

STR-AV220/AV220A/AV320R/AV320RA

SERVICE MANUAL

AEP Model
STR-AV220A/320RA

UK Model
STR-AV320R

West Germany Model
STR-AV220/320R



Photo : STR-AV320

SPECIFICATIONS

Amplifier section

Continuous RMS power output

STR-AV220/AV220A :

25 W + 25 W (4/8 ohms, at 40 Hz - 20 kHz
less than 0.8% total harmonic distortion)

STR-AV320R(WG)/AV320RA :

40 W + 40 W (4/8 ohms, at 40 Hz - 20 kHz
less than 0.8% total harmonic distortion)

STR-AV320R(UK) : 50W+50W (4/8 ohms, at 40Hz-20kHz
less than 0.8% total harmonic distortion)

Power output

IEC/DIN : STR-AV220/AV220A

30 W + 30 W (4 ohms at 1 kHz 0.7%)

STR-AV320R (WG) /AV320RA

50 W + 50 W (4 ohms at 1 kHz 0.7%)

STR-AV320R (UK)

55W+55W (8 ohms at 1kHz 0.7%)

Harmonic distortion

Less than 0.8% at rated output

Frequency response

PHONO: RIAA equalization curve ± 0.5 dB

CD

VIDEO | 40 Hz - 50 kHz ± 0.5 dB

TAPE

Inputs

| | Sensitivity | Impedance | S/N (weighting network, input level) |
|---------------------|-------------|------------|--------------------------------------|
| PHONO | 2.5 mV | 50 kilohms | 74 dB 72 dB* (A, 2.5 mV) |
| CD VIDEO TAPE | 150 mV | 50 kilohms | 95 dB 80 dB* (A, 150 mV) |

* '78 IHF

Outputs

| | |
|----------------------------|---|
| REC OUT, VIDEO (AUDIO) OUT | Voltage 150 mV Impedance 10 kilohms |
| SPEAKER A, B | Accepts speakers of 4 - 16 ohms |
| HEADPHONES | Accepts low and high impedance headphones |

Tone controls

BASS: ± 10 dB at 100 Hz

TREBLE: ± 10 dB at 10 kHz

Muting

-20 dB (STR-AV320RA only)

DBFB

+12 dB at 70 Hz

Tuner section

| | FM tuner section | AM tuner section |
|-------------------------------|---|---|
| Tuning range | 87.5 - 108 MHz | 531 - 1,602 kHz |
| Antenna terminals | 75 ohms, unbalanced | External antenna terminal |
| Sensitivity at 50 dB quieting | 18.3 dBf, 4.5 μ V (mono) 38.3 dBf, 45 μ V (stereo) | — |
| Usable sensitivity | 11.2 dBf, 2 μ V (IHF) | Loop antenna: 500 μ V (at 1,000 kHz) |

- Continued on page 2 -



FM STEREO FM-AM RECEIVER
SONY®

| | FM tuner section | AM tuner section |
|-----------------------|-------------------------------------|---------------------------|
| Signal-to-noise ratio | 76 dB (mono) 70 dB (stereo) | 54 dB (at 50 mV/m) |
| Harmonic distortion | 0.3% (mono), 0.5% (stereo) at 1 kHz | 0.5% (at 50 mV/m, 400 Hz) |
| Selectivity | 60 dB at 400 kHz | 30 dB at 9 kHz |
| Separation | 45 dB at 1 kHz | — |
| Frequency response | 30 Hz - 15 kHz ± 1.5 dB | — |

General System

Tuner section: PLL quartz-locked digital synthesizer system
 Pre-amplifier section: low-noise NF type equalizer amp
 Power amplifier section: quasi-complementary SEPP

Power requirements

220V AC, 50/60Hz : AEP, West Germany Model
 240V AC, 50/60Hz : UK Model

Power consumption

STR-AV220 / AV220A : 85W
 STR-AV320R (WG) / AV320RA : 120W
 STR-AV320R (UK) : 230W
 In standby condition: 5 watts (STR-AV320RA / AV320R)

AC outlets

One switched (100 watts) (STR-AV320RA / AV320R)

Dimensions

Approx. 430 × 110 × 300 mm (w/h/d)
 (17 × 4 3/16 × 11 7/8 inches)
 including projecting parts and controls

Weight

Approx. 5.8 kg (12 lb 13 oz) net (STR-AV220 / AV220A)
 Approx. 6.5 kg (14 lb 5 oz) net (STR-AV320R / AV320RA)

Accessories supplied

FM wire antenna (1)
 AM loop antenna (1)
 Remote Commander RM-S103 (1)
 Remote Commander RM-U203 (1) (STR-AV320R:UK)
 Sony batteries SUM 3(NS) (2)

Design and specifications subject to change without notice.

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SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK Δ OR DOTTED LINE WITH MARK Δ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

CAUTION

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the equipment manufacturer. Discard used batteries according to manufacturer's instructions.

ADVARSEL

Lithiumbatteri-Eksplosjonsfare ved feilagtig handling.
 Udskiftning ma kun ske med batteri af samme fabrikat og type.
 Lever det brugte batteri tilbage til leverand ϕ ren.

ADVARSEL

Lithiumbatteri-Eksplosjonsfare.
 Ved utskifting benyttes kun batteri som anbefalt av apparatfabrikanten.
 Brukt batteri returneres apparatleverand ϕ ren.

VARNING

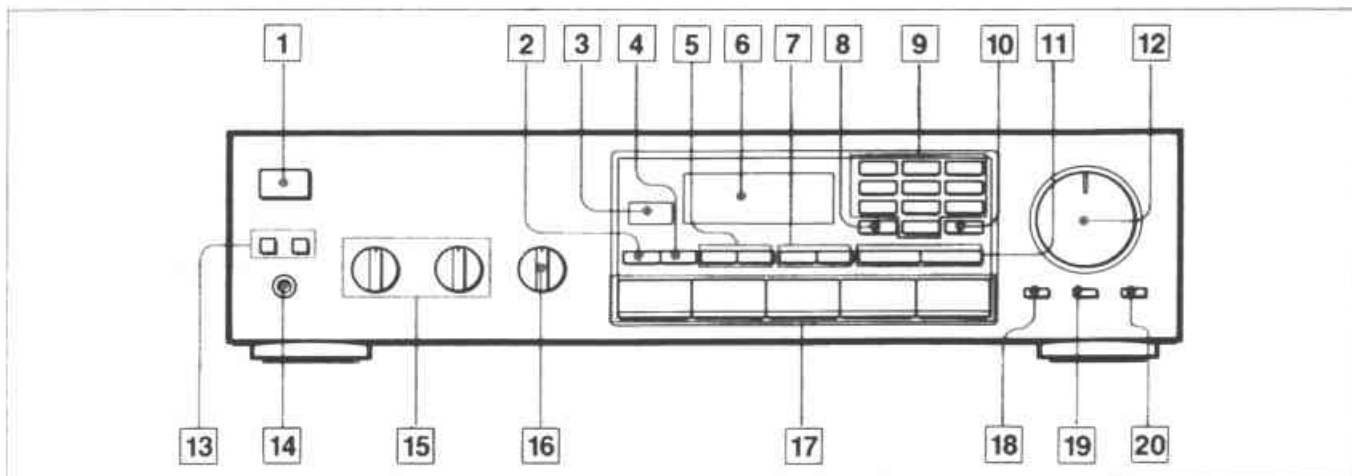
Explosionsfara vid felaktigh batteribyte.
 Anvand samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren.
 Kassera anvant batteri enligt fabrikantens instruktion.

VAROITUS

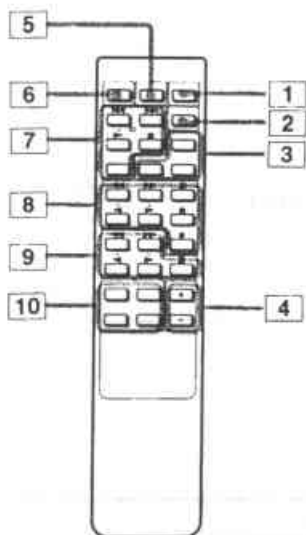
Paristo voi rajahtaa, jos se on virheellisesti asennettu.
 Vaihda paristo aincastaan laitevalmistajan suosittelemaan tyyppiin. Havita kaytetty paristo valmistajan ohjeiden mukaisesti.

SECTION 1 GENERAL

1-1. LOCATION AND FUNCTION OF CONTROLS




- [1] POWER switch**
- [2] DIRECT TUNING button**
- [3] Remote sensor (STR-AV320RA only)**
- [4] FM MODE button**
When an FM stereo program is noisy or hard to receive, press this button. The STEREO indicator goes out (the sound is heard in monaural, but the reception will be improved). To return to the stereo mode, press again or change the frequency.
- [5] BAND selectors**
- [6] Display window**
- [7] TUNING +/- buttons**
- [8] MEMORY button**
- [9] Numeric buttons**
- [10] SHIFT button**
- [11] PRESET +/- buttons**
- [12] VOLUME control and indicator**
The indicator is only equipped with the STR-AV320RA.
- [13] SPEAKERS selectors**
Depress to select which speaker system to drive. For both speaker systems, depress A and B.
- [14] HEADPHONES jack (stereo phone jack)**
- [15] TONE controls**
Turn the TREBLE control to adjust the high frequency sound. Turn BASS control to adjust the low frequency sound.
- [16] BALANCE control**
Turn clockwise to decrease the left channel volume, and turn counterclockwise to decrease the right channel volume.
- [17] Function selectors**
- [18] DBFB (Dynamic Bass Feed Back) button and indicator**
To reinforce the bass frequency sound, press this button.
- [19] MUTING button and indicator (STR-AV320RA only)**
Press to attenuate the sound level immediately (-20 dB attenuation). Pressing this button makes the indicator be lighted. To restore the sound level, press again.
- [20] SURROUND button and indicator**
To obtain the surround effect, press this button.



- [1] POWER button**
- [2] DBFB button**
- [3] TUNER PRESET +/- and SHIFT buttons**
- [4] VOLUME +/- buttons**
- [5] SURROUND button**
- [6] MUTING button**

- [7] CD player operation buttons**
D. (disc) SKIP: When your CD player is equipped with a multi-disc changer, use this button to select loaded disc.
CD ▶: Selects the CD function and starts CD-playback.
- [8] DECK B operation buttons (also for single tape deck)**
DECK B ◀/▶: Select tape function and start tape playback on deck B.
- [9] DECK A operation buttons**
DECK A ◀/▶: Select tape function and start tape playback on deck A.
- [10] Function select buttons**

Notes on the remote commander

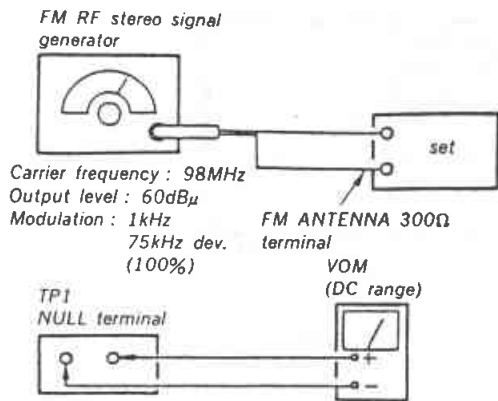
For the functions other than the receiver's own ones, the remote commander is effective only with Sony components having a remote sensor with  mark.

SECTION 2 ELECTRICAL ADJUSTMENTS

FM SECTION

• FM Discriminator (NULL) Adjustment

Setting :



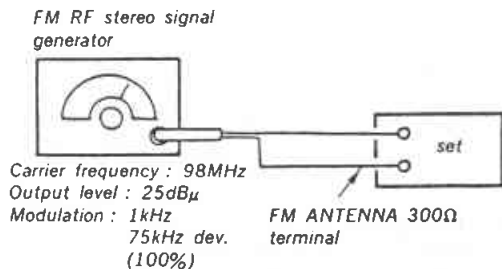
Procedure :

1. Tune the set to 98MHz.
2. Adjust T21 for 0V reading on the VOM.

Note : FM Tuning Level adjustment should be made after FM discriminator adjustment.

• FM Stereo Operation Level Adjustment

Setting :

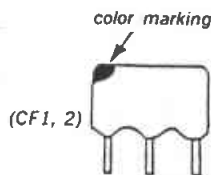


Procedure :

1. Tune the set to 98MHz.
2. Adjust RV24 so that the STEREO LED goes on.

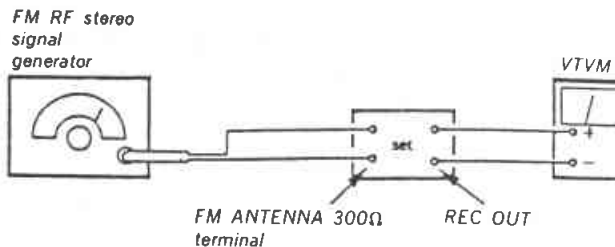
Note on Ceramic Filter (CF1, 2) Replacement.

This set employs two ceramic filters (CF1, 2) which should have the same color marking to identify their center frequency. Therefore FM IF offset adjustment by (* A, * B) connection is necessary to match the center frequency of the ceramic filters used with FM intermediate frequency.



• FM Stereo Separation Adjustment

Setting :



Procedure :

Tune the set to 98MHz.

| FM stereo signal generator output channel | VTVM connection | VTVM reading (dB) |
|---|-----------------|---------------------------------------|
| L-CH | L-CH | Ⓐ |
| R-CH | L-CH | Ⓑ Adjust RV21 for minimum reading. |
| R-CH | R-CH | Ⓒ |
| L-CH | R-CH | Ⓓ Adjust RV21 for minimum reading. |

L-CH Stereo separation : Ⓐ - Ⓑ

R-CH Stereo separation : Ⓒ - Ⓓ

The separations of both channels should be equal.

○ : short

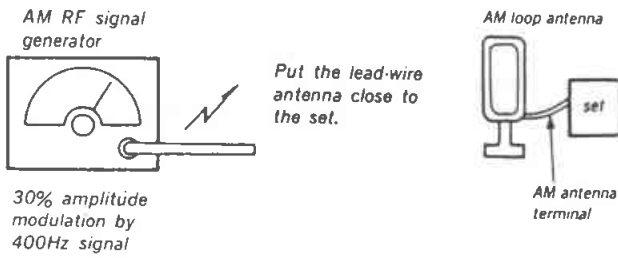
× : open

| Ceramic filter | | Connection | | FM intermediate frequency (MHz) |
|----------------|------------------------|------------|------------|---------------------------------|
| Color mark | Center frequency (MHz) | * A (D326) | * B (D327) | |
| White | 10.750 | × | ○ | 10.750 |
| Red | 10.700 | × | × | 10.700 |
| Black | 10.650 | ○ | ○ | 10.650 |

AM SECTION

• AM Meter Adjustment

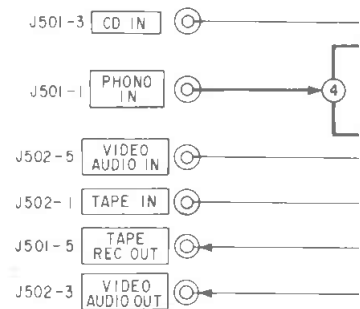
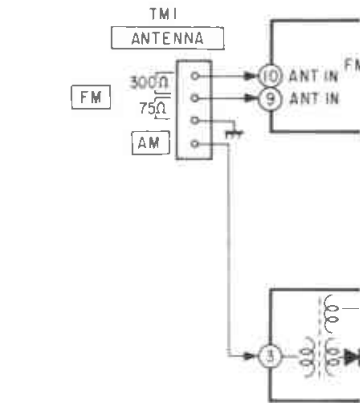
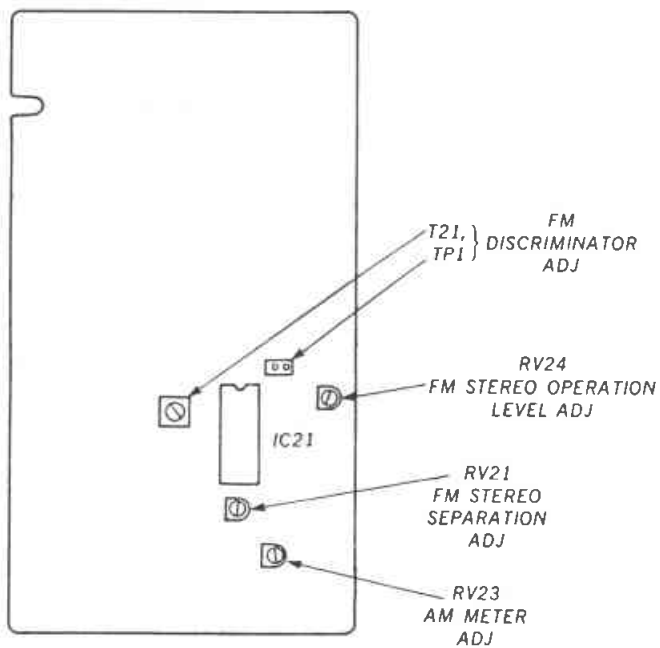
Setting :



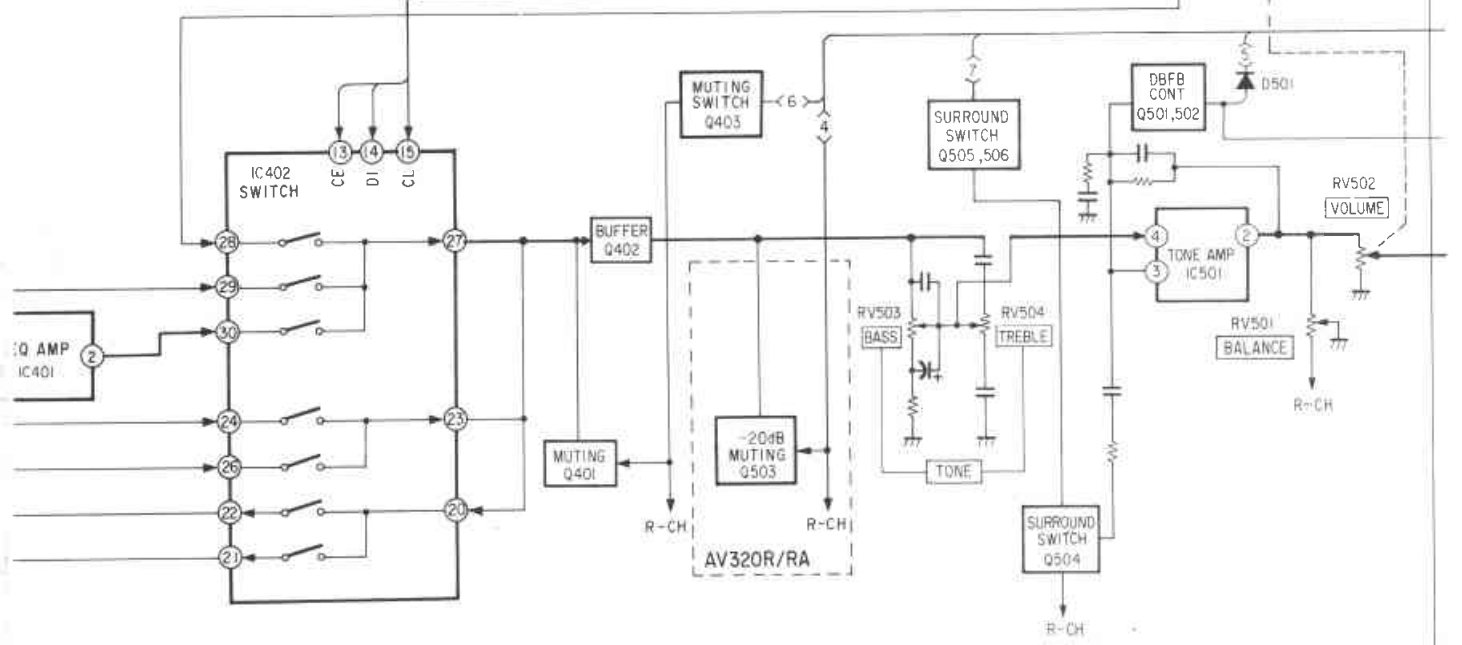
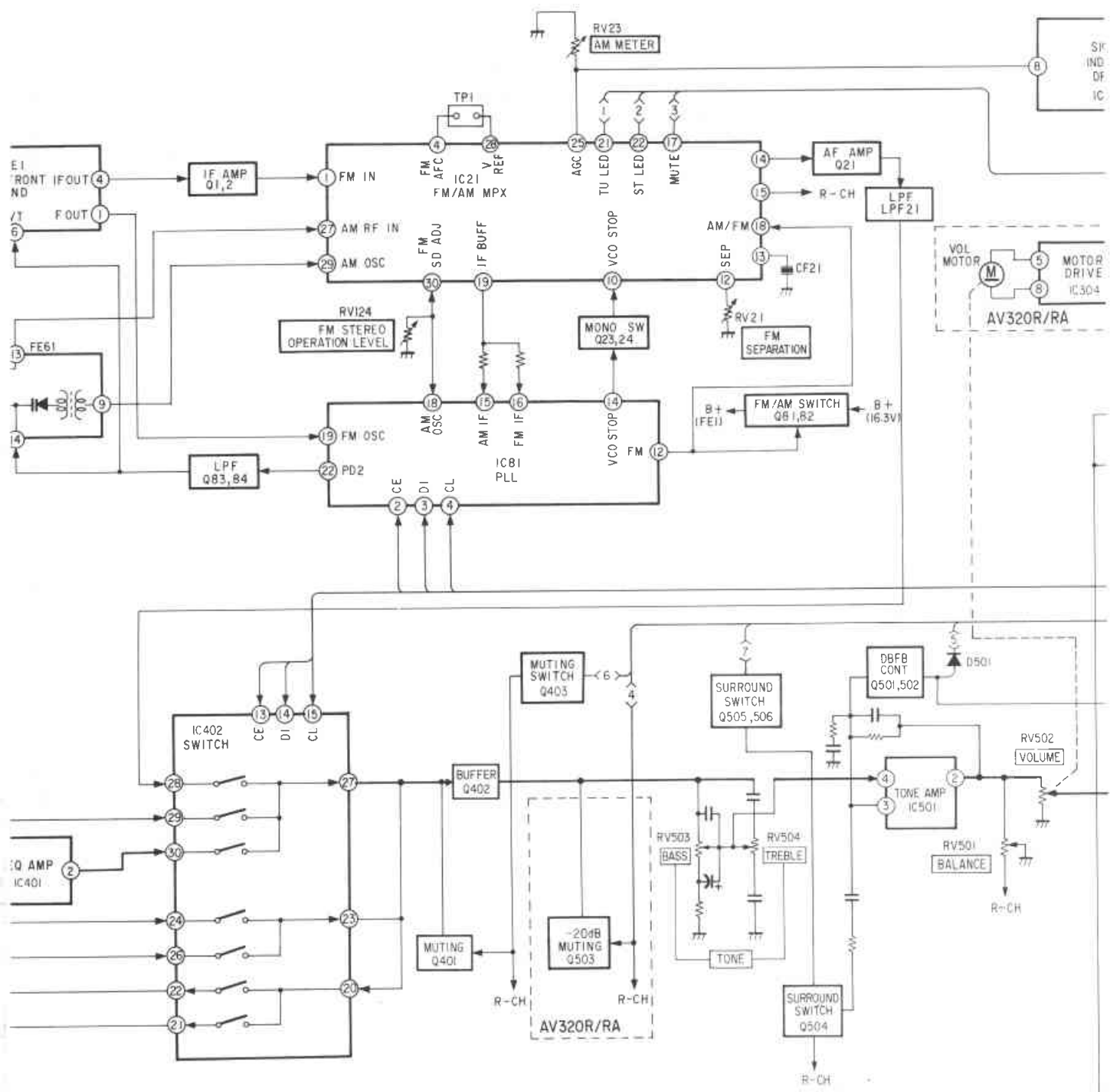
Procedure :

1. Tune the set to 1,050kHz.
2. Adjust the RV23 so that the 5 point segment of the signal meter goen on.

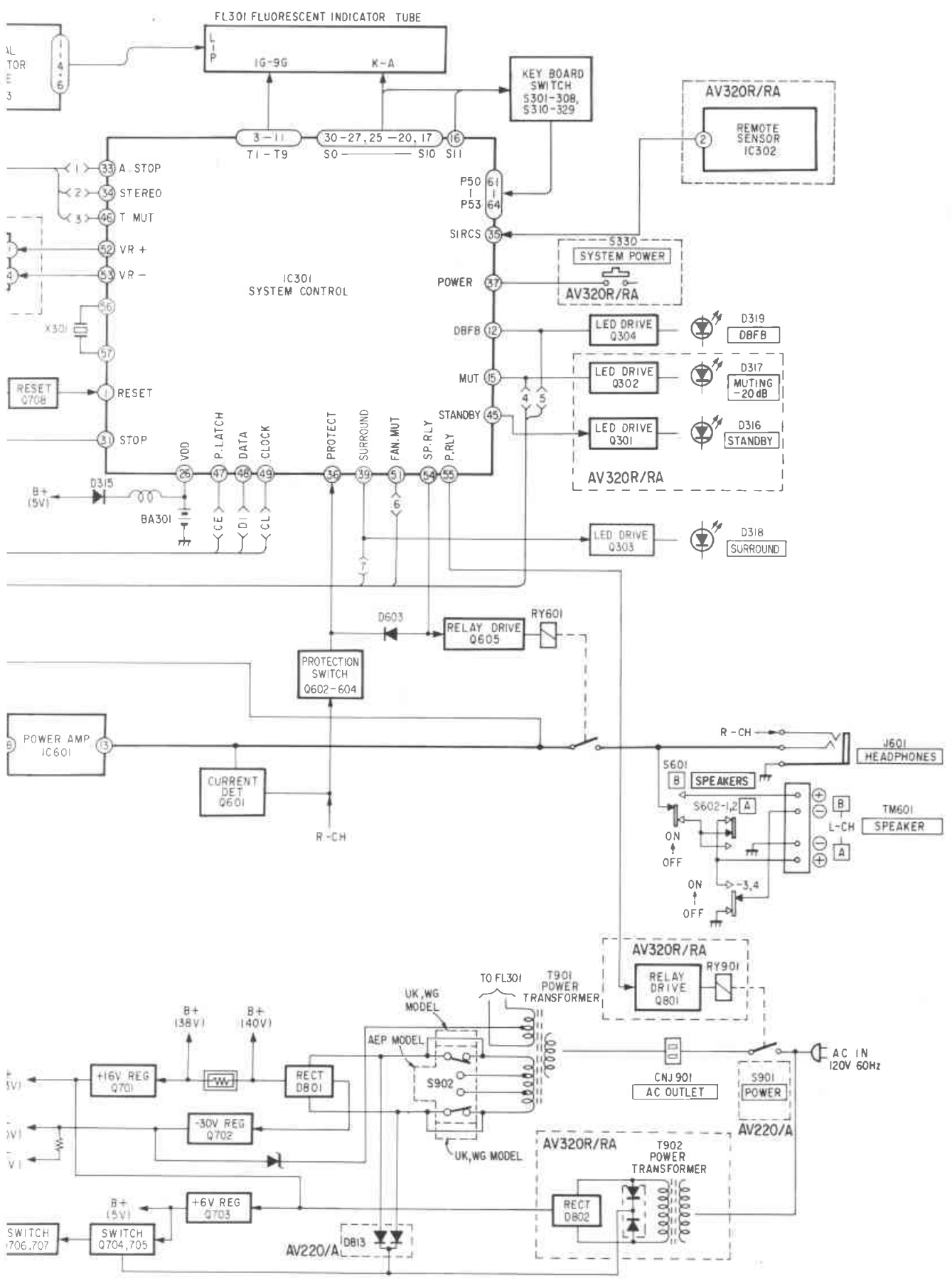
Adjustment Location : tuner board



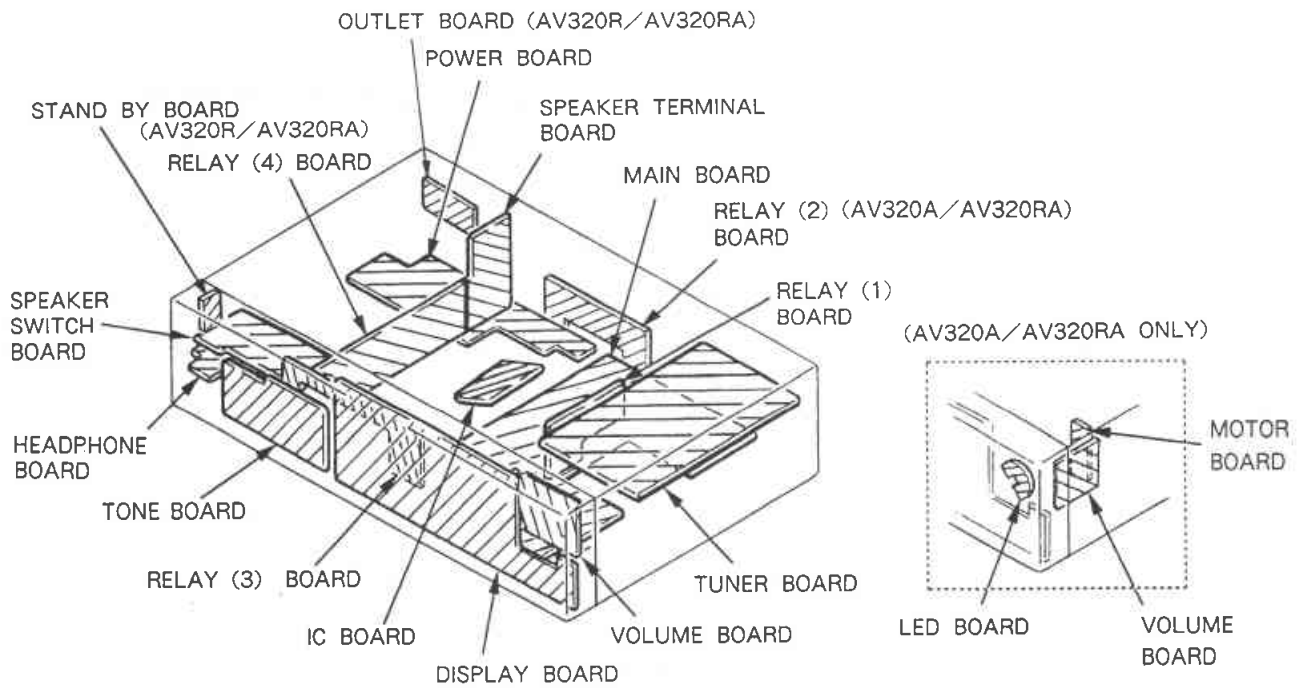
— R-CH IS OM



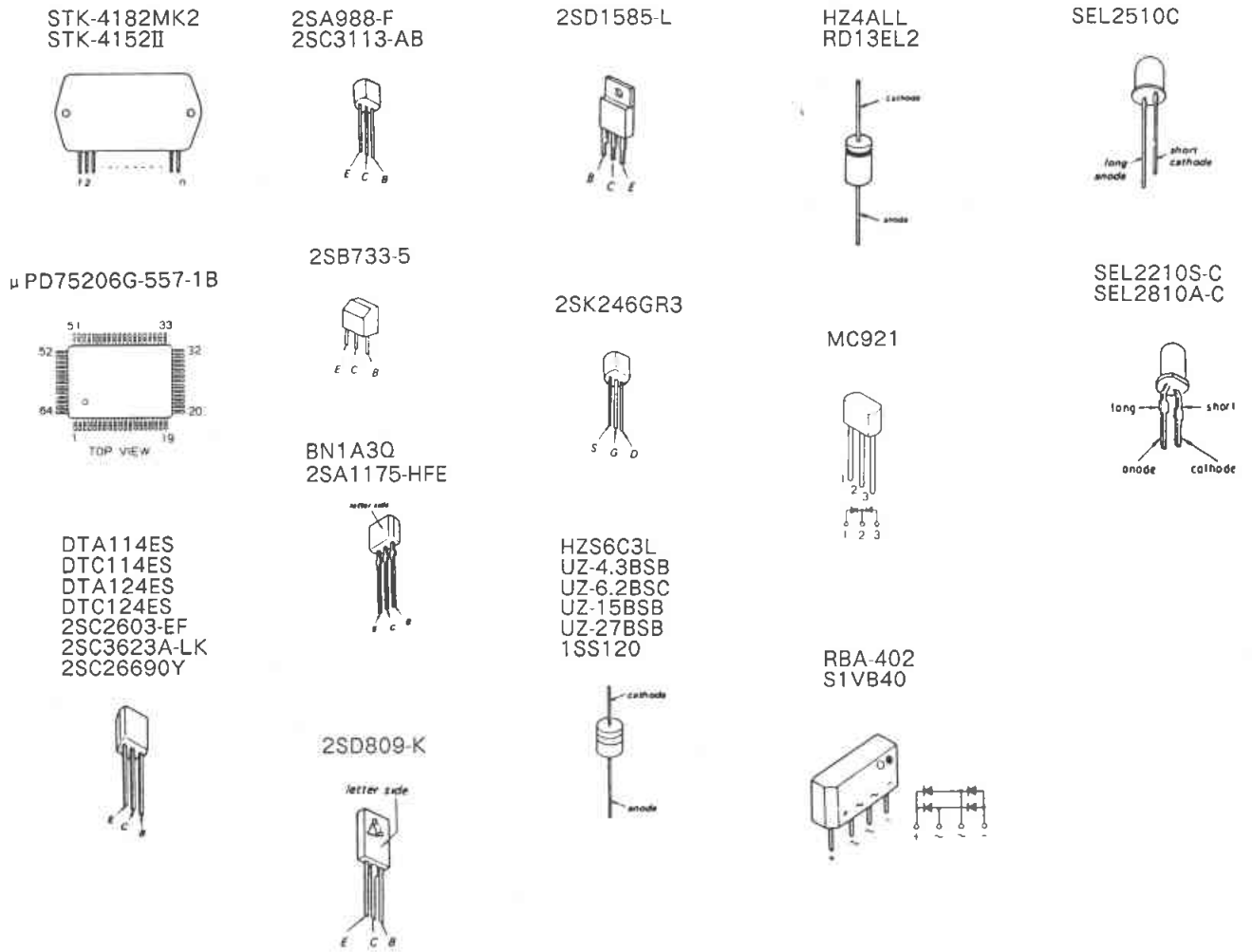
MISSION —



CIRCUIT BOARDS LOCATION



3.2. SEMICONDUCTOR LEAD LAYOUTS

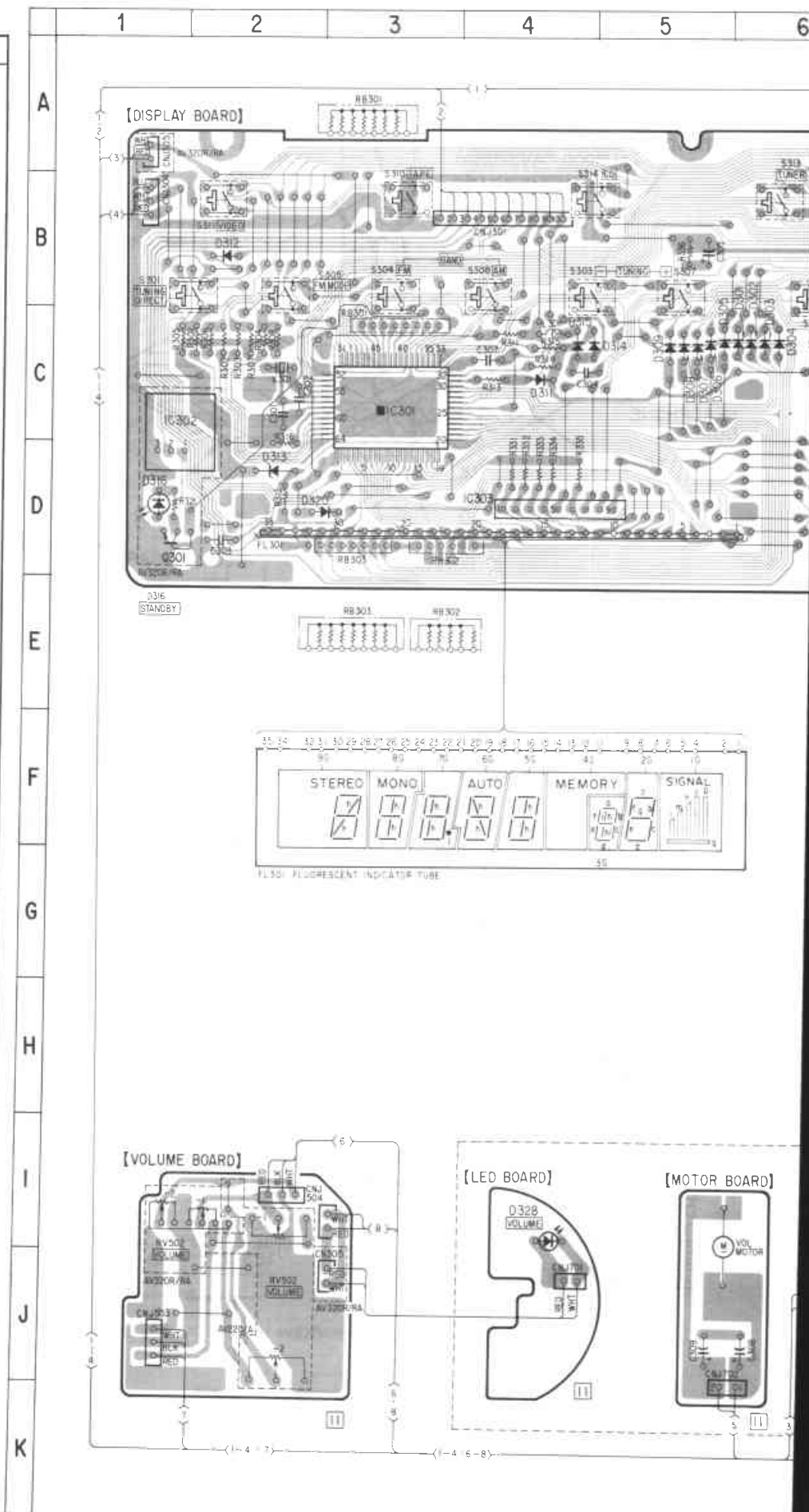


• SEMICONDUCTOR LOCATION

| Ref. No. | Location | Ref. No. | Location |
|----------|----------|----------------|----------|
| IC301 | C-3 | D312 | B-2 |
| IC302 | C-1 | D313 | D-2 |
| IC303 | D-4 | D314 | C-4 |
| IC304 | B-10 | D315 | C-4 |
| IC401 | C-13 | D316 | D-1 |
| IC402 | D-15 | D317 | B-10 |
| IC501 | C-30 | D318 | B-10 |
| IC601 | F-19 | D319 | B-9 |
| | | D320 | D-3 |
| | | D322 | D-8 |
| Q301 | D-1 | | |
| Q302 | C-8 | | |
| Q303 | C-8 | D323 | D-8 |
| Q304 | C-8 | D324 | D-8 |
| Q401 | D-16 | D326 | C-8 |
| | | D327 | D-8 |
| | | D328 | I-4 |
| Q402 | F-15 | | |
| Q403 | I-15 | | |
| Q451 | D-16 | D401 | I-15 |
| Q452 | F-15 | D402 | I-15 |
| Q501 | C-28 | D501 | C-28 |
| | | D502 | C-28 |
| | | D601 | F-17 |
| Q502 | C-29 | | |
| Q503 | C-27 | | |
| Q504 | C-28 | D602 | I-16 |
| Q505 | C-27 | D603 | I-17 |
| Q506 | C-28 | D604 | J-16 |
| | | D605 | J-15 |
| | | D607 | I-17 |
| Q551 | C-28 | | |
| Q552 | C-29 | | |
| Q553 | C-27 | D651 | F-17 |
| Q601 | F-17 | D702 | I-16 |
| Q602 | E-17 | D703 | J-17 |
| | | D704 | H-16 |
| | | D705 | H-16 |
| Q603 | E-18 | | |
| Q604 | E-18 | | |
| Q605 | I-17 | D706 | B-17 |
| Q651 | F-18 | D707 | B-17 |
| Q701 | I-16 | D708 | C-17 |
| | | D709 | J-15 |
| | | D710 | I-14 |
| Q702 | H-16 | | |
| Q703 | C-17 | | |
| Q704 | C-17 | D711 | I-14 |
| Q705 | C-17 | D801 | D-17 |
| Q706 | D-17 | D802 | J-21 |
| | | D803 | H-21 |
| Q707 | D-17 | | |
| Q708 | J-14 | AV220/AV220A | |
| Q709 | I-14 | D813 B-18 | |
| Q801 | I-21 | AV320R/AV320RA | |
| D301 | C-6 | D813 J-21 | |
| D302 | C-6 | | |
| D303 | C-6 | | |
| D304 | C-6 | | |
| D305 | C-5 | | |
| D306 | C-5 | | |
| D307 | C-5 | | |
| D308 | C-5 | | |
| D309 | C-5 | | |
| D311 | C-4 | | |

Note :

- : parts extracted from the component side.
- : parts mounted on the conductor side.
- *A, *B : See Page 4 for Note on Ceramic Filter (CF1, 2) Replacement.



7

8

9

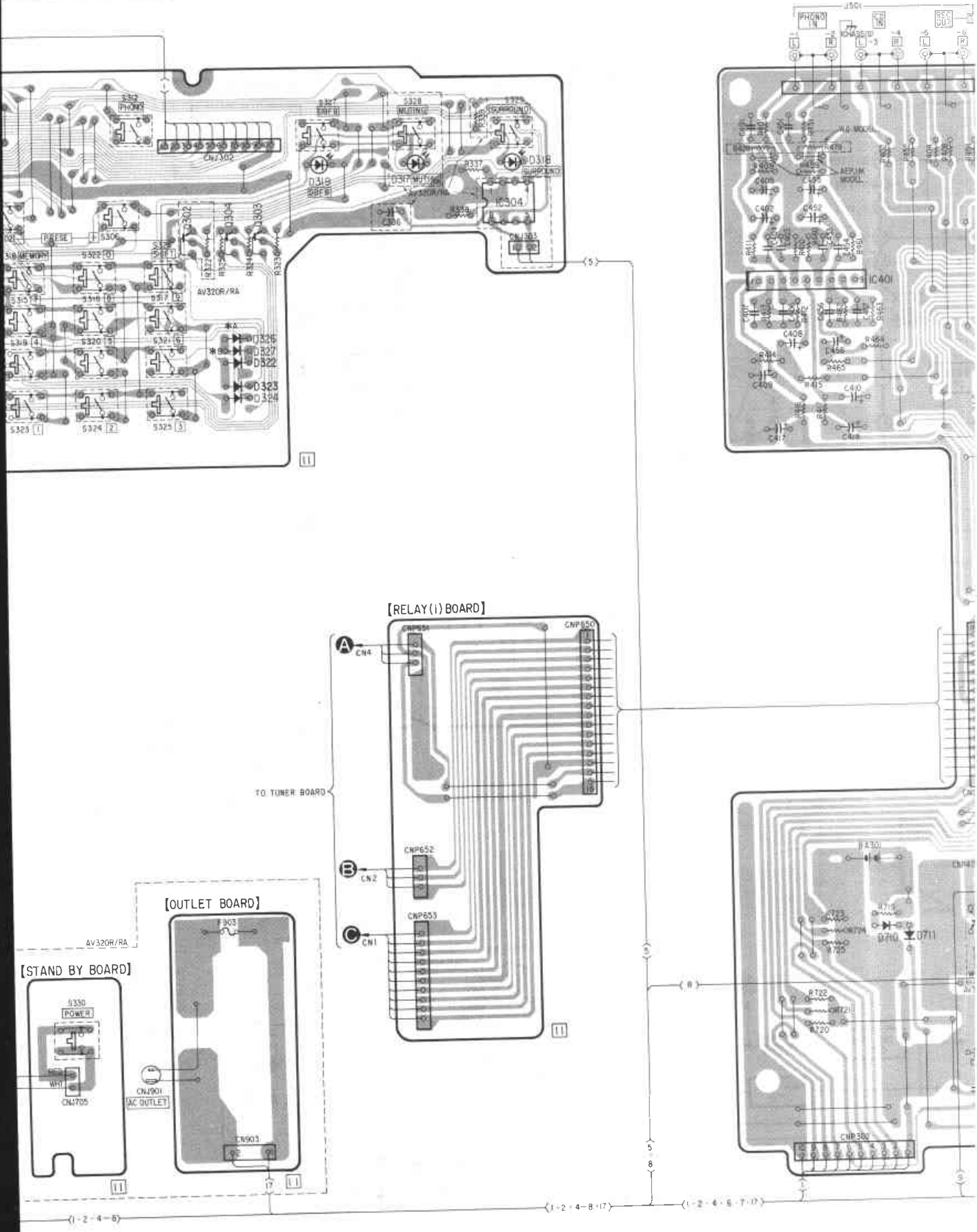
10

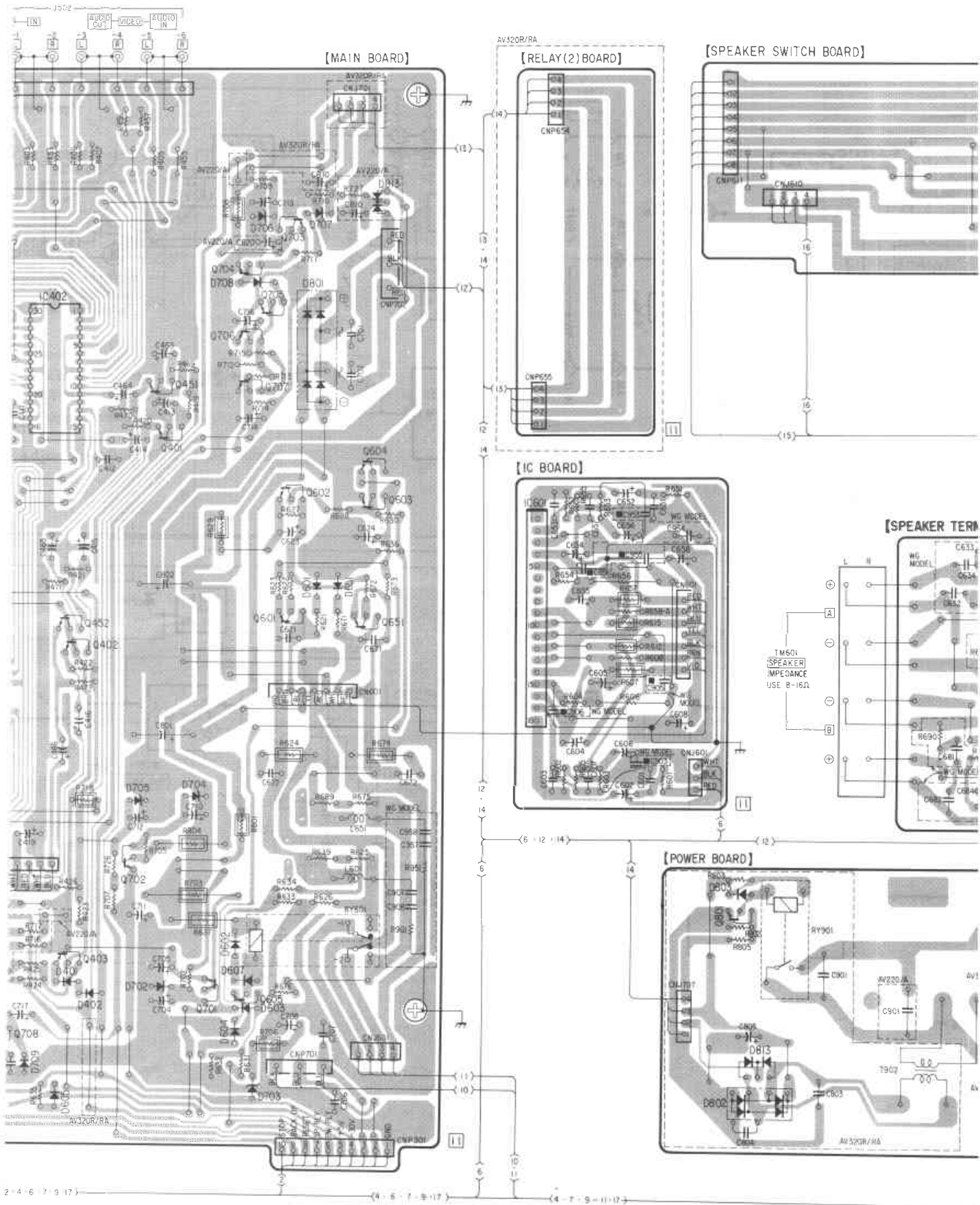
11

12

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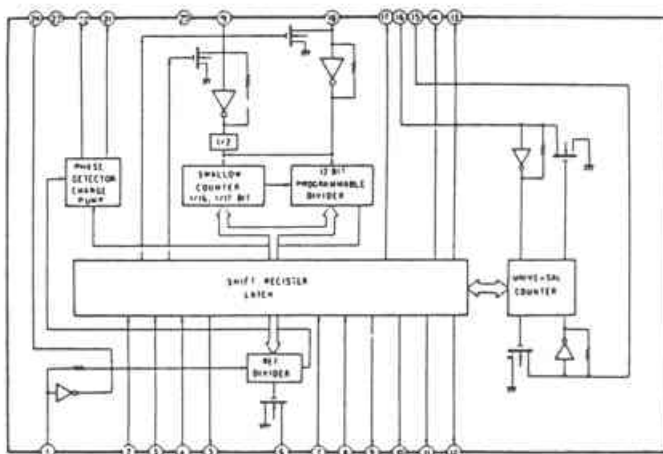
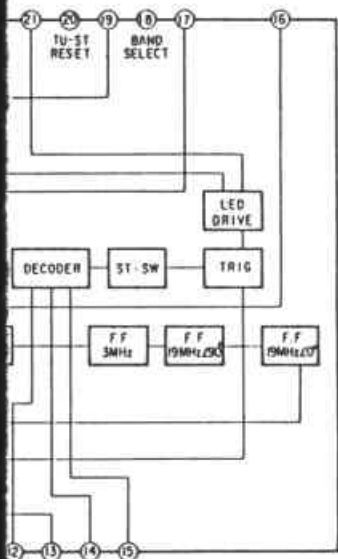
2 4 6 7 9 17

4 5 7 9 17

4 7 9 11 17

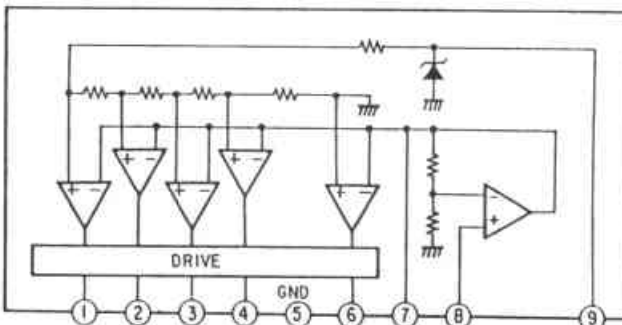
IC81 LC7218

IC50

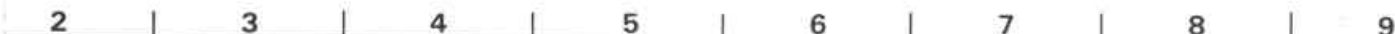


IC303 LB1493

IC5

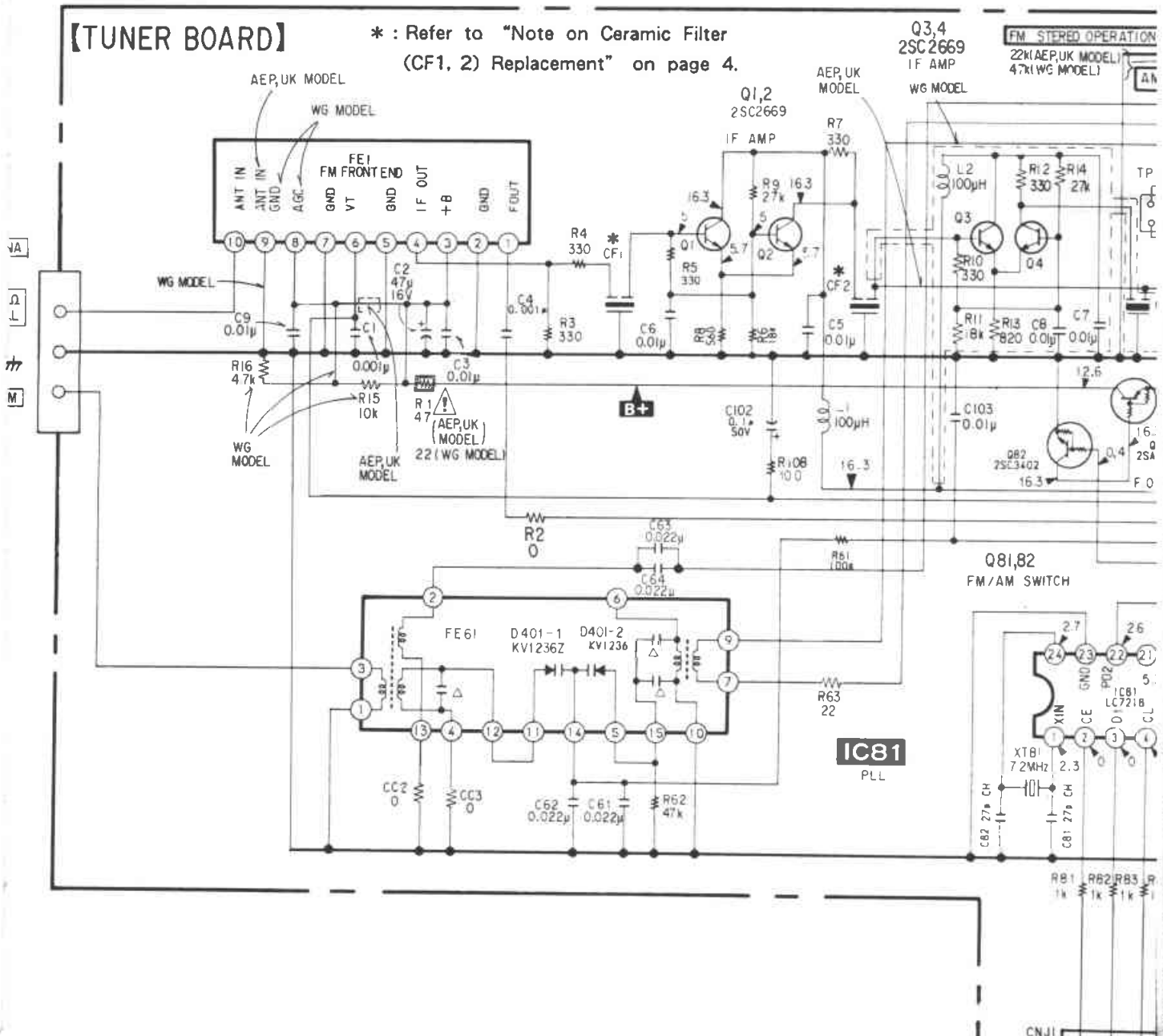


AGRAM - TUNER SECTION -

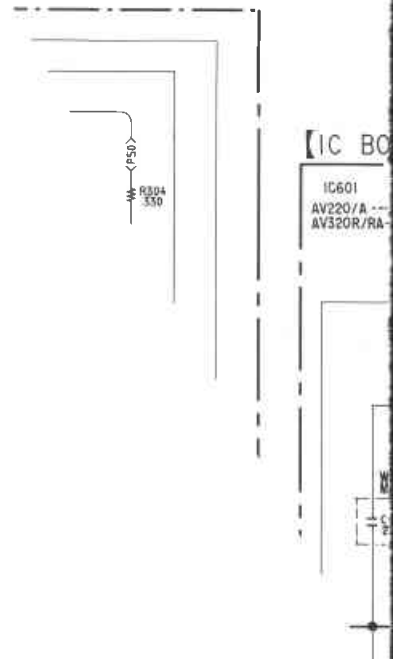
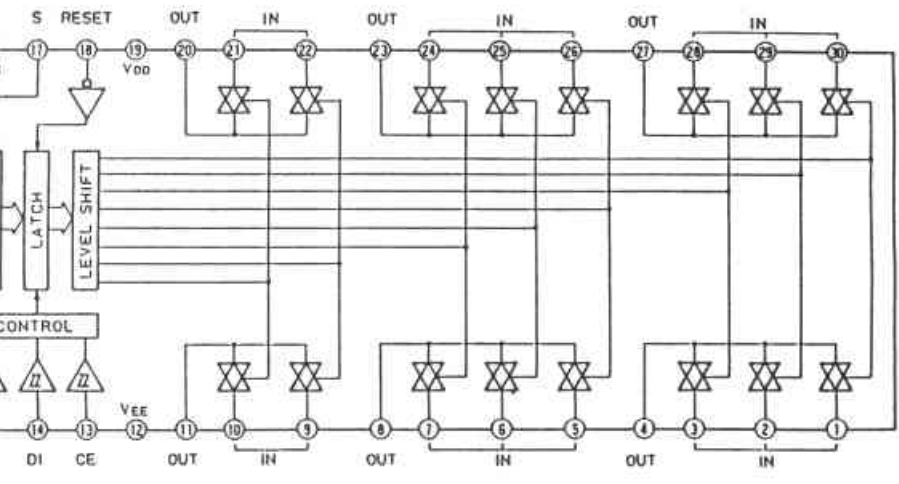


[TUNER BOARD]

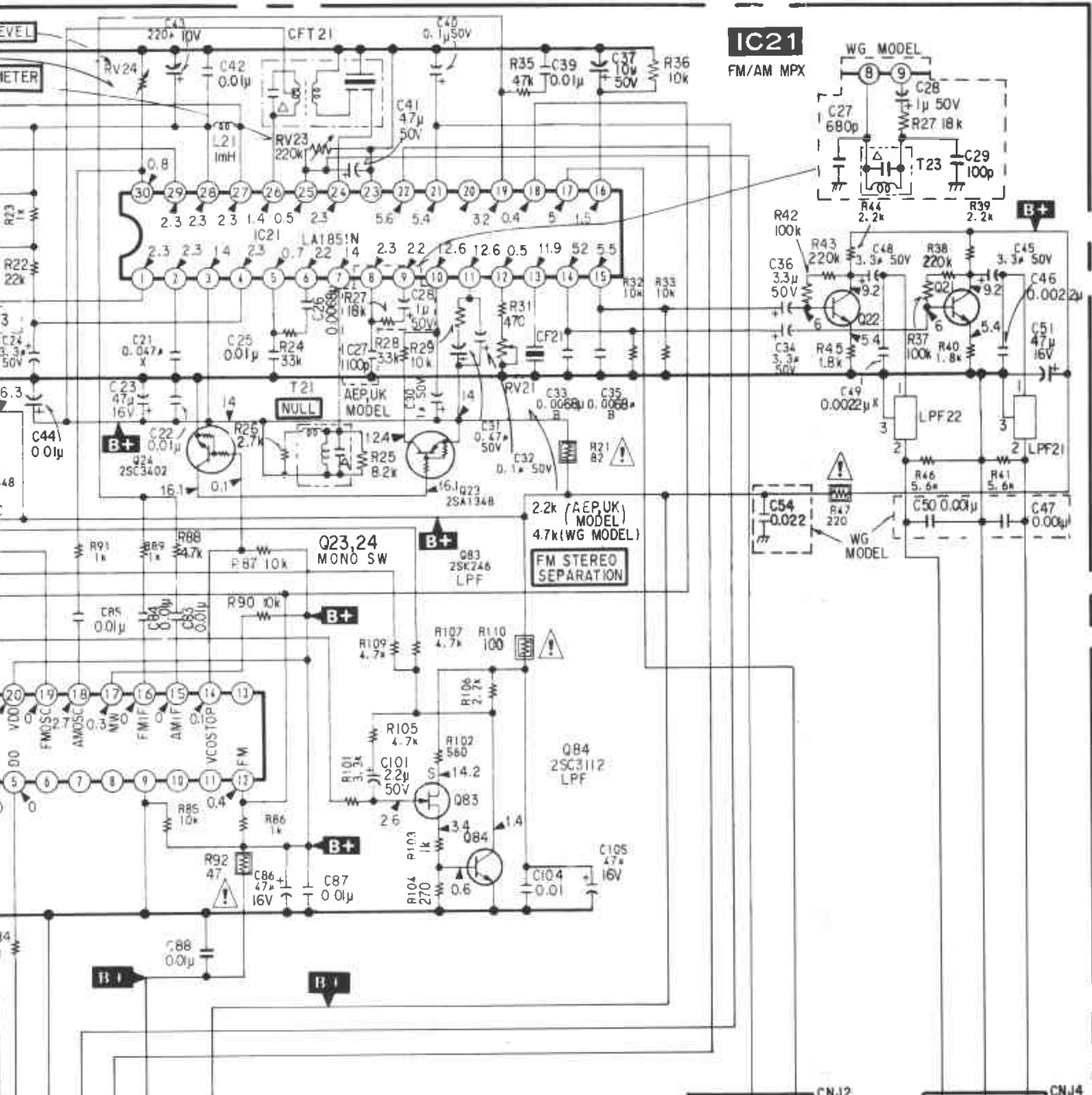
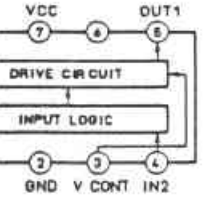
* : Refer to "Note on Ceramic Filter (CF1, 2) Replacement" on page 4.



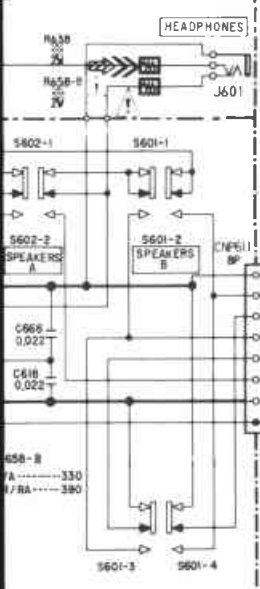
LC7822



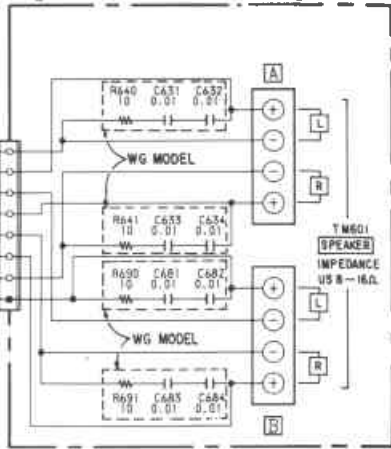
3 LB1639



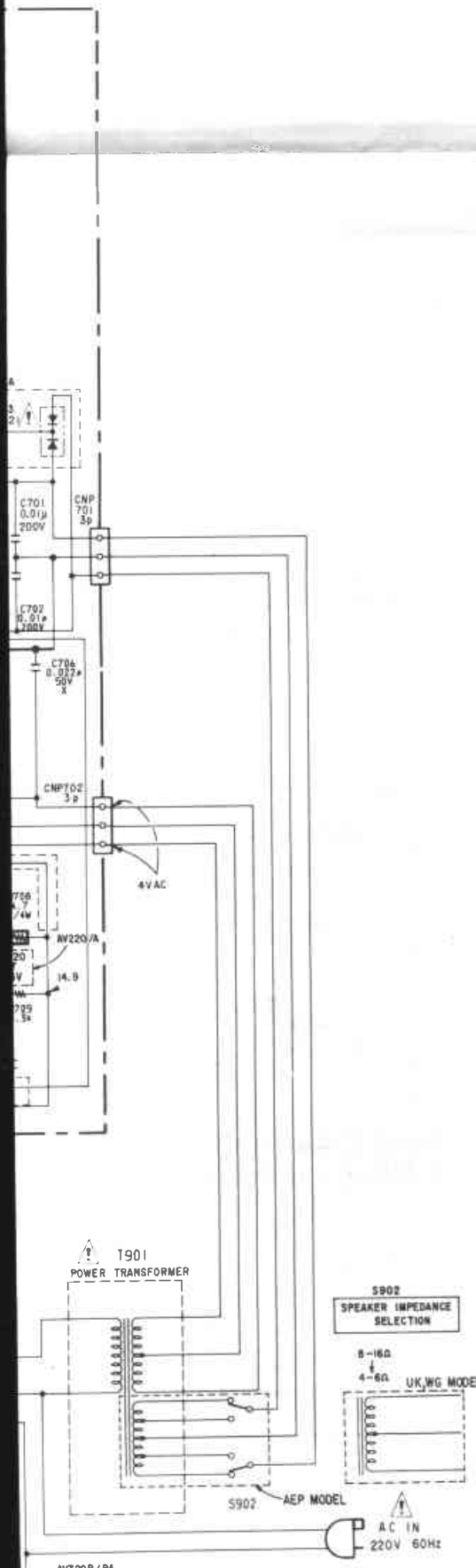
BOARD]



[SP TERMINAL BOARD]



AKER SWITCH BOARD]

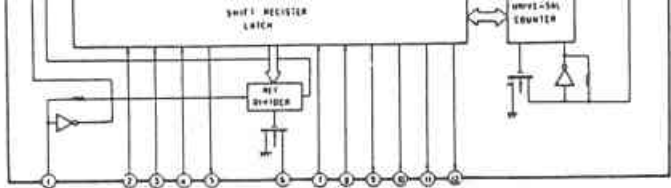
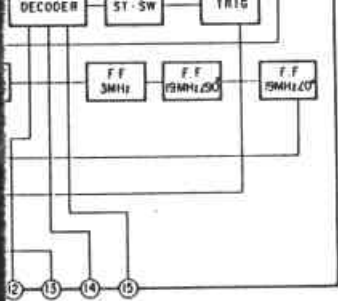


Note :

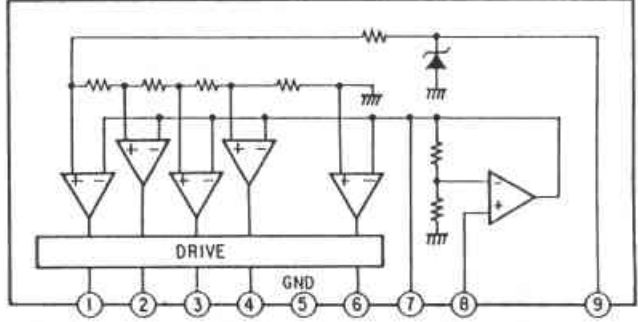
- *A, *B : See Page 4 for Note on Ceramic Filter (CF1, 2 and 3) Replacement.
- All capacitors are in μF unless otherwise noted. pF : $\mu \mu F$ 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}W$ or less unless otherwise specified.
- % : indicates tolerance.
- Δ : internal component.
- : nonflammable resistor.

Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

— : B+ Line



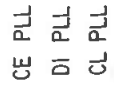
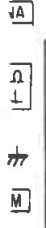
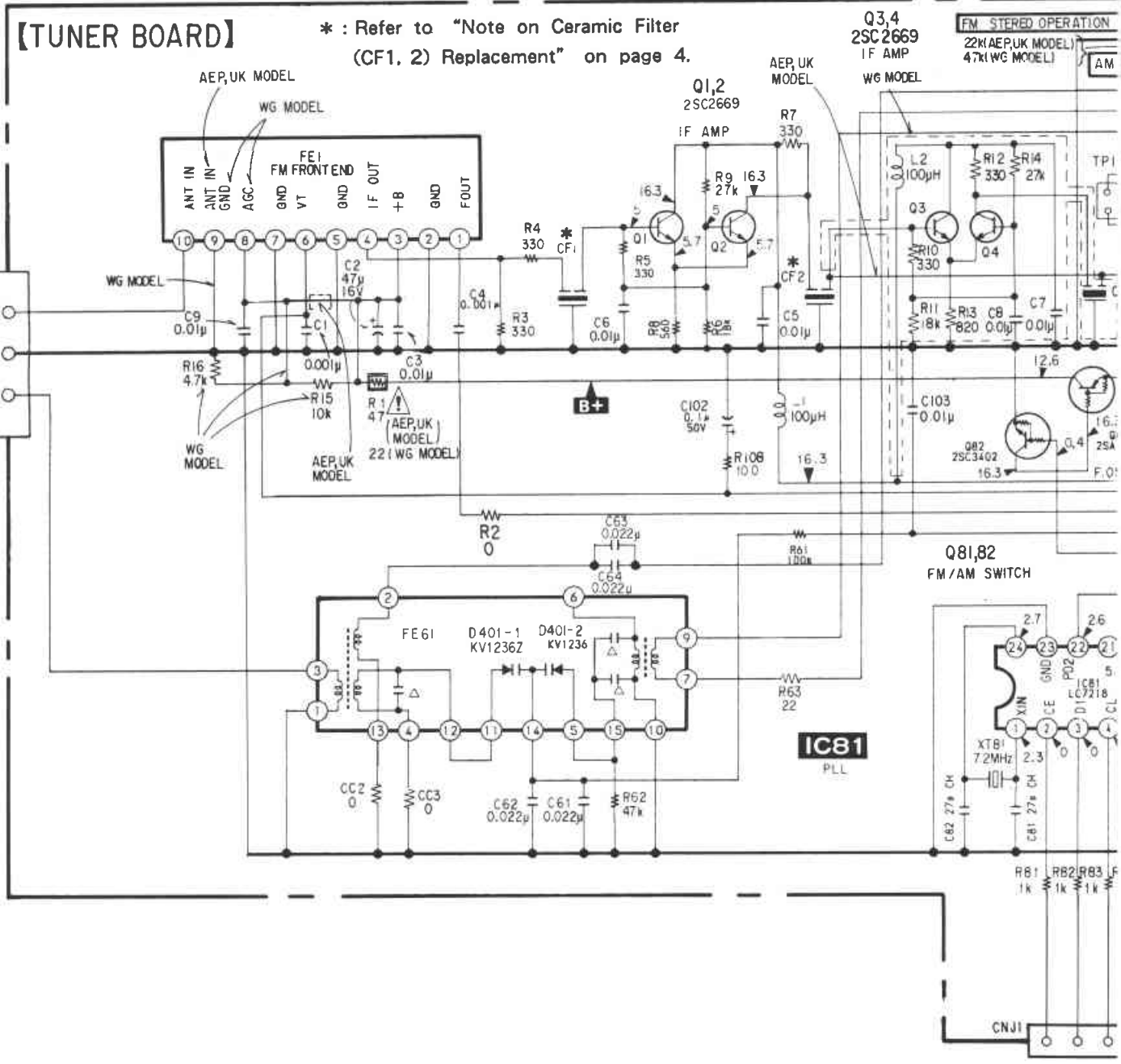
IC303 LB1493



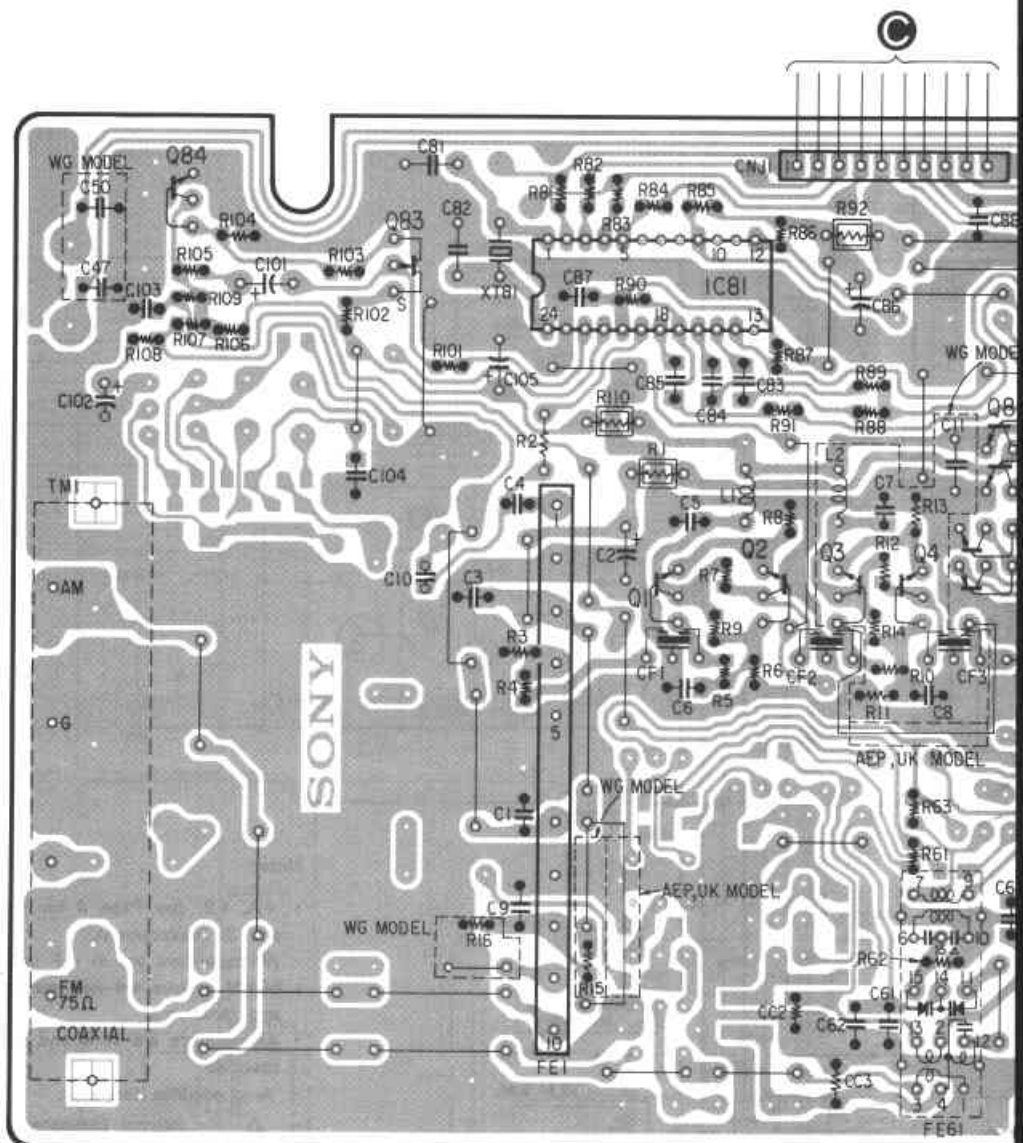
IC50



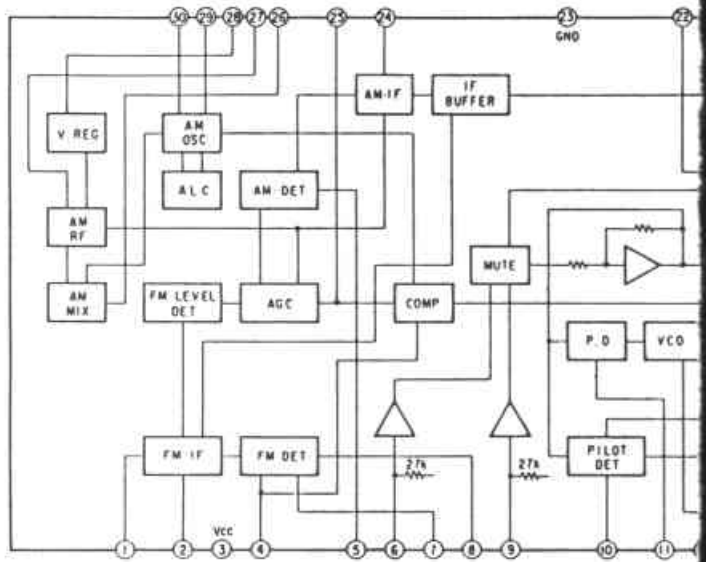
AGRAM -TUNER SECTION-



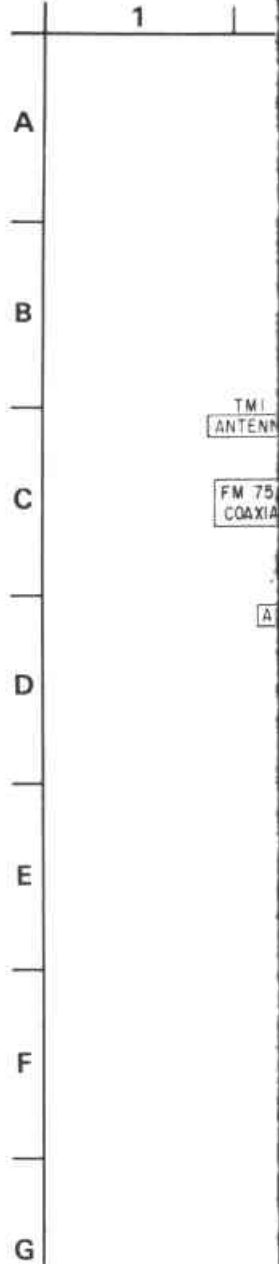
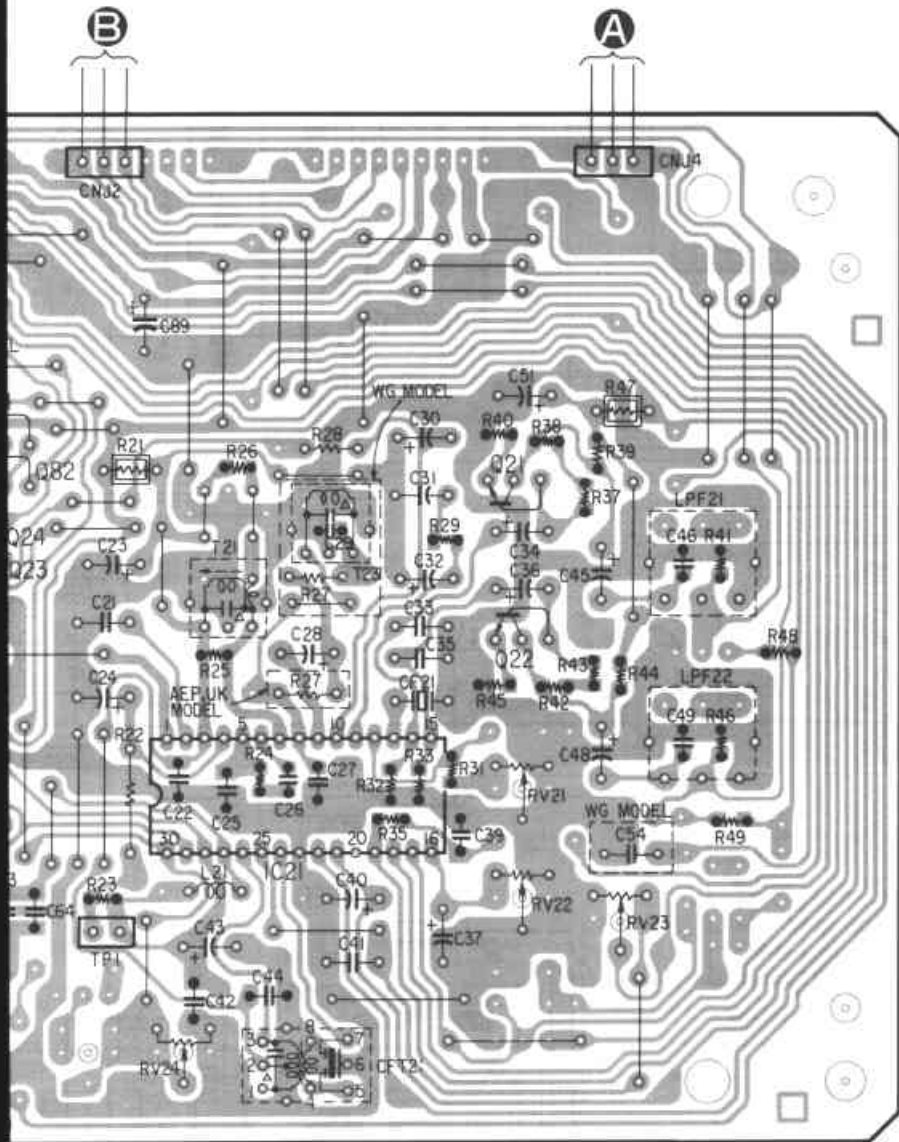
3-5. PRINTED WIRING BOARDS - TUNER SECTION -



IC21 LA1851N



3-6. SCHEMATIC DI



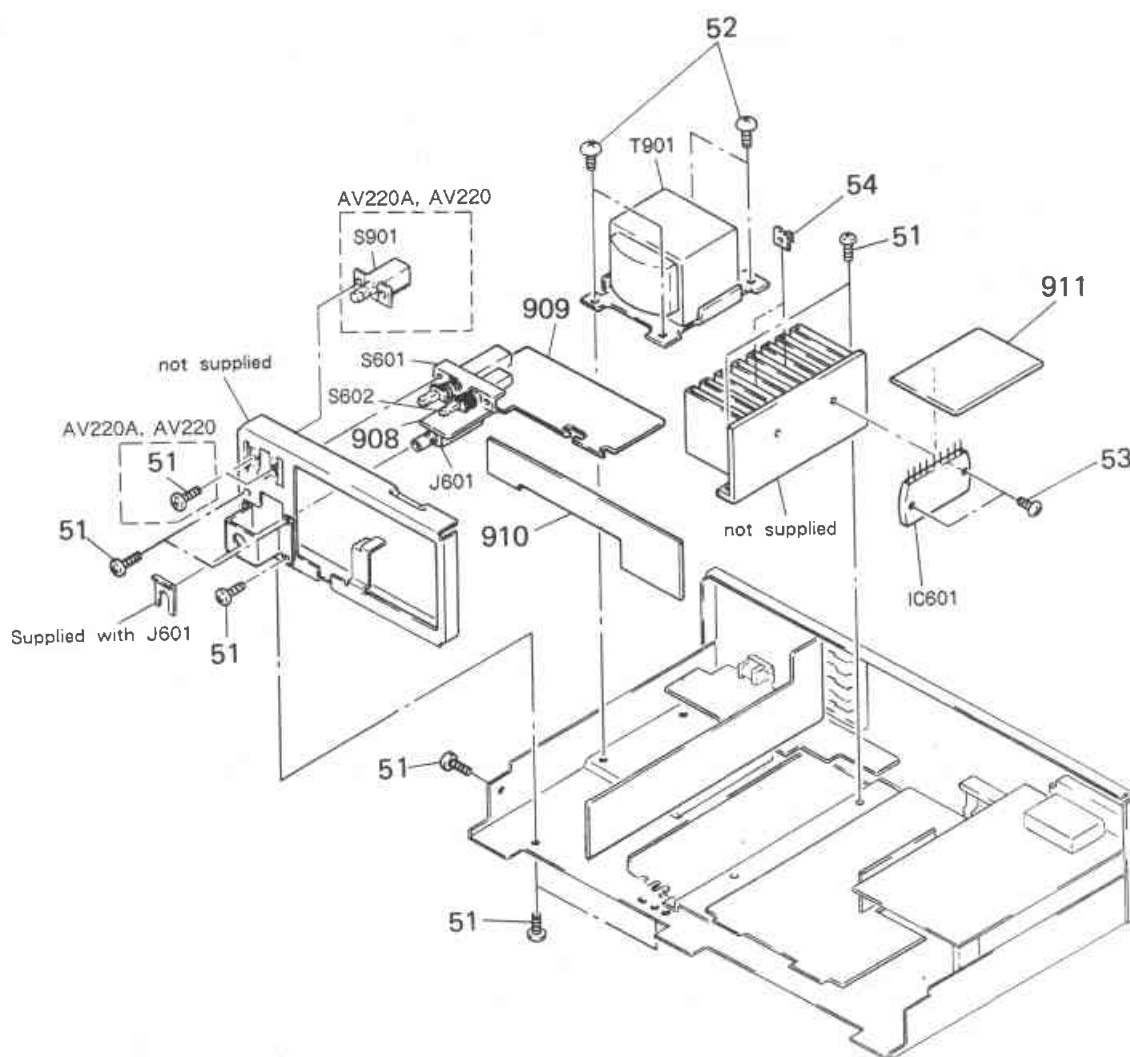
3-7. EXPLANATION OF IC301 (μ PD75206)

| PIN No. | SIGNAL NAME | FUNCTION | I/O | ACTIVE |
|---------|-------------|--|-----------|--------|
| 1 | RESET | Micro Computer RESET | I | L |
| 2 | T0 | FL tube indication (invalid) digit | O | H |
| 3 | T1 | FL tube indication digit | T1 O | H |
| 4 | T2 | FL tube indication digit | T2 O | H |
| 5 | T3 | FL tube indication digit | T3 O | H |
| 6 | T4 | FL tube indication digit | T4 O | H |
| 7 | T5 | FL tube indication digit | T5 O | H |
| 8 | T6 | FL tube indication digit | T6 O | H |
| 9 | T7 | FL tube indication digit | T7 O | H |
| 10 | T8 | FL tube indication digit | T8 O | H |
| 11 | T9 | FL tube SIGNAL indication digit | T9 O | H |
| 12 | T10/PH3 | DBFB Output | O | H |
| 13 | T11/PH2 | IF WIDE/NARROW Output | O | H |
| 14 | T12/PH1 | Adapter Output | O | H |
| 15 | T13/PH0 | -20dB Muting Output | O | H |
| 16 | T14/S11 | FL tube indication Segment/Diode | S11 O | H |
| 17 | T15/S10 | FL tube indication Segment/Diode | S10 O | H |
| 18 | V road | FL tube pulldown power supply | - | - |
| 19 | V pre | FL tube driver power supply | - | - |
| 20 | S9 | FL tube indication Segment/Diode | S9 O | H |
| 21 | S8 | FL tube indication Segment/Key Scan | S8 O | H |
| 22 | S7 | FL tube indication Segment/Key Scan | S7 O | H |
| 23 | S6 | FL tube indication Segment/Key Scan | S6 O | H |
| 24 | S5 | FL tube indication Segment/Key Scan | S5 O | H |
| 25 | S4 | FL tube indication Segment/Key Scan | S4 O | H |
| 26 | Vdd | Micro Computer power supply | - | - |
| 27 | S3 | FL tube indication Segment/Key Scan | S3 O | H |
| 28 | S2 | FL tube indication Segment/Key Scan | S2 O | H |
| 29 | S1 | FL tube indication Segment/Key Scan | S1 O | H |
| 30 | S0 | FL tube indication Segment/Key Scan | S0 O | H |
| 31 | P00/INT4 | Signal to cut power supply | STOP I | L |
| 32 | P01/SCK | Serial latch for electrical adjustment use | SI. LAT I | L |

-Continued on page 22-

| PIN No. | SIGNAL NAME | FUNCTION | I/O | ACTIVE |
|---------|-------------|---|-----|--------|
| 33 | P02/S0 | Tuner Auto Stop input ASTP | I | L |
| 34 | P03/S1 | Tuner Stereo input STEREO | I | L |
| 35 | P10/INT0 | Remote Control Signal input SIRCS | I | L |
| 36 | P11/INT1 | Protector input PROTECT | I | L |
| 37 | P12/INT2 | System Power Key input PKEY | I | L |
| 38 | P13/T10 | Adapter Mechanical Switch input AKEY | I | H |
| 39 | P20 | Surround output SURROUND | O | H |
| 40 | P21 | Video Control A VCRA | O | H |
| 41 | P22 | Video Control B VCRB | O | H |
| 42 | P23/BUZ | Video Inhibit VCRI | O | H |
| 43 | P30 | Protector Muting PMUT | O | L |
| 44 | P31 | Source Direct Output | O | H |
| 45 | P32 | Standby LED Output STANBY | O | H |
| 46 | P33 | Tuner Muting TMUTE | O | H |
| 47 | P60 | PLL/7822 Latch PLAT | O | H |
| 48 | P61 | PLL/7822/SI Data DATA | I/O | H |
| 49 | P62 | PLL/7822/SI Clock CLOK | I/O | H |
| 50 | P63 | IF WIDE/NARROW Display output | O | H |
| 51 | P40 | Function Muting FMUTE | O | L |
| 52 | P41 | Motor Volume UP VOL+ | O | H |
| 53 | P42 | Motor Volume DOWN VOL- | O | H |
| 54 | P43 | Speaker Relay SP. RY | O | H |
| 55 | PP0 | Power Relay POW. RY | O | H |
| 56 | X1 | Ceramic Oscillator | - | - |
| 57 | X2 | Ceramic Oscillator | - | - |
| 58 | Vss | Micro Computer GND | - | - |
| 59 | XT1 | - | - | - |
| 60 | XT2 | - | - | - |
| 61 | P50 | P50 Key Scan Input | I | H |
| 62 | P51 | P51 Key Scan Input | I | H |
| 63 | P52 | P52 Key Scan Input | I | H |
| 64 | P53 | P53 Key Scan Input | I | H |

(2) CHASSIS SECTION-1



Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

| No. | Part No. | Description | Remarks | No. | Part No. | Description | Remarks |
|-------|-----------------------|-----------------------------|---------|------|-----------------------|--|---------|
| 51 | 7-682-548-04 | SCREW +BVTT 3X8 (S) | | J601 | 1-507-863-51 | JACK, LARGE TYPE (HEADPHONES) | |
| 52 | 7-682-560-04 | SCREW +BVTT 4X6 (S) | | S601 | 1-571-485-11 | SWITCH, PUSH (2 KEY)(SPEAKER A) | |
| 53 | 7-685-650-79 | SCREW +BVTP 3X16 TYPE2 N-S | | S602 | 1-571-485-11 | SWITCH, PUSH (2 KEY)(SPEAKER B) | |
| 54 | *4-881-752-01 | (WG)...NUT, PLATE, SPECIAL | | S901 | Δ 1-554-685-11 | (AV220/A)...SWITCH, PUSH (AC POWER)(1 KEY) | |
| 908 | *1-634-070-11 | PC BOARD, HEADPHONE | | T901 | Δ 1-449-758-11 | (AV320R:UK)...TRANSFORMER, POWER | |
| 909 | *1-634-069-11 | PC BOARD, SPEAKER SWITCH | | T901 | Δ 1-449-760-11 | (AV320R:WG)...TRANSFORMER, POWER | |
| 910 | *1-634-067-11 | PC BOARD, RELAY (3) | | T901 | Δ 1-449-761-11 | (AV220).....TRANSFORMER, POWER | |
| 911 | *1-634-060-11 | PC BOARD, IC | | T901 | Δ 1-450-140-11 | (AV320RA).....TRANSFORMER, POWER | |
| IC601 | 8-749-900-34 | (AV320R/RA)...IC STK4182MK2 | | T901 | Δ 1-450-141-11 | (AV220A).....TRANSFORMER, POWER | |
| IC601 | Δ 8-749-941-52 | (AV220/A)...IC STK4152IT | | | | | |

SECTION 5 ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

MF: μ F, PF: μ F.

RESISTORS

- All resistors are in ohms.
- F: nonflammable

COILS

- MMH: mH, UH: μ H

SEMICONDUCTORS

In each case, U: μ , for example:

- UA...: μ A..., UPA...: μ PA...,
- UPC...: μ PC, UPD...: μ PD...
- WG: West Germany



The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

| Ref.No. | Part No. | Description | Ref.No. | Part No. | Description |
|---------|-----------------------|--|---------|--------------|---------------------------------------|
| 901 | *A-4334-398-A | (AV320R/RA)...MOUNTED PCB, TONE | C7 | 1-162-440-11 | (WG)...CERAMIC MELF 0.01MF 20% 16V |
| | *A-4334-413-A | (AV220/A)....MOUNTED PCB, TONE | C8 | 1-162-440-11 | (WG)...CERAMIC MELF 0.01MF 20% 16V |
| | | | C9 | 1-162-440-11 | CERAMIC MELF 0.01MF 20% 16V |
| 902 | *A-4334-002-A | (AV220/A)....MOUNTED PCB, DISPLAY | C10 | 1-162-516-11 | CERAMIC CHIP 100PF 10% 50V |
| | *A-4334-997-A | (AV320R/RA)...MOUNTED PCB, DISPLAY | C11 | 1-101-005-00 | (WG)...CERAMIC 0.022MF |
| 903 | *1-634-063-11 | PC BOARD, VOLUME | C21 | 1-161-021-11 | CERAMIC 0.047MF X |
| 904 | 1-465-420-11 | (AV320R:UK)...REMOTE COMMANDER(RM-U203) | C22 | 1-162-440-11 | CERAMIC MELF 0.01MF 20% 16V |
| | 1-465-423-11 | (AV320R/RA:AEP,WG) ...REMOTE COMMANDER(RM-S103) | C23 | 1-124-477-11 | ELECT 47MF |
| | | | C24 | 1-123-382-00 | ELECT 3.3MF |
| 905 | *1-634-064-11 | (AV320R/RA)...PC BOARD, LED | C25 | 1-162-440-11 | CERAMIC MELF 0.01MF 20% 16V |
| 906 | *1-634-068-11 | (AV320R/RA)...PC BOARD, STAND BY | C26 | 1-162-527-11 | CERAMIC CHIP 6800PF 20% 12V |
| 907 | *1-634-061-11 | (AV320R/RA)...PC BOARD, MOTOR | C27 | 1-162-521-11 | (WG)....CERAMIC CHIP 6800PF 20% 50V |
| 908 | *1-634-070-11 | PC BOARD, HEADPHONE | C27 | 1-162-516-11 | (AEP,UK)...CERAMIC CHIP 100PF 10% 50V |
| 909 | *1-634-069-11 | PC BOARD, SPEAKER SWITCH | C28 | 1-124-791-11 | ELECT 1.0MF |
| 910 | *1-634-067-11 | PC BOARD, RELAY (3) | C30 | 1-124-791-11 | ELECT 1.0MF |
| 911 | *1-634-060-11 | PC BOARD, 1C | C31 | 1-124-902-00 | ELECT 0.47MF |
| 912 | *1-635-428-11 | (AV320R/RA)...PC BOARD, OUTLET | C32 | 1-124-463-00 | ELECT 0.1MF |
| 913 | *1-634-071-11 | PC BOARD, SPEAKER TERMINAL | C33 | 1-130-481-00 | PE TEREPHTHALATE 0.0068MF |
| 914 | *A-4334-003-A | (AV220/A)....MOUNTED PCB, POWER | C34 | 1-123-382-00 | ELECT 3.3MF |
| | *A-4334-998-A | (AV320R/RA)...MOUNTED PCB, POWER | C35 | 1-130-481-00 | PE TEREPHTHALATE 0.0068MF |
| 915 | *A-4303-280-A | (AEP,UK) ...MOUNTED PCB, TUNER | C36 | 1-123-382-00 | ELECT 3.3MF |
| | | (TCB007-2JK2) | C37 | 1-123-875-11 | ELECT 10MF |
| | *A-4303-281-A | (WG)...MOUNTED PCB, TUNER | C39 | 1-162-440-11 | CERAMIC MELF 0.01MF 20% 16V |
| | | (TCB007-2KK2) | C40 | 1-124-463-00 | ELECT 0.1MF |
| | | | C41 | 1-124-927-11 | ELECT 4.7MF |
| 916 | Δ 1-555-750-00 | (AEP,WG)....CORD, POWER | C42 | 1-162-440-11 | CERAMIC MELF 0.01MF 20% 16V |
| | Δ 1-556-035-00 | (AV320:UK)...CORD, POWER | C43 | 1-126-176-11 | ELECT 220MF |
| 917 | *1-634-065-11 | PC BOARD, RELAY (1) | C44 | 1-162-440-11 | CERAMIC MELF 0.01MF 20% 16V |
| 918 | *A-4334-070-A | (AV220).....MOUNTED PCB, MAIN | C45 | 1-123-382-00 | ELECT 3.3MF |
| | *A-4334-073-A | (AV320R:WG).....MOUNTED PCB, MAIN | C46 | 1-162-524-11 | CERAMIC CHIP 2200PF 20% 12V |
| | *A-4334-996-A | (AV320RA,AV320R:UK).... MOUNTED PCB, MAIN | C47 | 1-162-522-11 | (WG)...CERAMIC CHIP 1000PF 20% 25V |
| | *A-4334-999-A | (AV220A).....MOUNTED PCB, MAIN | C48 | 1-123-382-00 | ELECT 3.3MF |
| 919 | 1-533-183-11 | HOLDER, FUSE | C49 | 1-162-524-11 | CERAMIC CHIP 2200PF 20% 12V |
| 920 | *1-634-066-11 | (AV320R/RA)...PC BOARD, RELAY (2) | C50 | 1-162-522-11 | (WG)...CERAMIC CHIP 1000PF 20% 12V |
| 921 | *1-634-073-11 | PC BOARD, RELAY (4) | C51 | 1-124-477-11 | ELECT 47MF |
| 922 | *1-565-514-11 | SOCKET, CONNECTOR 2P | C54 | 1-101-005-00 | (WG)...CERAMIC 0.022MF |
| 923 | 1-535-416-00 | TERMINAL | C61 | 1-162-624-11 | CERAMIC MELF 22000PF 25V |
| 924 | *1-560-265-00 | BASE POST (U-TYPE) | C62 | 1-162-624-11 | CERAMIC MELF 22000PF 25V |
| 8A301 | 1-528-120-00 | BATTERY, LITHIUM (CR-2025) | C63 | 1-162-624-11 | CERAMIC MELF 22000PF 25V |
| C1 | 1-162-522-11 | CERAMIC CHIP 1000PF 20% 25V | C64 | 1-162-624-11 | CERAMIC MELF 22000PF 25V |
| C2 | 1-124-477-11 | ELECT 47MF | C81 | 1-102-961-00 | CERAMIC 27PF CH |
| C3 | 1-162-440-11 | CERAMIC MELF 0.01MF 20% 16V | C82 | 1-102-961-00 | CERAMIC 27PF CH |
| C4 | 1-162-522-11 | CERAMIC CHIP 1000PF 20% 25V | C83 | 1-162-440-11 | CERAMIC MELF 0.01MF 20% 16V |
| C5 | 1-162-440-11 | CERAMIC MELF 0.01MF 20% 16V | | | |
| C6 | 1-162-440-11 | CERAMIC MELF 0.01MF 20% 16V | | | |

| Ref.No. | Part No. | Description | | | | | Ref.No. | Part No. | Description | | | | |
|---------|--------------|----------------------|----------|-----|-----|--|---------|--------------|---------------------|----------|--|-----|------|
| C84 | 1-162-440-11 | CERAMIC MELF | 0.01MF | | | | C507 | 1-101-880-00 | CERAMIC | 47PF | | 10% | 50V |
| C85 | 1-162-440-11 | CERAMIC MELF | 0.01MF | 20% | 16V | | C508 | 1-126-163-11 | ELECT | 4.7MF | | 20% | 50V |
| C86 | 1-124-477-11 | ELECT | 47MF | 20% | 16V | | C509 | 1-131-347-00 | TANTALUM | 1MF | | 10% | 25V |
| C87 | 1-162-440-11 | CERAMIC MELF | 0.01MF | 20% | 16V | | C510 | 1-130-489-00 | MYLAR | 0.033MF | | 5% | 50V |
| C88 | 1-162-440-11 | CERAMIC MELF | 0.01MF | 20% | 16V | | C511 | 1-124-791-11 | (AV320R/RA)...ELECT | 1MF | | 20% | 50V |
| C101 | 1-124-925-11 | ELECT | 2.2MF | | | | C512 | 1-124-464-11 | ELECT | 0.22MF | | 20% | 50V |
| C102 | 1-124-463-00 | ELECT | 0.1MF | | | | C513 | 1-124-464-11 | ELECT | 0.22MF | | 20% | 50V |
| C103 | 1-162-440-11 | CERAMIC MELF | 0.01MF | 20% | 16V | | C514 | 1-130-493-00 | MYLAR | 0.068MF | | 5% | 50V |
| C104 | 1-162-440-11 | CERAMIC MELF | 0.01MF | 20% | 16V | | C515 | 1-102-106-00 | CERAMIC | 100PF | | 10% | 50V |
| C105 | 1-124-477-11 | ELECT | 47MF | | | | C551 | 1-130-489-00 | MYLAR | 0.033MF | | 5% | 50V |
| C301 | 1-162-211-31 | CERAMIC | 33PF | 5% | 50V | | C552 | 1-124-250-00 | ELECT | 0.15MF | | 20% | 50V |
| C302 | 1-162-211-31 | CERAMIC | 33PF | 5% | 50V | | C553 | 1-130-481-00 | MYLAR | 0.0068MF | | 5% | 50V |
| C303 | 1-161-055-00 | CERAMIC | 0.022MF | 10% | 50V | | C554 | 1-130-489-00 | MYLAR | 0.033MF | | 5% | 50V |
| C304 | 1-161-055-00 | CERAMIC | 0.022MF | 10% | 50V | | C555 | 1-126-163-11 | ELECT | 4.7MF | | 20% | 50V |
| C305 | 1-124-791-11 | ELECT | 1MF | 20% | 50V | | C556 | 1-124-925-11 | ELECT | 2.2MF | | 20% | 50V |
| C306 | 1-123-875-11 | (AV320R/RA) | | | | | C557 | 1-101-880-00 | CERAMIC | 47PF | | 10% | 50V |
| C307 | 1-136-746-11 | FILM ...ELECT | 10MF | 20% | 50V | | C558 | 1-126-163-11 | ELECT | 4.7MF | | 20% | 50V |
| C308 | 1-124-464-11 | (AV320R/RA) | | | | | C559 | 1-131-347-00 | TANTALUM | 1MF | | 10% | 25V |
| C309 | 1-124-464-11 | (AV320R/RA) ...ELECT | 0.22MF | 20% | 50V | | C560 | 1-130-489-00 | MYLAR | 0.033MF | | 5% | 50V |
| C401 | 1-102-106-00 | CERAMIC | 100PF | 10% | 50V | | C561 | 1-124-791-11 | (AV320R/RA)...ELECT | 1MF | | 20% | 50V |
| C402 | 1-123-382-00 | ELECT | 3.3MF | 20% | 50V | | C565 | 1-102-106-00 | CERAMIC | 100PF | | 10% | 50V |
| C403 | 1-102-106-00 | CERAMIC | 100PF | 10% | 50V | | C601 | 1-162-286-31 | CERAMIC | 220PF | | 10% | 50V |
| C404 | 1-102-106-00 | CERAMIC | 100PF | 10% | 50V | | C602 | 1-124-927-11 | ELECT | 4.7MF | | 20% | 50V |
| C405 | 1-124-963-11 | ELECT | 33MF | 20% | 16V | | C603 | 1-162-288-31 | CERAMIC | 330PF | | 10% | 50V |
| C406 | 1-130-480-00 | MYLAR | 0.0056MF | 5% | 50V | | C604 | 1-124-122-11 | ELECT | 100MF | | 20% | 50V |
| C407 | 1-130-473-00 | MYLAR | 0.0015MF | 5% | 50V | | C605 | 1-124-910-11 | ELECT | 47MF | | 20% | 50V |
| C408 | 1-123-382-00 | ELECT | 3.3MF | 20% | 50V | | C606 | 1-124-120-11 | ELECT | 220MF | | 20% | 16V |
| C409 | 1-124-477-11 | ELECT | 47MF | 20% | 25V | | C607 | 1-162-193-31 | CERAMIC | 3.3PF | | 10% | 50V |
| C410 | 1-124-477-11 | ELECT | 47MF | 20% | 25V | | C608 | 1-123-875-11 | ELECT | 10MF | | 20% | 50V |
| C411 | 1-102-074-00 | CERAMIC | 0.001MF | 10% | 50V | | C618 | 1-161-055-00 | CERAMIC | 0.022MF | | 10% | 25V |
| C412 | 1-102-106-00 | CERAMIC | 100PF | 10% | 50V | | C621 | 1-130-495-00 | MYLAR | 0.1MF | | 5% | 50V |
| C413 | 1-124-927-11 | ELECT | 4.7MF | 20% | 50V | | C622 | 1-130-491-00 | MYLAR | 0.047MF | | 5% | 50V |
| C414 | 1-123-382-00 | ELECT | 3.3MF | 20% | 50V | | C623 | 1-123-875-11 | ELECT | 10MF | | 20% | 50V |
| C415 | 1-123-382-00 | ELECT | 3.3MF | 20% | 50V | | C624 | 1-124-472-11 | ELECT | 470MF | | 20% | 6.3V |
| C416 | 1-123-875-11 | ELECT | 10MF | 20% | 50V | | C630 | 1-161-055-00 | CERAMIC | 0.022MF | | 10% | 50V |
| C417 | 1-124-478-11 | ELECT | 100MF | 20% | 25V | | C631 | 1-161-051-00 | (WG)...CERAMIC | 0.01MF | | 10% | 50V |
| C418 | 1-124-478-11 | ELECT | 100MF | 20% | 25V | | C632 | 1-161-051-00 | (WG)...CERAMIC | 0.01MF | | 10% | 50V |
| C419 | 1-124-478-11 | ELECT | 100MF | 20% | 25V | | C633 | 1-161-051-00 | (WG)...CERAMIC | 0.01MF | | 10% | 50V |
| C451 | 1-102-106-00 | CERAMIC | 100PF | 10% | 50V | | C634 | 1-161-051-00 | (WG)...CERAMIC | 0.01MF | | 10% | 50V |
| C452 | 1-123-382-00 | ELECT | 3.3MF | 20% | 50V | | C651 | 1-162-286-31 | CERAMIC | 220PF | | 10% | 50V |
| C453 | 1-102-106-00 | CERAMIC | 100PF | 10% | 50V | | C652 | 1-124-927-11 | ELECT | 4.7MF | | 20% | 50V |
| C454 | 1-102-106-00 | CERAMIC | 100PF | 10% | 50V | | C653 | 1-162-288-31 | CERAMIC | 330PF | | 10% | 50V |
| C455 | 1-124-963-11 | ELECT | 33MF | 20% | 16V | | C654 | 1-124-122-11 | ELECT | 100MF | | 20% | 50V |
| C456 | 1-130-480-00 | MYLAR | 0.0056MF | 5% | 50V | | C655 | 1-124-910-11 | ELECT | 47MF | | 20% | 50V |
| C457 | 1-130-473-00 | MYLAR | 0.0015MF | 5% | 50V | | C656 | 1-124-120-11 | ELECT | 220MF | | 20% | 16V |
| C458 | 1-123-382-00 | ELECT | 3.3MF | 20% | 50V | | C657 | 1-162-193-31 | CERAMIC | 3.3PF | | 10% | 50V |
| C463 | 1-126-163-11 | ELECT | 4.7MF | 20% | 50V | | C658 | 1-123-875-11 | ELECT | 10MF | | 20% | 50V |
| C464 | 1-123-382-00 | ELECT | 3.3MF | 20% | 50V | | C668 | 1-161-055-00 | CERAMIC | 0.022MF | | 10% | 25V |
| C465 | 1-123-382-00 | ELECT | 3.3MF | 20% | 50V | | C671 | 1-130-495-00 | MYLAR | 0.1MF | | 5% | 50V |
| C466 | 1-123-875-11 | ELECT | 10MF | 20% | 50V | | C672 | 1-130-491-00 | MYLAR | 0.047MF | | 5% | 50V |
| C501 | 1-130-489-00 | MYLAR | 0.033MF | 5% | 50V | | C681 | 1-161-051-00 | (WG)...CERAMIC | 0.01MF | | 10% | 50V |
| C502 | 1-124-250-00 | ELECT | 0.15MF | 20% | 50V | | C682 | 1-161-051-00 | (WG)...CERAMIC | 0.01MF | | 10% | 50V |
| C503 | 1-130-481-00 | MYLAR | 0.0068MF | 5% | 50V | | C683 | 1-161-051-00 | (WG)...CERAMIC | 0.01MF | | 10% | 50V |
| C504 | 1-130-489-00 | MYLAR | 0.033MF | 5% | 50V | | C701 | 1-106-367-00 | MYLAR | 0.01MF | | 5% | 200V |
| C505 | 1-126-163-11 | ELECT | 4.7MF | 20% | 50V | | | | | | | | |
| C506 | 1-124-925-11 | ELECT | 2.2MF | 20% | 50V | | | | | | | | |

| Ref.No. | Part No. | Description | | | | |
|---------|---------------|--|---------|-----|------|--|
| C702 | 1-106-367-00 | MYLAR | 0.01MF | 5% | 200V | |
| C704 | 1-124-478-11 | ELECT | 100MF | 20% | 25V | |
| C705 | 1-124-477-11 | ELECT | 47MF | 20% | 25V | |
| C706 | 1-161-055-00 | CERAMIC | 0.022MF | 10% | 50V | |
| C707 | 1-161-055-00 | CERAMIC | 0.022MF | 10% | 50V | |
| C708 | 1-124-927-11 | ELECT | 4.7MF | 20% | 50V | |
| C710 | 1-124-910-11 | ELECT | 47MF | 20% | 50V | |
| C711 | 1-124-910-11 | ELECT | 47MF | 20% | 50V | |
| C712 | 1-123-875-11 | ELECT | 10MF | 20% | 50V | |
| C713 | 1-124-477-11 | ELECT | 47MF | 20% | 25V | |
| C714 | 1-124-477-11 | ELECT | 47MF | 20% | 25V | |
| C716 | 1-124-464-11 | ELECT | 0.22MF | 20% | 50V | |
| C717 | 1-124-902-00 | ELECT | 0.47MF | 20% | 50V | |
| C718 | 1-124-791-11 | ELECT | 1MF | 20% | 50V | |
| C719 | 1-161-055-00 | CERAMIC | 0.022MF | 10% | 50V | |
| C801 | 1-126-307-11 | ELECT | 6800MF | 20% | 50V | |
| C802 | 1-126-307-11 | ELECT | 6800MF | 20% | 50V | |
| C803 | 1-106-367-00 | (AV320R/RA)..MYLAR | 0.01MF | 5% | 200V | |
| C804 | 1-106-367-00 | (AV320R/RA)..MYLAR | 0.01MF | 5% | 200V | |
| C805 | 1-124-557-11 | (AV320R/RA)..ELECT | 1000MF | 20% | 25V | |
| C810 | 1-124-791-11 | ELECT | 1MF | 20% | 50V | |
| C820 | 1-124-477-11 | (AV220/A)..ELECT | 47MF | 20% | 25V | |
| C901 | 1-161-744-00 | CERAMIC | 0.01MF | | 400V | |
| C903 | 1-162-286-31 | (WG)..CERAMIC | 220PF | 10% | 50V | |
| C905 | 1-161-055-00 | (WG)..CERAMIC | 0.022MF | 10% | 50V | |
| C906 | 1-162-288-31 | (WG)..CERAMIC | 330PF | 10% | 50V | |
| C907 | 1-161-055-00 | (WG)..CERAMIC | 0.022MF | 10% | 50V | |
| C908 | 1-161-055-00 | (WG)..CERAMIC | 0.022MF | 10% | 50V | |
| C953 | 1-162-286-31 | (WG)..CERAMIC | 220PF | 10% | 50V | |
| C954 | 1-162-286-31 | (WG)..CERAMIC | 220PF | 10% | 50V | |
| C955 | 1-161-055-00 | (WG)..CERAMIC | 0.022MF | 10% | 50V | |
| C956 | 1-162-288-31 | (WG)..CERAMIC | 330PF | 10% | 50V | |
| C957 | 1-161-055-00 | (WG)..CERAMIC | 0.022MF | 10% | 50V | |
| C958 | 1-161-055-00 | (WG)..CERAMIC | 0.022MF | 10% | 50V | |
| CC2 | 1-249-366-11 | CARBON MELF | 0 | 5% | 1/5W | |
| CC3 | 1-249-366-11 | CARBON MELF | 0 | 5% | 1/5W | |
| CC11 | 1-249-366-11 | (AEP,UK)..CARBON MELF | 0 | 5% | 1/5W | |
| CC12 | 1-249-366-11 | (WG).....CARBON MELF | 0 | 5% | 1/5W | |
| CF1 | 1-567-389-11 | FILTER, CERAMIC | | | | |
| CF2 | 1-567-389-11 | FILTER, CERAMIC | | | | |
| CF3 | 1-567-389-11 | (WG)..FILTER, CERAMIC | | | | |
| CF21 | 1-577-075-11 | OSCILLATOR, CERAMIC | | | | |
| CFT21 | 1-404-853-11 | TRANSFORMER, IF (CERAMIC FILTER) | | | | |
| CN305 | *1-564-777-11 | (AV320R/RA).. PLUG, CONNECTOR (2.5MM) 2P | | | | |
| CN803 | *1-535-139-00 | BASE POST 19MM (10MM PITCH) 2P | | | | |
| CNJ1 | *1-569-387-11 | SOCKET, CONNECTOR (PC BOARD) 10P | | | | |
| CNJ2 | *1-569-380-11 | SOCKET, CONNECTOR (PC BOARD) 3P | | | | |
| CNJ4 | *1-569-380-11 | SOCKET, CONNECTOR (PC BOARD) 3P | | | | |
| CNJ201 | *1-569-411-11 | SOCKET, CONNECTOR (PC BOARD) 16P | | | | |
| CNJ301 | *1-562-334-00 | SOCKET, CONNECTOR 10P | | | | |
| CNJ302 | *1-562-334-00 | SOCKET, CONNECTOR 10P | | | | |
| CNJ303 | *1-506-778-11 | (AV320R/RA).. PLUG, CONNECTOR (2.5MM) 2P | | | | |
| CNJ304 | *1-506-680-11 | PLUG, CONNECTOR (2.5MM) 3P | | | | |
| CNJ305 | *1-506-778-11 | (AV320R/RA).. PLUG, CONNECTOR (2.5MM) 2P | | | | |
| CNJ503 | *1-506-707-31 | PLUG, CONNECTOR (2.5MM) 3P | | | | |
| CNJ601 | *1-506-680-11 | PLUG, CONNECTOR (2.5MM) 3P | | | | |
| CNJ610 | *1-569-509-11 | CONNECTOR (SOCKET) 4P | | | | |
| CNJ611 | *1-562-573-11 | SOCKET, CONNECTOR 8P | | | | |
| CNJ701 | *1-564-778-11 | (AV320R/RA)..PLUG, CONNECTOR (2.5MM) 4P | | | | |
| CNJ901 | 1-526-751-00 | (AV320R:UK)..OUTLET, AC (AC OUTLET) | | | | |
| CNJ901 | 1-526-794-11 | (AV320RA, AV320R:WG) ..OUTLET, AC (AC OUTLET) | | | | |

| Ref.No. | Part No. | Description |
|----------|---------------|---|
| CNP301 | 1-565-419-11 | PIN, CONNECTOR 10P |
| CNP302 | 1-565-419-11 | PIN, CONNECTOR 10P |
| CNP401 | *1-564-779-11 | PLUG, CONNECTOR (2.5MM) 6P |
| CNP611 | *1-569-508-11 | PIN, CONNECTOR 8P |
| CNP650 | *1-569-410-11 | PIN, CONNECTOR (PC BOARD) 16P |
| CNP651 | *1-569-388-11 | PIN, CONNECTOR (PC BOARD) 3P |
| CNP652 | *1-569-388-11 | PIN, CONNECTOR (PC BOARD) 3P |
| CNP653 | *1-569-395-11 | PIN, CONNECTOR (PC BOARD) 10P |
| CNP654 | *1-506-529-11 | (AV320R/RA)..PIN CONNECTOR, B-B 4P |
| CNP655 | *1-506-529-11 | (AV320R/RA)..PIN CONNECTOR, B-B 4P |
| CNP656 | *1-506-529-11 | PIN CONNECTOR, B-B 4P |
| CNP657 | *1-506-529-11 | PIN CONNECTOR, B-B 4P |
| CNP658 | *1-565-513-11 | PIN, CONNECTOR 2P |
| CNP701 | *1-535-116-00 | TERMINAL |
| CNP701-A | *1-564-777-11 | (AV320R/RA)..PLUG, CONNECTOR (2.5MM) 2P |
| CNP702 | *1-535-116-00 | TERMINAL |
| D301 | 8-719-912-20 | DIODE 1SS120 |
| D302 | 8-719-912-20 | DIODE 1SS120 |
| D303 | 8-719-912-20 | DIODE 1SS120 |
| D304 | 8-719-912-20 | DIODE 1SS120 |
| D305 | 8-719-912-20 | DIODE 1SS120 |
| D306 | 8-719-912-20 | DIODE 1SS120 |
| D307 | 8-719-912-20 | DIODE 1SS120 |
| D308 | 8-719-912-20 | DIODE 1SS120 |
| D309 | 8-719-912-20 | DIODE 1SS120 |
| D311 | 8-719-912-20 | DIODE 1SS120 |
| D312 | 8-719-912-20 | DIODE 1SS120 |
| D313 | 8-719-914-11 | DIODE HZ4ALL |
| D314 | 8-719-912-20 | DIODE 1SS120 |
| D315 | 8-719-912-20 | DIODE 1SS120 |
| D316 | 8-719-301-38 | (AV320R/RA)..DIODE SEL2210S-C (STANDBY) |
| D317 | 8-719-301-52 | (AV320R/RA)..DIODE SEL2810A-C (MUTING) |
| D318 | 8-719-301-52 | DIODE SEL2810A-C (SURROUND) |
| D319 | 8-719-301-52 | DIODE SEL2810A-C (DBFB) |
| D320 | 8-719-912-20 | DIODE 1SS120 |
| D322 | 8-719-912-20 | DIODE 1SS120 |
| D323 | 8-719-912-20 | DIODE 1SS120 |
| D324 | 8-719-912-20 | DIODE 1SS120 |
| D326 | 8-719-912-20 | DIODE 1SS120 |
| D327 | 8-719-912-20 | DIODE 1SS120 |
| D328 | 8-719-303-00 | (AV320R/RA)..DIODE SEL2510C (VOLUME) |
| D401 | 8-719-912-20 | DIODE 1SS120 |
| D402 | 8-719-912-20 | DIODE 1SS120 |
| D501 | 8-719-912-20 | DIODE 1SS120 |
| D502 | 8-719-912-20 | DIODE 1SS120 |
| D601 | 8-719-912-20 | DIODE 1SS120 |
| D602 | 8-719-912-20 | DIODE 1SS120 |
| D603 | 8-719-912-20 | DIODE 1SS120 |
| D604 | 8-719-912-20 | DIODE 1SS120 |
| D605 | 8-719-912-20 | DIODE 1SS120 |
| D607 | 8-719-912-20 | DIODE 1SS120 |
| D651 | 8-719-912-20 | DIODE 1SS120 |
| D702 | 8-719-010-86 | DIODE RD13EL2 |
| D703 | 8-719-010-29 | DIODE UZ-4.3BSB |
| D704 | 8-719-011-07 | DIODE UZ-27BSB |
| D705 | 8-719-010-82 | DIODE UZ-15BSB |
| D706 | 8-719-010-47 | DIODE UZ-6.2BSC |
| D707 | 8-719-933-41 | DIODE HZS6C3L |
| D708 | 8-719-914-11 | DIODE HZ4ALL |
| D709 | 8-719-912-20 | DIODE 1SS120 |
| D710 | 8-719-912-20 | DIODE 1SS120 |
| D711 | 8-719-912-20 | DIODE 1SS120 |

Note: The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

| Ref.No. | Part No. | Description |
|---------|----------------|-----------------------------------|
| D801 | 8-719-312-09 | DIODE RBA-402 |
| D802 | 8-719-511-40 | (AV320R/RA)...DIODE S1VB40 |
| D803 | 8-719-912-20 | (AV320R/RA)...DIODE 1SS120 |
| D813 | 8-719-000-06 | DIODE MC921 |
| F901 | △ 1-532-973-11 | (AV320R/RA)...FUSE (1.6A) |
| F902 | △ 1-532-967-11 | (AV220/A)...FUSE (1.25A) |
| F902 | △ 1-532-973-11 | (AV320R/RA)...FUSE (1.6A) |
| F903 | △ 1-532-973-11 | (AV320R/RA)...FUSE (1.6A) |
| FE1 | 1-463-857-11 | (WG).....FRONT END, FM |
| FE1 | 1-463-862-21 | (AEP,UK)...FRONT END, FM |
| FE61 | 1-236-461-11 | ENCAPSULATED COMPONENT |
| FL301 | 1-519-509-11 | INDICATOR TUBE, FLUORESCENT |
| IC21 | 8-759-821-45 | IC LA1851N |
| IC81 | 8-759-820-91 | IC LC7218 |
| IC301 | 8-759-149-47 | IC UPD75206G-557-1B |
| IC302 | 8-749-920-59 | (AV320R/RA)...IC AIQH3020S |
| IC303 | 8-759-800-95 | IC LB1493 |
| IC304 | 8-759-820-62 | (AV320R/RA)...IC LB1639 |
| IC401 | 8-759-112-93 | IC UPC4570HA-1 |
| IC402 | 8-759-805-14 | IC LC7822 |
| IC501 | 8-759-112-93 | IC UPC4570HA-1 |
| IC601 | 8-749-900-34 | (AV320R/RA)...IC STK4182MK2 |
| IC601 | 8-749-941-52 | (AV220/A)...IC STK415211 |
| J501 | 1-565-320-11 | JACK, PIN 6P (PHONE/CD/TAPE) |
| J502 | 1-565-320-11 | JACK, PIN 6P (VIDEO/TAPE) |
| J601 | 1-507-863-51 | JACK, LARGE TYPE (HEADPHONES) |
| L1 | 1-410-521-11 | MICRO INDUCTOR 100UH |
| L2 | 1-410-521-11 | (WG)...MICRO INDUCTOR 100UH |
| L21 | 1-410-171-11 | MICRO INDUCTOR 1MMH |
| L301 | 1-410-521-11 | INDUCTOR 100UH |
| L601 | *1-420-872-00 | COIL, AIR CORE |
| L651 | *1-420-872-08 | COIL, AIR CORE |
| LPF21 | 1-235-164-00 | FILTER, LOW PASS |
| LPF22 | 1-235-164-00 | FILTER, LOW PASS |
| Q1 | 8-729-230-99 | TRANSISTOR 2SC26690Y |
| Q2 | 8-729-230-99 | TRANSISTOR 2SC26690Y |
| Q3 | 8-729-230-99 | (WG)...TRANSISTOR 2SC26690Y |
| Q4 | 8-729-230-99 | (WG)...TRANSISTOR 2SC26690Y |
| Q21 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |
| Q22 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |
| Q23 | 8-729-900-61 | TRANSISTOR DTA114ES |
| Q24 | 8-729-900-80 | TRANSISTOR DTC114ES |
| Q81 | 8-729-900-61 | TRANSISTOR DTA114ES |
| Q82 | 8-729-900-80 | TRANSISTOR DTC114ES |
| Q83 | 8-729-202-67 | TRANSISTOR 2SK246GR3 |
| Q84 | 8-729-230-93 | TRANSISTOR 2SC3113-AB |
| Q301 | 8-729-900-36 | (AV320R/RA)...TRANSISTOR DTC124ES |
| Q302 | 8-729-900-36 | (AV320R/RA)...TRANSISTOR DTC124ES |
| Q303 | 8-729-900-36 | TRANSISTOR DTC124ES |
| Q304 | 8-729-900-36 | TRANSISTOR DTC124ES |
| Q401 | 8-729-107-84 | TRANSISTOR 2SC3623A-LK |
| Q402 | 8-729-620-05 | TRANSISTOR 2SC2603-EF |
| Q403 | 8-729-119-76 | TRANSISTOR 2SA1175-HFE |
| Q451 | 8-729-107-84 | TRANSISTOR 2SC3623A-LK |
| Q452 | 8-729-620-05 | TRANSISTOR 2SC2603-EF |
| Q501 | 8-729-202-67 | TRANSISTOR 2SK246-GR3 |
| Q502 | 8-729-620-05 | TRANSISTOR 2SC2603-EF |

| Ref.No. | Part No. | Description |
|---------|--------------|--------------------------------------|
| Q503 | 8-729-141-30 | (AV320R/RA)...TRANSISTOR 2SC3623A-LK |
| Q504 | 8-729-202-67 | TRANSISTOR 2SK246-GR3 |
| Q505 | 8-729-900-36 | TRANSISTOR DTC124ES |
| Q506 | 8-729-900-63 | TRANSISTOR DTA124ES |
| Q551 | 8-729-202-67 | TRANSISTOR 2SK246-GR3 |
| Q552 | 8-729-620-05 | TRANSISTOR 2SC2603-EF |
| Q553 | 8-729-141-30 | (AV320R/RA)...TRANSISTOR 2SC3623A-LK |
| Q601 | 8-729-108-14 | TRANSISTOR 2SA988-F |
| Q602 | 8-729-620-05 | TRANSISTOR 2SC2603-EF |
| Q603 | 8-729-620-05 | TRANSISTOR 2SC2603-EF |
| Q604 | 8-729-620-05 | TRANSISTOR 2SC2603-EF |
| Q605 | 8-729-620-05 | TRANSISTOR 2SC2603-EF |
| Q651 | 8-729-108-14 | TRANSISTOR 2SA988-F |
| Q701 | 8-729-107-25 | TRANSISTOR 2SD1585-L |
| Q702 | 8-729-113-34 | TRANSISTOR 2SB733-5 |
| Q703 | 8-729-180-92 | TRANSISTOR 2SD809-K |
| Q704 | 8-729-620-05 | TRANSISTOR 2SC2603-EF |
| Q705 | 8-729-115-22 | TRANSISTOR BN1A3Q |
| Q706 | 8-729-119-76 | TRANSISTOR 2SA1175-HFE |
| Q707 | 8-729-620-05 | TRANSISTOR 2SC2603-EF |
| Q708 | 8-729-900-36 | TRANSISTOR DTC124ES |
| Q709 | 8-729-620-05 | (AV320R/RA)...TRANSISTOR 2SC2603-EF |
| Q801 | 8-729-620-05 | (AV320R/RA)...TRANSISTOR 2SC2603-EF |
| R1 | 1-249-397-11 | (WG)...CARBON (SMALL) 22 |
| R1 | 1-249-401-11 | (AEP,UK)...CARBON (SMALL) 47 |
| R3 | 1-249-329-11 | CARBON MELF 330 5% 1/8W |
| R4 | 1-249-329-11 | CARBON MELF 330 5% 1/8W |
| R5 | 1-249-329-11 | CARBON MELF 330 5% 1/8W |
| R6 | 1-249-350-11 | CARBON MELF 18K 5% 1/8W |
| R7 | 1-249-329-11 | CARBON MELF 330 5% 1/8W |
| R8 | 1-249-332-11 | CARBON MELF 560 5% 1/8W |
| R9 | 1-249-352-11 | CARBON MELF 27K 5% 1/8W |
| R10 | 1-249-329-11 | (WG)...CARBON MELF 330 5% 1/8W |
| R11 | 1-249-350-11 | (WG)...CARBON MELF 18K 5% 1/8W |
| R12 | 1-249-329-11 | (WG)...CARBON MELF 330 5% 1/8W |
| R13 | 1-249-334-11 | (WG)...CARBON MELF 820 5% 1/8W |
| R14 | 1-249-352-11 | (WG)...CARBON MELF 27K 5% 1/8W |
| R15 | 1-249-347-11 | (WG)...CARBON MELF 10K 5% 1/8W |
| R16 | 1-249-343-11 | (WG)...CARBON MELF 4.7K 5% 1/8W |
| R21 | 1-249-404-00 | CARBON (SMALL) 82 |
| R22 | 1-249-433-11 | CARBON (SMALL) 22K |
| R23 | 1-249-335-11 | CARBON MELF 1K 5% 1/8W |
| R24 | 1-249-353-11 | CARBON MELF 33K 5% 1/8W |
| R25 | 1-249-346-11 | CARBON MELF 8.2K 5% 1/8W |
| R26 | 1-249-340-11 | (WG)...CARBON MELF 2.7K 5% 1/8W |
| R27 | 1-249-432-11 | CARBON (SMALL) 18K |
| R28 | 1-249-423-11 | CARBON (SMALL) 3.3K |
| R29 | 1-249-347-11 | CARBON MELF 10K 5% 1/8W |
| R31 | 1-249-331-11 | CARBON MELF 470 5% 1/8W |
| R32 | 1-249-347-11 | CARBON MELF 10K 5% 1/8W |
| R33 | 1-249-347-11 | CARBON MELF 10K 5% 1/8W |
| R35 | 1-249-355-11 | CARBON MELF 47K 5% 1/8W |
| R36 | 1-249-429-11 | CARBON (SMALL) 10K |
| R37 | 1-249-359-11 | CARBON MELF 100K 5% 1/8W |
| R38 | 1-249-363-11 | CARBON MELF 220K 5% 1/8W |

Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

| Ref.No. | Part No. | Description | | | | |
|---------|--------------|----------------------|------|----|------|--|
| R39 | 1-249-339-11 | CARBON MELF | 2.2K | 5% | 1/8W | |
| R40 | 1-249-338-11 | CARBON MELF | 1.8K | 5% | 1/8W | |
| R41 | 1-249-344-11 | CARBON MELF | 5.6K | 5% | 1/8W | |
| R42 | 1-249-359-11 | CARBON MELF | 100K | 5% | 1/8W | |
| R43 | 1-249-363-11 | CARBON MELF | 220K | 5% | 1/8W | |
| R44 | 1-249-339-11 | CARBON MELF | 2.2K | 5% | 1/8W | |
| R45 | 1-249-338-11 | CARBON MELF | 1.8K | 5% | 1/8W | |
| R46 | 1-249-344-11 | CARBON MELF | 5.6K | 5% | 1/8W | |
| R47 | 1-249-409-11 | CARBON (SMALL) | 220 | | | |
| R48 | 1-249-359-11 | CARBON MELF | 100K | 5% | 1/8W | |
| R49 | 1-249-359-11 | CARBON MELF | 100K | 5% | 1/8W | |
| R61 | 1-249-359-11 | CARBON MELF | 100K | 5% | 1/8W | |
| R62 | 1-249-355-11 | CARBON MELF | 47K | 5% | 1/8W | |
| R63 | 1-249-315-11 | CARBON MELF | 22 | 5% | 1/8W | |
| R81 | 1-249-335-11 | CARBON MELF | 1K | 5% | 1/8W | |
| R82 | 1-249-335-11 | CARBON MELF | 1K | 5% | 1/8W | |
| R83 | 1-249-335-11 | CARBON MELF | 1K | 5% | 1/8W | |
| R84 | 1-249-335-11 | CARBON MELF | 1K | 5% | 1/8W | |
| R85 | 1-249-347-11 | CARBON MELF | 10K | 5% | 1/8W | |
| R86 | 1-249-355-11 | CARBON MELF | 1K | 5% | 1/8W | |
| R87 | 1-249-347-11 | CARBON MELF | 10K | 5% | 1/8W | |
| R88 | 1-249-343-11 | CARBON MELF | 4.7K | 5% | 1/8W | |
| R89 | 1-249-335-11 | CARBON MELF | 1K | 5% | 1/8W | |
| R90 | 1-249-347-11 | CARBON MELF | 10K | 5% | 1/8W | |
| R91 | 1-249-335-11 | CARBON MELF | 1K | 5% | 1/8W | |
| R92 | 1-249-401-11 | CARBON (SMALL) | 47 | | | |
| R101 | 1-249-341-11 | CARBON MELF | 3.3K | 5% | 1/8W | |
| R102 | 1-249-332-11 | CARBON MELF | 560 | 5% | 1/8W | |
| R103 | 1-249-335-11 | CARBON MELF | 1K | 5% | 1/8W | |
| R104 | 1-249-328-11 | CARBON MELF | 270 | 5% | 1/8W | |
| R105 | 1-249-343-11 | CARBON MELF | 4.7K | 5% | 1/8W | |
| R106 | 1-249-339-11 | CARBON MELF | 2.2K | 5% | 1/8W | |
| R107 | 1-249-343-11 | CARBON MELF | 4.7K | 5% | 1/8W | |
| R108 | 1-249-323-11 | CARBON MELF | 100 | 5% | 1/8W | |
| R109 | 1-249-343-11 | CARBON MELF | 4.7K | 5% | 1/8W | |
| R110 | 1-249-405-11 | CARBON (SMALL) | 100 | | | |
| R301 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W | |
| R302 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W | |
| R303 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W | |
| R304 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W | |
| R305 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R306 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R307 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R308 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R311 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R312 | 1-249-431-11 | CARBON | 15K | 5% | 1/4W | |
| R313 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R314 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W | |
| R315 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W | |
| R316 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W | |
| R321 | 1-249-410-11 | (AV320R/RA)...CARBON | 270 | 5% | 1/4W | |
| R322 | 1-249-410-11 | CARBON | 270 | 5% | 1/4W | |
| R323 | 1-249-410-11 | CARBON | 270 | 5% | 1/4W | |
| R324 | 1-249-410-11 | CARBON | 270 | 5% | 1/4W | |
| R325 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W | |
| R331 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W | |
| R332 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W | |

| Ref.No. | Part No. | Description | | | | |
|---------|--------------|----------------------|------|----|------|--|
| R333 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W | |
| R334 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W | |
| R335 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W | |
| R336 | 1-249-431-11 | CARBON | 15K | 5% | 1/4W | |
| R337 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W | |
| R338 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W | |
| R339 | 1-249-393-11 | (AV320R/RA)...CARBON | 10 | 5% | 1/4W | |
| R401 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W | |
| R402 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R403 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R404 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |
| R405 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R406 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |
| R407 | 1-247-897-11 | CARBON | 560K | 5% | 1/4W | |
| R408 | 1-247-897-11 | CARBON | 560K | 5% | 1/4W | |
| R409 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W | |
| R410 | 1-247-897-11 | CARBON | 560K | 5% | 1/4W | |
| R411 | 1-249-416-11 | CARBON | 820 | 5% | 1/4W | |
| R412 | 1-247-897-11 | CARBON | 560K | 5% | 1/4W | |
| R413 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W | |
| R414 | 1-247-897-11 | CARBON | 560K | 5% | 1/4W | |
| R415 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R416 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W | |
| R417 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W | |
| R418 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |
| R419 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |
| R420 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W | |
| R421 | 1-247-901-11 | CARBON | 820K | 5% | 1/4W | |
| R422 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |
| R423 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W | |
| R424 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W | |
| R425 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W | |
| R426 | 1-249-405-11 | CARBON | 100 | 5% | 1/4W | |
| R428 | 1-249-417-11 | (WG)...CARBON | 1K | 5% | 1/4W | |
| R451 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W | |
| R452 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R453 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R454 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |
| R455 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R456 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |
| R457 | 1-247-897-11 | CARBON | 560K | 5% | 1/4W | |
| R458 | 1-247-897-11 | CARBON | 560K | 5% | 1/4W | |
| R459 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W | |
| R460 | 1-247-897-11 | CARBON | 560K | 5% | 1/4W | |
| R461 | 1-249-416-11 | CARBON | 820 | 5% | 1/4W | |
| R462 | 1-247-897-11 | CARBON | 560K | 5% | 1/4W | |
| R463 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W | |
| R464 | 1-247-897-11 | CARBON | 560K | 5% | 1/4W | |
| R465 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R469 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |
| R470 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W | |
| R471 | 1-247-901-11 | CARBON | 320K | 5% | 1/4W | |
| R472 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |
| R478 | 1-249-417-11 | (WG)...CARBON | 1K | 5% | 1/4W | |
| R501 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R502 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W | |
| R503 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W | |

| Ref.No. | Part No. | Description | | | |
|---------|---------------|-----------------------|------|----|--------|
| R504 | 1-249-427-11 | CARBON | 6.8K | 5% | 1/4W |
| R505 | 1-249-438-11 | CARBON | 56K | 5% | 1/4W |
| R506 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R507 | 1-247-883-00 | CARBON | 150K | 5% | 1/4W |
| R508 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R509 | 1-249-412-11 | CARBON | 390 | 5% | 1/4W |
| R510 | 1-249-427-11 | CARBON | 6.8K | 5% | 1/4W |
| R511 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R512 | 1-249-430-11 | CARBON | 12K | 5% | 1/4W |
| R513 | 1-249-404-00 | (AV320R/RA)...CARBON | 82 | 5% | 1/4W |
| R514 | 1-249-429-11 | (AV320R/RA)...CARBON | 10K | 5% | 1/4W |
| R515 | 1-249-434-11 | CARBON | 27K | 5% | 1/4W |
| R516 | 1-249-434-11 | CARBON | 27K | 5% | 1/4W |
| R517 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R518 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R519 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R520 | 1-247-903-00 | CARBON | 1M | 5% | 1/4W |
| R521 | 1-249-428-11 | CARBON | 8.2K | 5% | 1/4W |
| R522 | 1-247-903-00 | CARBON | 1M | 5% | 1/4W |
| R523 | 1-249-441-11 | (AV320R/RA)...CARBON | 100K | 5% | 1/4W |
| R524 | 1-249-426-11 | (AV320R/RA)...CARBON | 5.6K | 5% | 1/4W |
| R551 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R552 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R553 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R554 | 1-249-427-11 | CARBON | 6.8K | 5% | 1/4W |
| R555 | 1-249-438-11 | CARBON | 56K | 5% | 1/4W |
| R556 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R557 | 1-247-883-00 | CARBON | 150K | 5% | 1/4W |
| R558 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R559 | 1-249-412-11 | CARBON | 390 | 5% | 1/4W |
| R560 | 1-249-427-11 | CARBON | 6.8K | 5% | 1/4W |
| R561 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R562 | 1-249-430-11 | CARBON | 12K | 5% | 1/4W |
| R563 | 1-249-404-00 | (AV320R/RA)...CARBON | 82 | 5% | 1/4W |
| R564 | 1-249-429-11 | (AV320R/RA)...CARBON | 10K | 5% | 1/4W |
| R601 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R602 | 1-249-438-11 | CARBON | 56K | 5% | 1/4W |
| R603 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W |
| R604 | 1-249-421-11 | (AV220/A)...CARBON | 2.2K | 5% | 1/4W |
| R604 | 1-249-423-11 | (AV320R/RA)...CARBON | 3.3K | 5% | 1/4W |
| R605 | 1-249-438-11 | CARBON | 56K | 5% | 1/4W |
| R606 | 1-247-756-11 | (AV220/A)...CARBON | 2.2K | 5% | 1/2W |
| R606 | 1-247-758-11 | (AV320R/RA)...CARBON | 3.3K | 5% | 1/2W |
| R607 | △1-217-151-00 | RES, METAL PLATE 0.22 | | | |
| R608 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R612 | △1-249-405-11 | CARBON | 100 | 5% | 1/4W F |
| R615 | △1-249-405-11 | CARBON | 100 | 5% | 1/4W F |
| R621 | 1-249-427-11 | CARBON | 6.8K | 5% | 1/4W |
| R622 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W |
| R623 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W |
| R624 | △1-247-727-11 | CARBON | 10 | 5% | 1/2W F |
| R625 | 1-247-768-00 | CARBON | 2.4 | 5% | 1/4W |
| R626 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R627 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W |
| R628 | 1-249-427-11 | CARBON | 6.8K | 5% | 1/4W |
| R629 | △1-249-399-11 | CARBON | 33 | 5% | 1/4W F |

| Ref.No. | Part No. | Description | | | |
|---------|---------------|---------------------------|------|----|--------|
| R630 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R631 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R632 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R633 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R634 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W |
| R635 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R636 | 1-247-903-00 | CARBON | 1M | 5% | 1/4W |
| R637 | △1-215-866-11 | (AV220/A)...METAL OXIDE | 330 | 5% | 1W F |
| R637 | △1-216-432-00 | (AV320R/RA)...METAL OXIDE | 820 | 5% | 1W F |
| R638 | △1-215-889-00 | (AV220/A)...METAL OXIDE | 330 | 5% | 2W F |
| R638 | △1-216-454-11 | (AV320R/RA)...METAL OXIDE | 390 | 5% | 2W F |
| R639 | 1-247-768-00 | CARBON | 2.4 | 5% | 1/4W |
| R640 | 1-249-393-11 | (WG)...CARBON | 10 | 5% | 1/4W |
| R641 | 1-249-393-11 | (WG)...CARBON | 10 | 5% | 1/4W |
| R651 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R652 | 1-249-438-11 | CARBON | 56K | 5% | 1/4W |
| R653 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W |
| R654 | 1-249-421-11 | (AV220/A)...CARBON | 2.2K | 5% | 1/4W |
| R654 | 1-249-423-11 | (AV320R/RA)...CARBON | 3.3K | 5% | 1/4W |
| R655 | 1-249-438-11 | CARBON | 56K | 5% | 1/4W |
| R656 | 1-247-756-11 | (AV220/A)...CARBON | 2.2K | 5% | 1/2W |
| R656 | 1-247-758-11 | (AV320R/RA)...CARBON | 3.3K | 5% | 1/2W |
| R657 | 1-217-151-00 | RES, METAL PLATE 0.22 | | | |
| R658-A | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R658-B | 1-215-889-00 | (AV220/A)...METAL OXIDE | 330 | 5% | 2W F |
| R658-B | 1-216-454-11 | (AV320R/RA)...METAL OXIDE | 390 | 5% | 2W F |
| R671 | 1-249-427-11 | CARBON | 6.8K | 5% | 1/4W |
| R672 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W |
| R673 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W |
| R674 | △1-247-727-11 | CARBON | 10 | 5% | 1/2W F |
| R675 | 1-247-768-00 | CARBON | 2.4 | 5% | 1/4W |
| R676 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R689 | 1-247-768-00 | CARBON | 2.4 | 5% | 1/4W |
| R690 | 1-249-393-11 | (WG)...CARBON | 10K | 5% | 1/4W |
| R691 | 1-249-393-11 | (WG)...CARBON | 10K | 5% | 1/4W |
| R702 | 1-249-422-11 | CARBON | 2.7K | 5% | 1/4W |
| R703 | △1-216-448-11 | METAL OXIDE | 39 | 5% | 2W F |
| R705 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W |
| R706 | △1-249-405-11 | CARBON | 100 | 5% | 1/4W F |
| R707 | 1-249-410-11 | CARBON | 270 | 5% | 1/ |
| R708 | △1 | | | | |
| R709 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W |
| R710 | 1-249-429-11 | (AV220/A)...CARBON | 10K | 5% | 1/4W |
| R710 | 1-249-433-11 | (AV320R/RA)...CARBON | 22K | 5% | 1/4W |
| R711 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R712 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R713 | 1-249-426-11 | CARBON | 5.6K | 5% | 1/4W |
| R714 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R715 | 1-249-426-11 | CARBON | 5.6K | 5% | 1/4W |
| R716 | 1-249-417-11 | (AV320R/RA)...CARBON | 1K | 5% | 1/4W |

Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

| Ref.No. | Part No. | Description | Ref.No. | Part No. | Description |
|---------|-----------------------|--|---|---|---|
| R717 | 1-249-429-11 | (AV320R/RA)...CARBON 10K 5% 1/4W | S317 | 1-554-303-21 | SWITCH, KEY BOARD (9) |
| R718 | Δ 1-249-401-11 | CARBON 47 5% 1/4W F | S318 | 1-554-303-21 | SWITCH, KEY BOARD (MEMORY) |
| R719 | 1-249-425-11 | CARBON 4.7K 5% 1/4W | S319 | 1-554-303-21 | SWITCH, KEY BOARD (4) |
| R720 | 1-249-437-11 | CARBON 47K 5% 1/4W | S320 | 1-554-303-21 | SWITCH, KEY BOARD (5) |
| R721 | 1-249-413-11 | CARBON 470 5% 1/4W | S321 | 1-554-303-21 | SWITCH, KEY BOARD (6) |
| R722 | 1-249-437-11 | CARBON 47K 5% 1/4W | S322 | 1-554-303-21 | SWITCH, KEY BOARD (0) |
| R723 | 1-249-437-11 | CARBON 47K 5% 1/4W | S323 | 1-554-303-21 | SWITCH, KEY BOARD (1) |
| R724 | 1-249-437-11 | CARBON 47K 5% 1/4W | S324 | 1-554-303-21 | SWITCH, KEY BOARD (2) |
| R725 | 1-249-437-11 | CARBON 47K 5% 1/4W | S325 | 1-554-303-21 | SWITCH, KEY BOARD (3) |
| R726 | 1-249-410-11 | (AV320R/RA)...CARBON 270 5% 1/4W | S326 | 1-554-303-21 | SWITCH, KEY BOARD (SHIFT) |
| R726 | 1-249-430-11 | (AV220/A).....CARBON 12K 5% 1/4W | S327 | 1-554-303-21 | SWITCH, KEY BOARD (DBFB) |
| R727 | 1-249-437-11 | (AV220/A)... CARBON 47K 5% 1/4W | S328 | 1-554-303-21 | (AV320R/RA)...SWITCH, KEY BOARD (MUTING -20dB) |
| R801 | Δ 1-249-389-11 | CARBON 4.7 5% 1/4W F | S329 | 1-554-303-21 | SWITCH, KEY BOARD (SURROUND) |
| R802 | 1-249-437-11 | (AV320R/RA)...CARBON 47K 5% 1/4W | S330 | 1-554-303-21 | (AV320R/RA)..SWITCH, KEY BOARD (SYSTEM POWER)(POWER) |
| R803 | 1-249-396-11 | (AV320R/RA)...CARBON 18 5% 1/4W | S601 | 1-571-485-11 | SWITCH, PUSH (2 KEY)(SPEAKER A) |
| R804 | Δ 1-247-739-11 | (AV320R/RA)...CARBON 100 5% 1/2W F | S602 | 1-571-485-11 | SWITCH, PUSH (2 KEY)(SPEAKER B) |
| R804 | Δ 1-249-482-11 | (AV220/A).....CARBON 4.7 5% 1/2W F | S901 | Δ 1-554-685-11 | (AV220/A)...SWITCH, PUSH (AC POWER)(1 KEY) |
| R805 | 1-249-425-11 | (AV320R/RA)...CARBON 4.7K 5% 1/4W | S902 | 1-570-046-21 | (AEP)..SWITCH, VOLTAGE CHANGE (SPEAKER IMPEDANCE SELECTOR) |
| R901 | 1-249-396-11 | (WG)...CARBON 18 5% 1/4W | T21 | 1-404-807-11 | TRANSFORMER, DISCRIMINATOR |
| R951 | 1-249-396-11 | (WG)...CARBON 18 5% 1/4W | T23 | 1-236-465-11 | (WG)...ENCAPSULATED COMPONENT |
| RB301 | 1-233-081-11 | COMPOSITION CIRCUIT BLOCK | T901 | Δ 1-449-758-11 | (AV320R:UK)...TRANSFORMER, POWER |
| RB302 | 1-232-955-11 | COMPOSITION CIRCUIT BLOCK | T901 | Δ 1-449-760-11 | (AV320R:WG)...TRANSFORMER, POWER |
| RB303 | 1-232-998-11 | COMPOSITION CIRCUIT BLOCK | T901 | Δ 1-449-761-11 | (AV220).....TRANSFORMER, POWER |
| RV21 | 1-238-013-11 | RES. ADJ. CARBON 2.2K (FM STEREO SPARATION) | T901 | Δ 1-450-140-11 | (AV320RA)...TRANSFORMER, POWER |
| RV23 | 1-238-021-11 | RES. ADJ. CARBON 220K (AM METER) | T901 | Δ 1-450-141-11 | (AV220A).....TRANSFORMER, POWER |
| RV24 | 1-236-019-11 | (WG)..... RES. ADJ. CARBON 47K (FM STEREO OPERATION LEVEL) | T902 | Δ 1-448-523-11 | (AV320R/RA)...TRANSFORMER, POWER |
| RV24 | 1-238-017-11 | (AEP,UK)... RES. ADJ. CARBON 22K (FM STEREO OPERATION LEVEL) | TM1 | *1-537-138-31 | (AEP,UK)...TERMINAL BOARD (ANT) |
| RV501 | 1-238-942-11 | RES. VAR. CARBON 100K (BALANCE) | TM601 | Δ 1-536-706-00 | TERMINAL BOARD (SPEAKER A/B) |
| RV502 | 1-238-074-11 | (AV220/A).....RES. VAR. CARBON 100K/100K (VOLUME) | TP1 | *1-560-060-00 | PIN, CONNECTOR 2P |
| RV502 | 1-238-943-11 | (AV320R/RA)...RES. VAR. CARBON 100K/100K (VOLUME) | VZR901 | Δ 1-807-180-11 | (AV320R/RA)..VARISTOR SNR-14A300K |
| RV503 | 1-238-941-11 | RES. VAR. CARBON 50K/50K (TONE BASS) | X301 | 1-567-170-00 | OSCILLATOR, CERAMIC (4.194MHz) |
| RV504 | 1-238-941-11 | RES. VAR. CARBON 50K/50K (TONE TREBLE) | XT81 | 1-577-126-11 | VIBRATOR, CRYSTAL |
| RY601 | 1-515-533-11 | RELAY | ACCESSORY & PACKING MATERIAL | | |
| RY901 | 1-515-720-11 | (AV320R/RA)...RELAY | 1-465-420-11 | (AV320R:UK)...REMOTE COMMANDER (RM-U203) | |
| S301 | 1-554-303-21 | SWITCH, KEY BOARD (TUNING DIRECT) | 1-465-420-11 | (AV320RA, AV320R:WG)... REMOTE COMMANDER (RM-S103) | |
| S302 | 1-554-303-21 | SWITCH, KEY BOARD (PRESET -) | 1-501-369-11 | (AEP,UK)...ANTENNA | |
| S303 | 1-554-303-21 | SWITCH, KEY BOARD (TUNING -) | 1-501-374-11 | ANTENNA, LOOP | |
| S304 | 1-554-303-21 | SWITCH, KEY BOARD (BAND FM) | 2-181-754-01 | (AV320RA/AV320R)...COVER, BATTERY | |
| S305 | 1-554-303-21 | SWITCH, KEY BOARD (FM MODE) | 3-751-607-11 | (AEP)...MANUAL, INSTRUCTION (ENGLISH, F, E) | |
| S306 | 1-554-303-21 | SWITCH, KEY BOARD (PRESET +) | 3-751-607-41 | (UK)...MANUAL, INSTRUCTION (ENGLISH) | |
| S307 | 1-554-303-21 | SWITCH, KEY BOARD (TUNING +) | 3-751-607-51 | (AEP)...MANUAL, INSTRUCTION (D, NL, S) | |
| S308 | 1-554-303-21 | SWITCH, KEY BOARD (BAND AM) | 3-751-607-61 | (WG)...MANUAL, INSTRUCTION (D) | |
| S310 | 1-554-303-21 | SWITCH, KEY BOARD (TAPE) | 3-751-651-41 | INSTRUCTION | |
| S311 | 1-554-303-21 | SWITCH, KEY BOARD (VIDEO) | 4-925-079-01 | (AV320R:UK)...COVER(6), BATTERY | |
| S312 | 1-554-303-21 | SWITCH, KEY BOARD (PHONO) | *4-931-010-01 | CUSHION (BOTTOM) | |
| S313 | 1-554-303-21 | SWITCH, KEY BOARD (TUNING) | *4-931-011-01 | CUSHION (TOP) | |
| S314 | 1-554-303-21 | SWITCH, KEY BOARD (CD) | *4-938-141-01 | (AV320R/RA)...INDIVIDUAL CARTON | |
| S315 | 1-554-303-21 | SWITCH, KEY BOARD (7) | *4-931-097-01 | (AV220/A).....INDIVIDUAL CARTON | |
| S316 | 1-554-303-21 | SWITCH, KEY BOARD (8) | F : FRENCH | D : GERMAN | |
| | | | E : SPANISH | NL : DUTCH | |
| | | | | S : SWEDISH | |