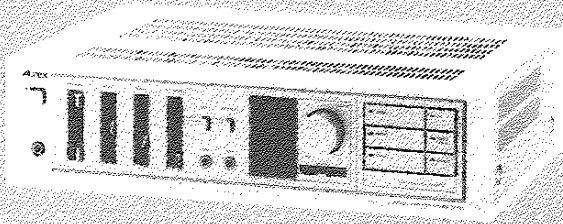


センターファイル
CENTER FILE

TOSHIBA

STEREO AMPLIFIER

SB-M3/M4



SPECIFICATIONS .

■ General

Power supply: 220V - 50 Hz
 Power consumption: 280W
 Weight: 6.3 kg
 Dimensions: 420(W) x 169(H) x 285(D)
 mm

■ Amplifier

Continuous power output
 20 Hz ~ 20 kHz
 both ch. driven: 40W x 2(4Ω), 40W x 2(8Ω)
 1 kHz both ch.
 driven: 45W x 2(4Ω), 45W x 2(8Ω)
 Total harmonic distortion: 0.05%
 Frequency response: 8 Hz ~ 70 kHz (±3 dB)

Power band width

(HF): 10 Hz ~ 30 kHz
 Load impedance: 4Ω ~ 16Ω
 Damping factor: 35
 S/N (IHF A Network): 95 dB (TUNER/AUX)
 75 dB (PHONO)
 Input sensitivity/impedance:
 PHONO 3.0 mV/47 kΩ
 TUNER 180 mV/47 kΩ
 AUX/TAPE 180 mV/47 kΩ
 Output level: TAPE REC 150 mV
 Tone control: BASS (at 100 Hz) ±8 dB
 TREBLE (at 10 kHz) ±8 dB
 Phono overload level: 60 mV (RMS)

Specifications subject to change without notice.

TE

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1. BLOCK DIAGRAM

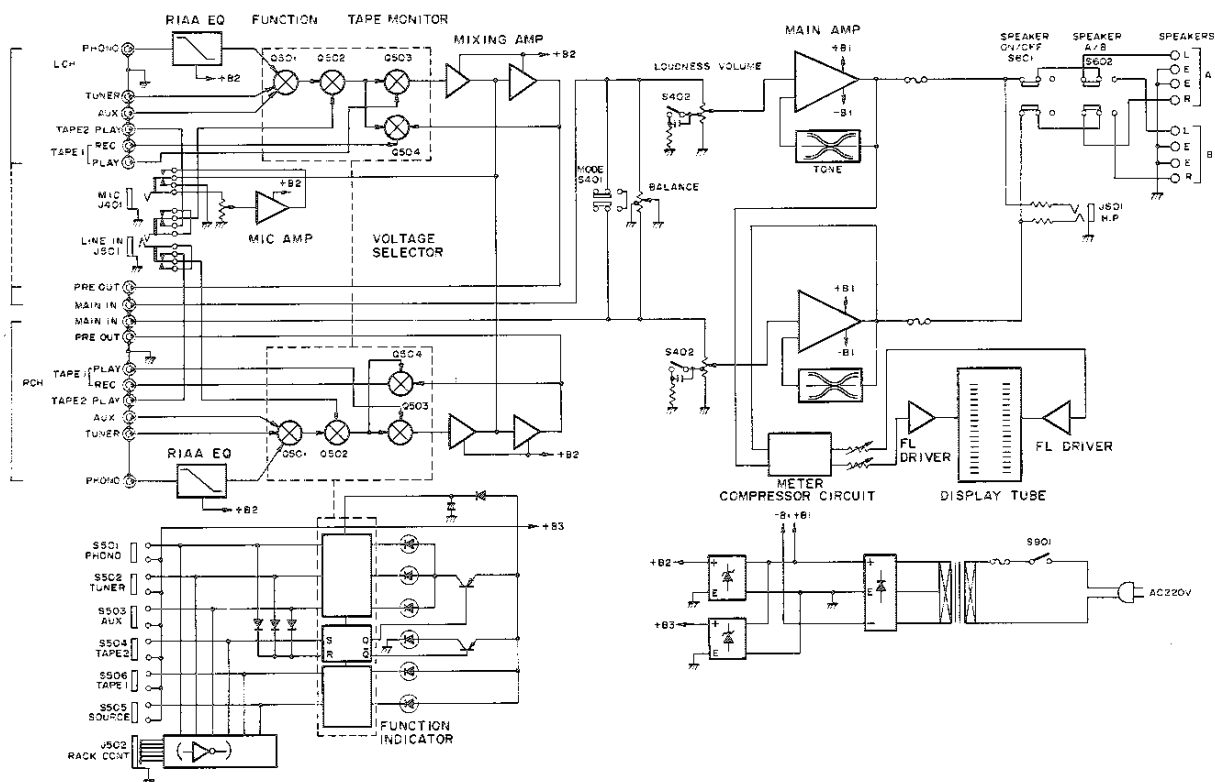


Figure 1

2. OPERATING CONTROLS

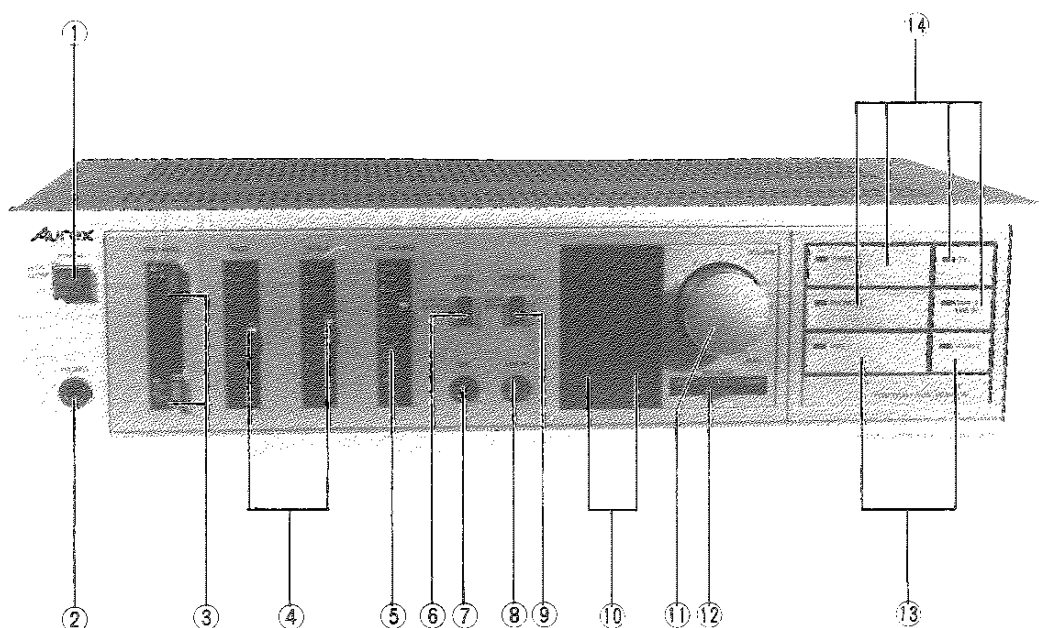


Figure 2

① Power switch

Depress this switch to turn the power on, depress again to turn the power off.

② Phones

Plug into this jack when listening through headphones.

③ Speaker selector

A: Sound from speakers connected to rear panel terminals A.

B: Sound from speakers connected to rear panel terminals B.

④ Bass and treble controls

Slide these knobs upward from the centre zero (flat) position to emphasize bass or treble tones. Slide downward to attenuate (decrease) bass or treble tones.

⑤ Mic mixing volume

Slide this knob to adjust mic volume level. When mixing sound from mic with other sources, the mic volume can be adjusted independently of the main volume level.

⑥ Mode switch

Set this switch in mono (depressed) position for monaural reproduction when the input signal is monaural or to convert stereo input signal to monaural form. Otherwise keep the switch in stereo (normal) position.

⑦ Mic jack

Plug in microphone plug to this jack when using mics.

⑧ LINE IN terminal

Use this terminal with second tape deck for playback. Connect tape deck to this terminal using specially-provided cord (option, 6.3 mm ϕ plug pin x 2). When this terminal is in use, TAPE 2 terminal on rear panel is automatically disconnected.

⑨ Loudness switch

Depress this switch for listening at very low volume levels. The loudness circuit emphasizes the low- and high- frequency regions for a natural sound balance at low volume. (This switch is effective between zero and midpoint positions of the volume knob.)

⑩ Peak power meters

These meters indicate the peak (instantaneous) power output levels when using 8 ohm speakers. For 4 ohm speakers, multiply the indicated readings by 2 to obtain approximate values.

⑪ Volume

Turn this knob to adjust the volume level.

⑫ Balance control

Slide this knob to adjust volume balance between left and right speakers.

⑬ Tape monitor switch

TAPE 1: Depress this switch for playback of tape deck connected to TAPE 1 terminal.

SOURCE: When listening to source other than TAPE 1, depress this switch, then select desired source with function selector ⑭.

⑭ Function selectors

Choose the desired programme source by pressing one of these buttons:

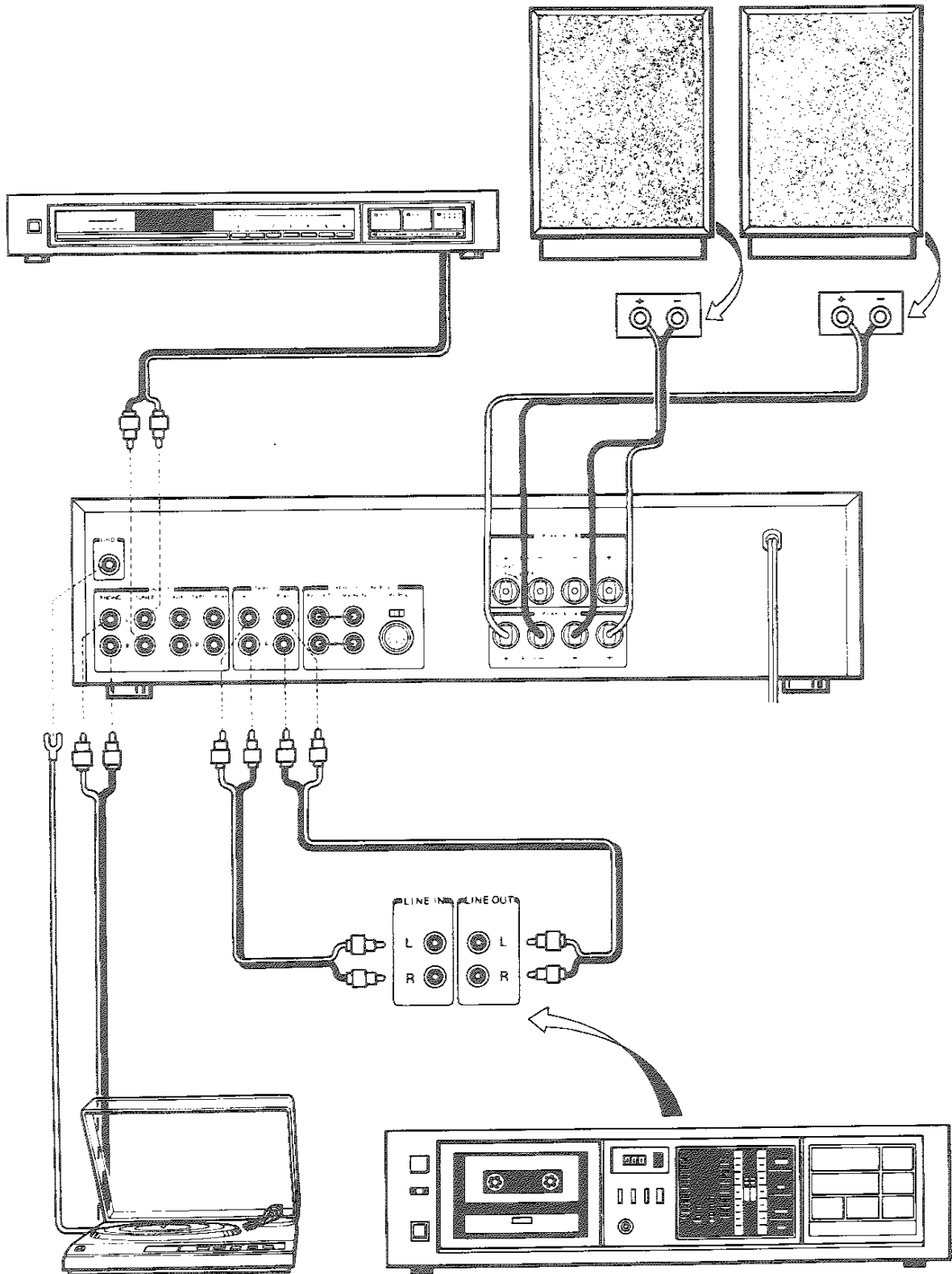
PHONO: For a turntable

TUNER: For a radio tuner

AUX: For any kind of audio equipment (excluding turntables and microphones)

TAPE 2: For tape deck connected to TAPE 2 terminal.

3. SYSTEM CONNECTIONS



4. OPERATION

Note: Until all connections have been properly completed, leave the power supply cords unplugged and the power switches OFF.

■ Connections of speaker to amplifier

Connect right speaker cord to "R" amplifier speaker output terminal and left speaker cord to "L" terminal. Be sure to connect the plus terminal of speaker to the plus terminal of amplifier speaker output terminal and minus to minus. Wrong connection of plus and minus results in loss of playback sound quality in stereo mode.

- Be sure to leave amplifier power switch OFF while making connections.
- Don't short-circuit the amplifier speaker output terminals.
- Confirm that volume knob is in zero position before power is turned on.

■ To play phonograph records

Connect output cables from turntable to PHONO terminals of amplifier. If turntable is equipped with an earth wire or terminal, be sure to connect it to earth wire terminal (GND) of amplifier. Overlooking this simple point may result in a hum.

To activate turntable, depress SOURCE button of tape monitor switch ⑬ and PHONO button of function selector ⑭, adjust volume and tone controls.

■ To listen to radio broadcasts

Connect tuner output cables to TUNER input terminals on amplifier rear panel.

There is no special need to link tuner and amplifier with an earth wire.

After depressing SOURCE button of tape monitor switch ⑬ and TUNER button of function selector ⑭, tune in to desired station and adjust volume and tone.

■ To use AUX terminals

To connect audio component to AUX terminals, depress SOURCE button of tape monitor switch ⑬ and AUX button of function selector ⑭. Operate connected component according to its instruction manual. Finally, adjust volume and tone.

■ To play tape deck

(1) Tape deck connections

Connect tape deck input terminals (LINE IN) to amplifier's record terminal (REC 1), and deck output terminals (LINE OUT) to amplifier's playback (PLAY 1) terminals. TAPE 2 terminal is for playback only. Connect PLAY terminal of second tape deck with this terminal.

(2) To play

To play TAPE 1, depress TAPE 1 of tape monitor switch

⑬. For TAPE 2, first depress SOURCE button of tape monitor switch ⑬ and TAPE 2 button of function selector ⑭ before activating tape deck.

When second tape deck is connected to LINE IN terminal ⑧ on front panel, PLAY 2 terminal is automatically disconnected.

(3) Tape monitoring

When recording with a tape deck equipped with proper tape monitoring facilities, monitoring is possible when using TAPE 1, but not when using TAPE 2.

Note: Depending on arrangement of tape deck and amplifier, slight hum may occur. If so, place tape deck under amplifier.

■ To record

Prepare programme source (from turntable, tuner or other audio equipment) to be recorded, set tape deck in recording mode. Note that during the actual recording, amplifier volume and tone controls will have no effect on recording level or tone.

■ Mic mixing and mic mixing recording

The SB-M3/M4 is designed to permit both direct mic mixing with a tuner, turntable or other audio source and mic mixing recording.

Note: Always remember to slide the microphone volume level down to the minimum position before unplugged the microphone.

(1) Mic mixing

Plug the microphone into the microphone jack and prepare the phonograph record or FM broadcast as for ordinary listening. Slide the mic mixing volume upward to adjust the relative volume levels. The SOURCE volume level is then adjusted by the main volume knob. To mix an already recorded signal with another, simply connect the tape deck outputs to the SB-M3/M4's auxiliary (TAPE 2 PLAY) terminals.

(2) Mic mixing recording

The mic mixing described above may also be recorded on a tape deck connected to the SB-M3/M4. Note, however, that the amplifier volume and tone control knobs are not effective for adjusting volume level and tone of the sound being recorded.

5. DISASSEMBLY INSTRUCTIONS

REMOVAL OF TOP COVER

1. Remove six screw (A), (B) and (C) (3φ x 8mm) from both sides and back side, then the top cover can be removed as shown in Figures 4, 5 and 6.

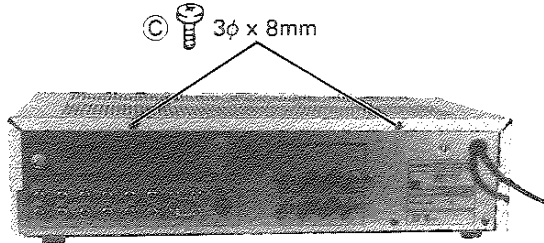


Figure 6

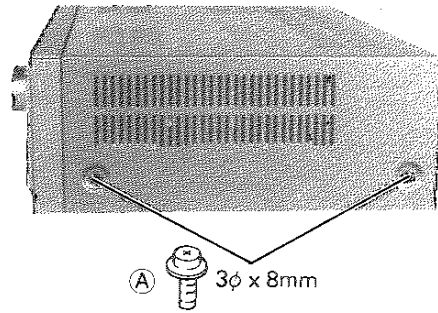


Figure 4

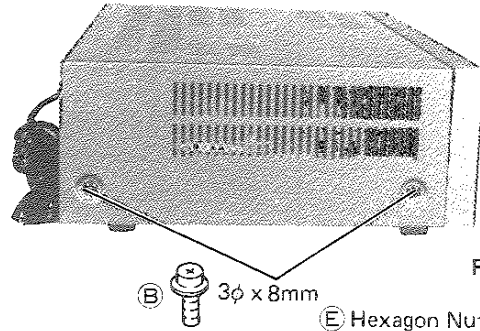


Figure 5

REMOVAL OF FRONT PANEL

1. Remove to cover as shown in Figures 4, 5 and 6.
2. Pull out one tuning knob (D) as shown in Figure 7.
3. Remove the hexagon nut (E) holding the ring under the tuning knob as shown in Figure 8.

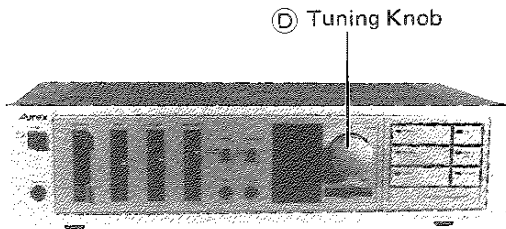


Figure 7

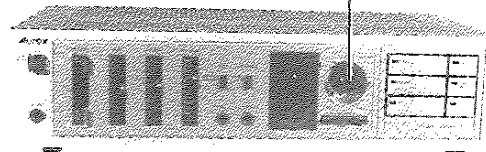


Figure 8

4. Remove the four screws (F) and (G) (3φ x 6mm) from right side and left side, as shown in Figures 9 and 10.
5. Remove one screw (H) (3φ x 8mm) from bottom side as shown in Figure 11.

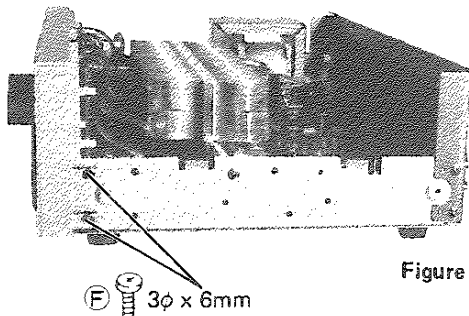


Figure 9

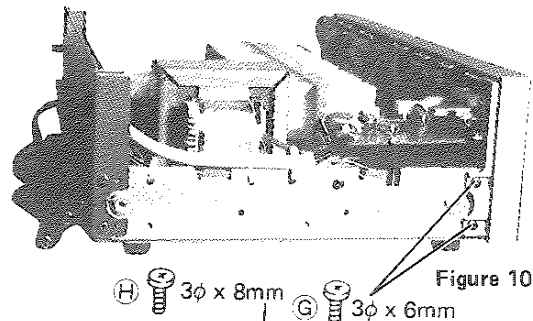


Figure 10

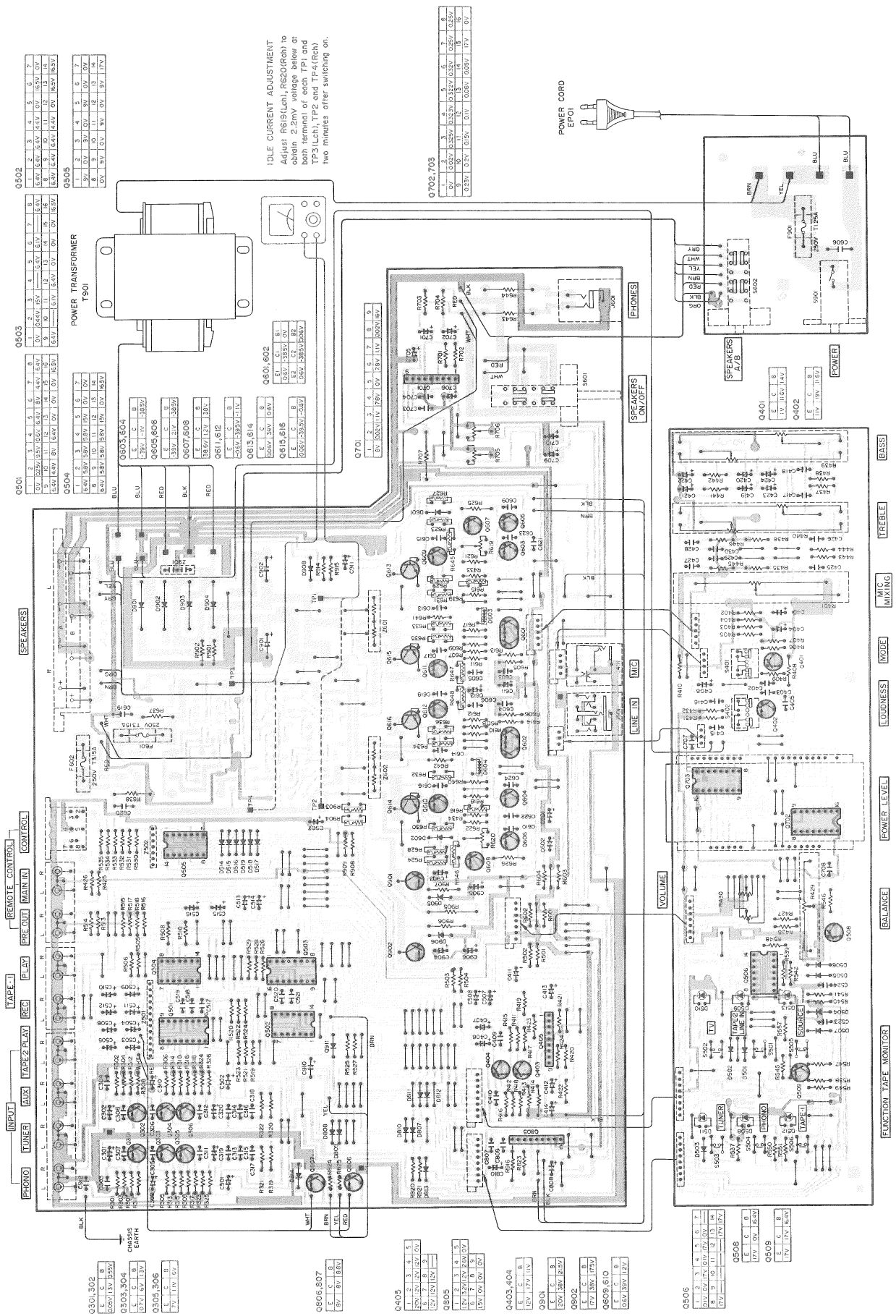
REMOVAL OF BOTTOM PLATE

1. Remove eight screws (I) (3φ x 8mm) from the bottom side as shown in Figure 12.



Figure 11

6. P.C. BOARD PARTS LOCATIONS



Q502

1	2	3	4	5	6	7
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V

Q503

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q504

1	2	3	4	5	6	7
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V

Q505

1	2	3	4	5	6	7
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V

Q506

1	2	3	4	5	6	7
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V

Q507

1	2	3	4	5	6	7
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V

Q508

1	2	3	4	5	6	7
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V

Q509

1	2	3	4	5	6	7
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V

Q510

1	2	3	4	5	6	7
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V

Q511

1	2	3	4	5	6	7
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V

Q512

1	2	3	4	5	6	7
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V

Q601

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q602

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q603

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q604

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q605

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q606

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q607

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q608

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q609

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q610

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q611

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q701

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q702

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q703

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q704

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q705

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q706

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q707

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q708

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q709

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q710

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q711

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q801

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q802

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q803

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q804

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q805

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q806

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q807

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q808

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q809

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q810

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q811

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q901

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q902

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q903

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q904

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q905

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q906

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q907

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q908

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q909

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q910

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

Q911

1	2	3	4	5	6	7	8
0.5V	1.0V	1.5V	2.0V	2.5V	3.0V	3.5V	4.0V

IDLE CURRENT ADJUSTMENT
Adjust RES1(Lch), RES2(Rch) to obtain 2.2mV voltage below at both terminal of each TP1 and TP3(Lch), TP2 and TP4(Rch) two minutes after switching on.

CAUTION: The Δ mark, the symbol No. circled with rectangle in the schematic diagram and the shaded area in the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list.

Figure 12

7. SCHEMATIC DIAGRAM

SB-M3
SB-M4

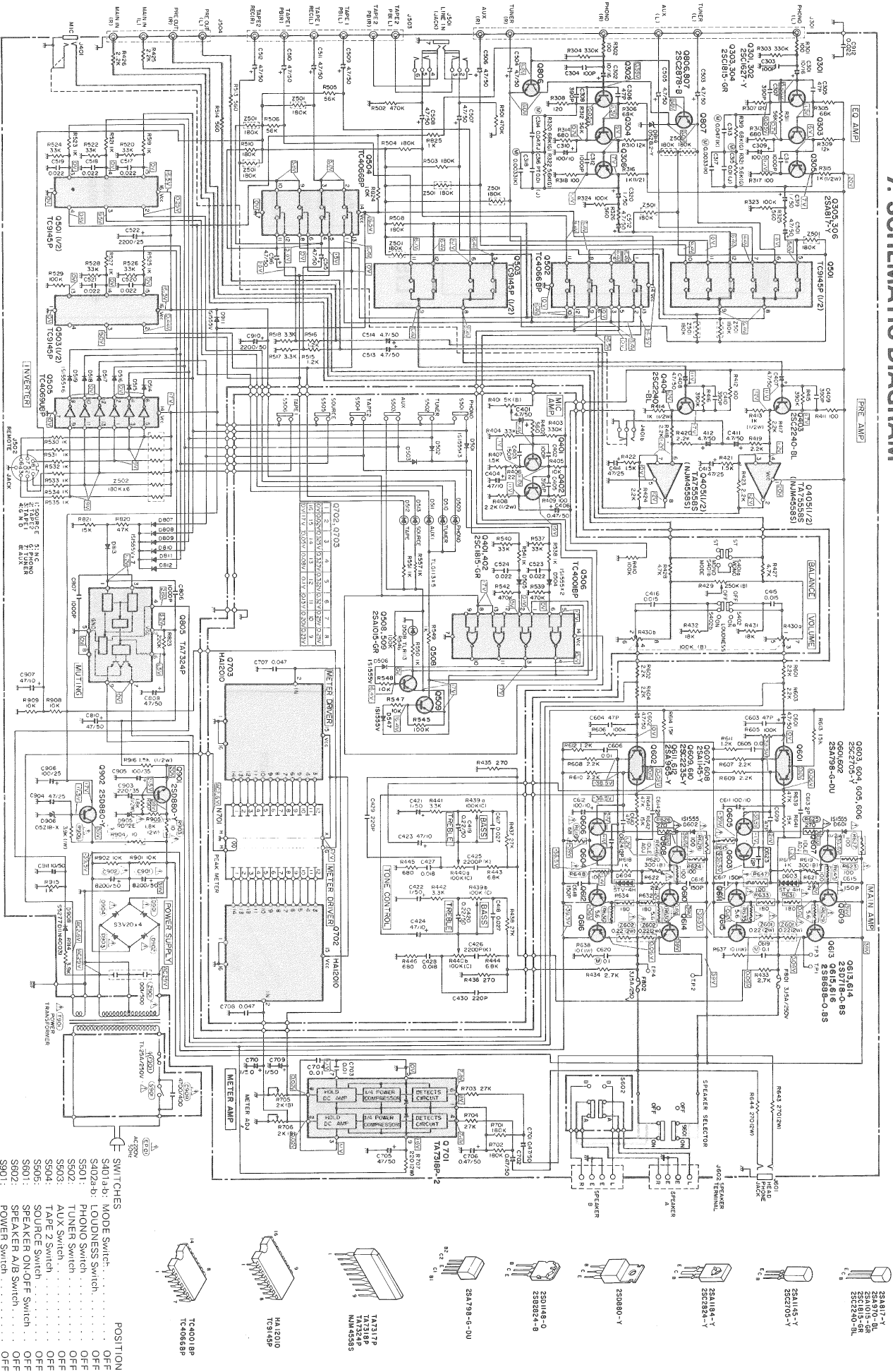


Figure 13

CAUTION: The Δ mark, the symbol No. circled within the schematic diagram and the shaded area in the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list.

- SWITCHES**
- S401a-b: MODE Switch OFF
 - S402a-b: LOUDNESS Switch OFF
 - S501: PHONO Switch OFF
 - S502: TUNER Switch OFF
 - S503: AUX Switch OFF
 - S504: TAPE 2 Switch OFF
 - S505: SOURCE Switch OFF
 - S801: SPEAKER ON/OFF Switch OFF
 - S802: SPEAKER A/B Switch OFF
 - S901: POWER Switch OFF

- POSITION**
- IC401B: T4401B
 - IC402B: T4002B
 - HA1010: TA7217P
 - TA7218P
 - TA7219P
 - TA7220P
 - TA7221P
 - TA7222P
 - TA7223P
 - TA7224P
 - TA7225P
 - TA7226P
 - TA7227P
 - TA7228P
 - TA7229P
 - TA7230P
 - TA7231P
 - TA7232P
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 - TA7291P
 - TA7292P
 - TA7293P
 - TA7294P
 - TA7295P
 - TA7296P
 - TA7297P
 - TA7298P
 - TA7299P
 - TA7300P

8. EXPLODED VIEW CABINET

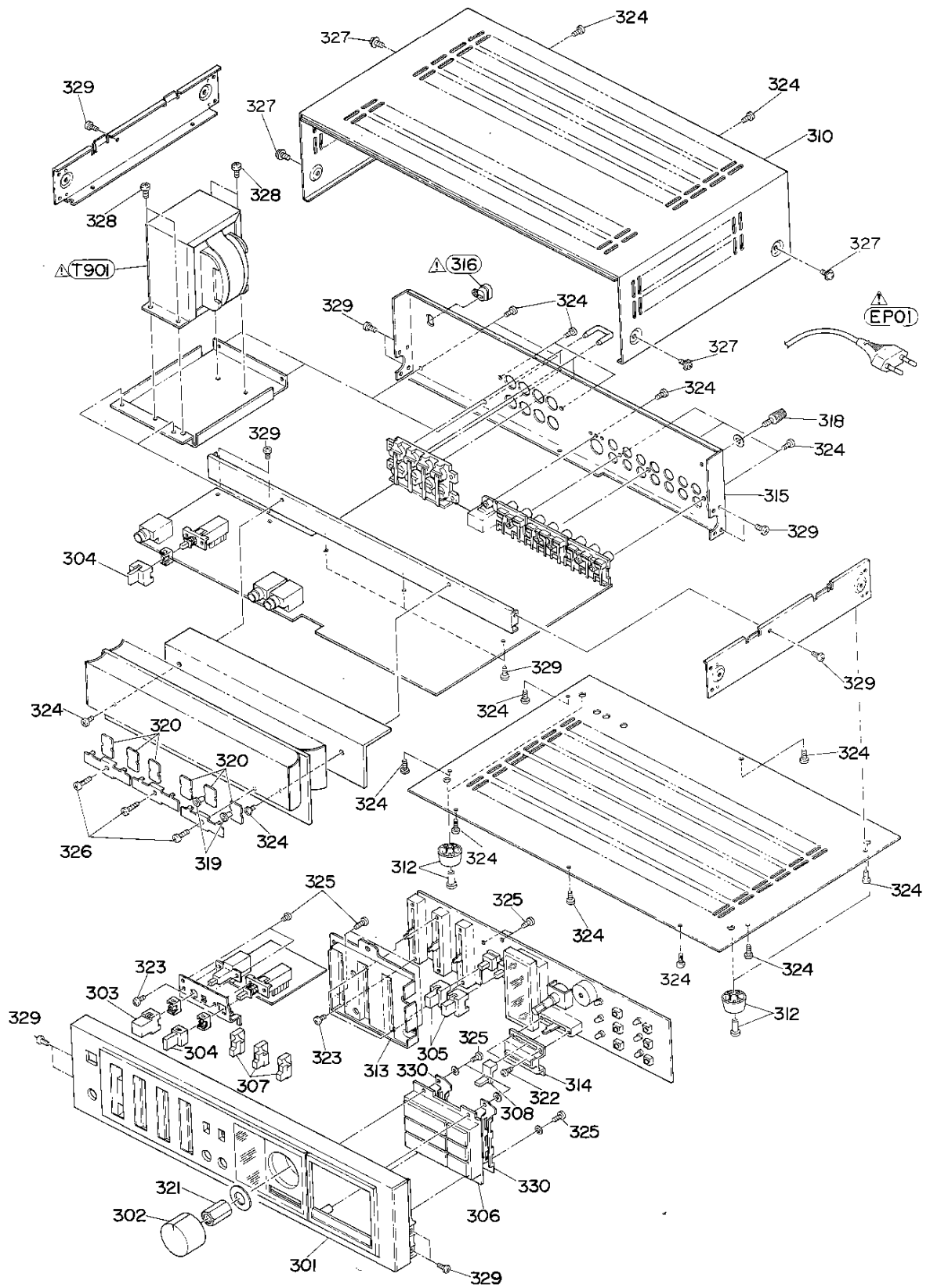


Figure 14

NOTE: Parts excluded in the parts list are not available as replacement parts.

9. PARTS LIST (CABINET)

CAUTION:

The Δ mark, the symbol No. circled with rectangle in the schematic diagram and the shaded area in the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list.

Symbol No.	Part No.	Description	Symbol No.	Part No.	Description
301	22825089	Panel Ass'y (M3-TE) (TOSHIBA)	Δ 316	25845528	Cord Bush
301	22825122	Panel Ass'y (M4-TE) (AUREX)	318	20794122	Screw, Ground
302	22826365	Knob Ass'y, Volume	319	22756447	Washer, Transistor
303	22824381	Knob Ass'y, Power	320	22723284	Insulator
304	22824388	Knob Ass'y, Speaker	321	22702192	Nut, Volume
305	22824389	Knob Ass'y, Mode/Subsonic	322	22707265	Screw, 2 ϕ x 4mm, BID
306	22826378	Knob Ass'y, Function	323	22707066	Screw, 3 ϕ x 6mm, BID
307	22884175	Knob, Bass/Treble/- Loudness	324	22701326	Screw, 3 ϕ x 8mm, BID Tapping
308	22884176	Knob, Balance	325	22707116	Screw, 3 ϕ x 10mm, BID Tapping
310	22841330	Top Cover	326	22707334	Screw, 3 ϕ x 14mm, BID Tapping
312	22828070	Foot	327	22707696	Screw, 3 ϕ x 8mm, TPAN
313	22833592	Cover, Tone Knob	328	22707040	Screw, 4 ϕ x 6mm, FTBID
314	22833593	Cover, Balance Knob	329	22701237	Screw, 3 ϕ x 6mm, BID Tapping
315	22714168	Jack Plate (M3-TE)	330	25779235	Spring, Knob
315	22714216	Jack Plate (M4-TE)	331	22707784	Screw, 3 ϕ x 10mm

10. PARTS LIST

Symbol No.	Part No.	Description	Symbol No.	Part No.	Description
TRANSISTORS, IC'S & DIODES			Q613, 614	A6845864	Transistor, 2SD718-O/R
Q301, 302	A6314440	Transistor, 2SC1627-Y	Q615, 616	A6625365	Transistor, 2SB688-O/R
Q303, 304	A6317460	Transistor, 2SC1815NEW-GR	Q701	B0324880	IC, TA7318P-2
Q305, 306	A6531140	Transistor, 2SA817-Y	Q702, 703	22117003	IC, HA12010
Q401, 402	A6317460	Transistor, 2SC1815NEW-GR	Q805	B0325060	IC, TA7324P
Q403, 404	A6325845	Transistor, 2SC2240NEW-BL	Q901, 902	A6848520	Transistor, 2SD880-Y
Q405	B0350510	IC, TA75558S or (NJM4558S)	D501, 502	A7246703	Diode, 1S1555V
Q501, 503	B0411450	IC, TC9145P	503, 504		
Q502, 504	B0470662	IC, TC4066BP	505, 506		
Q506	B0470016	IC, TC4001BP	507		
Q508, 509	A6534060	Transistor, 2SA1015-GR	D508	A8600607	Diode, TLR113A
Q601, 602	22114468	Transistor, 2SA798-G-DU	D509, 510	A8605666	Diode, TLG113A
Q603, 604	A6334820	Transistor, 2SC2705-Y	511, 512		
605, 606			513		
Q607, 608	A6540520	Transistor, 2SA1145-Y	D514, 515	A7246703	Diode, 1S1555V
Q609, 610	A6325440	Transistor, 2SC2235-Y	516, 517		
Q611, 612	A6533140	Transistor, 2SA965-Y	518, 519		

No. 1178.

F801 SW 22144448 FUSE, 3.15A, 250V (NIBM13)

Symbol No.	Part No.	Description
D601, 602	A7246703	Diode, 1S1555V
D603, 604	22115424	Diode, STV-4H
D807, 808	A7246703	Diode, 1S1555V
809, 810		
811, 812		
813		
D814	A7110208	Diode, 05Z8.2-Y-Y/Z
D901, 902	22115496	Diode, S3V20-X
903, 904		
D905	22115372	Diode, RD22E
D906	A7110610	Diode, 05Z18-X
D908	A7978385	Diode, S5277D
D911	A7246703	Diode, 1S1555V

ELECTRICAL PARTS

S401a-b	22195951	Switch, Push, MODE
S402a-b	22195951	Switch, Push, LOUDNESS
S501	22195924	Switch, Key, PHONO
S502	22195924	Switch, Key, TUNER
S503	22195924	Switch, Key, AUX
S504	22195924	Switch, Key, TAPE2
S505	22195924	Switch, Key, SOURCE
S506	22195924	Switch, Key, TAPE1
S601	22195947	Switch, Push, Speaker ON-OFF
S602	22195947	Switch, Push, Speaker A/B
S901	22195631	Switch, Push, Power
J301	22163910	Jack, US6P
J401	22163908	Jack, Microphone, 6φ
J501	22163908	Jack, Line in, 6φ
J502	22167964	Din Socket, 8P
J503	22163910	Jack, US6P
J504	22163887	Jack, US4P
J601	22163907	Jack, Headphone, 6φ
J602	22162489	Terminal, Speaker
Z501	22540564	Composite Parts, 180K ohm x 12
Z502	22540591	Composite Parts, 10K ohm x 6
Z601, 602	22500320	Composite Parts, 0.22 ohm, 2w x 2
Z901	22340148	Composite Parts, 0.01mfd, 500V x 2
N701	22104566	Display Tube, Peak Meter
T901	22224107	Transformer, Power

Symbol No.	Part No.	Description
F801, 802	22144448	Fuse, 3.15A, 250V (NIBM13)
F901	22144357	Fuse, 11.25A, 250V
EP01	22176286	Cord, Power
EP02	22165047	Fuse Holder
EP03	22164842	Plug, 2P

CAPACITORS

D = ±0.5pF, J = ±5%, K = ±10%, M = ±20%,

Z = -20% + 80%

ABBREVIATIONS: CD = Ceramic Disk, EL = Electrolytic,

BL = Barrier Layer, MY = Mylar

C301, 302	22485100	EL, 10mfd, 16V
C303, 304	22362101	CD, 100pF, 50V, K
C305, 306	22362470	CD, 47pF, 50V, K
C307, 308	22349391	CD, 390pF, 50V, K
C309, 310	22483101	EL, 100mfd, 10V
C311, 312	22349102	CD, 1000pF, 50V, K
C313, 314	22371473	MY, 0.047mfd, 50V, J
C315, 316	22371103	MY, 0.01mfd, 50V, J
C317, 318	22371332	MY, 0.0033mfd, 50V, J
C319, 320	22488109	EL, 1mfd, 50V
C401	22488479	EL, 4.7mfd, 50V
C402	22349102	CD, 1000pF, 50V, K
C403	22349151	CD, 150pF, 50V, K
C404	22483470	EL, 47mfd, 10V
C405	22349391	CD, 390pF, 50V, K
C406	22488478	EL, 0.47mfd, 50V
C407, 408	22488479	EL, 4.7mfd, 50V
C409, 410	22349391	CD, 390pF, 50V, K
C411	22488479	EL, 4.7mfd, 50V
C412	22488479	EL, 4.7mfd, 50V
C413, 414	22486470	EL, 47mfd, 25V
C415, 416	22360546	BL, 0.015mfd, 25V, K
C417, 418	22360549	BL, 0.027mfd, 25V, K
C419, 420	22488228	EL, 0.22mfd, 50V
C421, 422	22488109	EL, 1mfd, 50V
C423, 424	22488470	EL, 47mfd, 10V
C425, 426	22360536	BL, 2200pF, 25V, K
C427, 428	22360547	BL, 0.018mfd, 25V, K
C429, 430	22349221	CD, 220pF, 50V, K
C501, 502	22488479	EL, 4.7mfd, 50V
503, 504		
505, 506		
507, 508		
509, 510		
511, 512		

Symbol No.	Part No.	Description
C513, 514 515, 516	22488479	EL, 4.7mfd, 50V
C517, 518 519, 520 521 523, 524	22342223	CD, 0.022mfd, 50V, Z
C522	22486222	EL, 2200mfd, 25V
C601, 602	22488479	EL, 4.7mfd, 50V
C603, 604	22362470	CD, 47pF, 50V, K
C605, 606	22342103	CD, 0.01mfd, 50V, Z
C609, 610	22362470	CD, 47pF, 50V, K
C611, 612	22483101	EL, 100mfd, 10V
C613, 614	22361209	CD, 2pF, 50V, D
C615, 616 617, 618	22349151	CD, 150pF, 50V, K
C619, 620	22372104	MY, 0.1mfd, 50V, K
C623, 624	22362120	CD, 12pF, 50V, K
C701, 702	22488478	EL, 0.47mfd, 50V
C703, 704	22342103	CD, 0.01mfd, 50V, Z
C705	22488470	EL, 47mfd, 50V
C706	22488478	EL, 0.47mfd, 50V
C707, 708	22371473	MY, 0.047mfd, 50V, J
C709, 710	22488109	EL, 1mfd, 50V
C806, 807	22349102	CD, 1000pF, 50V, K
C808, 810	22488479	EL, 4.7mfd, 50V
△ C901, 902	22446461	EL, 8200mfd, 50V
C903	22487221	EL, 220mfd, 35V
C904	22486470	EL, 47mfd, 25V
C905	22487101	EL, 100mfd, 35V
C906	22486101	EL, 100mfd, 25V
C907	22483470	EL, 47mfd, 10V
△ C909	22340180	CD, 4700pF, 400V, M
C910	22486222	EL, 2200mfd, 25V
C911	22488100	EL, 10mfd, 50V
C912	22342223	CD, 0.022mfd, 50V, Z
RESISTORS		
All resistors are 1/4W, ±5% carbon film unless otherwise noted. 1K ohm = 1000 ohm		
R301, 302	22545101	100 ohm
R303, 304	22545334	330K ohm
R305, 306	22545683	68K ohm
R307, 308	22545121	120 ohm
R309, 310	22545123	12K ohm
R311, 312	22545563	56K ohm
R313, 314	22545681	680 ohm
R315, 316	22547102	1K ohm, 1/2W

Symbol No.	Part No.	Description
R317, 318	22545101	100 ohm
R319, 320	22540471	68K ohm, G = ±2%
R321, 322	22540470	5.6K ohm, G = ±2%
R323, 324	22545104	100K ohm
R325, 326	22545561	560 ohm
R401	22657232	5K ohm, B, Variable, MIC Volume
R402	22545561	560 ohm
R403	22545334	330K ohm
R404	22545333	33K ohm
R405	22545103	10K ohm
R406	22545220	22 ohm
R407	22545152	1.5K ohm
R408	22547222	2.2K ohm, 1/2W
R409	22545101	100 ohm
R410	22545104	100K ohm
R411, 412	22545101	100 ohm
R413, 414	22547102	1K ohm, 1/2W
R415, 416	22545394	390K ohm
R417, 418 419, 420	22545222	2.2K ohm
R421, 422	22545152	1.5K ohm
R423, 424	22545222	2.2K ohm
R425, 426	22545222	2.2K ohm
R427, 428	22545472	4.7K ohm
R429	22657231	250K ohm, B, Variable, Balance
R430	22651573	100K ohm, B, Variable, Volume
R431, 432	22545183	18K ohm
R433, 434	22545272	2.7K ohm
R435, 436	22545271	270 ohm
R437, 438	22545273	27K ohm
R439a ~ b	22657233	100K ohm, C, Variable Bass
R440a ~ b	22657233	100K ohm, C, Variable, Treble
R441, 442	22545332	3.3K ohm
R443, 444	22545682	6.8K ohm
R445, 446	22545681	680 ohm
R501, 502	22545474	470K ohm
R503, 504	22545184	180K ohm
R506	22545563	56K ohm
R508	22545184	180K ohm
R510	22545184	180K ohm
R513, 514	22545561	560 ohm
R515, 516	22545122	1.2K ohm
R517, 518	22545332	3.3K ohm
R519	22545102	1K ohm
R520	22545333	33K ohm
R521	22545102	1K ohm
R522	22545333	33K ohm
R523	22545102	1K ohm

Symbol No.	Part No.	Description
R524	22545333	33K ohm
R525	22545102	1K ohm
R526	22545333	33K ohm
R527	22545102	1K ohm
R528	22545333	33K ohm
R529	22545104	100K ohm
R530, 531 532, 533 534, 535	22545102	1K ohm
R537	22545333	33K ohm
R538	22545102	1K ohm
R539	22545474	470K ohm
R540	22545333	33K ohm
R541	22545102	1K ohm
R542	22545474	470K ohm
R545, 546	22545104	100K ohm
R547, 548	22545103	10K ohm
R549, 550	22545102	1K ohm
R551	22545102	1K ohm
R557	22545102	1K ohm
R601, 602 603, 604	22545222	2.2K ohm
R605, 606	22545104	100K ohm
R607, 608 609, 610	22545222	2.2K ohm
R611, 612	22545122	1.2K ohm
R613, 614	22545153	15K ohm
△ R615, 616	22500150	66 ohm, Fusible
R617, 618	22545102	1K ohm
R619, 620	22658612	300 ohm, B, Semi-Fixed Variable
R621, 622	22545270	27 ohm
△ R623, 624	22500122	100 ohm, Fusible
△ R625, 626	22500135	270 ohm, Fusible
△ R627, 628	22500122	100 ohm, Fusible
△ R629, 630	22500170	5.6 ohm, Fusible
△ R631, 632 633, 634	22500136	180 ohm, Fusible
△ R635, 636	22500170	5.6 ohm, Fusible
R637, 638	22570250	10 ohm, 1W, Metal Oxide Film
R639, 640	22545473	47K ohm
R641, 642	22545153	15K ohm
R643, 644	22570312	270 ohm, 2W, Metal Oxide Film
△ R645, 646 647, 648	22500122	100 ohm, Fusible
R701, 702	22545184	180K ohm
R703, 704	22545273	27K ohm
R705, 706	22658628	2K ohm, B, Semi-fixed, Variable

Symbol No.	Part No.	Description
R707	22570311	220 ohm, 2W, J, Metal Oxide Film
R820	22545473	47K ohm
R821	22545153	15K ohm
R823	22545224	220K ohm
R824	22545103	10K ohm
R825	22545102	1K ohm
R901, 902	22545103	10K ohm
△ R903, 904	22500130	10 ohm, Fusible
△ R905	22570322	1.8K ohm, 2W, Metal Oxide Film
R906	22570281	3.9K ohm, 1W, Metal Oxide Film
R907	22547182	1.8K ohm, ½W
R908, 909	22545103	10K ohm
R914	22545392	3.9K ohm
R915	22545102	1K ohm
R916	22547152	1.5K ohm, ½W

ACCESSORIES

AC01	22903316	Owner's Manual (SB-M3/M4)
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