

Service  
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# Service Manual

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# Specifications

## STANDARD TEST CONDITIONS

SUPPLY VOLTAGE:	AC 230V, 50Hz
REFERENCE OUTPUT:	500 mW (Into 8 ohm Load)
AM ANTENNA:	IRE Loop
AM STANDARD SIGNAL:	400 Hz, 30% Modulation at 1MHz
FM ANTENNA:	75 ohm Balanced
FM STANDARD SIGNAL:	1 kHz, 45 kHz Deviation at 98 MHz

## AM BAND

## NOMINAL

Frequency Range	522—1611 kHz
IF Frequency	450 kHz
Usable Sensitivity S/N @20dB	800 $\mu$ V/m
IF Rejection at 603 kHz	50 dB
Image Rejection at 1404 kHz	40 dB
AGC Figure of Merit (Ref: 100 mV/m)	45 dB

## FM BAND

Frequency Range	87.5—108 MHz
IF Frequency	10.7 MHz
Mono 26 dB/ST. 46 dB Quieting Sensitivity	4/100 $\mu$ V
IF Rejection at 90 MHz	70 dB
Image Rejection at 106 MHz	65 dB
AM Suppression	40 dB

## AMPLIFIER SECTION

Speaker Impedance: 8 ohms each Channel.

Reference Level: 500 m Watt each Channel.

0.9% THD Power at 20kHz	55 Watts
Total Harmonic Distortion	0.2% @ Reference level
S/N Ratio	95 dB
Channel Separation (at 1 kHz)	50 dB
Graphic Equalizer Effect:	
Base 1 (at 100 Hz)	
Boost	+10 dB $\pm$ 3 dB
Cut	-10 dB $\pm$ 3 dB
Trable 1 (at 10 kHz)	
Boost	+10 dB $\pm$ 3 dB
Cut	-10 dB $\pm$ 3 dB

## Controls & Connections

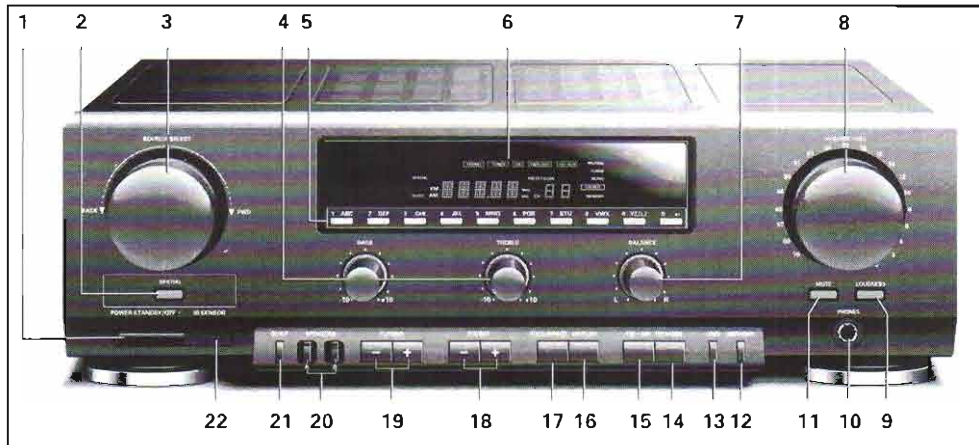


Figure 1

### CONTROLS

- 1 **POWER STANDBY/OFF** – for switching on to standby mode and for switching off.
- 2 **SPATIAL** – to extend the stereo effect to a spatial stereo sound.
- 3 **SOURCE SELECT** – for selecting the desired listening source.
- 4 **BASS** – for adjusting the bass tones.  
**TREBLE** – for adjusting the high tones.
- 5 **Digit keys**  
– for selecting 30 preset stations.  
– for entering data when programming station name and when using the direct tuning function.
- 6 **Display**
- 7 **BALANCE** – for adjusting the balance of the volume between the left and right channels.
- 8 **VOLUME** – for adjusting the volume.
- 9 **LOUDNESS** – for increasing the treble and bass response at low volume settings.
- 10 **PHONES** – socket for stereo headphones
  - You may connect a pair of stereo headphones with 6.3 mm plug to this socket. Inserting the plug will **not** disconnect the speakers.
- 11 **MUTE** – for decreasing the volume by 20 dB (= factor 10).
- 12 **MEMORY** – for opening and closing the memory when programming preset stations.
- 13 **SND (Station Name Display)** – for entering a station name for a tuner preset.
- 14 **FM MODE** – for selecting mono or stereo reception.
- 15 **FM/AM** – selecting reception of FM or AM (MW) stations.
- 16 **DISPLAY** – for selecting the frequency or the station name of a preset station to be shown on the display.
- 17 **FREQ(ueency) DIRECT** – for direct tuning to the station frequency.
- 18 **PRESET +/-** – for selecting the next or previous tuner preset
- 19 **TUNING +/-** – frequency up/down.
- 20 **SPEAKERS A** – for switching on and off a pair of speakers connected to the SPEAKERS A terminals.  
**SPEAKERS B** – for switching on and off a pair of speakers connected to the SPEAKERS B terminals.
- 21 **SLEEP** – to set a time period after which the system will automatically be switched to standby (off).
- 22 **(n)fra R(ed) SENSOR** – infrared remote control eye. For receiving signals from the remote control.

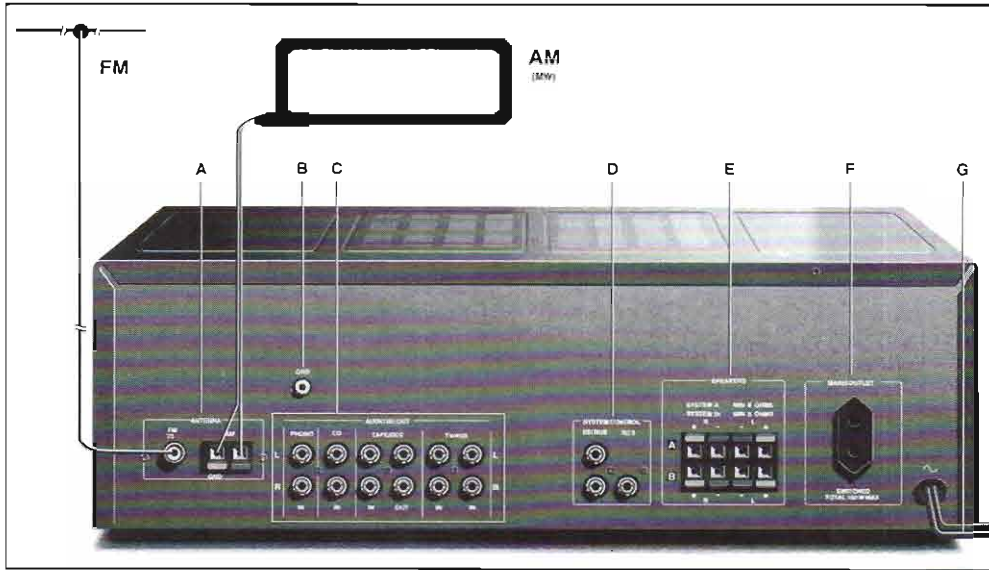


Figure 2

You only have to install your system once. Please make the following connections (whenever applicable).

**Note:** Switch off the receiver before making any connections.

**CONNECTIONS**

**A ANTENNA**

- **FM 75 Ω** – The FM terminal is used for connection to the Community or Cable Antenna system or to a roof-mounted FM antenna. If none of these are available, you may use the wire supplied for nearby stations (reception could be poor).
- **GND** – terminal for connection of the ground wire of your antenna.
- **AM** – For AM reception connect the supplied wires to the GND and AM antenna terminals (one wire to the GND and one wire to the AM terminal) and position the antenna for best reception.

**Note:** Do **not** place the AM loop antenna on the unit, as this unit employs a computing device which could cause interference.

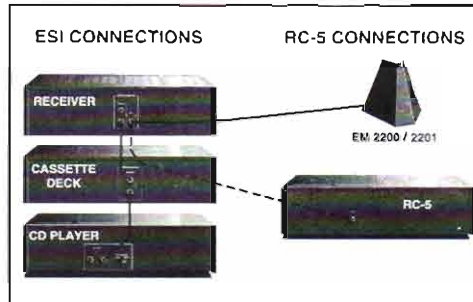
**B PHONO GND** – for connecting the earth wire of a record player.

**C AUDIO IN/OUT**

- **PHONO** – input sockets for connecting a record player with an 'MM' (Moving Magnet) cartridge.
- **CD** – input sockets for connecting a CD (Compact Disc) player.
- **TAPE/DCC** – input and output sockets for connecting a cassette deck or a Digital Compact Cassette deck.
- **TV/AUX** – input sockets for connecting the sound channel of a TV set or video recorder and output sockets for extra sound recording equipment e.g. a cassette or tape deck or a HiFi stereo video recorder.

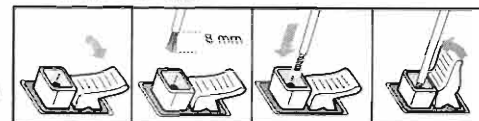
**D SYSTEM CONTROL**

- **ESI BUS** (Enhanced System Intelligence) (coloured green) – Remote-control input/output sockets for connection to the corresponding ESI sockets of other components in your HiFi system (e.g. the Philips 900 series). Connect the ESI socket to the ESI socket of the external equipment that uses the ESI remote control system. Connecting the ESI BUS enables you to operate other components via the FR911's IR sensor.
- **RC-5 BUS** (coloured orange) – remote-control input/output socket for connection to the corresponding RC-5 socket of a Compact Disc player or remote control receiver e.g. EM 2200/2201. Connect the RC-5 socket to the RC-5 socket of the external equipment that uses the RC-5 remote control system. This socket has been added to maintain compatibility with older Philips Audio equipment.



**E SPEAKERS**

- **A** – terminals for connecting a pair of speakers, impedance min. 8 ohms (L = left, R = right)
- **B** – terminals for connecting a second pair of speakers impedance min. 8 ohms (L = left, R = right)
- One of the wires of a loudspeaker cable is marked with a colour or rib. Connect the marked wire to the red terminal, the non-marked wire to the black one. Make sure that all loudspeakers are connected in the same way.



**POWER**

- **F MAINS OUTLETS** – switched AC power outputs for connecting power plugs from various units such as a cassette deck, CD player, etc. (maximum capacity is 100 W)
- **G Mains lead**

After making all the necessary connections (some may not be applicable for your system set-up), your system is ready for use. In the next chapter we will describe how to operate your FR911 receiver.

(GB)

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified, be used.

(F)

Les normes de sécurité exigent que l'appareil soit remis à l'état d'origine et que soient utilisés les pièces de rechange identiques à celles spécifiées.

(NL)

Veiligheidsbepalingen vereisen, dat het apparaat bij reparatie in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde, worden toegepast.

(D)

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Geräts darf nicht verändert werden; für Reparaturen sind Original-Ersatzteile zu verwenden.

(I)

Le norme di sicurezza esigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati i pezzi di ricambio identici a quelli specificati.

"After servicing and before returning set to customer perform a leakage current measurement test from all exposed metal parts to earth ground to assure no shock hazard exist. The leakage current must not exceed 0.5mA."

(GB) WARNING

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically. When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance. Keep components and tools also at this potential.

ESD



(NL) WAARSCHUWING

Alle IC's en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD). Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen verminderen. Zorg ervoor dat u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat. Houd componenten en hulpmiddelen ook op ditzelfde potentiaal.

(F) ATTENTION

Tous les IC et beaucoup d'autres semi-conducteurs sont sensibles aux décharges statiques (ESD). Leur longévité pourrait être considérablement écourtée par le fait qu'aucune précaution n'est prise à leur manipulation. Lors de réparations, s'assurer de bien être relié au même potentiel que la masse de l'appareil et enfiler le bracelet serti d'une résistance de sécurité. Veiller à ce que les composants ainsi que les outils que l'on utilise soient également à ce potentiel.






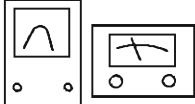
(D) WARNUNG

Alle ICs und viele andere Halbleiter sind empfindlich gegenüber elektrostatischen Entladungen (ESD). Unvorsichtige Behandlung im Reparaturfall kann die Lebensdauer drastisch reduzieren. Veranlassen Sie, dass Sie im Reparaturfall über ein Pulsarmband mit Widerstand verbunden sind mit dem gleichen Potential wie die Masse des Gerätes. Bauteile und Hilfsmittel auch auf dieses gleiche Potential halten.

(I) AVVERTIMENTO

Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD). La loro longevità potrebbe essere fortemente ridotta in caso di non osservazione della più grande cauzione alla loro manipolazione. Durante le riparazioni occorre quindi essere collegato allo stesso potenziale che quello della massa dell'apparecchio tramite un braccialetto a resistenza. Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

## Alignment & Adjustment

SK...						
<b>IF Alignment</b>						
AM	450kHz	A	450kHz	T101	*1	MAX
FM	10.7MHz	B	10.7MHz	T102	*2	0.0V
<b>RF Alignment</b>						
AM	522kHz	A	522kHz	L102	*3	1.2V ± 0.05V
AM	1611kHz	A	1611kHz	TC102	*3	8.5V ± 0.05V
FM	87.5MHz	B	87.5MHz	—	*3	1.2V ± 0.05V
FM	108MHz	B	108MHz	—	*3	7.5V
<b>Sensitivity Alignment</b>						
AM	600kHz	A	600kHz	L101	*4	↓MAX.
AM	1400kHz	A	1400kHz	TC101	*4	↓MAX.
FM	90MHz	B	90MHz	—	*4	↓MAX.
FM	106MHz	B	106MHz	—	*4	↓MAX.

SK...						
<b>T. H. D. Adjustment</b>						
FM	98MHz MOD. = 1kHz DEV. = 75kHz	B #1		T102	*5	0.0V
FM	98MHz MOD. = 1kHz DEV. = 75kHz	B #1		T103	*5	T.H.D MIN.
<b>Auto Tuning Sensitivity Adjustment</b>						
FM	98MHz/20dB	B	98MHz	SFR102	*4	LOCK AT 26dB
AM	1000kHz/60dB	A	1000kHz	SFR101	*4	LOCK AT 60dB
<b>MPX Separation Adjustment</b>						
FM	98MHz	B	98MHz	SFR103	*4	SEPARATION OVER 35dB

- \*1 Across TP7 & TP5
- \*2 Across TP6 & TP5
- \*3 Across TP1 & TP2
- \*4 Across Speaker Output

- \*5 Across TP3 & TP4
- #1 See Fig. 3

Repeat ↓

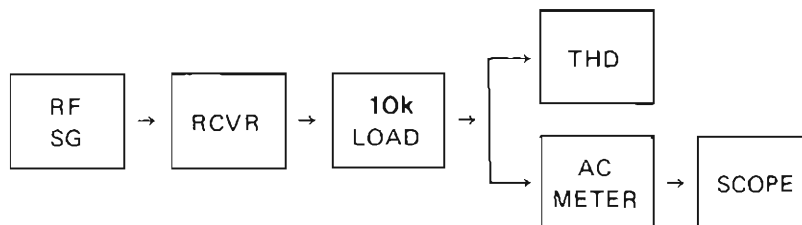
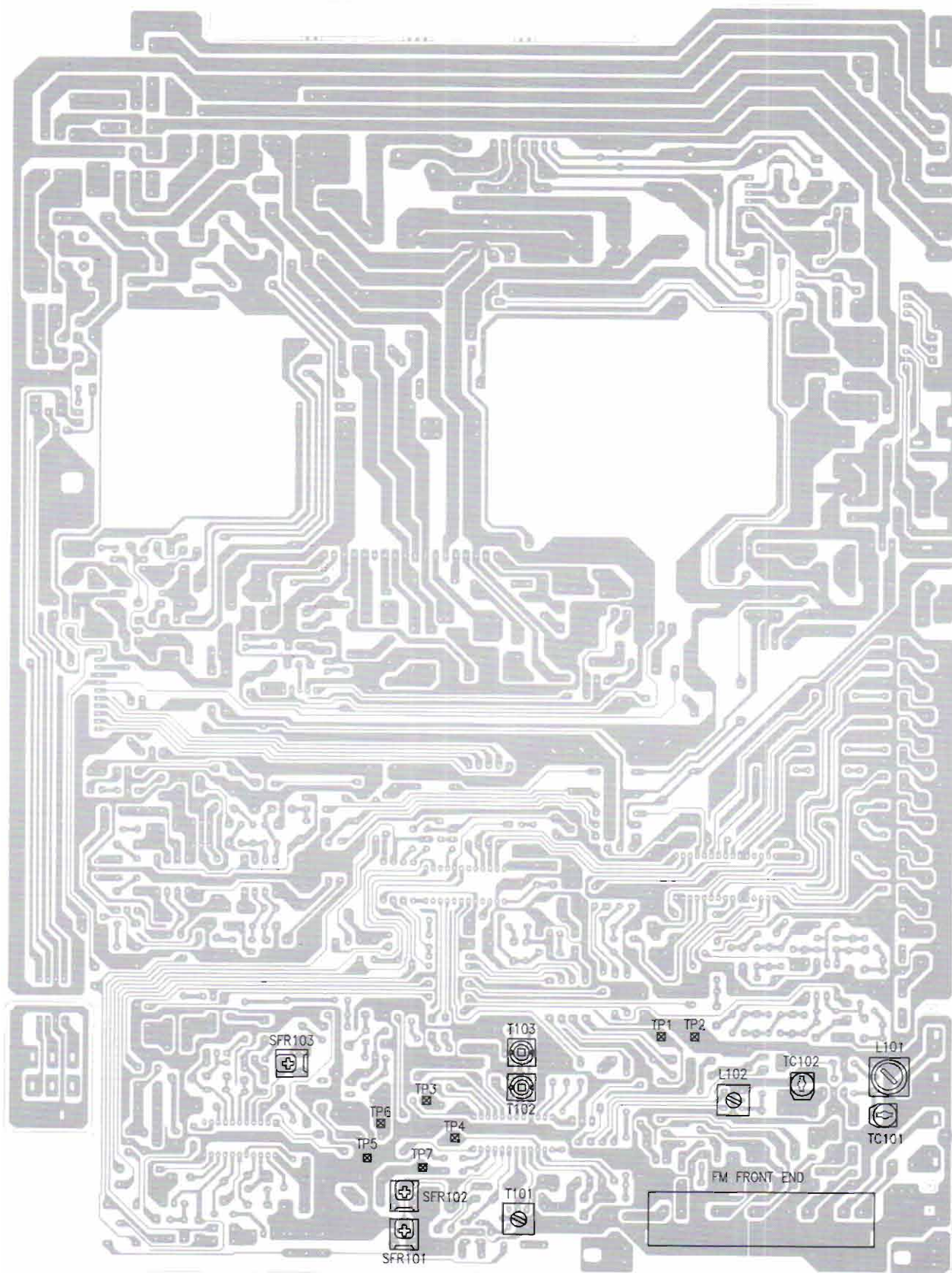


Figure 3



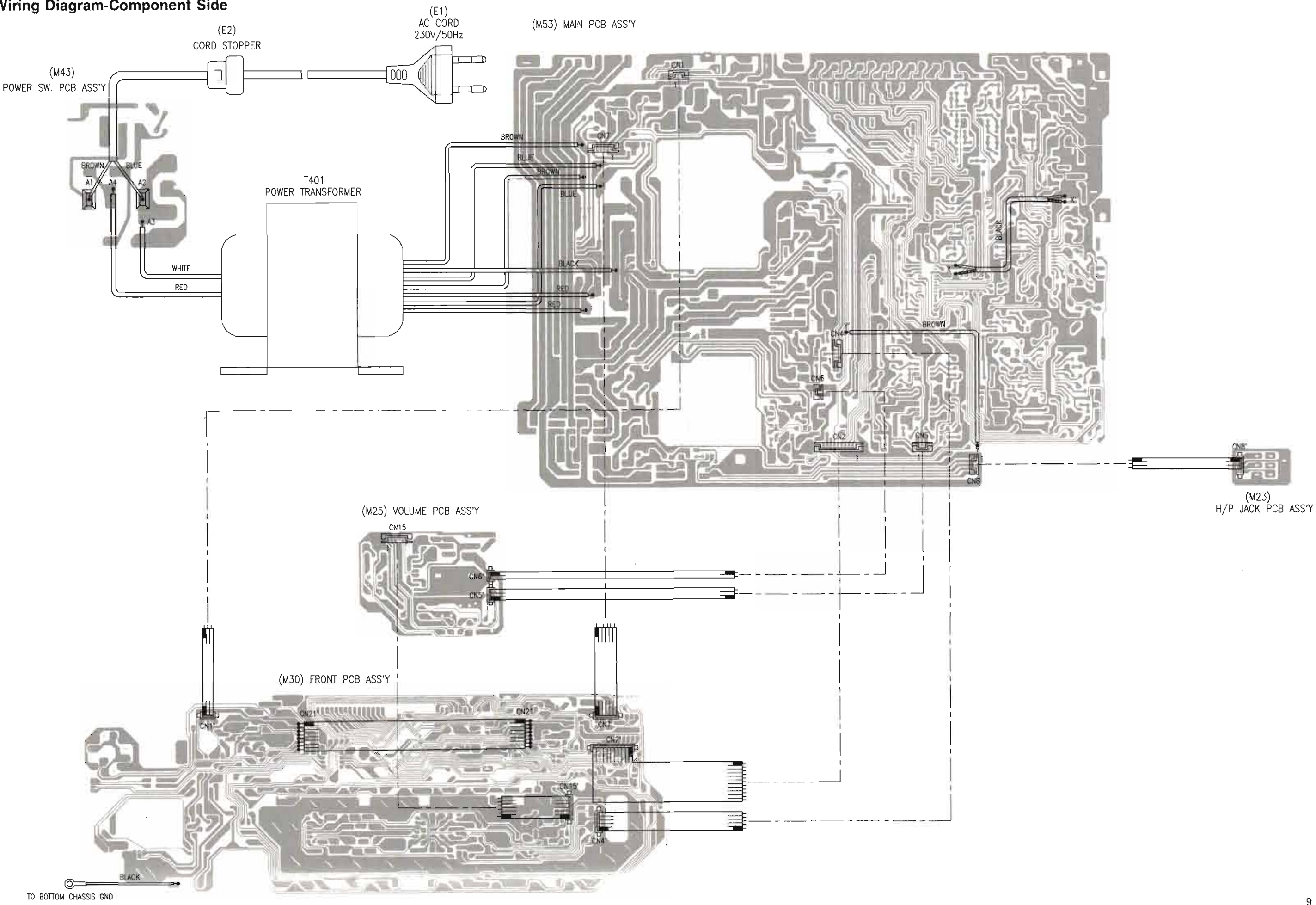
# Main Board Test Point

## MAIN P C BOARD

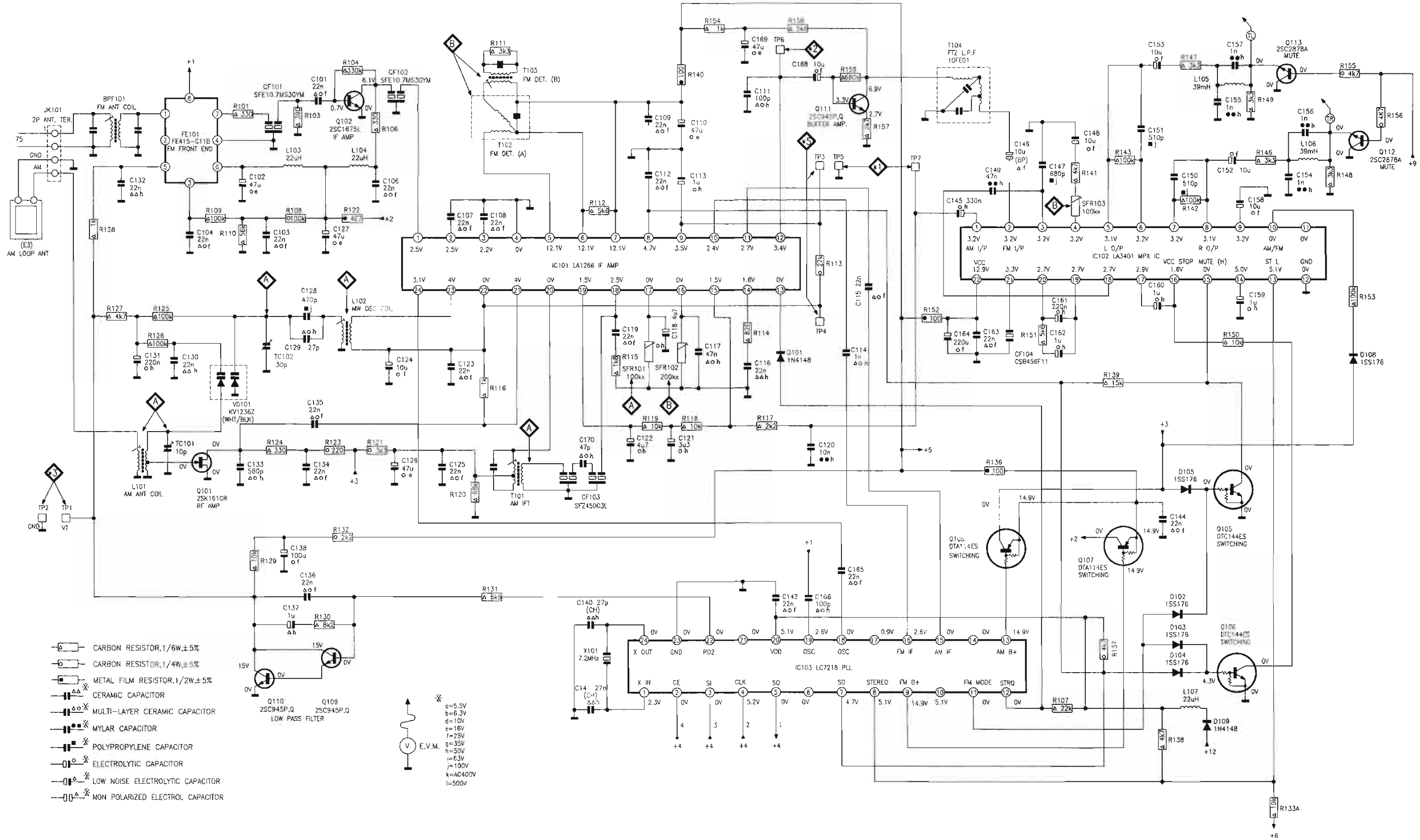




# Wiring Diagram-Component Side



Schematic Diagram - Tuner

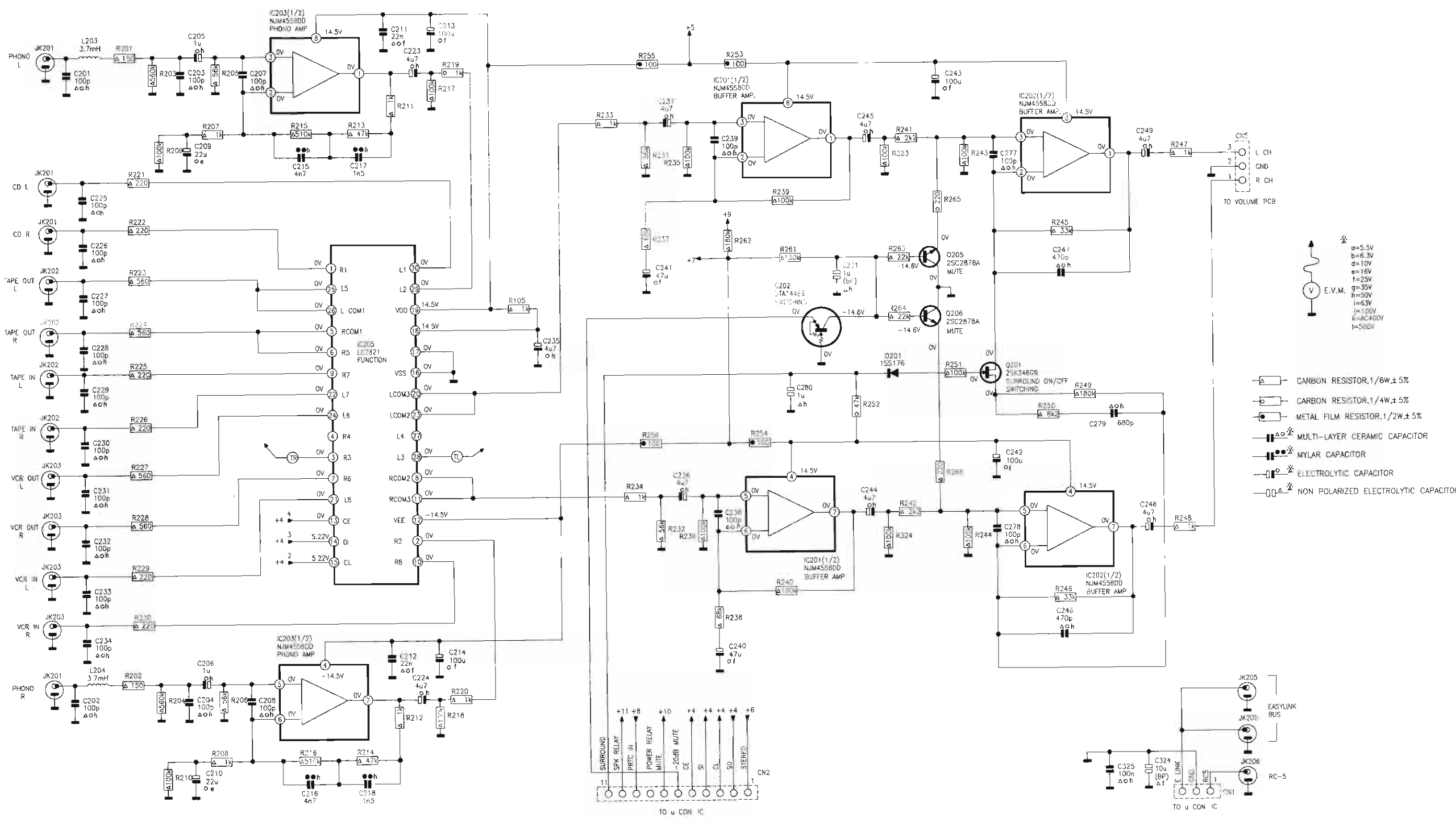


- CARBON RESISTOR, 1/6W ± 5%
- CARBON RESISTOR, 1/4W ± 5%
- METAL FILM RESISTOR, 1/2W ± 5%
- △△— CERAMIC CAPACITOR
- △△△— MULTI-LAYER CERAMIC CAPACITOR
- MYLAR CAPACITOR
- \*— POLYPROPYLENE CAPACITOR
- ELECTROLYTIC CAPACITOR
- LOW NOISE ELECTROLYTIC CAPACITOR
- NON POLARIZED ELECTROL CAPACITOR

E.V.M.

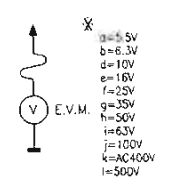
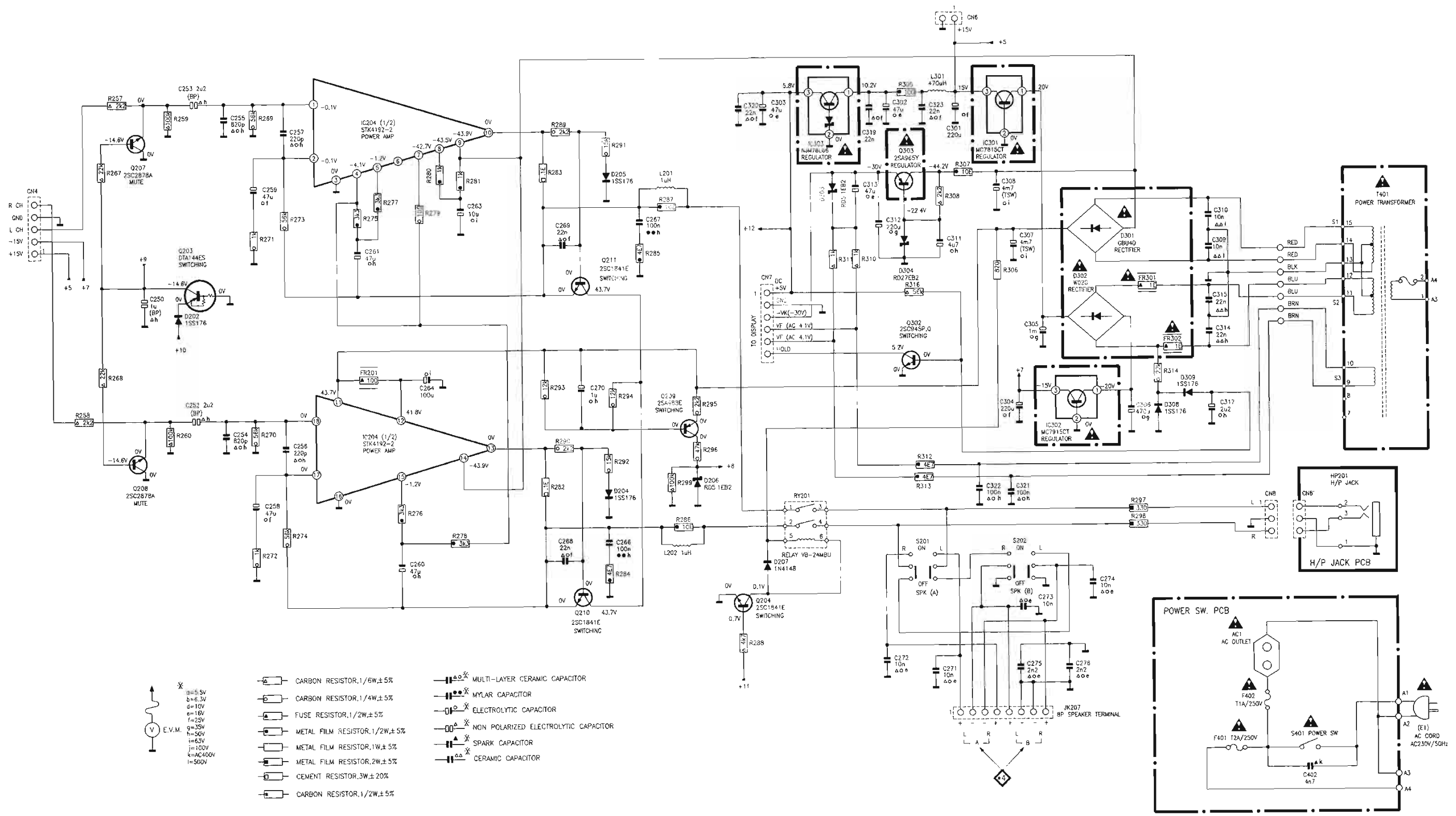
a	= 5.5V
b	= 6.3V
d	= 10V
f	= 16V
g	= 25V
h	= 35V
i	= 50V
j	= 63V
k	= 100V
l	= AC400V
m	= 500V

# Schematic Diagram - Function Selector Switch



- \* a=5.5V
  - b=6.3V
  - c=10V
  - d=16V
  - e=25V
  - f=35V
  - g=50V
  - h=63V
  - i=100V
  - k=AC400V
  - l=500V
- E.V.M.
- ▭ CARBON RESISTOR, 1/6W ± 5%
  - ▭ CARBON RESISTOR, 1/4W ± 5%
  - ▭ METAL FILM RESISTOR, 1/2W ± 5%
  - ▭ MULTI-LAYER CERAMIC CAPACITOR
  - ▭ MYLAR CAPACITOR
  - ▭ ELECTROLYTIC CAPACITOR
  - ▭ NON POLARIZED ELECTROLYTIC CAPACITOR

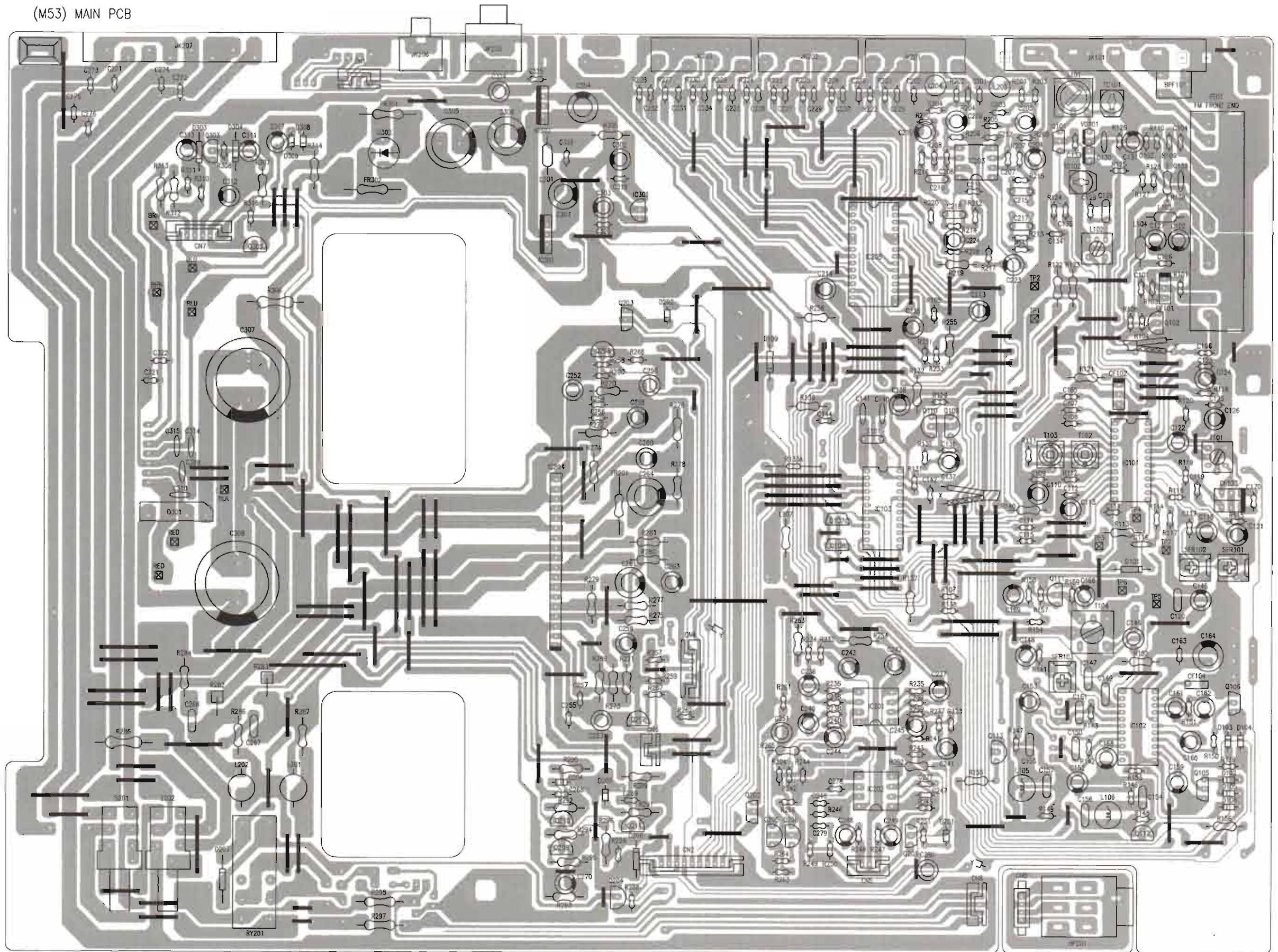
# Schematic Diagram - Power Amp.



- |                                |                                      |
|--------------------------------|--------------------------------------|
| CARBON RESISTOR, 1/6W ± 5%     | MULTI-LAYER CERAMIC CAPACITOR        |
| CARBON RESISTOR, 1/4W ± 5%     | MYLAR CAPACITOR                      |
| FUSE RESISTOR, 1/2W ± 5%       | ELECTROLYTIC CAPACITOR               |
| METAL FILM RESISTOR, 1/2W ± 5% | NON POLARIZED ELECTROLYTIC CAPACITOR |
| METAL FILM RESISTOR, 1W ± 5%   | SPARK CAPACITOR                      |
| METAL FILM RESISTOR, 2W ± 5%   | CERAMIC CAPACITOR                    |
| CEMENT RESISTOR, 3W ± 20%      |                                      |
| CARBON RESISTOR, 1/2W ± 5%     |                                      |



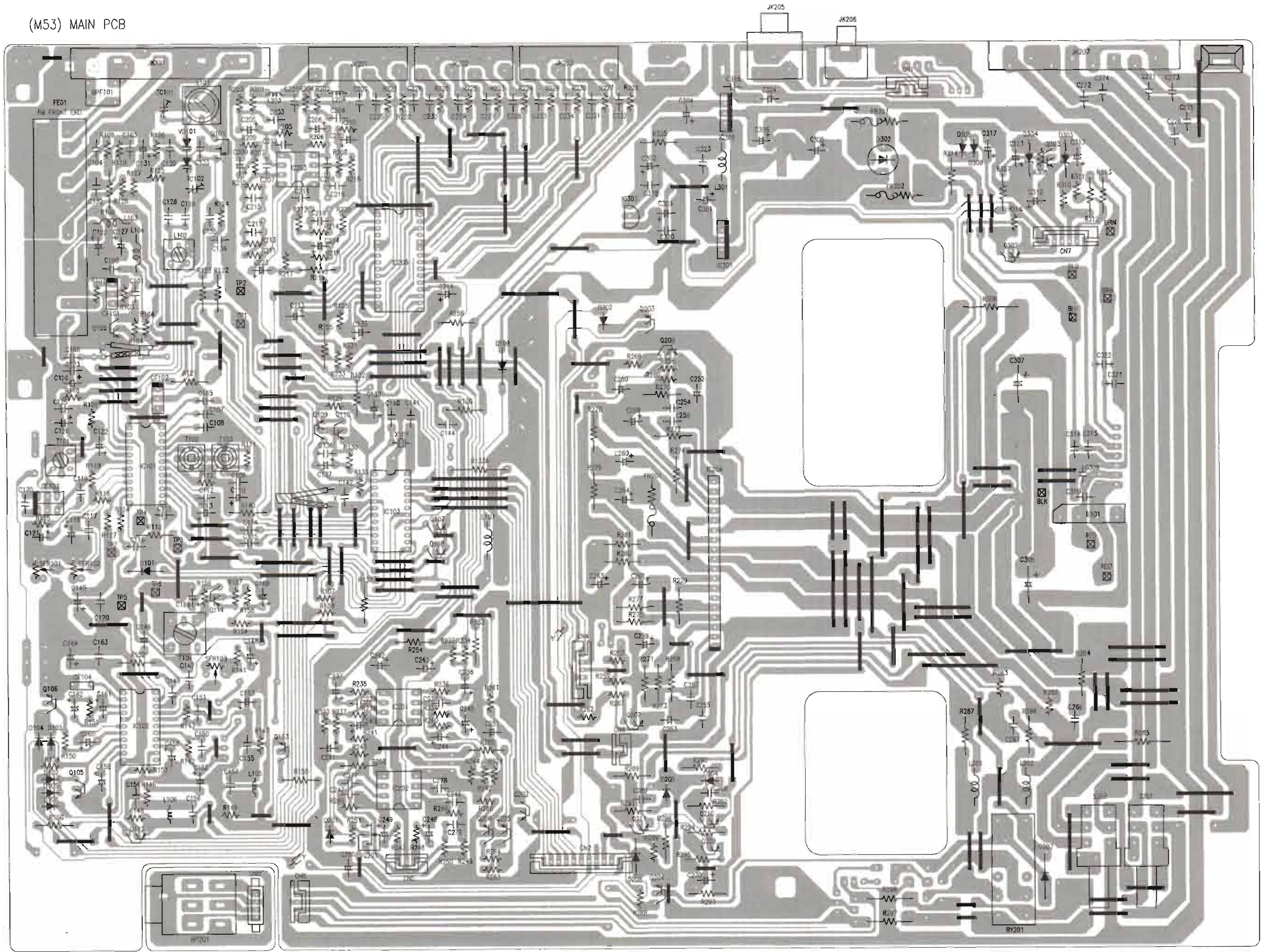
(M53) MAIN PCB



(M23) H/P JACK PCB



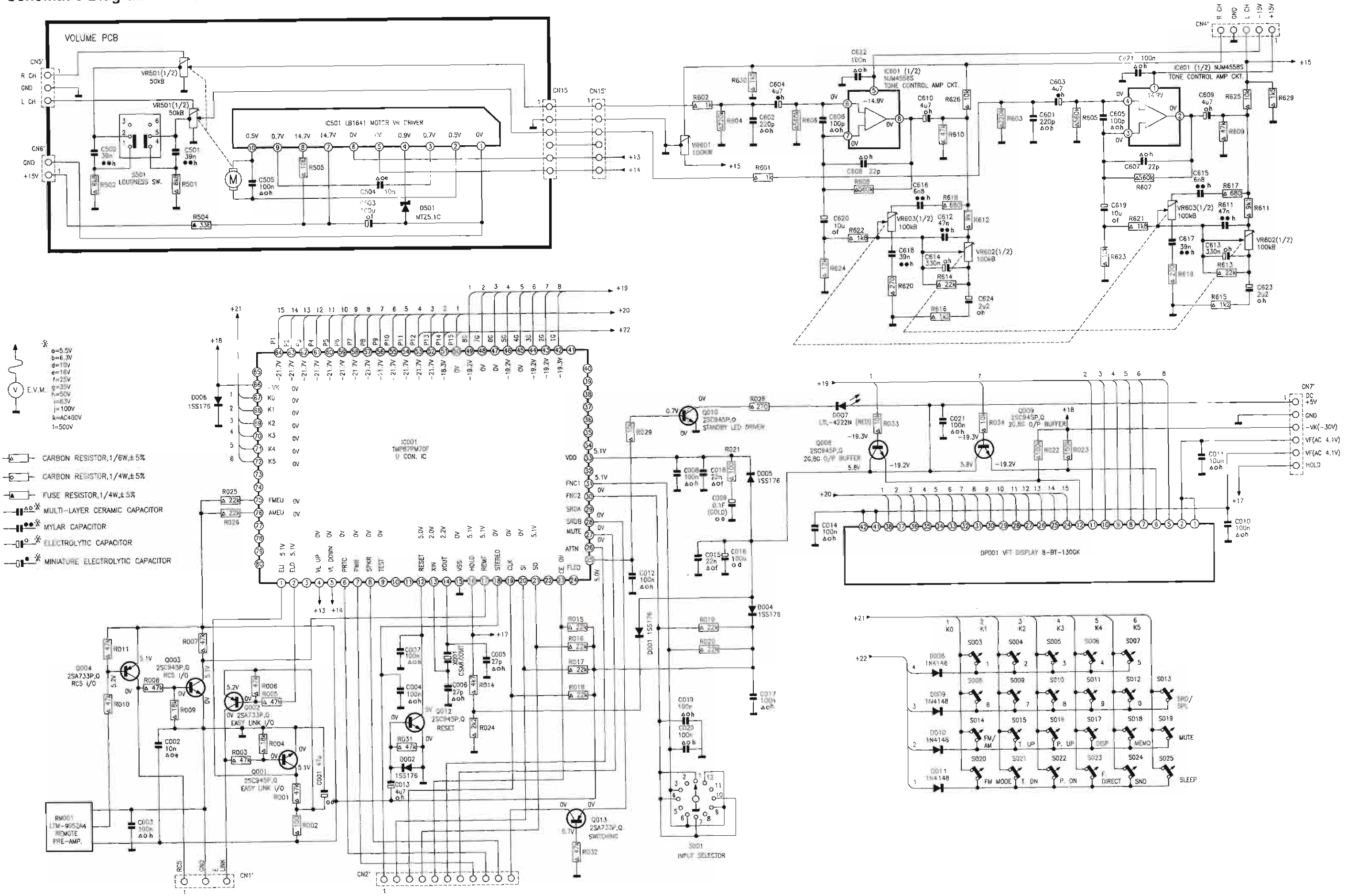
(M53) MAIN PCB



(M23) H/P JACK PCB



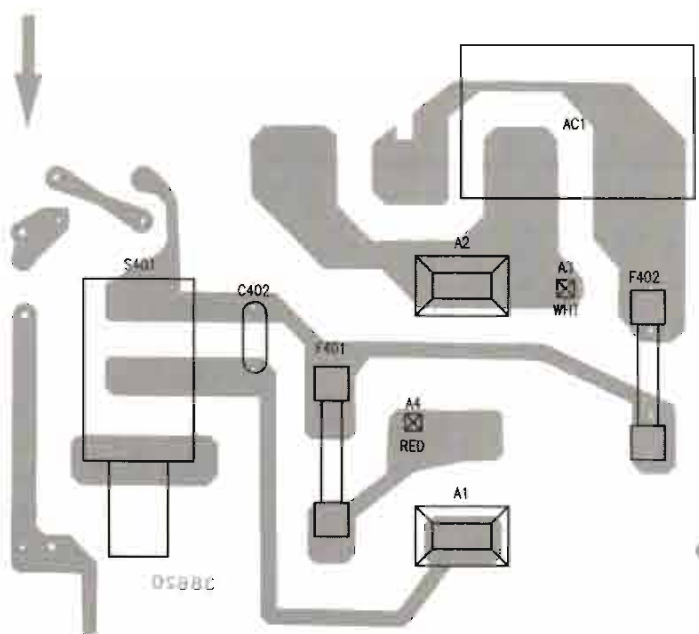
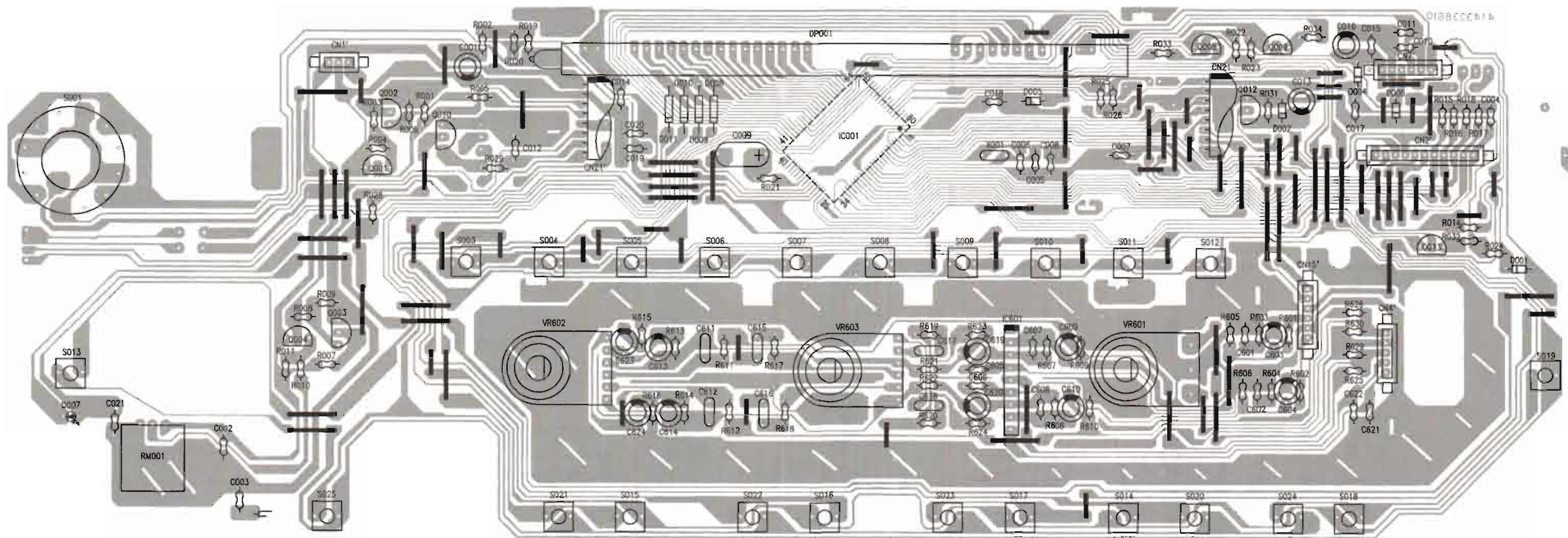
# Schematic Diagram-Front



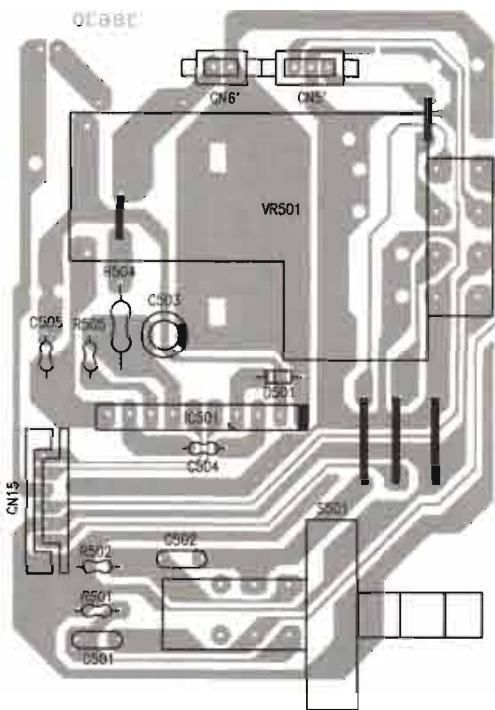


P C Board-Component Side

(M30) FRONT PCB



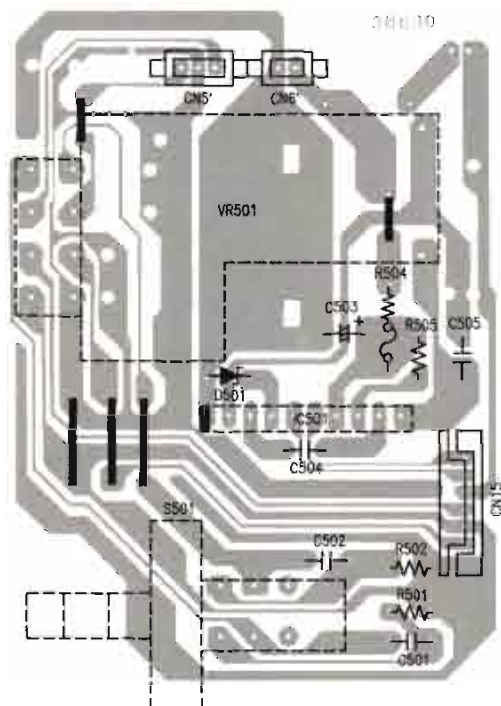
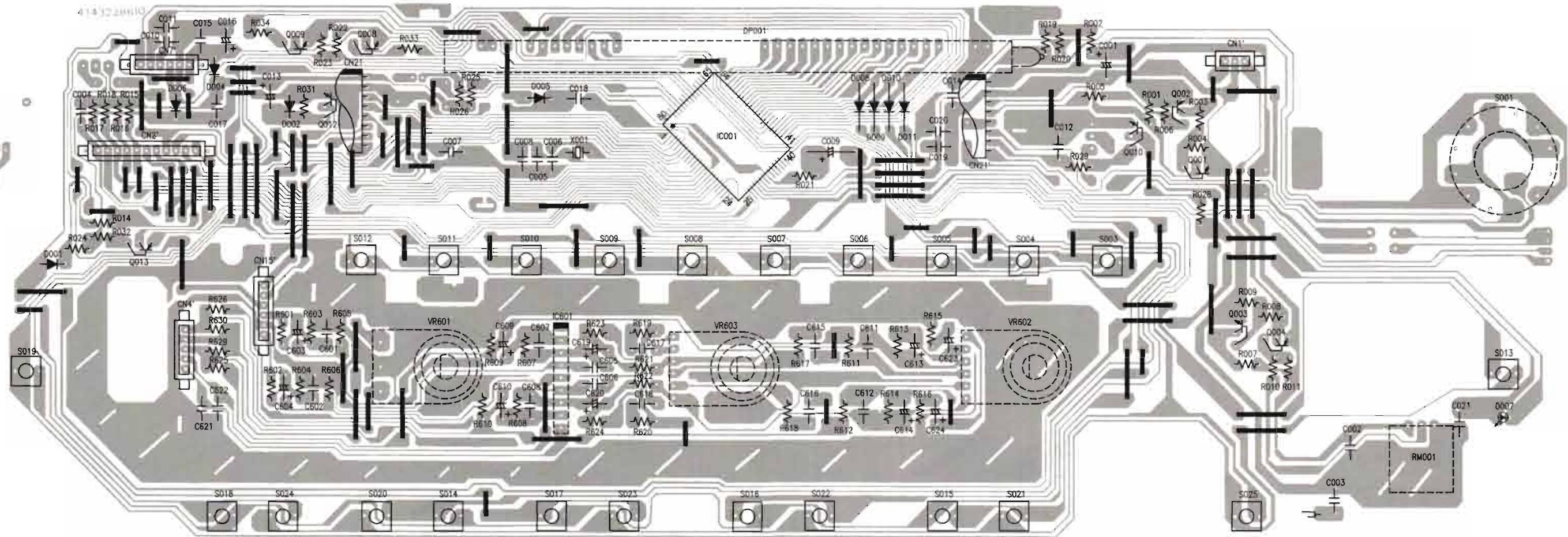
(M43) POWER SW. PCB



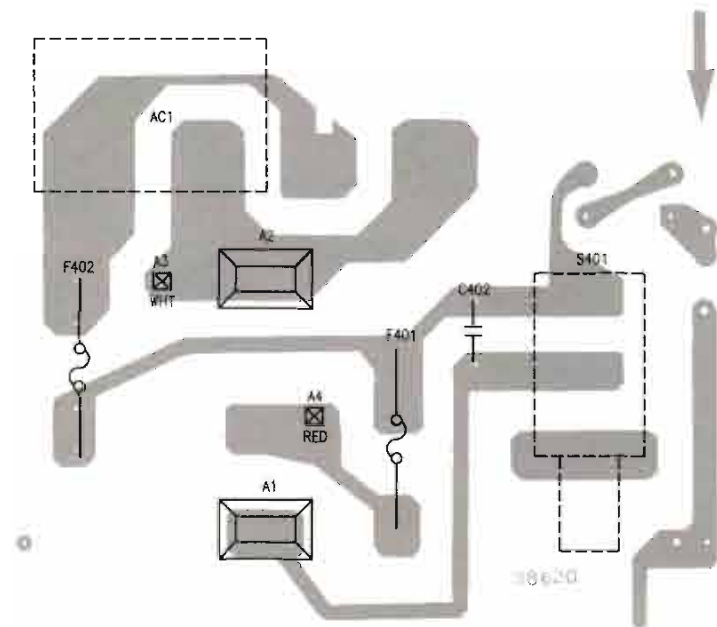
(M25) VOLUME PCB



(M30) FRONT PCB

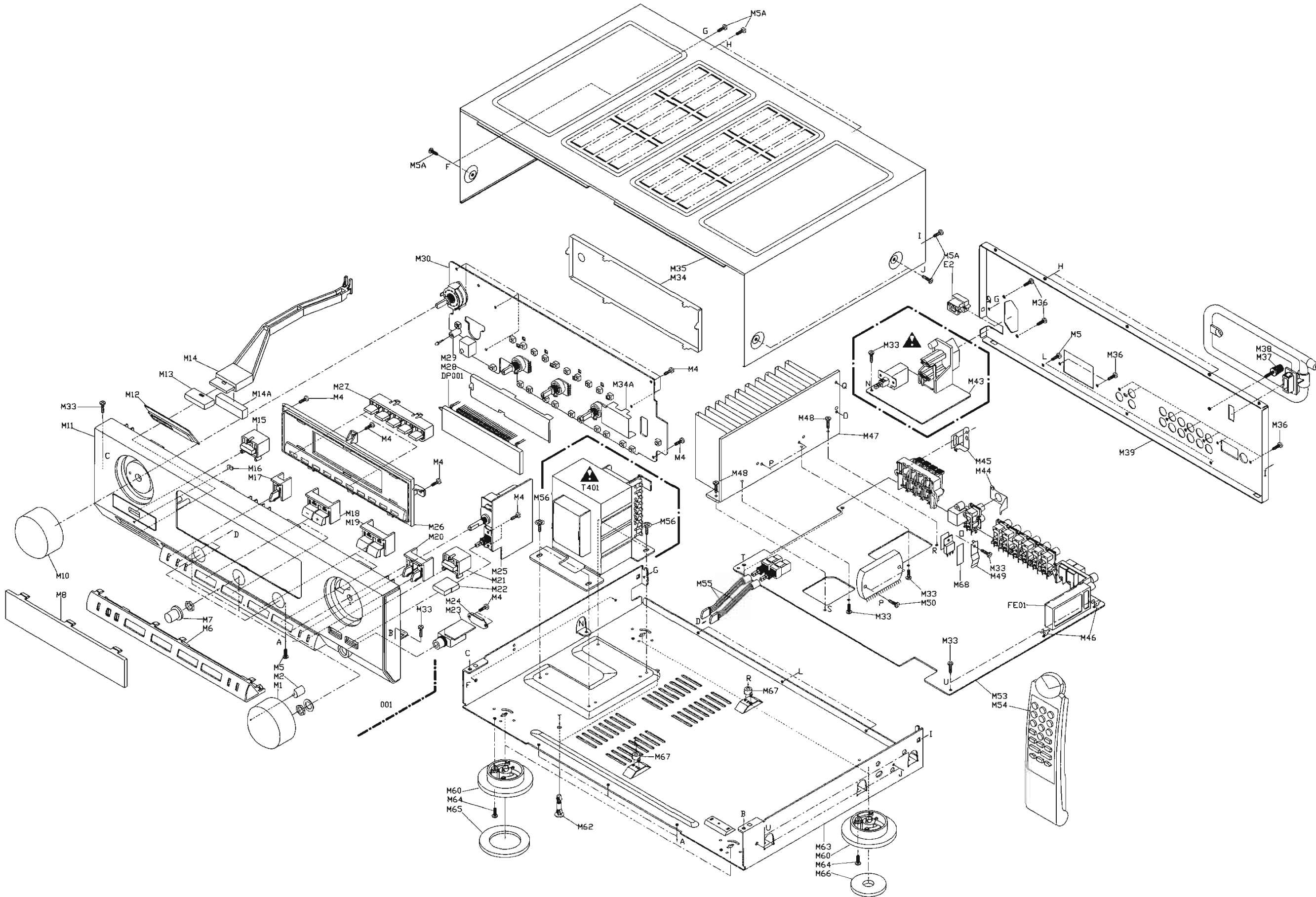


(M25) VOLUME PCB



(M43) POWER SW. PCB

Mechanical Exploded View







# Replacement Parts List

Ref No.	Description	Part No.	Ref No.	Description	Part No.
<b>COILS &amp; TRANSFORMER &amp; FILTERS</b>					
L101	AM antenna coil TWS-358-638	4822 156 21683	C115	.022uF/25V (Z)	4822 126 12547
L102	MW oscillator coil	4822 156 21685	C116	.022uF/50V (Z) Ceramic	4822 126 13073
L103	Peaking coil 22uH "K"	4822 157 70206	C117	.047uF/50V (Z)	4822 126 12541
L104	Peaking coil 22uH "K"	4822 157 70206	C118	4.7uF/50V (M) Electrolytic	4822 124 80431
L105	Inductance 39mH "K"	4822 156 21684	C119	.022uF/25V (Z)	4822 126 12547
L106	Inductance 39mH "K"	4822 156 21684	C120	.01uF/50V (J) Mylar	4822 121 41857
L107	Peaking coil 22uH "K"	4822 157 70206	C121	3.3uF/50V (M) Electrolytic	4822 124 80428
L201	Spring coil 1.0uH	4822 157 70362	C122	4.7uF/50V (M) Electrolytic	4822 124 80431
L202	Spring coil 1.0uH	4822 157 70362	C123	.022uF/25V (Z)	4822 126 12547
L203	Ring coil 3.7mH	4822 157 70364	C124	10uF/25V (M) Electrolytic	4822 124 42417
L204	Ring coil 3.7mH	4822 157 70364	C125	.022uF/25V (Z)	4822 126 12547
L301	Peaking coil 470uH "K"	4822 157 70363	C126	47uF/16V (M) Electrolytic	4822 124 40433
BPF101	FM antenna coil	4822 157 60042	C127	47uF/16V (M) Electrolytic	4822 124 40433
T101	AM IFT R22-E792	4822 157 60039	C128	470pF/100V (J) Polypropylene	4822 121 43381
T102	FM DET (A) TWS-358-636	4822 156 21686	C129	27pF/50V (J)	4822 126 12543
T103	FM DET (B) TWS-358-637	4822 156 21687	C130	.022uF/50V (Z) Ceramic	4822 126 13073
T104	FTZ L.P.F. 10FE01	4822 156 21682	C131	.22uF/50V (M) Electrolytic	4822 124 40746
X001	Resonator CSA8.00MT	5322 242 72897	C132	.022uF/50V (Z) Ceramic	4822 126 13073
CF101	Ceramic filter SFE10.7MS3GYM (RED)	4822 242 72243	C133	560pF/50V (K)	4822 126 12536
CF102	Ceramic filter SFE10.7MS3GYM (RED)	4822 242 72243	C134	.022uF/25V (Z)	4822 126 12547
CF103	Ceramic filter SFZ450G3L	4822 242 81377	C135	.022uF/25V (Z)	4822 126 12547
CF104	Ceramic filter CSB456F11	4822 242 81117	C136	.022uF/25V (Z)	4822 126 12547
T401	Power transformer EI-86	4822 146 31404	C137	1uF/50V (M) Electrolytic "LN"	4822 124 80895
<b>CAPACITORS</b>					
Note: All capacitors are Multi-layer ceramic type, unless otherwise noted. C=±0.25pF D=±0.5pF J=±5% K=±10% M=±20% Z=+80/-20%					
CH: Temperature compensation capacitor, temperature draft within 0±60PPM/°C.					
TC101	Trimmer capacitor 10pF	4822 125 50628	C147	680pF/100V (J) Polypropylene	4822 121 43382
TC102	Trimmer capacitor 30pF	4822 125 50634	C148	10uF/25V (M) Electrolytic	4822 124 42417
C001	47uF/10V (M) Electrolytic	4822 124 80429	C149	.047uF/50V (J) Mylar	4822 121 43526
C002	.01uF/16V (K)	4822 126 12545	C150	510pF/100V (J) Polypropylene	4822 121 70536
C003	.1uF/50V (Z)	4822 126 12539	C151	510pF/100V (J) Polypropylene	4822 121 70536
C004	.1uF/50V (Z)	4822 126 12539	C152	10uF/25V (M) Electrolytic	4822 124 42417
C005	27pF/50V (J)	4822 126 12543	C153	10uF/25V (M) Electrolytic	4822 124 42417
C006	27pF/50V (J)	4822 126 12543	C154	.001uF/50V (J) Mylar	4822 121 43897
C007	.1uF/50V (Z)	4822 126 12539	C155	.001uF/50V (J) Mylar	4822 121 43897
C008	.1uF/50V (Z)	4822 126 12539	C156	.001uF/50V (J) Mylar	4822 121 43897
C009	.1F/5.5V (Z) Gold	4822 124 80438	C157	.001uF/50V (J) Mylar	4822 121 43897
C010	.1uF/50V (Z)	4822 126 12539	C158	10uF/25V (M) Electrolytic	4822 124 42417
C011	.1uF/50V (Z)	4822 126 12539	C159	1uF/50V (M) Electrolytic	4822 124 40242
C012	.1uF/50V (Z)	4822 126 12539	C160	1uF/50V (M) Electrolytic	4822 124 40242
C013	4.7uF/50V (M) Electrolytic	4822 124 80431	C161	.22uF/50V (M) Electrolytic	4822 124 40746
C014	.1uF/50V (Z)	4822 126 12539	C162	1uF/50V (M) Electrolytic	4822 124 40242
C015	.022uF/25V (Z)	4822 126 12547	C163	.022uF/25V (Z)	4822 126 12547
C016	100uF/10V (M) Electrolytic	4822 124 80426	C164	220uF/25V (M) Electrolytic	4822 124 41716
C017	.1uF/50V (Z)	4822 126 12539	C165	.022uF/25V (Z)	4822 126 12547
C018	.022uF/25V (Z)	4822 126 12547	C166	100pF/50V (K)	4822 126 12532
C019	.1uF/50V (Z)	4822 126 12539	C168	10uF/25V (M)	4822 124 42417
C020	.1uF/50V (Z)	4822 126 12539	C169	47uF/16V (M)	4822 124 40433
C021	.1uF/50V (Z)	4822 126 12539	C170	47pF/50V (J)	4822 126 12544
C101	.022uF/25V (Z)	4822 126 12547	C201	100pF/50V (K)	4822 126 12532
C102	47uF/16V (M) Electrolytic	4822 124 40433	C202	100pF/50V (K)	4822 126 12532
C103	.022uF/25V (Z)	4822 126 12547	C203	100pF/50V (K)	4822 126 12532
C104	.022uF/25V (Z)	4822 126 12547	C204	100pF/50V (K)	4822 126 12532
C106	.022uF/25V (Z)	4822 126 12547	C205	1uF/50V (M) Electrolytic	4822 124 40242
C107	.022uF/25V (Z)	4822 126 12547	C206	1uF/50V (M) Electrolytic	4822 124 40242
C108	.022uF/25V (Z)	4822 126 12547	C207	100pF/50V (K)	4822 126 12532
C109	.022uF/25V (Z)	4822 126 12547	C208	100pF/50V (K)	4822 126 12532
C110	47uF/16V (M) Electrolytic	4822 124 40433	C209	22uF/16V (M) Electrolytic	5322 124 41431
C111	100pF/50V (K)	4822 126 12532	C210	22uF/16V (M) Electrolytic	5322 124 41431
C112	.022uF/25V (Z)	4822 126 12547	C211	.022uF/25V (Z)	4822 126 12547
C113	1uF/50V (M) Electrolytic	4822 124 40242	C212	.022uF/25V (Z)	4822 126 12547
C114	.001uF/50V (K)	4822 126 12533	C213	100uF/25V (M) Electrolytic	4822 124 40207
			C214	100uF/25V (M) Electrolytic	4822 124 40207
			C215	.0047uF/50V (J) Mylar	4822 121 70262
			C216	.0047uF/50V (J) Mylar	4822 121 70262
			C217	.0015uF/50V (J) Mylar	5322 121 70042
			C218	.0015uF/50V (J) Mylar	5322 121 70042

## Replacement Parts List (Continued)

Ref No.	Description	Part No.	Ref No.	Description	Part No.
C223	4.7uF/50V (M) Electrolytic	4822 124 80431	C311	4.7uF/50V (M) Electrolytic	4822 124 80431
C224	4.7uF/50V (M) Electrolytic	4822 124 80431	C312	220uF/35V (M) Electrolytic	4822 124 41716
C225	100pF/50V (K)	4822 126 12532	C313	47uF/16V (M) Electrolytic	4822 124 40433
C226	100pF/50V (K)	4822 126 12532	C314	.022uF/50V (Z) Ceramic	4822 126 13073
C227	100pF/50V (K)	4822 126 12532	C315	.022uF/50V (Z) Ceramic	4822 126 13073
C228	100pF/50V (K)	4822 126 12532	C317	2.2uF/50V (M) Electrolytic	4822 124 40244
C229	100pF/50V (K)	4822 126 12532	C319	.022uF/25V (Z)	4822 126 12547
C230	100pF/50V (K)	4822 126 12532	C320	.022uF/25V (Z)	4822 126 12547
C231	100pF/50V (K)	4822 126 12532	C321	.1uF/50V (Z)	4822 126 12539
C232	100pF/50V (K)	4822 126 12532	C322	.1uF/50V (Z)	4822 126 12539
C233	100pF/50V (K)	4822 126 12532	C323	.022uF/25V (Z)	4822 126 12547
C234	100pF/50V (K)	4822 126 12532	C324	10uF/25V (M) Electrolytic "NON, BP"	4822 124 80434
C235	4.7uF/50V (M) Electrolytic	4822 124 80431	C325	.1uF/50V (Z)	4822 126 12539
C236	4.7uF/50V (M) Electrolytic	4822 124 80431	▲ C402	4700pF/AC400V Spark "L"	4822 124 22017
C237	4.7uF/50V (M) Electrolytic	4822 124 80431	C501	.039uF/50V (J) Mylar	4822 121 70261
C238	100pF/50V (K)	4822 126 12532	C502	.039uF/50V (J) Mylar	4822 121 70261
C239	100pF/50V (K)	4822 126 12532	C503	100uF/25V (M) Electrolytic	4822 124 40207
C240	47uF/25V (M) Electrolytic	4822 124 40433	C504	.01uF/16V (K)	4822 126 12545
C241	47uF/25V (M) Electrolytic	4822 124 40433	C505	.1uF/50V (Z)	4822 126 12539
C242	100uF/25V (M) Electrolytic	4822 124 40207	C601	220pF/50V (K)	4822 126 12534
C243	100uF/25V (M) Electrolytic	4822 124 40207	C602	220pF/50V (K)	4822 126 12534
C244	4.7uF/50V (M) Electrolytic	4822 124 80431	C603	4.7uF/50V (M) Electrolytic "MINI"	4822 124 20726
C245	4.7uF/50V (M) Electrolytic	4822 124 80431	C604	4.7uF/50V (M) Electrolytic "MINI"	4822 124 20726
C246	470pF/50V (K)	4822 126 12535	C605	100pF/50V (K)	4822 126 12532
C247	470pF/50V (K)	4822 126 12535	C606	100pF/50V (K)	4822 126 12532
C248	4.7uF/50V (M) Electrolytic	4822 124 80431	C607	22pF/50V (J)	4822 126 12542
C249	4.7uF/50V (M) Electrolytic	4822 124 80431	C608	22pF/50V (J)	4822 126 12542
C250	1uF/50V (M) Electrolytic "NON, BP"	4822 124 80435	C609	4.7uF/50V (M) Electrolytic	4822 124 80431
C251	1uF/50V (M) Electrolytic "NON, BP"	4822 124 80435	C610	4.7uF/50V (M) Electrolytic	4822 124 80431
C252	2.2uF/50V (M) Electrolytic "NON, BP"	4822 124 80436	C611	.047uF/50V (J) Mylar	4822 121 43526
C253	2.2uF/50V (M) Electrolytic "NON, BP"	4822 124 80436	C612	.047uF/50V (J) Mylar	4822 121 43526
C254	820pF/50V (K)	4822 126 12538	C613	.33uF/50V (M) Electrolytic	4822 124 40748
C255	820pF/50V (K)	4822 126 12538	C614	.33uF/50V (M) Electrolytic	4822 124 40748
C256	220pF/50V (K)	4822 126 12534	C615	.0068uF/50V (J) Mylar	4822 121 70263
C257	220pF/50V (K)	4822 126 12534	C616	.0068uF/50V (J) Mylar	4822 121 70263
C258	47uF/25V (M) Electrolytic	4822 124 40433	C617	.039uF/50V (J) Mylar	4822 121 70261
C259	47uF/25V (M) Electrolytic	4822 124 40433	C618	.039uF/50V (J) Mylar	4822 121 70261
C260	47uF/50V (M) Electrolytic	4822 124 40246	C619	10uF/25V (M) Electrolytic	4822 124 42417
C261	47uF/50V (M) Electrolytic	4822 124 40246	C620	10uF/25V (M) Electrolytic	4822 124 42417
C263	10uF/63V (M) Electrolytic	4822 124 40248	C621	.1uF/50V (Z)	4822 126 12539
C264	100uF/63V (M) Electrolytic	4822 124 40255	C622	.1uF/50V (Z)	4822 126 12539
C266	.1uF/50V (J) Mylar	4822 121 70259	C623	2.2uF/50V (M) Electrolytic	4822 124 40244
C267	.1uF/50V (J) Mylar	4822 121 70259	C624	2.2uF/50V (M) Electrolytic	4822 124 40244
C268	.022uF/25V (Z)	4822 126 12547	RESISTORS		
C269	.022uF/25V (Z)	4822 126 12547	Note: All resistors are carbon film, ±5% and 1/6 watt, unless otherwise noted.		
C270	1uF/50V (M) Electrolytic	4822 124 40242	R001	47K ohm	4822 050 14703
C271	.01uF/16V (K)	4822 126 12545	R002	100 ohm	4822 050 11001
C272	.01uF/16V (K)	4822 126 12545	R003	47K ohm	4822 050 14703
C273	.01uF/16V (K)	4822 126 12545	R004	18K ohm	4822 050 11803
C274	.01uF/16V (K)	4822 126 12545	R005	47K ohm	4822 050 14703
C275	.0022uF/16V (K)	4822 126 12546	R006	47K ohm	4822 050 14703
C276	.0022uF/16V (K)	4822 126 12546	R007	47K ohm	4822 050 14703
C277	100pF/50V (K)	4822 126 12532	R008	47K ohm	4822 050 14703
C278	100pF/50V (K)	4822 126 12532	R009	18K ohm	4822 050 11803
C279	680pF/50V (K)	4822 126 12537	R010	47K ohm	4822 050 14703
C280	1uF/50V (M) Electrolytic "NON"	4822 124 80435	R011	47K ohm	4822 050 14703
C301	220uF/25V (M) Electrolytic	4822 124 41716	R014	4.7K ohm	4822 050 14702
C302	47uF/16V (M) Electrolytic	4822 124 40433	R015	22K ohm	4822 050 12203
C303	47uF/16V (M) Electrolytic	4822 124 40433	R016	22K ohm	4822 050 12203
C304	220uF/25V (M) Electrolytic	4822 124 41716	R017	22K ohm	4822 050 12203
C305	1000uF/35V (M) Electrolytic	4822 124 80427	R018	22K ohm	4822 050 12203
C306	470uF/35V (M) Electrolytic	4822 124 41334	R019	22K ohm	4822 050 12203
C307	4700uF/63V (M) Electrolytic "TSW"	4822 124 80432	R020	22K ohm	4822 050 12203
C308	4700uF/63V (M) Electrolytic "TSW"	4822 124 80432	R021	100 ohm	4822 050 11001
C309	.01uF/500V (Z) Ceramic F:5mm	4822 124 80684	R022	100K ohm	4822 050 11004
C310	.01uF/500V (Z) Ceramic F:5mm	4822 124 80684	R023	100K ohm	4822 050 11004



## Replacement Parts List (Continued)

Ref No.	Description	Part No.	Ref No.	Description	Part No.
R024	2.2K ohm	4822 050 12202	R207	1K ohm	4822 050 11002
R025	22K ohm	4822 050 12203	R208	1K ohm	4822 050 11002
R026	22K ohm	4822 050 12203	R209	100K ohm	4822 050 11004
R028	270 ohm	4822 116 52217	R210	100K ohm	4822 050 11004
R029	10K ohm	4822 050 11003	R211	1K ohm	4822 050 11002
R031	47K ohm	4822 050 14703	R212	1K ohm	4822 050 11002
R032	47K ohm	4822 050 14703	R213	47K ohm	4822 050 14703
R033	10K ohm	4822 050 11003	R214	47K ohm	4822 050 14703
R034	10K ohm	4822 050 11003	R215	510K ohm	4822 050 15104
R101	330 ohm	4822 050 13301	R216	510K ohm	4822 050 15104
R103	390 ohm	4822 050 13901	R217	100K ohm	4822 050 11004
R104	330K ohm	4822 116 52272	R218	100K ohm	4822 050 11004
R105	1K ohm	4822 050 11002	R219	1K ohm, 1/4W	4822 050 21002
R106	330 ohm	4822 050 13301	R220	1K ohm	4822 050 11002
R107	22K ohm	4822 050 12203	R221	220 ohm	4822 050 12201
R108	100K ohm, 1/4W	4822 050 21004	R222	220 ohm	4822 050 12201
R109	100K ohm	4822 050 11004	R223	560 ohm	4822 050 15601
R110	56K ohm	4822 050 15603	R224	560 ohm	4822 050 15601
R111	3.3K ohm	4822 050 13302	R225	220 ohm	4822 050 12201
R112	5.6K ohm	4822 050 15602	R226	220 ohm	4822 050 12201
R113	27K ohm, 1/4W	4822 111 31014	R227	560 ohm	4822 050 15601
R114	82 ohm	4822 050 18209	R228	560 ohm	4822 050 15601
R115	1.8K ohm	4822 051 51802	R229	220 ohm	4822 050 12201
R116	1K ohm	4822 050 11002	R230	220 ohm	4822 050 12201
R117	2.2K ohm	4822 050 12202	R231	56K ohm	4822 050 15603
R118	10K ohm	4822 050 11003	R232	56K ohm	4822 050 15603
R119	10K ohm	4822 050 11003	R233	1K ohm	4822 050 11002
R120	68K ohm	4822 050 16803	R234	1K ohm	4822 050 11002
R121	3.3K ohm, 1/4W	4822 050 23302	R235	100K ohm	4822 050 11004
R122	4.7 ohm, 1/2W Metal (Flame-proof)	4822 117 10193	R236	100K ohm	4822 050 11004
R123	220 ohm, 1/4W	4822 050 22201	R237	68K ohm	4822 050 16803
R124	330 ohm	4822 050 13301	R238	68K ohm	4822 050 16803
R125	100K ohm	4822 050 11004	R239	100K ohm	4822 050 11004
R126	100K ohm	4822 050 11004	R240	100K ohm	4822 050 11004
R127	4.7K ohm	4822 050 14702	R241	2.2K ohm	4822 050 12202
R128	1K ohm	4822 050 11002	R242	2.2K ohm	4822 050 12202
R129	10K ohm	4822 050 11003	R243	100K ohm	4822 050 11004
R130	8.2K ohm	4822 050 18202	R244	100K ohm	4822 050 11004
R131	6.8K ohm	4822 050 16802	R245	33K ohm	4822 050 13303
R132	2.2K ohm, 1/4W	4822 050 22202	R246	33K ohm	4822 050 13303
R133A	10K ohm	4822 050 11003	R247	1K ohm	4822 050 11002
R136	100 ohm, 1/2W Metal (Flame-proof)	4822 117 10189	R248	1K ohm	4822 050 11002
R137	4.7K ohm, 1/4W	4822 050 24702	R249	180K ohm	4822 050 11804
R138	4.7K ohm	4822 050 14702	R250	8.2K ohm	4822 050 18202
R139	15K ohm	4822 050 11503	R251	100K ohm	4822 050 11004
R140	100 ohm, 1/2W Metal (Flame-proof)	4822 117 10189	R252	47K ohm, 1/4W	4822 050 24703
R141	4.7K ohm	4822 050 14702	R253	100 ohm, 1/2W Metal (Flame-proof)	4822 117 10189
R142	100K ohm	4822 050 11004	R254	100 ohm, 1/2W Metal (Flame-proof)	4822 117 10189
R143	100K ohm	4822 050 11004	R255	100 ohm, 1/2W Metal (Flame-proof)	4822 117 10189
R146	3.3K ohm	4822 050 13302	R256	100 ohm, 1/2W Metal (Flame-proof)	4822 117 10189
R147	3.3K ohm	4822 050 13302	R257	2.2K ohm	4822 050 12202
R148	3.3K ohm	4822 050 13302	R258	2.2K ohm	4822 050 12202
R149	3.3K ohm	4822 050 13302	R259	100K ohm	4822 050 11004
R150	10K ohm	4822 050 11003	R260	100K ohm	4822 050 11004
R151	5.6K ohm	4822 050 15602	R261	180K ohm	4822 050 11804
R152	100 ohm, 1/2W Metal (Flame-proof)	4822 117 10189	R262	180K ohm	4822 050 11804
R153	100K ohm	4822 050 11004	R263	22K ohm	4822 050 12203
R154	1K ohm	4822 050 11002	R264	22K ohm	4822 050 12203
R155	4.7K ohm, 1/4W	4822 050 24702	R265	220 ohm, 1/4W	4822 050 22201
R156	4.7K ohm, 1/4W	4822 050 24702	R266	220 ohm	4822 050 12201
R157	2.7K ohm	4822 111 31013	R267	22K ohm	4822 050 12203
R158	5.6K ohm	4822 050 15602	R268	22K ohm	4822 050 12203
R159	680K ohm	4822 116 52298	R269	56K ohm, 1/4W	4822 050 25603
R201	150 ohm	4822 050 11501	R270	56K ohm, 1/4W	4822 050 25603
R202	150 ohm	4822 050 11501	R271	1K ohm, 1/4W	4822 050 21002
R203	560K ohm	4822 050 15604	R272	1K ohm, 1/4W	4822 050 21002
R204	560K ohm	4822 050 15604	R273	56K ohm, 1/4W	4822 050 25603
R205	56K ohm	4822 050 15603	R274	56K ohm, 1/4W	4822 050 25603
R206	56K ohm	4822 050 15603	R275	3.3K ohm, 1/2W Metal (Flame-proof)	4822 117 10192

## Replacement Parts List (Continued)

Ref No.	Description	Part No.	Ref No.	Description	Part No.
R276	3.3K ohm, 1/2W Metal (Flame-proof)	4822 117 10192	R618	680 ohm	4822 050 16801
R277	3.3K ohm, 1/2W Metal (Flame-proof)	4822 117 10192	R619	270 ohm	4822 116 52217
R278	3.3K ohm, 1/2W Metal (Flame-proof)	4822 117 10192	R620	270 ohm	4822 116 52217
R279	100 ohm, 1/4W	5322 116 55549	R621	1.8K ohm	4822 051 51802
R280	1K ohm, 1/2W Metal (Flame-proof)	4822 117 10191	R622	1.8K ohm	4822 051 51802
R281	1K ohm, 1/2W Metal (Flame-proof)	4822 117 10191	R623	12K ohm	4822 050 11203
R282	0.1 ohm, 3W Cement ±20%	4822 113 90241	R624	12K ohm	4822 050 11203
R283	0.1 ohm, 3W Cement ±20%	4822 113 90241	R625	10K ohm	4822 050 11003
R284	4.7 ohm, 1/2W Metal (Flame-proof)	4822 117 10193	R626	10K ohm	4822 050 11003
R285	4.7 ohm, 1/2W Metal (Flame-proof)	4822 117 10193	R629	1.5K ohm	4822 050 11502
R286	10 ohm, 1/2W Metal (Flame-proof)	4822 117 10188	R630	1.5K ohm	4822 050 11502
R287	10 ohm, 1/2W Metal (Flame-proof)	4822 117 10188	FR201	100 ohm, 1/2W Fuse	4822 117 10197
R288	4.7K ohm	4822 050 14702	▲ FR301	1 ohm, 1/2W Fuse	4822 111 91493
R289	2.2K ohm, 1/4W	4822 050 22202	▲ FR302	1 ohm, 1/2W Fuse	4822 111 91493
R290	2.2K ohm, 1/4W	4822 050 22202			
R291	15K ohm, 1/4W	4822 050 21503	SEMICONDUCTORS		
R292	15K ohm, 1/4W	4822 050 21503	IC001	TMP87PM70F	4822 209 32048
R293	12K ohm, 1/4W	4822 050 21203	IC101	LA1266	4822 209 71785
R294	12K ohm, 1/4W	4822 050 21203	IC102	LA3401	4822 209 73434
R295	2.2K ohm, 1/4W	4822 050 22202	IC103	LC7218	4822 209 30178
R296	47K ohm, 1/4W	4822 050 24703	IC201	NJM4558DD	4822 209 81054
R297	330 ohm, 2W Metal (Flame-proof)	4822 117 10122	IC202	NJM4558DD	4822 209 81054
R298	330 ohm, 2W Metal (Flame-proof)	4822 117 10122	IC203	NJM4558DD	4822 209 81054
R299	100K ohm	4822 050 11004	IC204	STK4192-2	4822 209 70441
R305	100 ohm, 1/2W Metal (Flame-proof)	4822 117 10189	IC205	LC7821	4822 209 72748
R306	820 ohm, 1W Metal (Flame-proof)	4822 117 10198	▲ IC301	MC7815CT	5322 209 71759
R307	10 ohm, 1/2W Metal (Flame-proof)	4822 117 10188	▲ IC302	MC7915CT	5322 209 86361
R308	2.2K ohm	4822 050 12202	▲ IC303	NJM78L06	4822 209 83819
R310	1K ohm	4822 050 11002	IC501	LB1641	4822 209 30193
R311	1K ohm	4822 050 11002	IC601	NJM4558S	4822 209 73303
R312	4.7 ohm, 1/2W Metal (Flame-proof)	4822 117 10193	Q001	2SC945P,Q	4822 130 41198
R313	4.7 ohm, 1/2W Metal (Flame-proof)	4822 117 10193	Q002	2SA733P,Q	4822 130 61867
R314	22K ohm, 1/4W	4822 116 52257	Q003	2SC945P,Q	4822 130 41198
R316	56K ohm	4822 050 15603	Q004	2SA733P,Q	4822 130 61867
R323	100K ohm	4822 050 11004	Q008	2SC945P,Q	4822 130 41198
R324	100K ohm	4822 050 11004	Q009	2SC945P,Q	4822 130 41198
R501	6.8K ohm	4822 050 16802	Q010	2SC945P,Q	4822 130 41198
R502	6.8K ohm	4822 050 16802	Q012	2SC945P,Q	4822 130 41198
R504	33 ohm, 1/4W Fuse	4822 117 10187	Q013	2SA733P,Q	4822 130 61867
R505	10 ohm	4822 050 11009	Q101	2SK161GR, FET	4822 130 63222
R601	1K ohm	4822 050 11002	Q102	2SC1675L	4822 130 41595
R602	1K ohm	4822 050 11002	Q105	DTC144ES	4822 130 42594
R603	220K ohm	4822 050 12204	Q106	DTC144ES	4822 130 42594
R604	220K ohm	4822 050 12204	Q107	DTA114ES	4822 130 60766
R605	560K ohm	4822 050 15604	Q108	DTA114ES	4822 130 60766
R606	560K ohm	4822 050 15604	Q109	2SC945P,Q	4822 130 41198
R607	560K ohm	4822 050 15604	Q110	2SC945P,Q	4822 130 41198
R608	560K ohm	4822 050 15604	Q111	2SC945P,Q	4822 130 41198
R609	47K ohm	4822 050 14703	Q112	2SC2878A	4822 130 62904
R610	47K ohm	4822 050 14703	Q113	2SC2878A	4822 130 62904
R611	9.1K ohm	4822 050 19102	Q201	2SK246GR, FET	4822 130 60098
R612	9.1K ohm	4822 050 19102	Q202	DTA144ES	4822 130 42594
R613	22K ohm	4822 050 12203	Q203	DTA144ES	4822 130 42594
R614	22K ohm	4822 050 12203	Q204	2SC1841E	4822 130 42388
R615	1.2K ohm	4822 050 11202	Q205	2SC2878A	4822 130 62904
R616	1.2K ohm	4822 050 11202	Q206	2SC2878A	4822 130 62904
R617	680 ohm	4822 050 16801	Q207	2SC2878A	4822 130 62904
			Q208	2SC2878A	4822 130 62904
			Q209	2SA988E	4822 130 42386
			Q210	2SC1841E	4822 130 42388
			Q211	2SC1841E	4822 130 42388
			Q302	2SC945P,Q	4822 130 41198
			▲ Q303	2SA965Y	4822 130 63221
			X101	X'TAL 7.2MHz	4822 242 71875
			D001	1SS176	4822 130 33861
			D002	1SS176	4822 130 33861
			D004	1SS176	4822 130 33861
			D005	1SS176	4822 130 33861



## Replacement Parts List (Continued)

Ref No.	Description	Part No.	Ref No.	Description	Part No.
D006	1SS176	4822 130 33861	S014	Tact switch SKHVBC3430-CP (FM/AM band)	4822 276 13373
D007	LTL-4222N, LED (RED)	4822 130 83205	S015	Tact switch SKHVBC3430-CP (Tuning up)	4822 276 13373
D008	1N4148	4822 130 30621	S016	Tact switch SKHVBC3430-CP (Preset up)	4822 276 13373
D009	1N4148	4822 130 30621	S017	Tact switch SKHVBC3430-CP (Display)	4822 276 13373
D010	1N4148	4822 130 30621	S018	Tact switch SKHVBC3430-CP (Memory)	4822 276 13373
D011	1N4148	4822 130 30621	S019	Tact switch SKHVBB3420-CP (Mute)	4822 276 13372
D101	1N4148	4822 130 30621	S020	Tact switch SKHVBC3430-CP (FM mode)	4822 276 13373
D102	1SS176	4822 130 33861	S021	Tact switch SKHVBC3430-CP (Tuning down)	4822 276 13373
D103	1SS176	4822 130 33861	S022	Tact switch SKHVBC3430-CP (Preset down)	4822 276 13373
D104	1SS176	4822 130 33861	S023	Tact switch SKHVBC3430-CP (Frequency direct)	4822 276 13373
D105	1SS176	4822 130 33861	S024	Tact switch SKHVBC3430-CP (Station name display)	4822 276 13373
D108	1SS176	4822 130 33861	S025	Tact switch SKHVBC3430-CP (Sleep)	4822 276 13373
D109	1N4148	4822 130 30621	S201	Push switch SPUL19C611-CP (Speaker A)	4822 276 13363
D201	1SS176	4822 130 33861	S202	Push switch SPUL19C611-CP (Speaker B)	4822 276 13363
D202	1SS176	4822 130 33861	▲ S401	Power switch SDDL1107U-CP (Power)	4822 276 13374
D204	1SS176	4822 130 33861	S501	Push switch SPUL12A207-CP (Loudness)	4822 276 13375
D205	1SS176	4822 130 33861			
D206	RD5.1EB2, Zener	4822 130 32897			
D207	1N4148	4822 130 30621			
▲ D301	CBU4D	4822 130 83302			
▲ D302	W02C	4822 130 83476			
D303	RD5.1EB2, Zener	4822 130 32897			
D304	RD27EB2, Zener	4822 130 80209			
D308	1SS176	4822 130 33861			
D309	1SS176	4822 130 33861			
D501	MTZ5.1C, Zener	4822 130 82667			
VD101	KV1236Z (WHT/BLK)	4822 130 33787			
VARIABLE RESISTORS					
SFR101	Semi-fixed resistor 100KX (AM lock sense adjustment)	4822 100 11968			
SFR102	Semi-fixed resistor 200KX (FM lock sense adjustment)	4822 100 11969			
SFR103	Semi-fixed resistor 100KX (FM separation adjustment)	4822 100 11968			
VR501	Variable resistor 50KBx2 RK16312MS019-CP	4822 101 21216			
VR601	Variable resistor 100KW RK161140044-CP	4822 101 21214			
VR602	Variable resistor 100KBx2 RK16K124A014-CP	4822 101 21215			
VR603	Variable resistor 100KBx2 RK16K124A014-CP	4822 101 21215			
SWITCHES					
S001	Rotary switch MSB1.12P-20L "C" (Input selector)	4822 273 20373			
S003	Tact switch SKHVBB3420-CP (Memory preset station)	4822 276 13372			
S004	Tact switch SKHVBB3420-CP (Memory preset station)	4822 276 13372			
S005	Tact switch SKHVBB3420-CP (Memory preset station)	4822 276 13372			
S006	Tact switch SKHVBB3420-CP (Memory preset station)	4822 276 13372			
S007	Tact switch SKHVBB3420-CP (Memory preset station)	4822 276 13372			
S008	Tact switch SKHVBB3420-CP (Memory preset station)	4822 276 13372			
S009	Tact switch SKHVBB3420-CP (Memory preset station)	4822 276 13372			
S010	Tact switch SKHVBB3420-CP (Memory preset station)	4822 276 13372			
S011	Tact switch SKHVBB3420-CP (Memory preset station)	4822 276 13372			
S012	Tact switch SKHVBB3420-CP (Memory preset station)	4822 276 13372			
S013	Tact switch SKHVBB3420-CP (Surround/Spatial)	4822 276 13372			
			HP201	Headphone jack JY-6317-01-030G3	4822 267 31625
			JK101	2P antenna terminal	4822 290 81552
			JK201	4P RCA jack	4822 267 41082
			JK202	4P RCA jack	4822 267 41082
			JK203	4P RCA jack	4822 267 41082
			JK205	2P RCA jack RJ-1020-110 (C)	4822 267 41084
			JK206	RCA jack 1P 0501015-C	4822 267 31616
			JK207	8P speaker terminal	4822 290 81562
			CN1	3P FTW top base	---- -- ----
			CN1'	Wire holder 3P20	---- -- ----
			CN2	11P FTW top base	---- -- ----
			CN2'	Wire holder 11P20	---- -- ----
			CN4	5P FTW top base	---- -- ----
			CN4'	Wire holder 5P20	---- -- ----
			CN5	3P FTW top base	---- -- ----
			CN5'	Wire holder 3P20	---- -- ----
			CN6	2P FTW top base	---- -- ----
			CN6'	Wire holder 2P20	---- -- ----
			CN7	6P FTW top base	---- -- ----
			CN7'	Wire holder 6P20	---- -- ----
			CN8	3P FTW top base	---- -- ----
			CN8'	Wire holder 4P20	---- -- ----
			CN15	6P FTW top base	---- -- ----
			CN15'	Wire holder 6P20	---- -- ----
			FE01	FM front end FE415-G11B	4822 210 10614
			RY201	Relay VB-24MBU	4822 280 80764
			RM001	Remote pre-amplifier LTM-9052A4	4822 218 10499
			DP001	VFT Display 8-BT-130GK	4822 130 91217
			▲ F401	Fuse BS T2A/250V	4822 253 50162
			▲ F402	Fuse BS T1A/250V	4822 253 50161
			▲ AC1	AC outlet YKE31-0090	4822 267 20437
			▲ E1	AC cord VDE 7.5F BLK2	4822 321 10926
			E2	Cord stopper 2271	4822 325 80504
			E3	AM loop antenna coil AJ-2017	4822 303 40059
			E4	Battery UM4E (PHILIPS) (2 used)	---- -- ----

Note: ---- -- ---- Indicates a not normally stocked item.

# Replacement Parts List (Continued)

Ref No.	Description	Part No.	Ref No.	Description	Part No.
E5	FM indoor antenna	4822 303 50073	E16	Fuse holder PFC5000-0202T (4 used)	---- - - - -
E6	Insulator (mica) between heat sink and IC (IC103)	---- - - - -	E18	Square terminal pin on PCB (14 used)	---- - - - -
E8	RCA cable BLK-1M (GRN) (2 used)	4822 321 61875	E19	Long square terminal pin on PCB (2 used)	---- - - - -
E9	H/P jack PCB (Blank)	---- - - - -	E20	Square terminal pin on PCB (2 used)	---- - - - -
E12	Main PCB (Blank)	---- - - - -	E22	75 ohm antenna socket N0004A	4822 265 20621
E13	Front PCB (Blank)	---- - - - -			
E14	Power switch PCB (Blank)	---- - - - -			
E15	Volume PCB (Blank)	---- - - - -			

Note: ---- - - - - Indicates a not normally stocked item.