

SERVICE MANUAL



marantz

model 2265B

Stereophonic Receiver

TABLE OF CONTENTS

Section	Title	Page
1.	P.W. BOARDS	1
2.	TEST EQUIPMENT REQUIRED FOR SERVICING	1
3.	AM ALIGNMENT PROCEDURES	2
3.1	AM IF Alignment	2
3.2	AM Frequency Range and Tracking Alignment	2
3.3	AM Signal Strength Meter Alignment	2
4.	FM ALIGNMENT PROCEDURES	2
4.1	FM Frequency Range and Tracking Alignment	2
4.2	Stereo Separation Alignment	2
4.3	Muting Circuit Alignment	2
4.4	Dolby FM Tape Output Setting	2
5.	AUDIO ADJUSTMENT	2
6.	VOLTAGE CONVERSION FOR EUROPEAN MODEL	3
7.	DIAGRAMS	5
7.1	Block Diagram	5
7.2	Connection Diagram - U.S.A. & Canada	7
7.3	Connection Diagram - Europe	9
8.	SCHEMATIC DIAGRAMS AND COMPONENT LOCATIONS	11
8.1	FM Front End Circuit Board P100	11
8.2	AM Tuner, FM IF & MPX Decoder Circuit Board P200	12
8.3	Phono Amp Circuit Board P400	13
8.4	Main Amp Circuit Board P700	14
8.5	Power Supply Circuit Board P800	15
8.6	Pre and Tone Amp Circuit Board PE01	16
8.7	Monitor and Filter Switches Circuit Board PS01	17
8.8	Dolby Socket Circuit Board PK01	18
8.9	Function Lamp Circuit Board PY01	18
8.10	Dial Lamp Circuit Board PZ01	18
8.11	Antenna Muting Circuit Board PC01	18
8.12	Speaker Switches Circuit Board PN01	19
9.	MAJOR COMPONENT LOCATIONS	20
9.1	Cabinet - Front View	20
9.2	Chassis - Top View	20
9.3	Cabinet - Rear View	21
9.4	Chassis - Bottom View	21
10.	EXPLODED VIEWS	22
10.1	Rear Panel Exploded View - U.S.A. & Canada	22
10.2	Rear Panel Exploded View - Europe	22
10.3	Front Panel Exploded View	23
10.4	Chassis Exploded View	25
10.5	Packing Material Exploded View	27
11.	PARTS LIST	28
12.	TECHNICAL SPECIFICATIONS	40
13.	SCHEMATIC DIAGRAMS	43

INTRODUCTION

This service manual was prepared for use by Authorized Warranty Stations and contains service information for Marantz Model 2265B Stereophonic Receiver.

Servicing information and voltage data included in this manual are intended for use by the knowledgeable and experienced technician only. All instructions should be read carefully. No attempt should be made to proceed without a good understanding of the operation of the receiver.

The parts list furnishes information by which replacement parts may be ordered from the Marantz Company. A simple description is included for parts which can usually be obtained through local suppliers.

1. P.W. BOARDS

As can be seen from the circuit diagram, the chassis of Model 2265B consists of the following units. Each unit mounted on a printed circuit board is described within the square enclosed by a bold dotted line on the circuit diagram.

1. FM Front End mounted on P.W. Board P100
2. AM Tuner, FM IF & MPX
Stereo Decoder mounted on P.W. Board P200
3. Dolby Socket mounted on P.W. Board PK01
4. Phono Amp mounted on P.W. Board P400
5. Main Amp mounted on P.W. Board P700
6. Power Supply mounted on P.W. Board P800
7. Pre & Tone Amp mounted on P.W. Board PE01
8. Monitor & Filter
Switches mounted on P.W. Board PS01
9. Function Lamp mounted on P.W. Board PY01
10. Dial Lamp mounted on P.W. Board PZ01
11. Antenna Muting mounted on P.W. Board PC01
12. Speaker Switches mounted on P.W. Board PN01
13. Fuse mounted on P.W. Board PP01

2. TEST EQUIPMENT REQUIRED FOR SERVICING

This table lists the test equipment required for servicing the Model 2265B Receiver

Item	Manufacturer and Model No.	Use
AM Signal Generator		Signal source for AM alignment
Test Loop		Use with AM Signal Generator
FM Signal Generator MPX Signal Generator	Sound Technology Model 1000A	Signal source for FM alignment Stereo separation alignment and trouble shooting
Distortion Analyzer Audio Oscillator AC VTVM	Sound Technology Model 1700A	Distortion measurements Sinewave and squarewave signal source Voltage measurements (AC)
Oscilloscope	Tektronix Model T932 Philips Model 3232	Waveform analysis and trouble shooting and ASO alignment
Frequency Counter	Fluke Model 1900A	MPX Oscillator adjustment (VCO)
Circuit Tester		Trouble shooting
DC VTVM	Fluke Model 8000 "Digital" Simpson Model 313, Triplet Model 801	Voltage measurements (DC)
AC Wattmeter	Simpson Model 1379	Monitors primary power to amplifier
AC Ammeter	Commercial Grade (1-10A)	Monitors amplifier output under short circuit condition
Line Voltmeter	Simpson Model 1359	Monitors potential of primary power to amplifier
Variable Autotransformer	Superior Electronic Co., Powerstat Model 116B-10A	Adjusts level of primary power to amplifier
Shorting Plug	Use phono plug with 600-ohm across center pin and shell	Shorts amplifier input to eliminate noise pickup
Output Load (8 ohms, 0.5%, 100W)	Commercial Grade	Provides 8-ohm load for amplifier output termination
Output Load (4 ohms, 0.5%, 100W)	Commercial Grade	Provides 4-ohm load for amplifier output termination

3. AM ALIGNMENT PROCEDURES

3.1 AM IF ALIGNMENT

1. Connect a sweep generator to the J155 and an alignment scope to the test point B.
2. Rotate each core of IF transformers L155 and L156 for maximum height and flat top symmetrical response.

3.2 AM FREQUENCY RANGE AND TRACKING ALIGNMENT

1. Set an AM signal generator to 515 kHz. Turn the tuning capacitor fully closed (place the tuning pointer at the low end) and adjust the oscillator coil L153 for maximum audio output.
2. Set the signal generator to 1650 kHz. Place the tuning pointer in the high frequency end and adjust the oscillator trimmer on the oscillator tuning capacitor for maximum audio output.
3. Repeat steps 1 and 2 until no further adjustment is necessary.
4. Set the generator to 600 kHz and tune the receiver to the same frequency and adjust a slug core of AM ferrite-rod antenna L001 and RF coil L152 for maximum output.
5. Set the generator to 1400 kHz and tune the receiver to the same frequency and adjust both trimming capacitors of antenna and RF tuned circuit for maximum output.
6. Repeat steps 4 and 5 until no further adjustment is necessary.

NOTE: During tracking alignment reduce the signal generator output as necessary to avoid AGC action.

3.3 AM SIGNAL STRENGTH METER ALIGNMENT

Set an AM signal generator to 1000 kHz at 5 μV , and adjust R157 so that the signal strength meter may read 90% of the full scale.

4. FM ALIGNMENT PROCEDURES

4.1 FM FREQUENCY RANGE AND TRACKING ALIGNMENT

1. Connect an FM signal generator to the FM ANTENNA terminals and an oscilloscope and an audio distortion analyzer to the TAPE MONITOR OUT jacks on the rear panel.
2. Set the signal generator to 87 MHz and provide about 3 to 5 μV . Place the tuning pointer at the low frequency end by rotating the tuning knob and adjust the core of oscillator coil L105 to obtain maximum audio output.
3. Set the signal generator to 109 MHz and provide about 3 to 5 μV output. Rotate the tuning knob and place the tuning pointer at the high frequency end and adjust the trimming capacitor CF04 for maximum output.
4. Repeat steps 2 and 3 until no further adjustment is necessary.
5. Set the signal generator to 90 MHz and tune the receiver to the same frequency. Decrease signal generator output until the audio output level decreases with the decreasing generator output. Adjust the antenna coil L101, RF coils L102, L103 and L104 and IF transformer L106 for minimum audio distortion.

6. Set the signal generator to 106 MHz and tune the receiver to the same frequency. Adjust the trimming capacitors CF01, CF02 and CF03 for minimum distortion.
7. Repeat steps 5 and 6 until no further adjustment is necessary.
8. Adjust the primary core (lower) of discriminator transformer L203 so that the center tuning meter pointer indicates its center at no signal applied. Set the FM signal generator to 98 MHz and increase its output level 1 μV and tune the receiver to the same frequency so that the center tuning meter pointer indicates its center. Adjust the secondary core (upper) of L203 for minimum distortion.
9. Set the signal generator to 98 MHz at 1000 μV , and adjust R227 so that the signal strength meter may read 90% of the full scale.

4.2 STEREO SEPARATION ALIGNMENT

1. Set the FM signal generator to provide 1 μV at 98 MHz. Tune the receiver to the same frequency so that the center tuning meter pointer indicates its center.
2. Turn the signal generator modulation off (with the pilot signal turned off), connect a frequency counter to test point J318, and adjust R307 so that the frequency counter may precisely read 76 kHz.
3. Modulate the signal generator with stereo composite signal consisting only of subchannel signal (of course a pilot signal must be included).
4. Adjust the trimming resistor R316 for maximum and same separation in both channels.

4.3 MUTING CIRCUIT ALIGNMENT

1. Set the FM signal generator to provide 30 μV or more at 98 MHz and tune the receiver to the same frequency correctly.
2. Set the semifixed resistor RC01 to the maximum position.
3. Depress the FM MUTING pushswitch.
4. Adjust the semifixed resistor RC02 for muting "on".

4.4 DOLBY FM TAPE OUTPUT SETTING

1. Set the modulation of the FM signal generator to 400 Hz, 50% (± 37.5 kHz Dev.).
2. Set the signal generator to provide 1 μV at 98 MHz. Tune the receiver to the same frequency so that the center tuning meter pointer indicates its center.
3. Turn the SELECTOR switch to FM 25 μS position. Set the semifixed resistors R332 and R333 so that the output of the TAPE MONITOR OUT jacks R and L become 580 mV at VTVM.

5. AUDIO ADJUSTMENT

1. Main Amplifier DC off-set alignment
Connect a DC voltmeter with 0.5 or 1 V range between the speaker terminals and adjust the semifixed resistor R710 for "zero" DC output on the meter. Repeat the same procedure for the other channel.

NOTE: During this alignment no load should be connected to the speaker terminals.

2. Idle-current adjustment

Connect a VTVM between pin terminals J717 and J718. Next, adjust the semifixed resistor R716 so that the VTVM reads 20 mV DC. Repeat the same procedure for the other channel.

3. Check DC off-set voltage aligned in the procedure 1 and if any DC output is observed on the DC voltmeter, adjust the R710 again for "zero" output.

6. VOLTAGE CONVERSION FOR EUROPEAN MODEL

The European version of the Model 2265B is equipped with a universal power transformer that may be adjusted to operate at 110 V, 120 V, 220 V, or 240 V AC at 50 to 60 Hz. To convert the unit to a different power source voltage, reposition conversion plug at shown in Figure 1.

CAUTION: DISCONNECT POWER SUPPLY CORD FROM AC OUTLET BEFORE CONVERTING VOLTAGE.

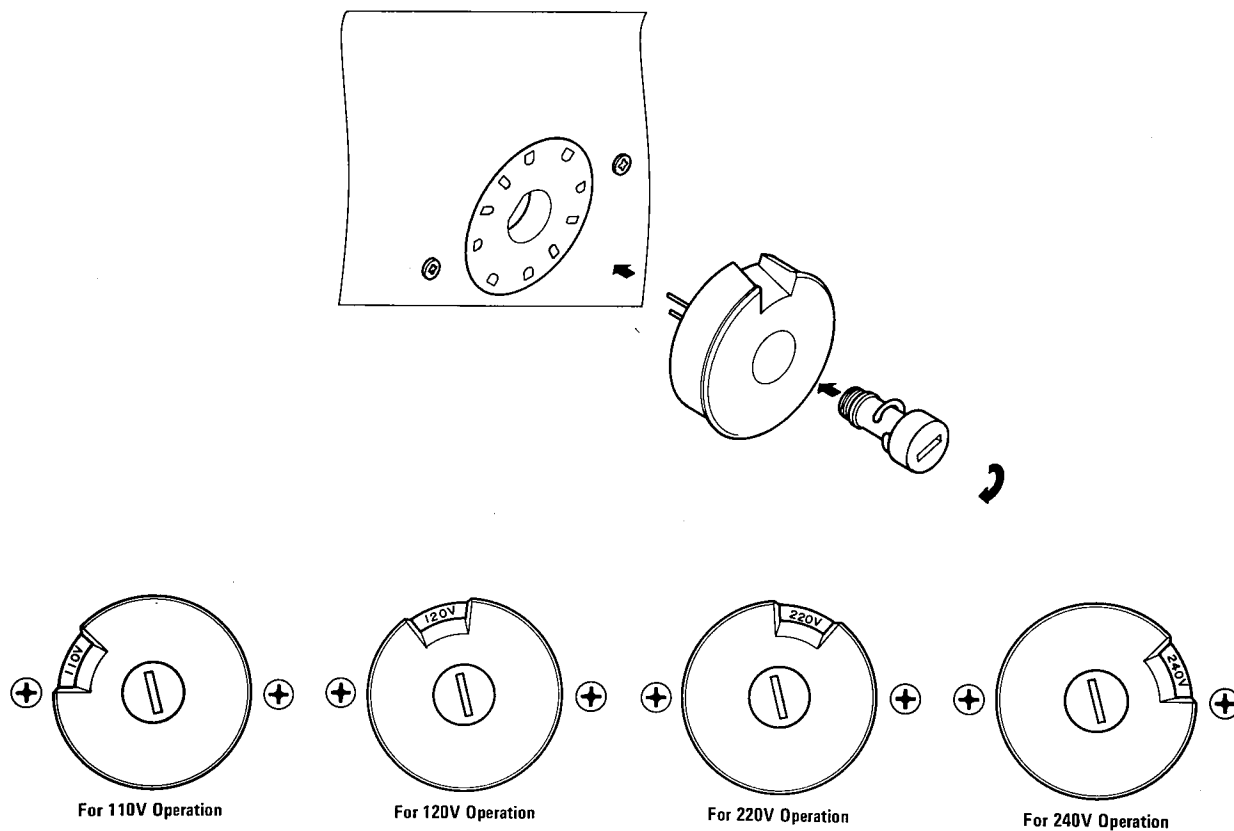


Figure 1. Voltage Conversion Chart

FTZ REGULATION

Instruction for the use in the range other than specified in FTZ codes.

Achtung für die Leute, die in dem Gebiet wohnen, wo die FTZ-Bestimmungen vorherrschend sind.

Sollte das Gerät auch für Frequenzen ausserhalb des in den FTZ-Bestimmungen angegebenen Bereiches empfangsbereit sein, bitten wir, den Bereich durch Nachstellen des Kernes in der Oszillatorspule (in der Abbildung mit "FTZ" gekennzeichnet) so zu korrigieren, dass er den Bestimmungen entspricht.

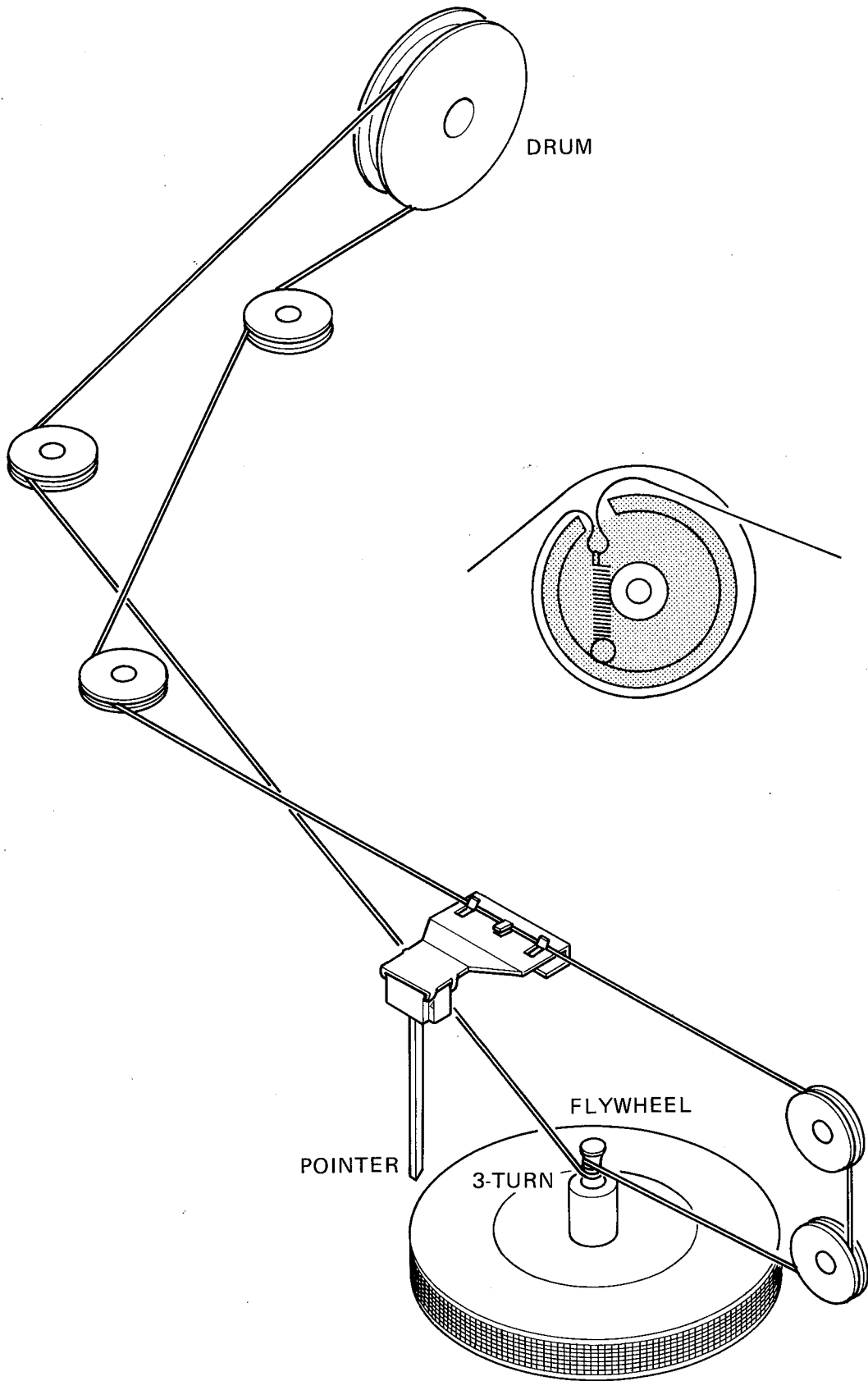
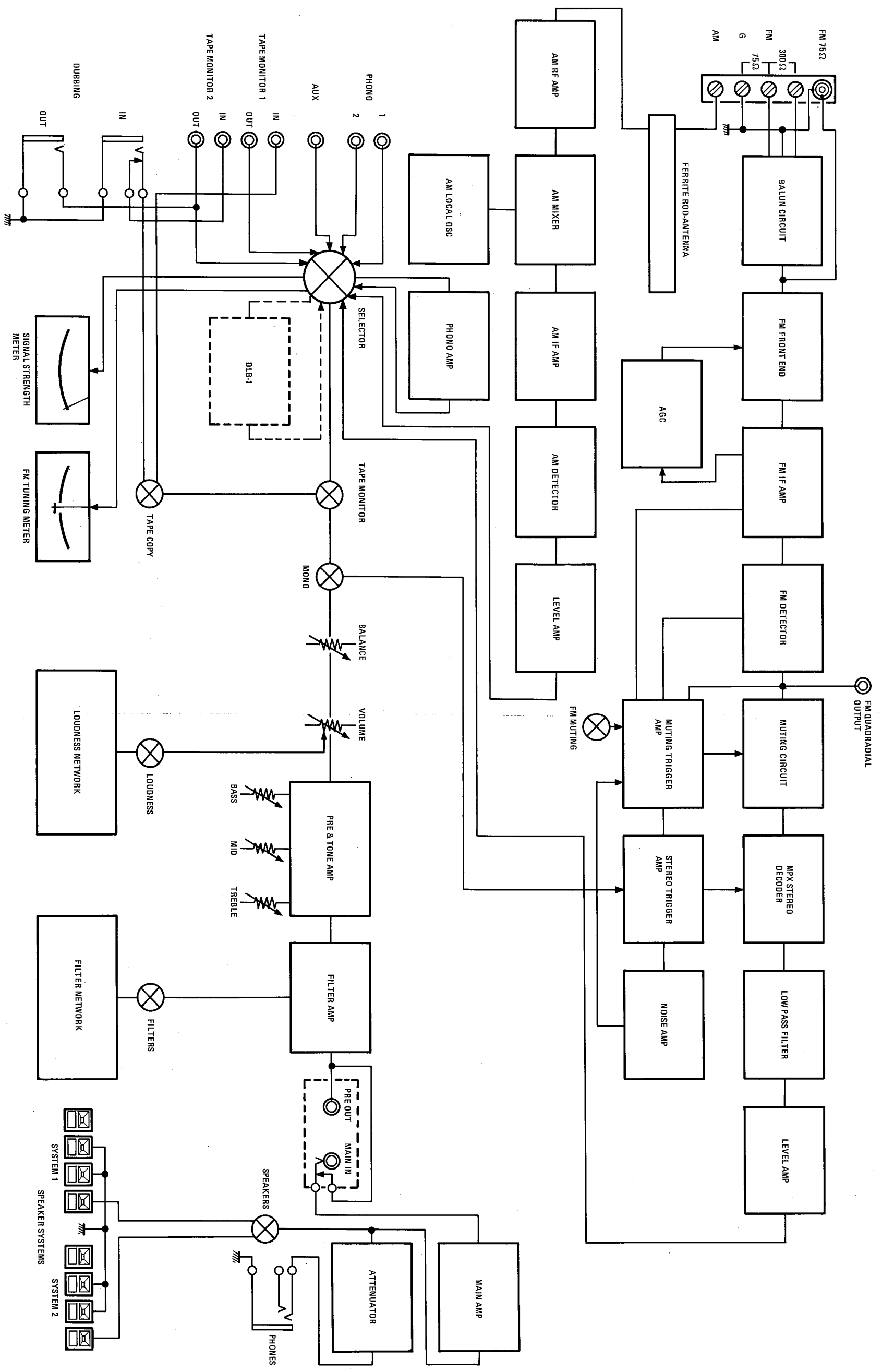
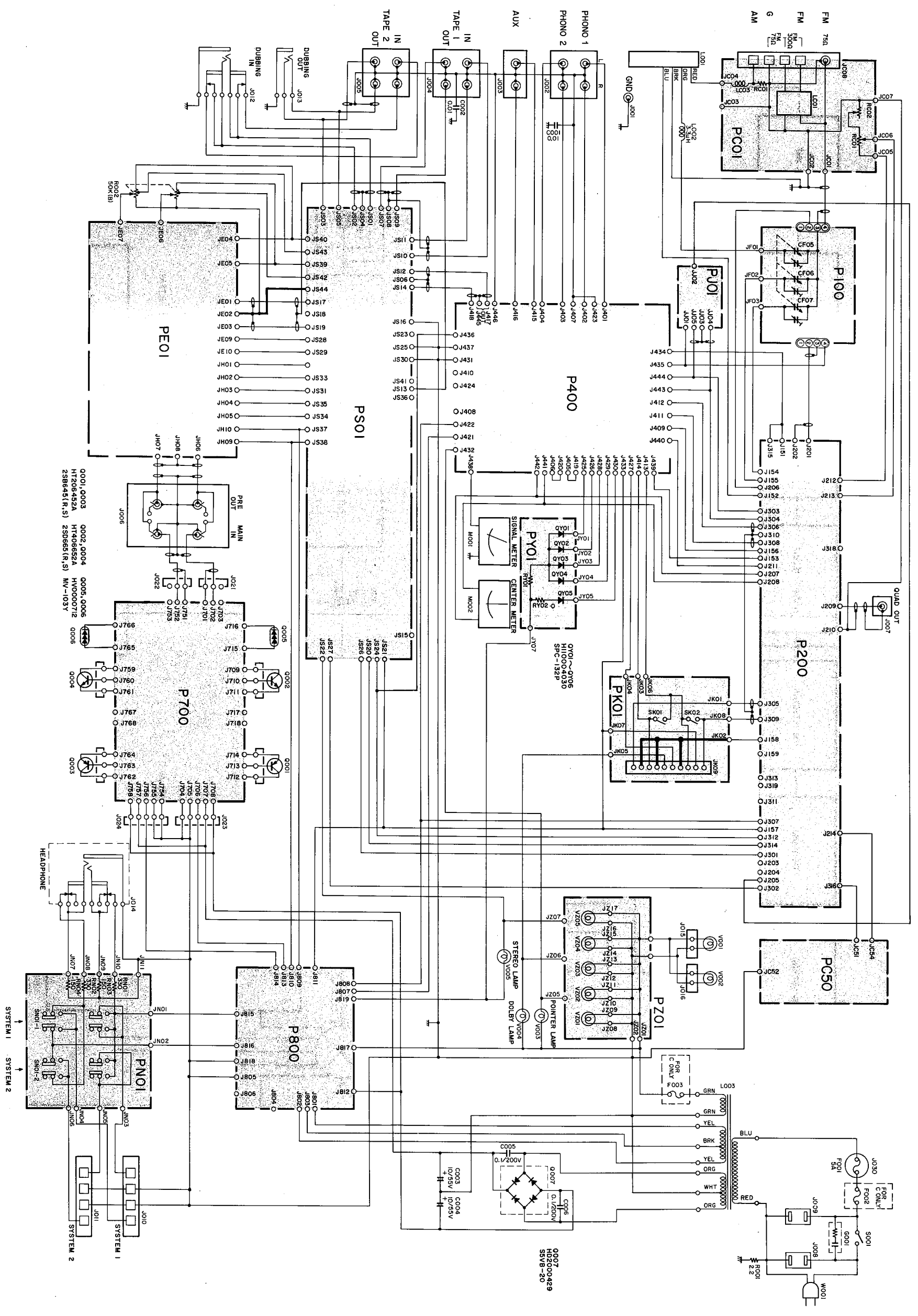


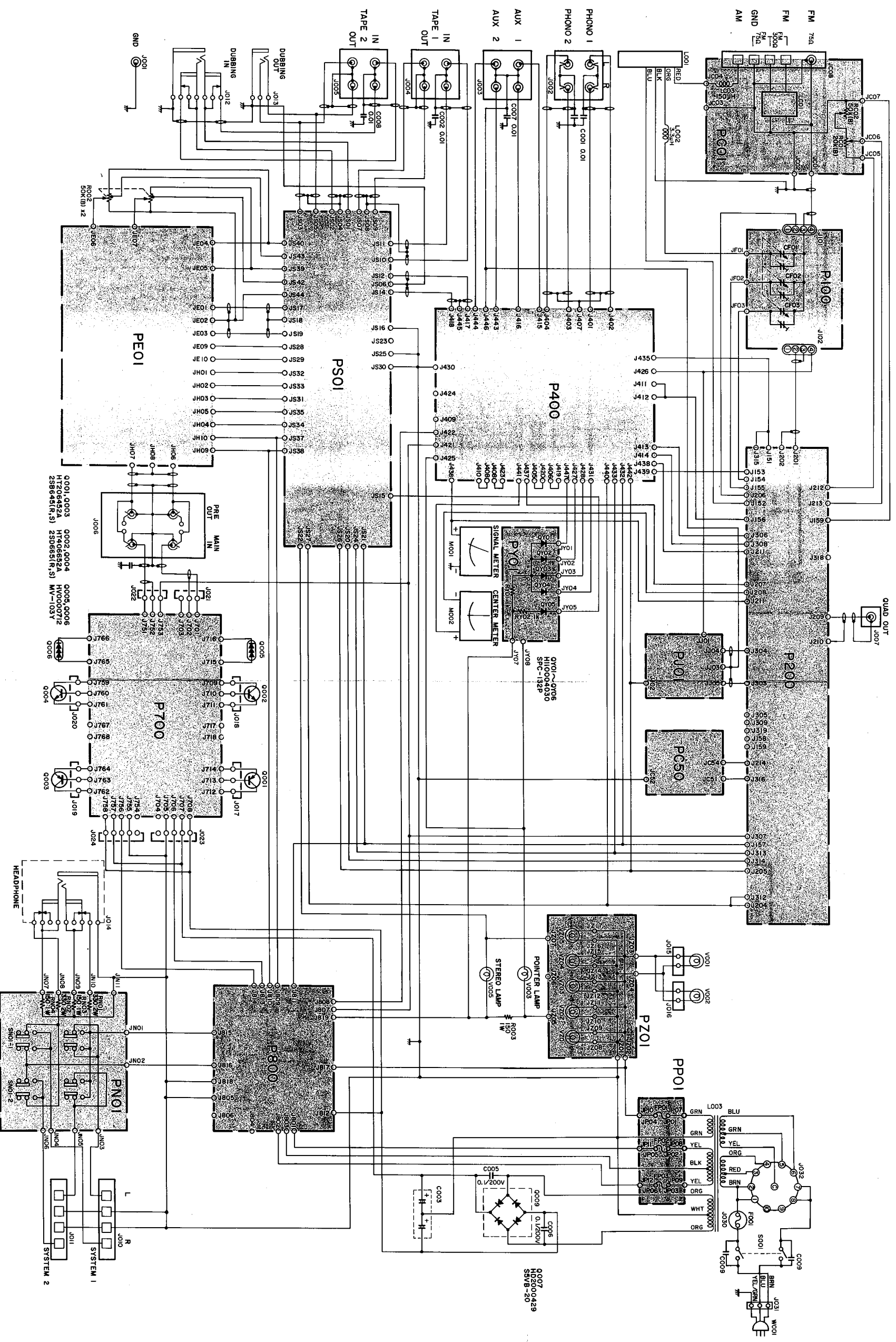
Figure 2. Dial Stringing

7. DIAGRAMS
7.1 BLOCK DIAGRAM

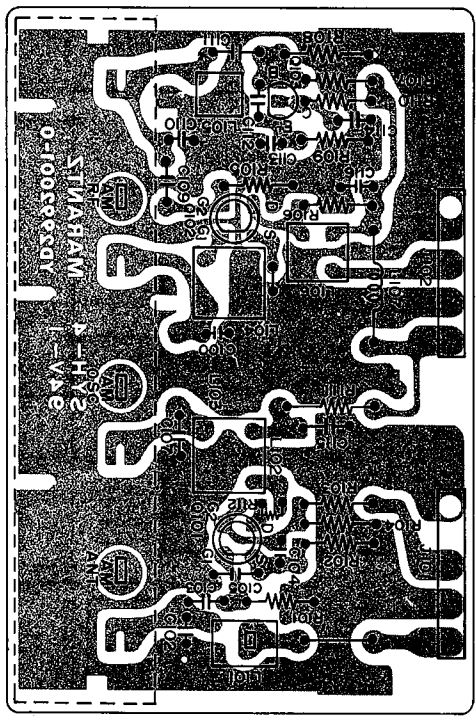
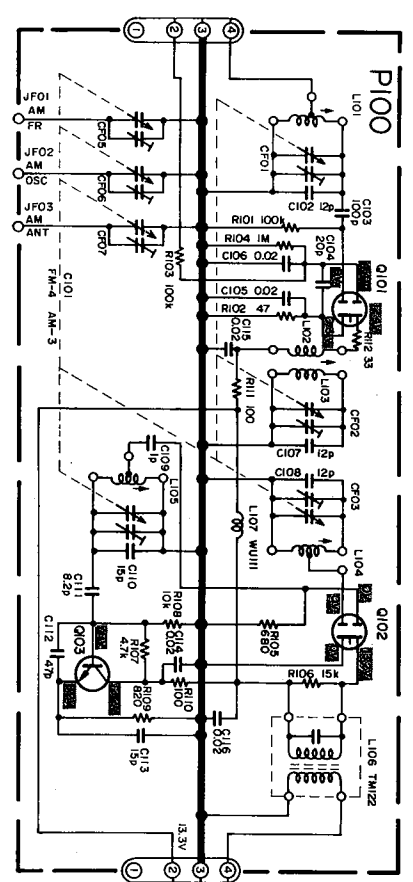


7.2 CONNECTION DIAGRAM - U.S.A. & CANADA





8. SCHEMATIC DIAGRAMS AND COMPONENT LOCATIONS
8.1 FM FRONT END CIRCUIT BOARD P100



8.2 AM TUNER, FM IF & MPX DECODER CIRCUIT BOARD P200

