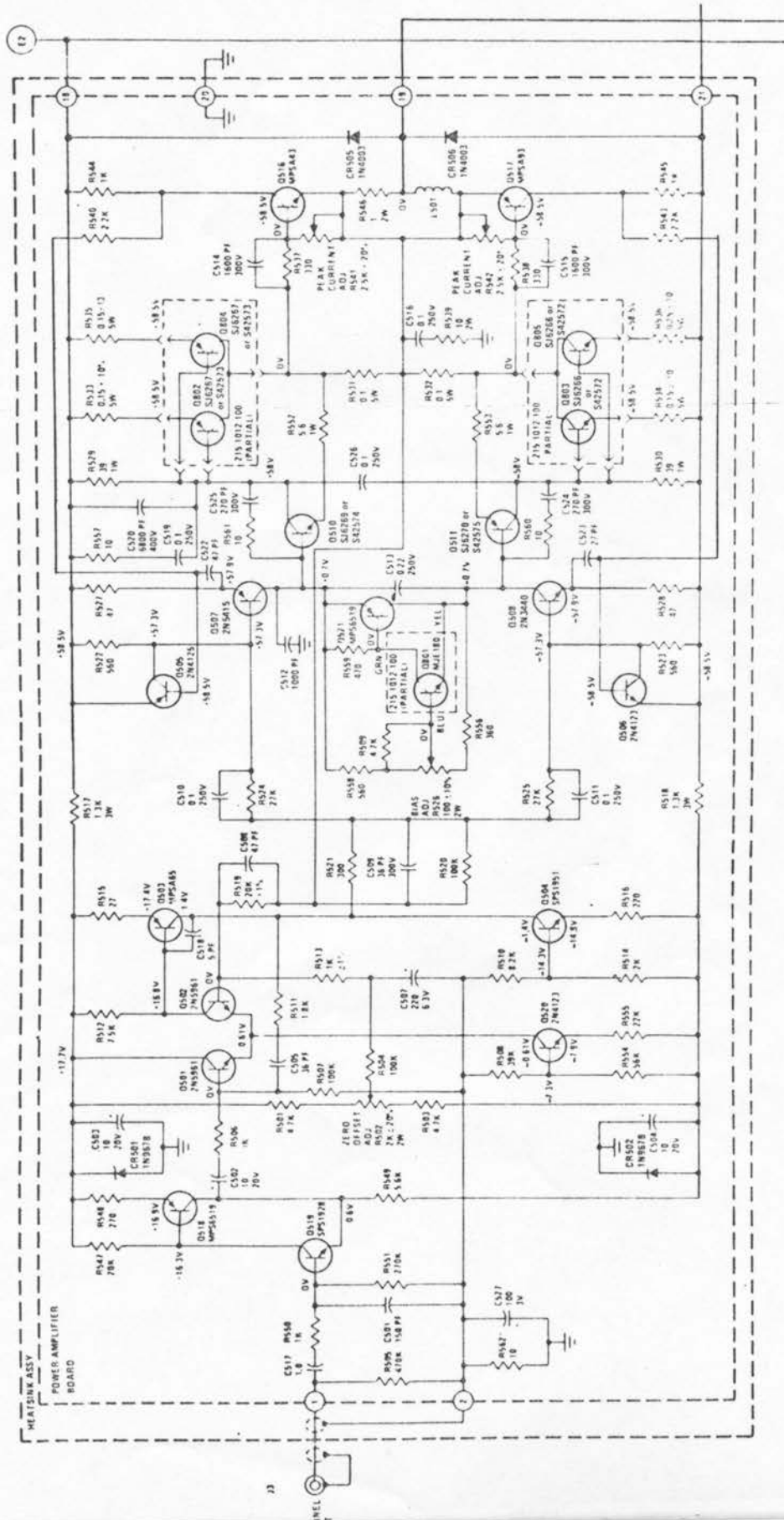
F RE-ASSEMBLY

1. Re-assemble both Amplifier Boards to the heatsinks.
2. Re-connect all previously removed wires to the Heatsink Assembly.
3. Re-mount the Heatsink Assemblies onto the chassis.
4. Check all wiring and connections.
5. Connect the output terminals of the Model 250M to an 8-ohm load, and connect the AC line cord to a variac and wattmeter. Slowly increase the AC input voltage while monitoring the wattmeter. Wattmeter indication should not exceed;
45-50 WATTS at 120 VAC with both amplifiers operational.
6. If Wattmeter indication exceeds specifications, immediately remove all power to the amplifier and re-check each step of the modification procedure until the trouble is located.

G PERFORMANCE VERIFICATION


Perform the Performance Verification procedure listed in Model 250M Service Manual pages 6 through 12.

H SCHEMATIC DIAGRAM (PARTIAL)



Notes: 1. This schematic shows left channel only.
 2. Right channel (not shown) is identical to left channel.
 Unless otherwise specified:
 3. Capacitors in mfd, 100V.
 4. Resistors in ohms, 1/4 W, ±5%.

MODEL 250M SCHEMATIC DIAGRAM (PARTIAL)
 (Modified per Marantz Service Bulletin M-250M-5)

 SERVICE BULLETIN	model number 250M	bulletin number M - 250M-6
	for serial numbers 3691 AND ABOVE	
	subject PRODUCTION CHANGE VU METERS	
	technical services approval <i>Shneider</i>	writer <i>JKJ</i>
engineering approval <i>D. N. Quinn</i>	date 3-3-77	

OBJECTIVE

This bulletin is issued to inform you of a production change in the VU Meters of the Marantz Model 250M.

APPLICATION

- A. This change has been incorporated in units bearing the Serial Number 3691 and above.
- B. When supplies of the old type meter are exhausted, the new type may be used for repairs.

PARTS ORDERING

<u>Description</u>	<u>Ref. Desig.</u>	<u>Old Part Number</u>	<u>New Part Number</u>	<u>Qty.</u>
Meter	M1 or M2	865-2001-000	865-2003-000	2
Meter Lamp Panel	None	153-2001-010	125-2032-100	2
Meter Mount Bracket	None	132-2005-010	132-2022-000	4

NOTE: You will also need a drill with a .312" (5/16") diameter drill bit and some black paint.

PROCEDURE

- A. When installing the new type meter in units bearing Serial Numbers below 3691 change both meters since there is a difference in the face plates.
- B. For installation of new meters in units with serial numbers below 3691, follow these steps:
 1. Remove both old meters.
 2. Using the .312" diameter drill bit, widen the holes for the Meter Zero Adjust Screws on the front panel of the Chassis.
 3. Carefully remove all metal fragments from the chassis and apply the black paint to cover the bare metal and any scratches.

(Cont'd . . .)

<p style="text-align: center;"><i>AA</i></p> <p>marantz.</p> <p>SERVICE BULLETIN</p>	model number 250M	bulletin number M-250M-7
	for serial numbers ALL	
	subject POWER TRANSFORMER REPLACEMENT	
	technical services approval <i>[Signature]</i>	writer <i>AA</i>
engineering approval <i>[Signature]</i>	date 11-15-77	

OBJECTIVE

This bulletin is issued to inform you of a new Power Transformer for the Marantz Model 250M.

APPLICATION

- A. This new Power Transformer, part number 440-1010-000 replaces transformer part number 440-2008-000 used on the Marantz Model 250M.
- B. When supplies of the old type transformer are exhausted, the new type transformer may be used for repair.

PARTS ORDERING

<u>Description</u>	<u>Ref. Desig.</u>	<u>Old Part Number</u>	<u>New Part Number</u>
Power Transformer	T1	440-2008-000	—
Power Transformer	T1	—	440-1010-000