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HST-39

*AEP Model
E Model*



Photo: AEP model

STEREO CASSETTE-RECEIVER

SPECIFICATIONS

GENERAL

System:	Superheterodyne FM/AM tuner, Complementary symmetry power amplifier circuit (SEPP OTL, OCL)
Power Requirements:	220 V ac, 50 Hz (AEP model) 110–120 or 220–240 V ac adjustable, 50/60 Hz (E model)
Power Consumption:	85 W
Dimensions:	Approx. 456 (w) x 225 (h) x 247 (d) mm 18 (w) x 8 ⁷ / ₈ (h) x 9 ³ / ₄ (d) inches Including projecting parts and controls
Weight:	Approx. 6.35 kg, 14 lb (net) 7.7 kg, 17 lb (in shipping carton)

Harmonic Distortion:	0.5% (MONO), 1.0% (STEREO) at 400 Hz
Selectivity:	50 dB
S/N Ratio:	65 dB
Frequency Response:	70 Hz – 12.5 kHz ± 3 dB
SapARATION:	Better than 35 dB


0 dB = 0.775 V

– Continued on page 2 –

FM SECTION

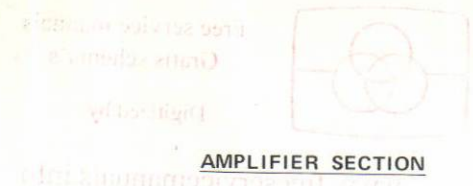
Tuning Range:	87.5–108 MHz
Antenna:	300 Ω balanced 75 Ω unbalanced
Usable Sensitivity:	12 dBf, 2.2 μV, S/N = 30 dB

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS 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.

SONY[®]

SERVICE MANUAL



AM SECTION

AEP model

Band	SW	MW	LW
Tuning Range	5.8-15.8 MHz (49 - 19 m)	530-1, 605 kHz	150-350 kHz
Antenna	External antenna terminal	Built-in ferrite-rod antenna and external antenna terminal	
Sensitivity	30 μ V, external antenna (S/N = 20 dB)	50 dB/m, built-in antenna 100 μ V, external antenna (S/N = 20 dB)	52 dB/m, built-in antenna 150 μ V, external antenna
S/N Ratio	50 dB		
Harmonic Distortion	0.8 % at 400 Hz		
Intermediate Frequency	468 kHz		

E model

Band	SW1	SW2	MW
Tuning Range	2.3-6.2 MHz (120-49 m)	7-17.9 MHz (41-16 m)	530-1,605 kHz
Antenna	External antenna terminal		Built-in ferrite-rod antenna and external antenna terminal
Sensitivity	30 μ V, external antenna (S/N = 20 dB)		50 dB/m, built-in antenna 100 μ V, external antenna
S/N Ratio	50 dB		
Harmonic Distortion	0.8 % at 400 Hz		
Intermediate Frequency	468 kHz		

AMPLIFIER SECTION

Continuous RMS Power Output: 12 + 12 W (8 Ω)
(less than 5% THD, both channels driven simultaneously) at 90 Hz -15 kHz

Music Power: 35 W (8 Ω)

Inputs:

	sensitivity	impedance	S/N
PHONO (phono jacks)	3.5 mV	47 k Ω	65 dB
AUX (phono jacks)	500 mV	47 k Ω	70 dB
MIC (phono jacks)	3.5 mV	600 Ω	60 dB

Outputs:

	output voltage	impedance
REC OUT (phono jacks)	250 mV	10 k Ω
HEADPHONES	Accepts headphones of 8 Ω or more	
SPEAKERS	Accepts speakers of 8 Ω	

Frequency Response: PHONO: RIAA curve \pm 2 dB
AUX: 30 Hz - 30 kHz \pm 2 dB
MIC: 100 Hz - 10 kHz \pm 2 dB

Tone Controls: BASS: \pm 10 dB at 100 Hz
TREBLE: \pm 10 dB at 10 kHz

Loudness Control (att. 30 dB): +6 dB at 100 Hz
+3 dB at 10 kHz

CASSETTE RECORDER SECTION

Recording System: 4-track 2-channel stereo

Frequency Response: 50 Hz -12 kHz (with the TAPE SELECT switch set to CrO₂)




S/N Ratio: 50 dB

Wow and Flutter: 0.18 % WRMS




MODEL IDENTIFICATION

- Rear Board -

AEP model

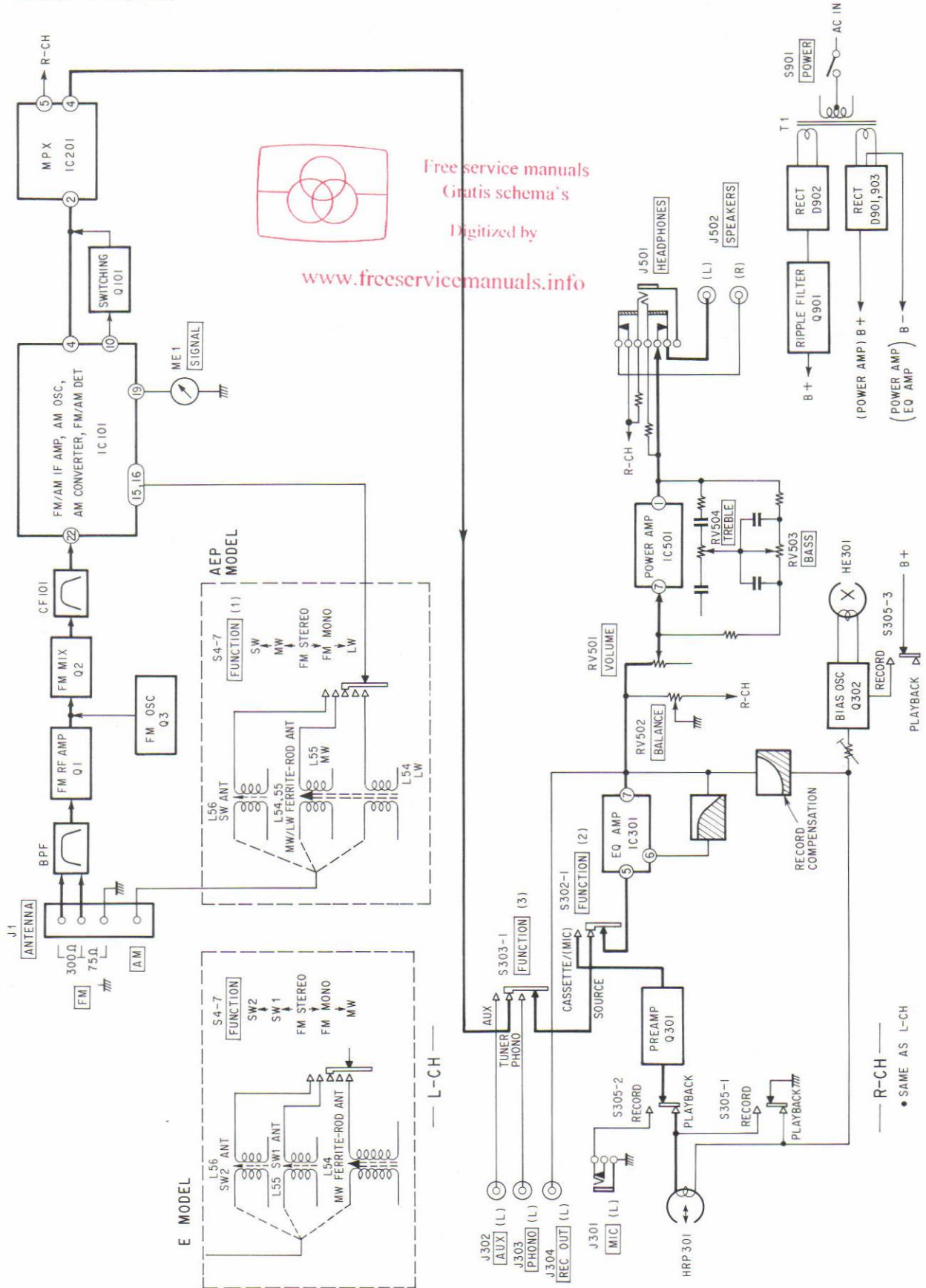
  	STEREO MUSIC SYSTEM
	MODEL NO. HST-39
	FREQUENCY RANGE : FM 87.5-108MHz MW 530-1605kHz LW 150-350kHz SW 5.8-15.8MHz
	IF : FM 10.7MHz AM 468KHz
	AC : 220V ~ 50Hz 85W
SERIAL NO.	MADE IN JAPAN

E model

  	STEREO MUSIC SYSTEM
	MODEL NO. HST-39
	FREQUENCY RANGE : FM 87.5-108MHz MW 530-1605kHz SW ₁ 2.3-6.2MHz SW ₂ 7.0-17.9MHz
	IF : FM 10.7MHz AM 468KHz
	AC : 110-120V/220-240V ~ 50/60Hz 85W
SERIAL NO.	MADE IN JAPAN

SECTION 1 OUTLINE

1-1. BLOCK DIAGRAM



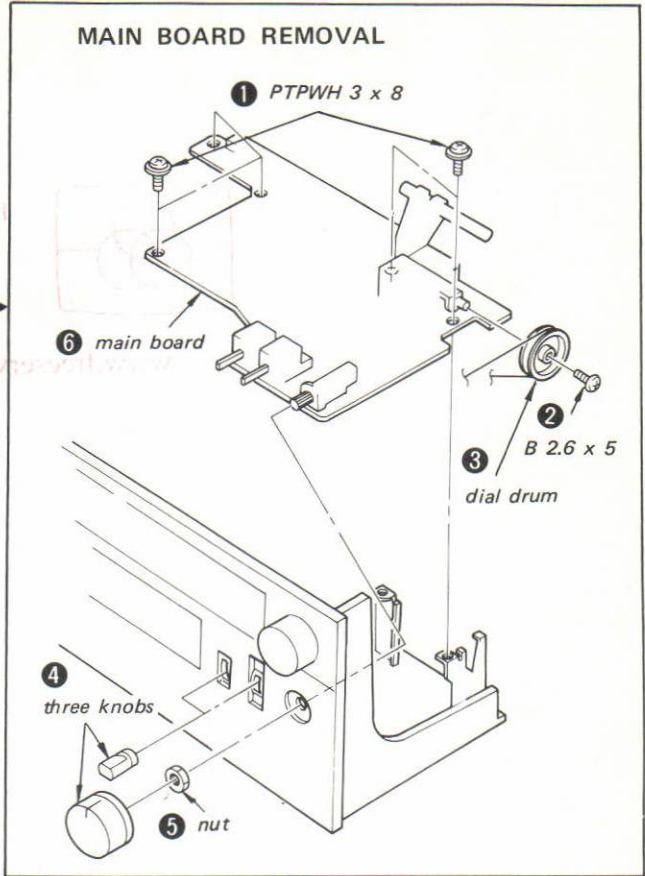
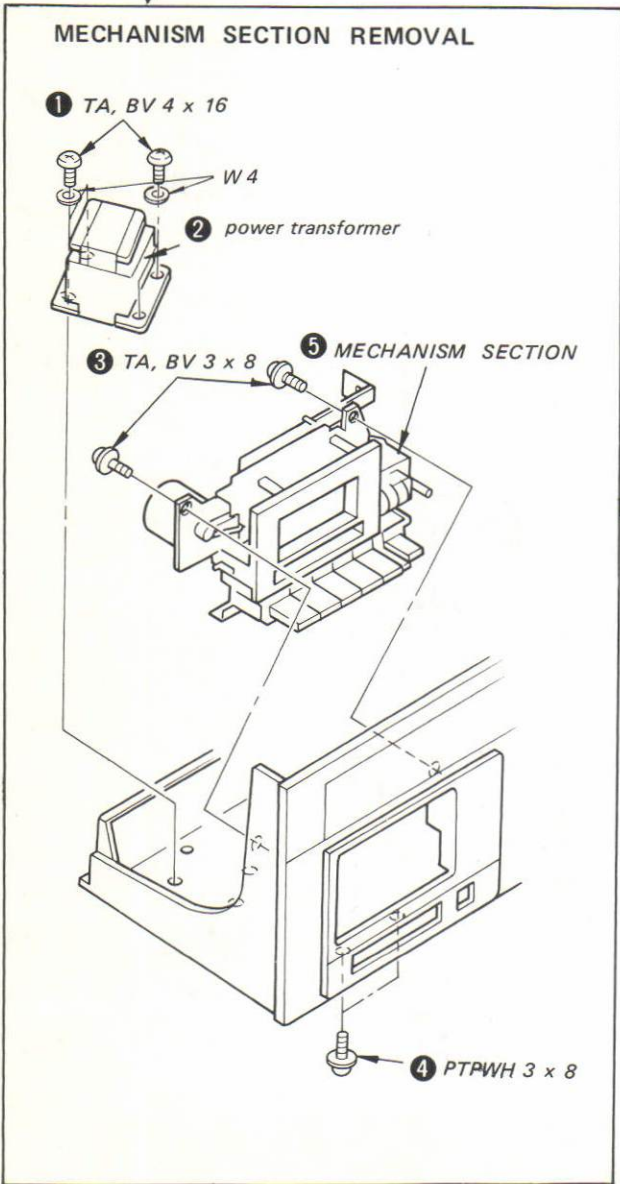
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SECTION 2 DISASSEMBLY

- Follow the disassembly procedure in the numerical order given.

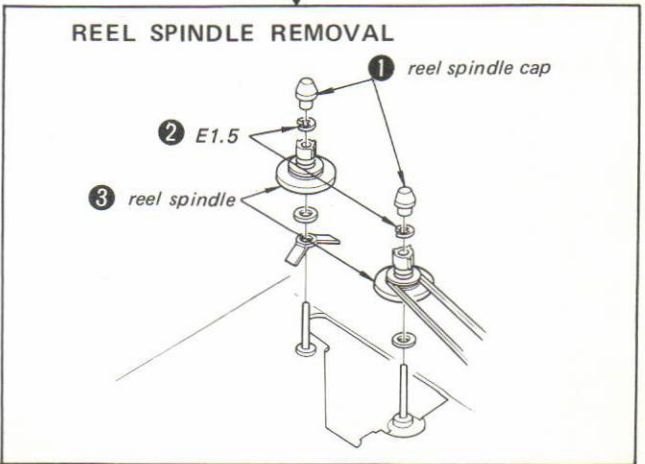
Remove the case.
BTP 4 x 25 (four screws)

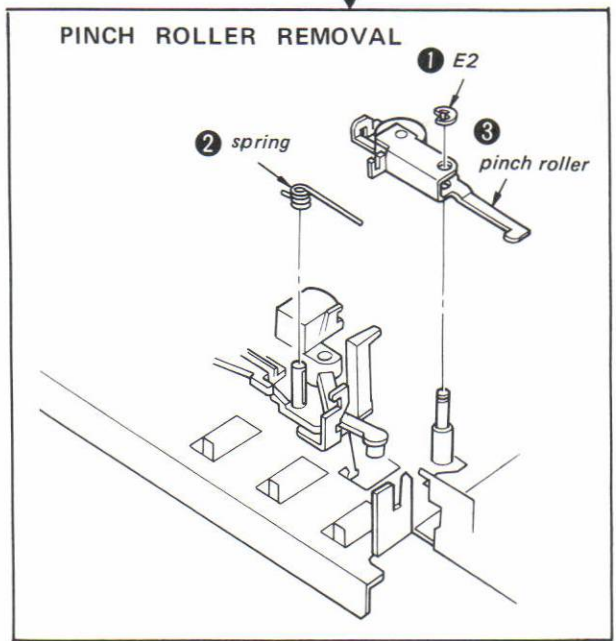
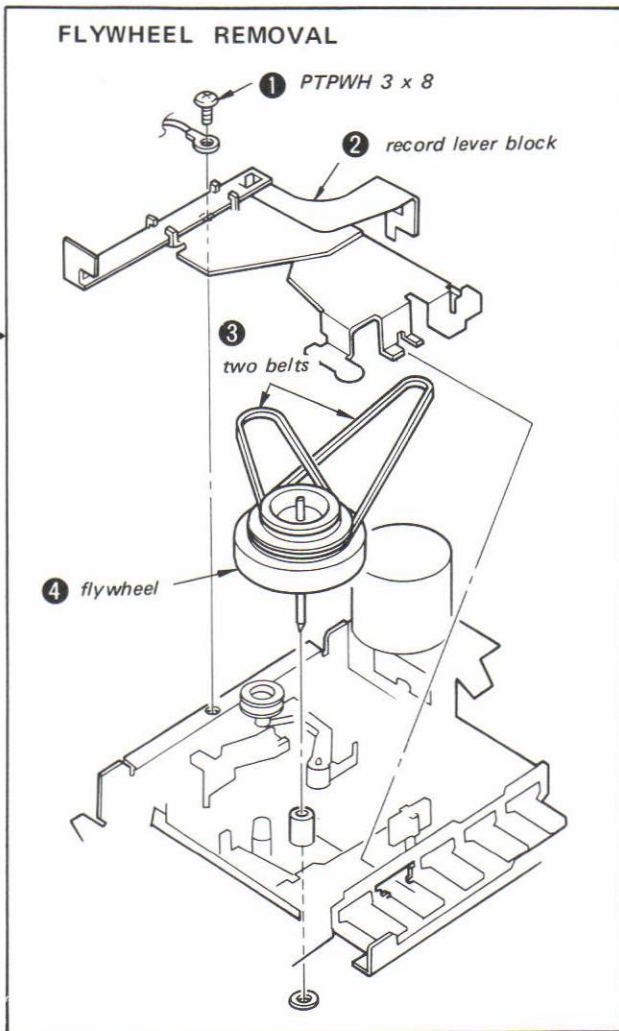
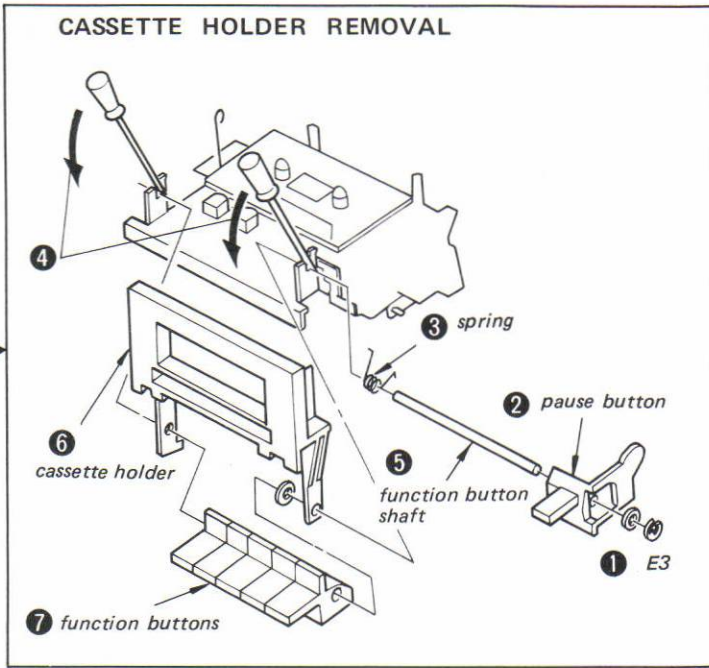
Remove the rear board.
PTPWH 3 x 8 (one screw)

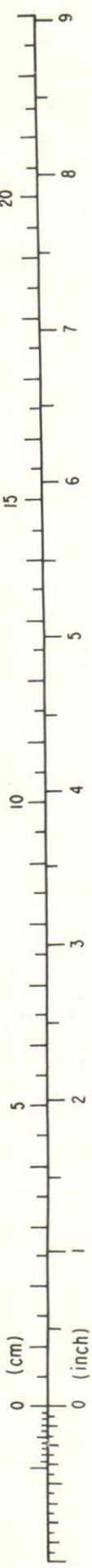


Remove the power amp board.

Remove the cassette deck cover.
TPP 2.6 x 10 (two screws)

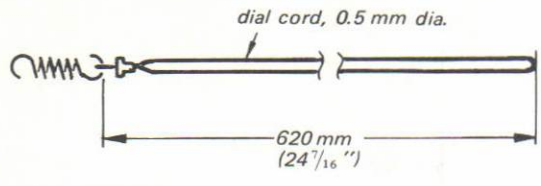






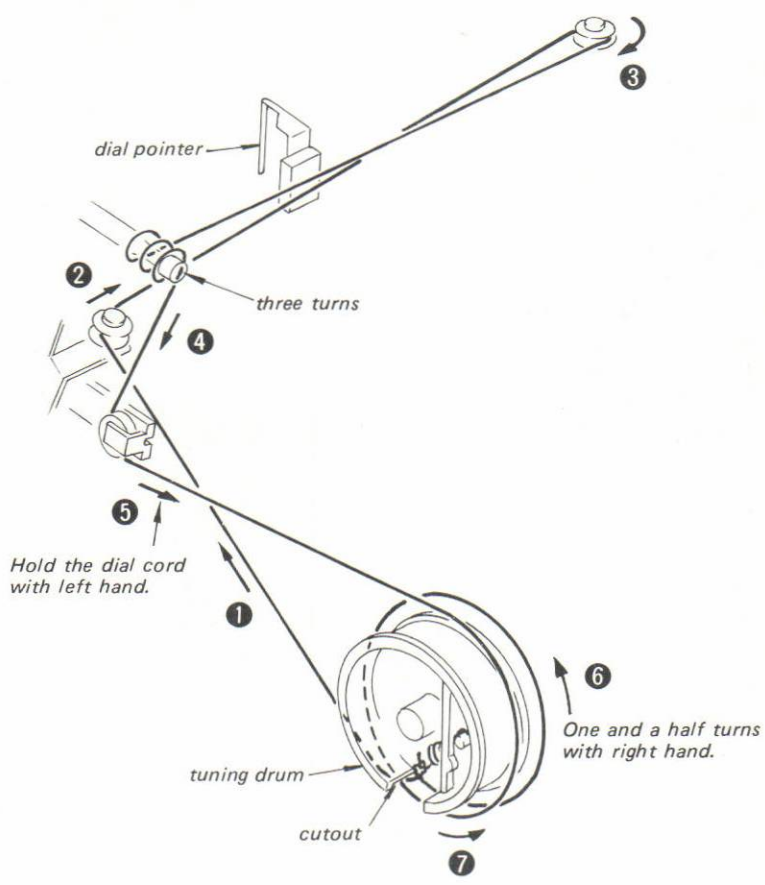
DIAL CORD STRINGING

1. Preparation



2. Stringing

- Turn the tuning-capacitor shaft fully clockwise and set the tuning drum so that the cutout is positioned as shown below.



3. Dial Pointer Setting

Receive a broadcasting station and set the dial pointer to the frequency of the station on the dial scale.

SECTION 3 ADJUSTMENTS

3-1. MECHANICAL ADJUSTMENT

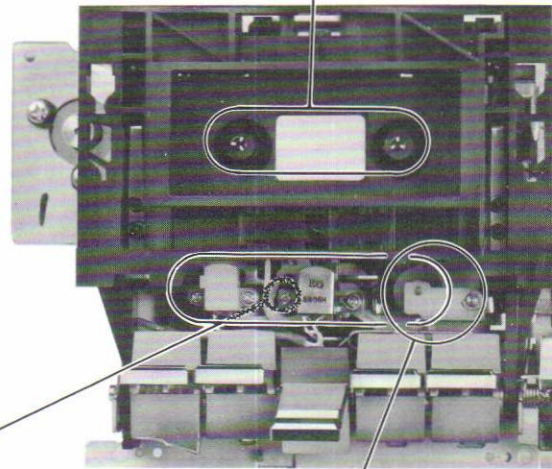
PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab:

record/playback head	pinch roller
erase head	rubber belts
capstan	idlers
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply a suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Torque Adjustment

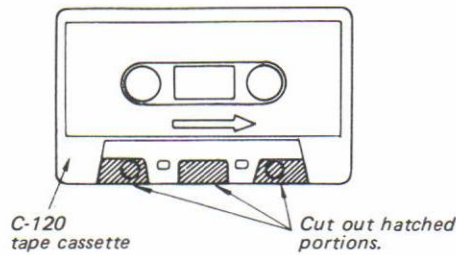
	Torque meter	Meter reading
Forward	CQ-101A, 102A, 103A	25 – 60 g-cm (0.35 – 0.84 oz-inch)
Fast Forward Rewind	CQ-201A	60 – 110 g-cm (0.84 – 1.53 oz-inch)



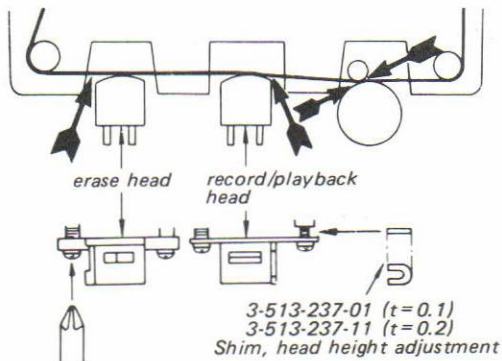
Head Height Adjustment

– Playback Mode –

1. Prepare an adjustment cassette as shown below.



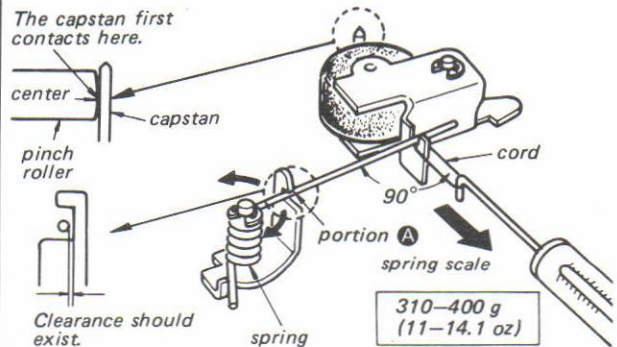
2. In playback mode and viewing from the front, adjust the head heights to eliminate tape curl and tape twist at arrowed portions.



Pinch Roller Pressure Adjustment

– Playback Mode –

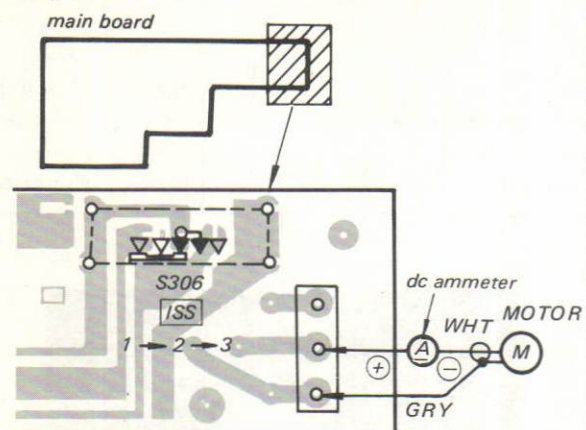
1. Pull the spring scale.
2. Slowly return the pinch roller and read the spring scale just when the pinch roller starts to rotate.
3. If necessary, bend the portion **A**.



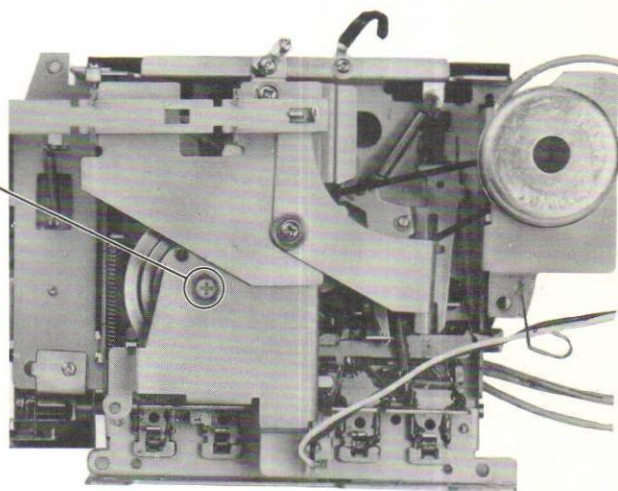
Note: If necessary, replace the spring.

Flywheel Thrust Play Adjustment

— Playback Mode —



1. Disconnect a lead wire (white) of the motor and connect the dc ammeter as shown above.
2. Turn the thrust screw counterclockwise until the screw tip is detached from the flywheel shaft.
3. Gradually turn the thrust screw clockwise to the position where the motor current suddenly increases.
4. Then, turn the thrust screw counterclockwise about $\frac{1}{4}$ turn from the position obtained in step 2.

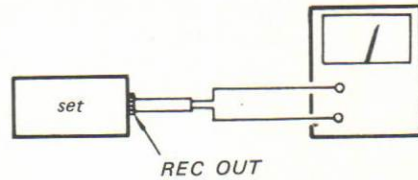
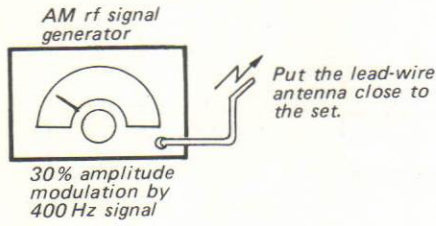


3-2. ELECTRICAL ADJUSTMENTS

MW SECTION (AEP, E model)

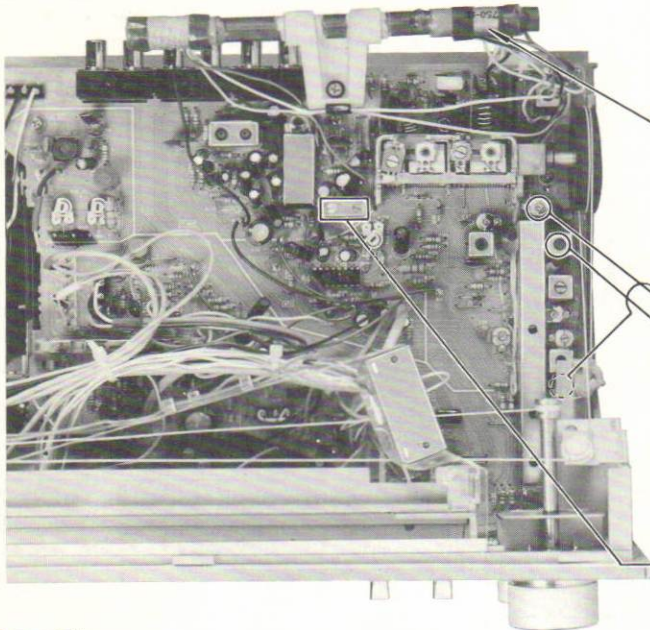
Setting: FUNCTION (3) switch: TUNER
FUNCTION (1) switch: MW

VOM
(range: 0.5–5 V ac)



- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

AEP model

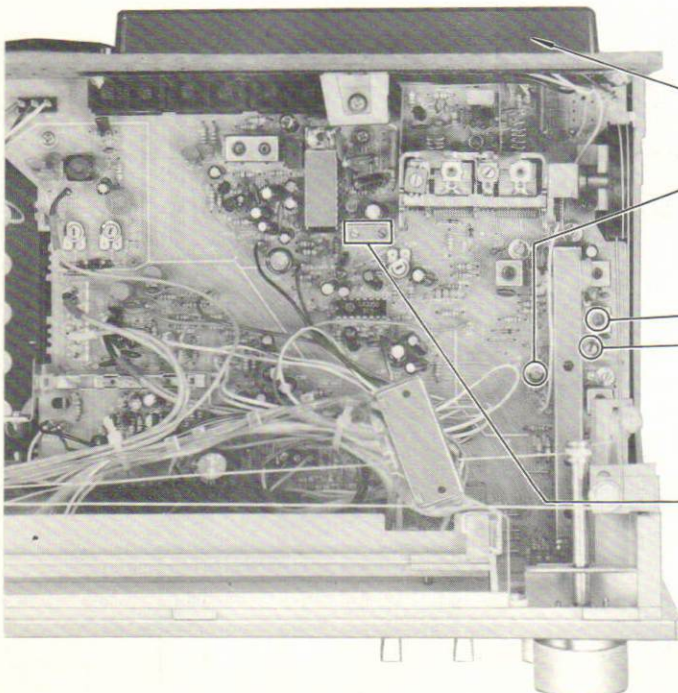


MW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VOM .	
L55	620 kHz
CT55	1400 kHz

MW FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VOM .	
CT52	1680 kHz
L52	520 kHz

AM IF ALIGNMENT	
Adjust for a maximum reading on VOM .	
CFU101	468 kHz

E model



MW TRACKING ADJUSTMENT	
Adjust for maximum reading on VOM .	
L54	620 kHz
CT54	1400 kHz

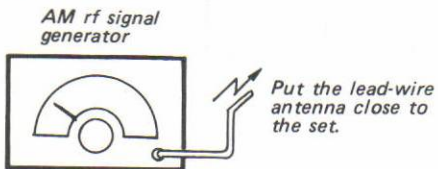
MW FREQUENCY COVERAGE ADJUSTMENT	
Adjust for maximum reading on VOM .	
L51	520 kHz
CT51	1680 kHz

AM IF ALIGNMENT	
Adjust for maximum reading on VOM .	
CFU101	468 kHz

SW, LW SECTION (AEP model)

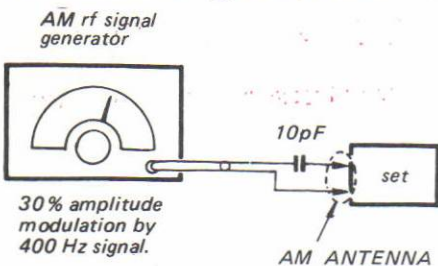
Setting: FUNCTION (3) switch: TUNER
 FUNCTION (1) switch: SW or LW

- LW FREQUENCY COVERAGE ADJUSTMENT
- LW TRACKING ① ADJUSTMENT
- AM IF ALIGNMENT



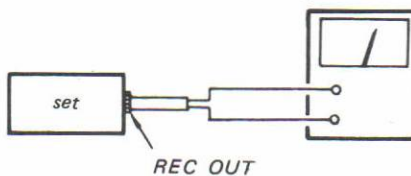
30% amplitude modulation by 400 Hz signal

- SW FREQUENCY COVERAGE ADJUSTMENT
- SW TRACKING ADJUSTMENT
- LW TRACKING ② ADJUSTMENT



30% amplitude modulation by 400 Hz signal.

VOM
 (range: 0.5–5 V ac)



- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

- Perform the LW TRACKING ADJUSTMENT in the numerical order given.

LW TRACKING ① ADJUSTMENT	
Adjust for a maximum reading on VOM.	
L54	170 kHz
CT54	310 kHz

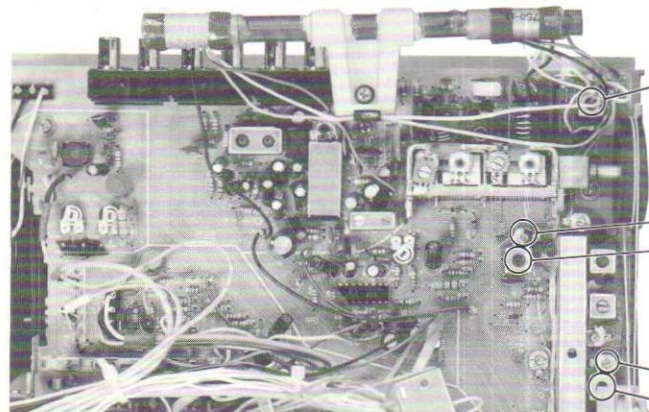
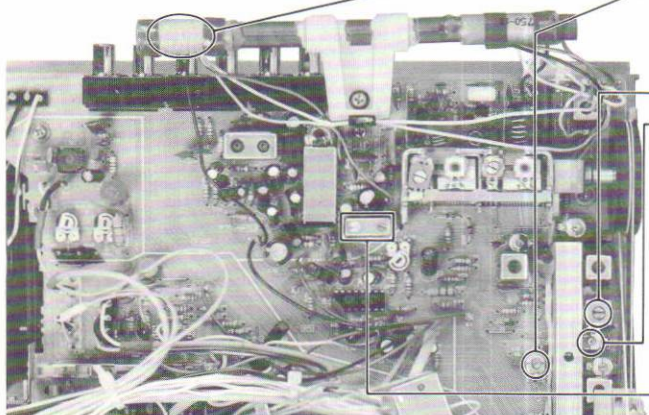
LW FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VOM.	
L51	145 kHz
CT51	365 kHz

AM IF ALIGNMENT	
Adjust for a maximum reading on VOM.	
CFU101	468 kHz

LW TRACKING ② ADJUSTMENT	
LW ANTENNA SELECTOR switch (S5) : ON.	
Adjust for a maximum reading on VOM.	
L57	240 kHz

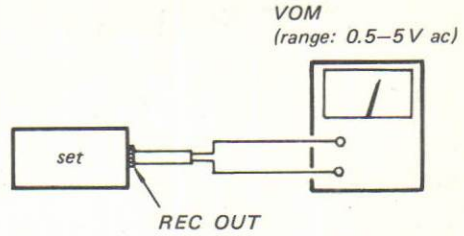
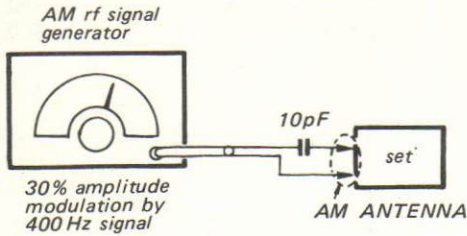
SW FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VOM.	
CT53	16.1 MHz
L53	5.5 MHz

SW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VOM.	
CT56	16.1 MHz
L56	5.5 MHz

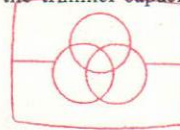


SW1, 2 SECTION (E model)

Setting: FUNCTION (3) switch: TUNER
 FUNCTION (1) switch: SW1 or SW2



- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.



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SW 2 FREQUENCY COVERAGE ADJUSTMENT

Adjust for a maximum reading on VOM.

18.4 MHz	CT53
6.8 MHz	L53

SW1 FREQUENCY COVERAGE ADJUSTMENT

Adjust for maximum reading on VOM.

CT52	6.5 MHz
L52	2.1 MHz

SW2 TRACKING ADJUSTMENT

Adjust for a maximum reading on VOM.

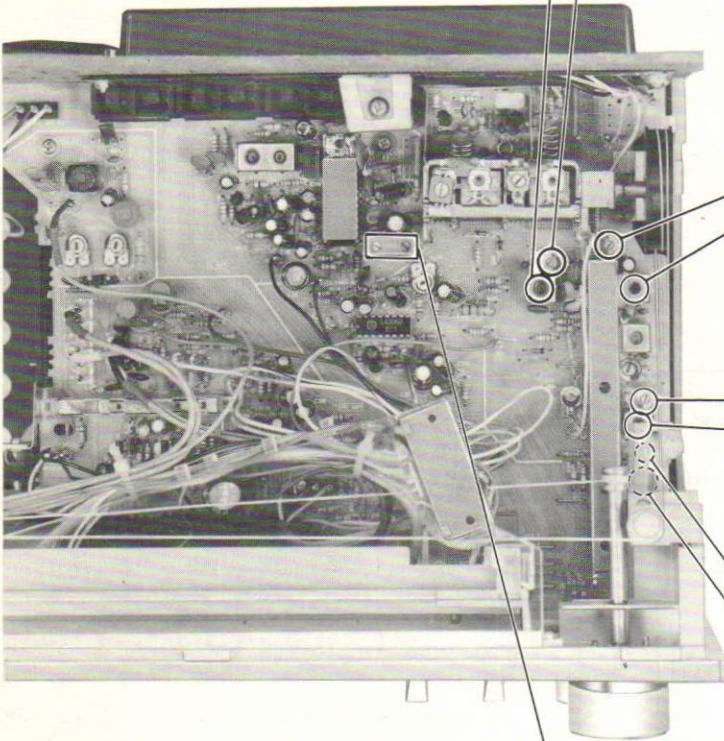
CT56	18.4 MHz
L56	6.8 MHz

SW1 TRACKING ADJUSTMENT

Adjust for maximum reading on VOM.

CT55	6.5 MHz
L55	2.1 MHz

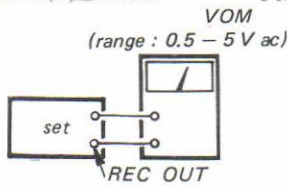
468 kHz	CFU101
Adjust for a maximum reading on VOM.	
AM IF ALIGNMENT	



FM SECTION (AEP, E model)

FM DISCRIMINATOR ALIGNMENT 1

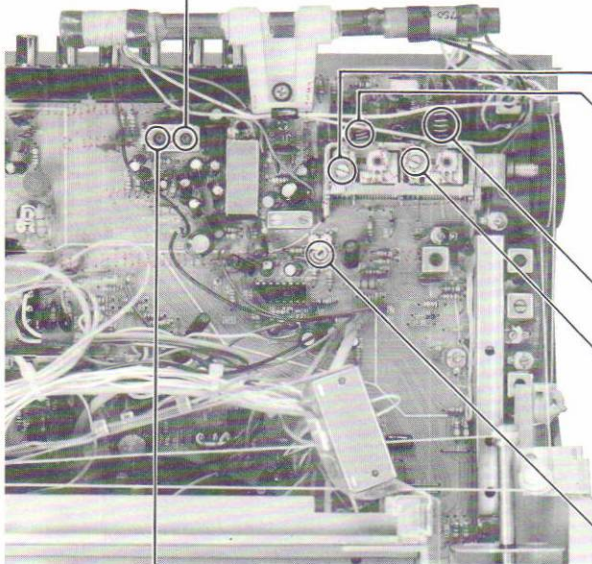
Setting: FUNCTION (3) switch: TUNER
 FUNCTION (1) switch: FM MONO



Procedure:

1. Detune the set.
2. Adjust T101 (primary side) for a maximum on the VOM.

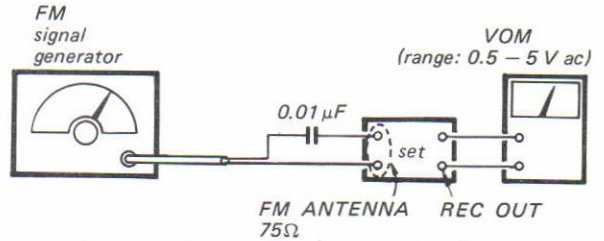
T101 (primary side)



T101 (secondary side)

FM FREQUENCY COVERAGE AND TRACKING ADJUSTMENT

Setting: FUNCTION (3) switch: TUNER
 FUNCTION (1) switch: FM MONO



- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

FM FREQUENCY COVERAGE ADJUSTMENT

Adjust for a maximum reading on VOM.

CT2	108.5 MHz (108.0 MHz)
L3	87.1 MHz (87.5 MHz)

() : in West Germany

FM TRACKING ADJUSTMENT

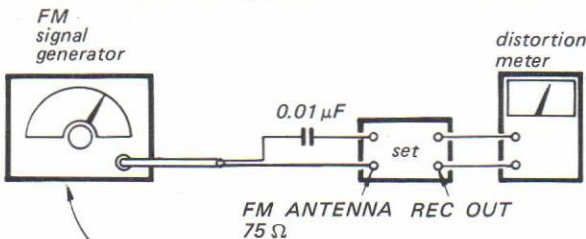
Adjust for a maximum reading on VOM.

L1	87.1 MHz (87.5 MHz)
CT1	108.5 MHz (108.0 MHz)

() : in West Germany

FM DISCRIMINATOR ALIGNMENT 2

Setting: FUNCTION (3) switch: TUNER
 FUNCTION (2) switch: FM MONO



Carrier frequency: 98 MHz
 Output level: 1 mV (60 dB)
 Modulation: 400 Hz, 75 kHz deviation (100%)

Procedure:

Adjust T101 (secondary side) for a minimum reading on the distortion meter.

- Perform this adjustment after the FM discriminator alignment 1.

RV206

19 kHz ADJUSTMENT

Setting: FUNCTION (3) switch: TUNER
 FUNCTION (1) switch: FM STEREO

Procedure:

1. Tune the set to the FM stereo broadcasting signal.
2. Turn RV206 clockwise or counterclockwise and memorize the lighting-up range of D202 (STEREO).
3. Secure RV206 at the center in lighting-up range of both turns as shown below.



TAPE RECORDER SECTION (AEP, E model)

Note: The adjustment should be performed in the order given in this service manual. The adjustments should be performed for both L-CH and R-CH.

Switches and controls should be set as follows unless otherwise specified.

TAPE SELECT switch NORMAL
 FUNCTION (2) switch CASSETTE/mic
 FUNCTION (3) switch AUX

Standard Record:

Supply the standard input signal to the input jack and set the REC LEVEL control to obtain the standard output signal level.

Standard Input Level

	MIC	AUX
source impedance	600 Ω	47 kΩ
input level	3.1 mV (-48 dB)	0.44 V (-5 dB)

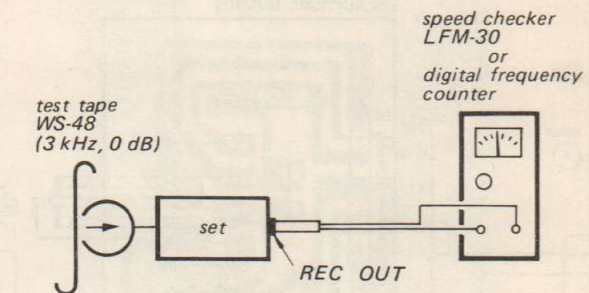
Standard Output Level

	REC OUT
load impedance	10 kΩ
output level	0.25 V (-10 dB)

Tape Speed Adjustment

Procedure:

Mode: playback

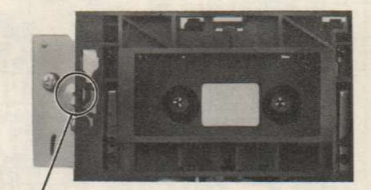


Specification:

Speed checker	Digital frequency counter
-2 - +2.5 %	2,940 - 3,075 Hz

Frequency difference between beginning and end of tape should be within 1% (30 Hz).

Adjustment Location:



If necessary, replace the motor pulley.



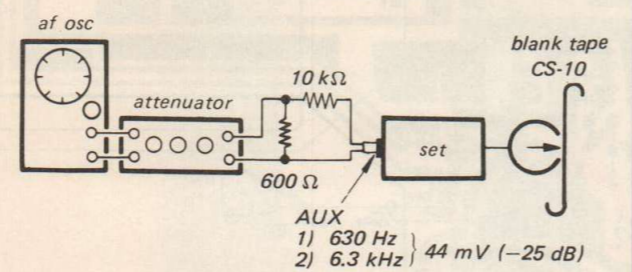
Motor pulley Part No.	Marking	Tape speed change
3-549-088-01	one groove	up ↓ down
3-549-088-11	no mark	
3-549-088-21	two grooves	

Record Bias Adjustment

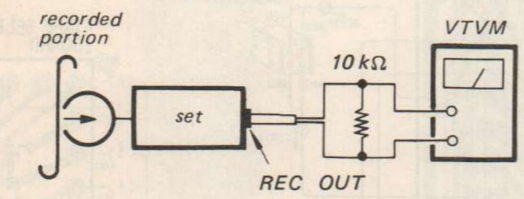
Setting: ISS switch: 2

Procedure:

Mode: standard record (see page 13).



Mode: playback

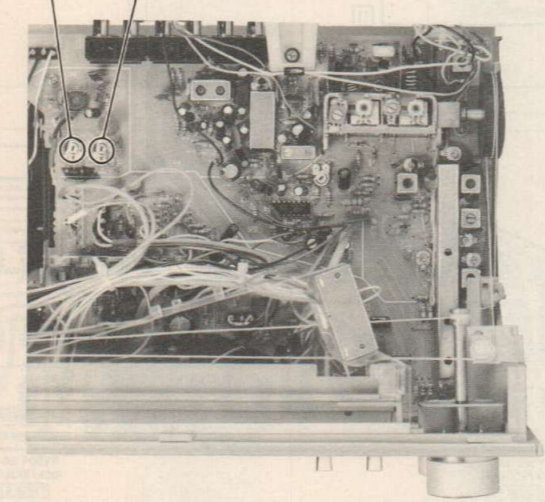


3. Adjust RV 301 and RV 401 to make 630 Hz and 6.3 kHz signal output levels equal.

Level difference between 630 Hz and 6.3 kHz signals: -1 - +1 dB.

Adjustment Location:

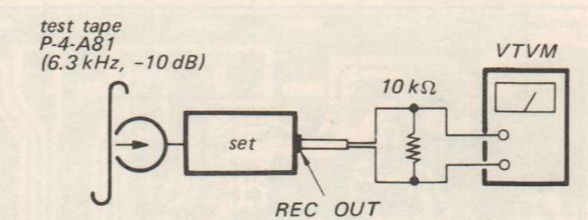
(L-CH) (R-CH)
 RV301 RV401



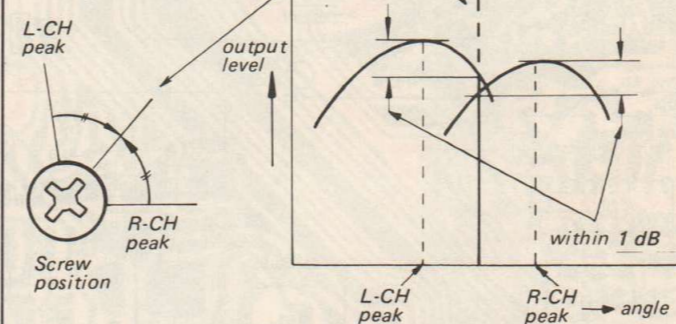
Record/playback Head Azimuth Adjustment

Procedure:

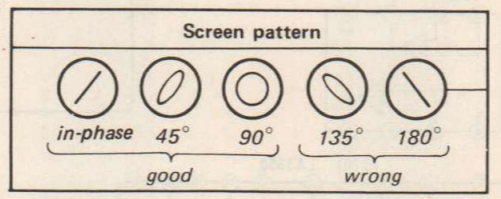
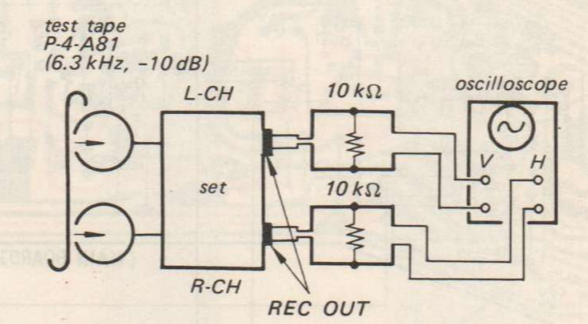
1. Mode: playback



2. Turn the adjustment screw for the maximum level and set it to the mechanical mid position between L-CH and R-CH peak positions.



3. Mode: playback



Adjustment Location:

adjustment screw

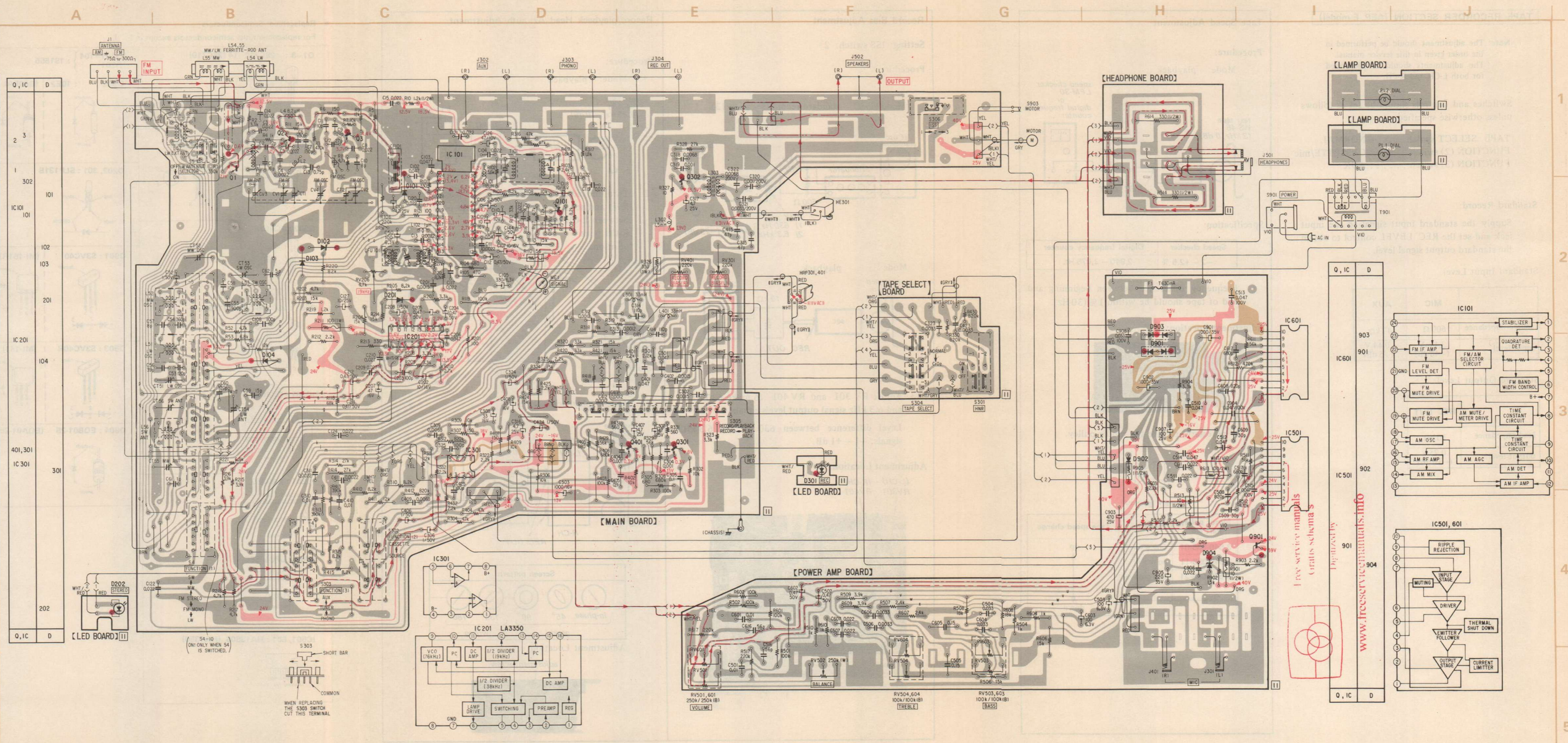


Replacement Semiconductors

For replacement, use semiconductors except in ().

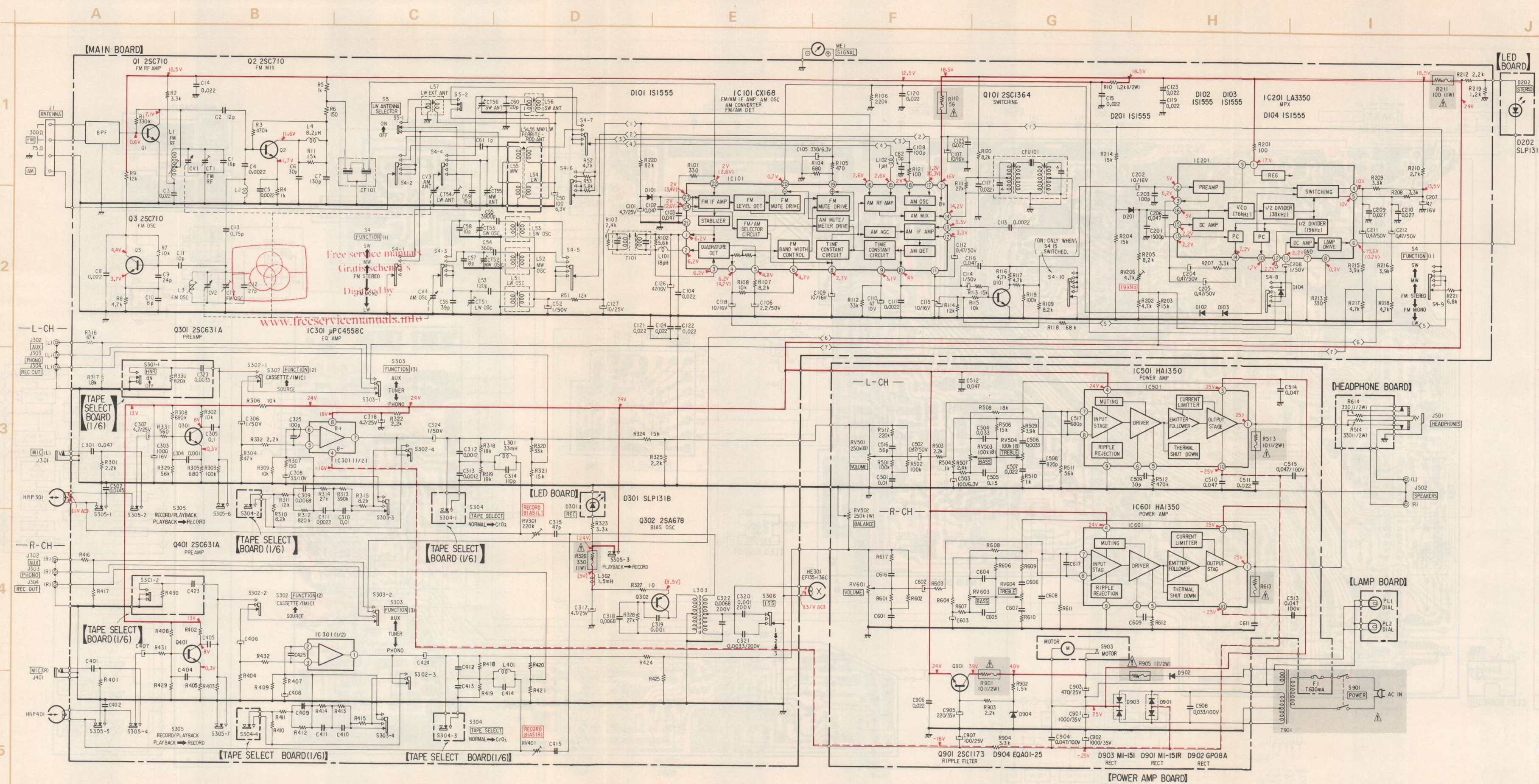
Q1-3 : 2SC710-14 (2SC710) 	D101-104 } : 1S1555 D201 } : 10E2 (GP08A)
Q101 : 2SC1364 Q301, 401 : 2SC1362 (2SC631A) 	D202, 301 : SLP131B
Q302 : 2SA678 	D901 : S3VC40 (MI-151R)
Q901 : 2SC1061 (2SC1173) 	D903 : S3VC40R (MI-151)
IC101 : CX168 	D904 : EQB01-25 (EQA01-25)
IC201 : LA3350 	
IC301 : μPC4558C 	
IC501, 601 : HA1350S (HA1350) 	

4-1. MOUNTING DIAGRAM (AEP model) - Conductor Side -



- Note:**
- Color code of sleeving over the end of the jacket.
 - WHT (RED) (GRY)
 - [] : indicates side identified with part number.
 - [] : B+ pattern
 - [] : B- pattern
 - [] : signal path
 - [] : L-CH
 - [] : R-CH

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- Note:**
- Components for right channel have same values as for left channel.
 - All capacitors are in μF unless otherwise noted. $pF = \mu\mu F$ 50 WV or less are not indicated except for electrolytics.
 - All resistors are in ohms, $\frac{1}{4}W$ unless otherwise noted. $k\Omega = 1000 \Omega$, $M\Omega = 1000 k\Omega$
 - \square : fusible resistor.
 - \triangle : internal component.
 - --- : B+ bus.
 - --- : B- bus.
 - \square : panel designation.
 - \square : adjustment for repair.
 - Voltages are dc with respect to ground unless otherwise noted.
 - Readings are taken under no signal (detuned) conditions with a VOM (20 $k\Omega/V$).
 () : AM
 [] : record
 < > : LED (D202) light
 (|) : record (with VTVM)
 - Voltage variations may be noted due to normal production tolerances.

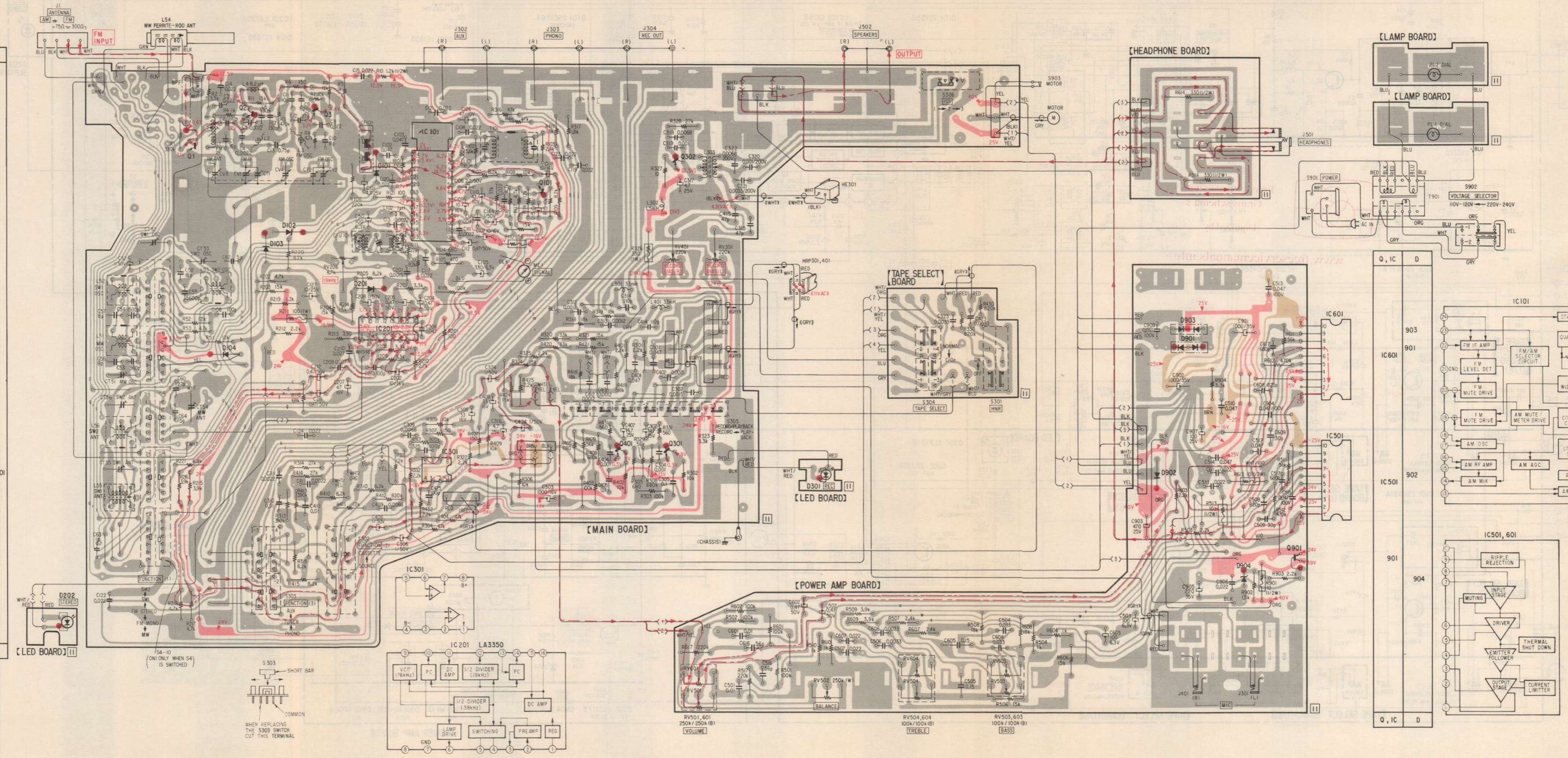
• Switch

Ref. No.	Switch	Position
S4-1 to 4-10	FUNCTION (1)	FM STEREO
S5-1, 2	LW ANTENNA SELECTOR	OFF
S301-1, 2	HNR	OFF
S302-1 to 302-4	FUNCTION (2)	SOURCE
S303-1 to 303-4	FUNCTION (3)	TUNER
S304-1 to 304-4	TAPE SELECT	NORMAL
S305-1 to 305-7	RECORD/PLAYBACK	PLAYBACK
S306	ISS	1
S901	POWER	OFF
S903	MOTOR	OFF

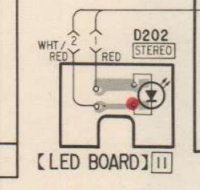
Note: The components identified by shading and mark \triangle are critical for safety. Replace only with part number specified.

4.3. MOUNTING DIAGRAM (E model) - Conductor Side -

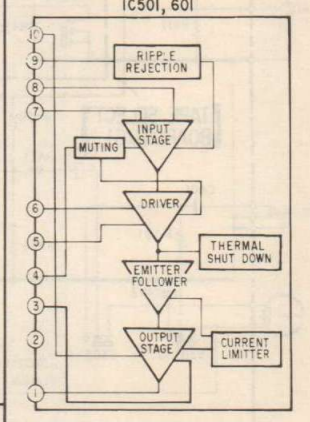
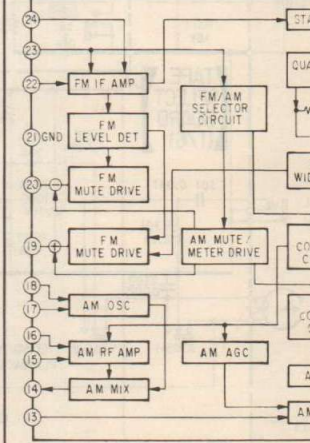
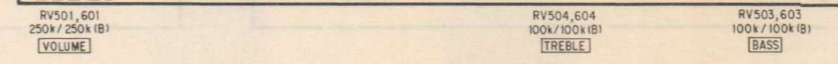
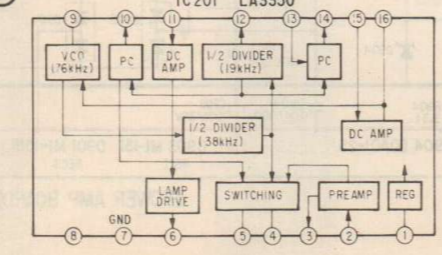
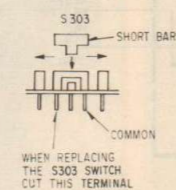
Q, IC	D
2	3
1	302
IC101	101
2	102
103	
201	
IC 201	104
401, 301	
IC 301	301
202	
Q, IC	D
903	
IC 601	901
902	
IC 501	902
901	
904	
Q, IC	D

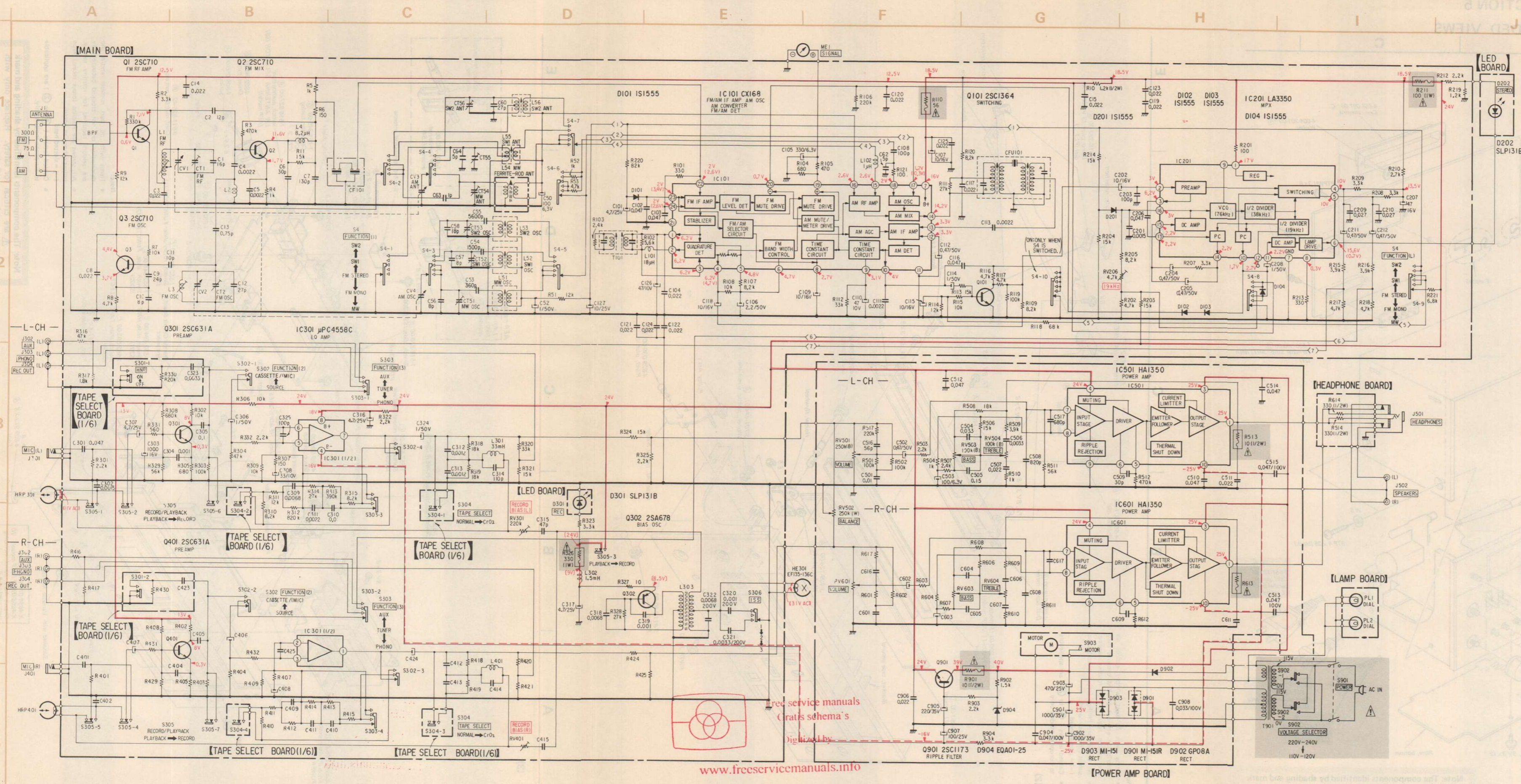


- Note:
- Color code of sleeving over the end of the jacket.
 - WHT RED (RED/GRY)
 - Indicates side identified with part number.
 - B+ pattern
 - B- pattern
 - signal path
 - L-CH
 - R-CH



S4-10 (ON ONLY WHEN S4 IS SWITCHED)





- Note:**
- Components for right channel have same values as for left channel.
 - All capacitors are in μF unless otherwise noted. $\text{pF} = \mu\text{F} / 100$
 - All resistors are in ohms, $\frac{1}{4}\text{W}$ unless otherwise noted. $\text{k}\Omega = 1000 \Omega$, $\text{M}\Omega = 1000 \text{k}\Omega$
 - : fusible resistor.
 - Δ : internal component.
 - : B+ bus.
 - : B- bus.
 - : panel designation.
 - : adjustment for repair.
 - Voltages are dc with respect to ground unless otherwise noted.
 - Readings are taken under no signal (detuned) conditions with a VOM (20 k Ω /V).
 - () : AM
 - [] : record
 - < > : LED (D202) light
 - (()) : record (with VTVM)
 - Voltage variations may be noted due to normal production tolerances.

• Switch

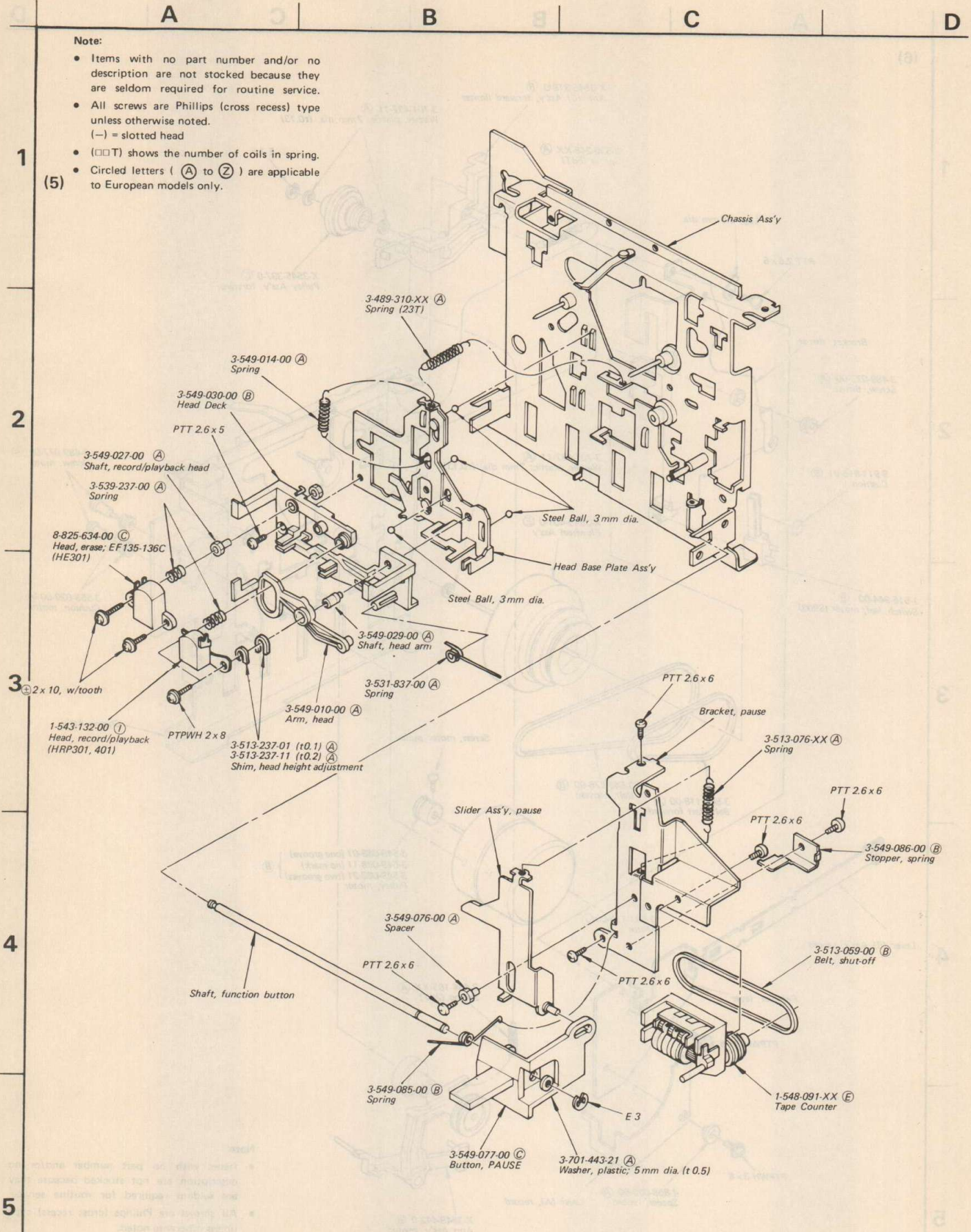
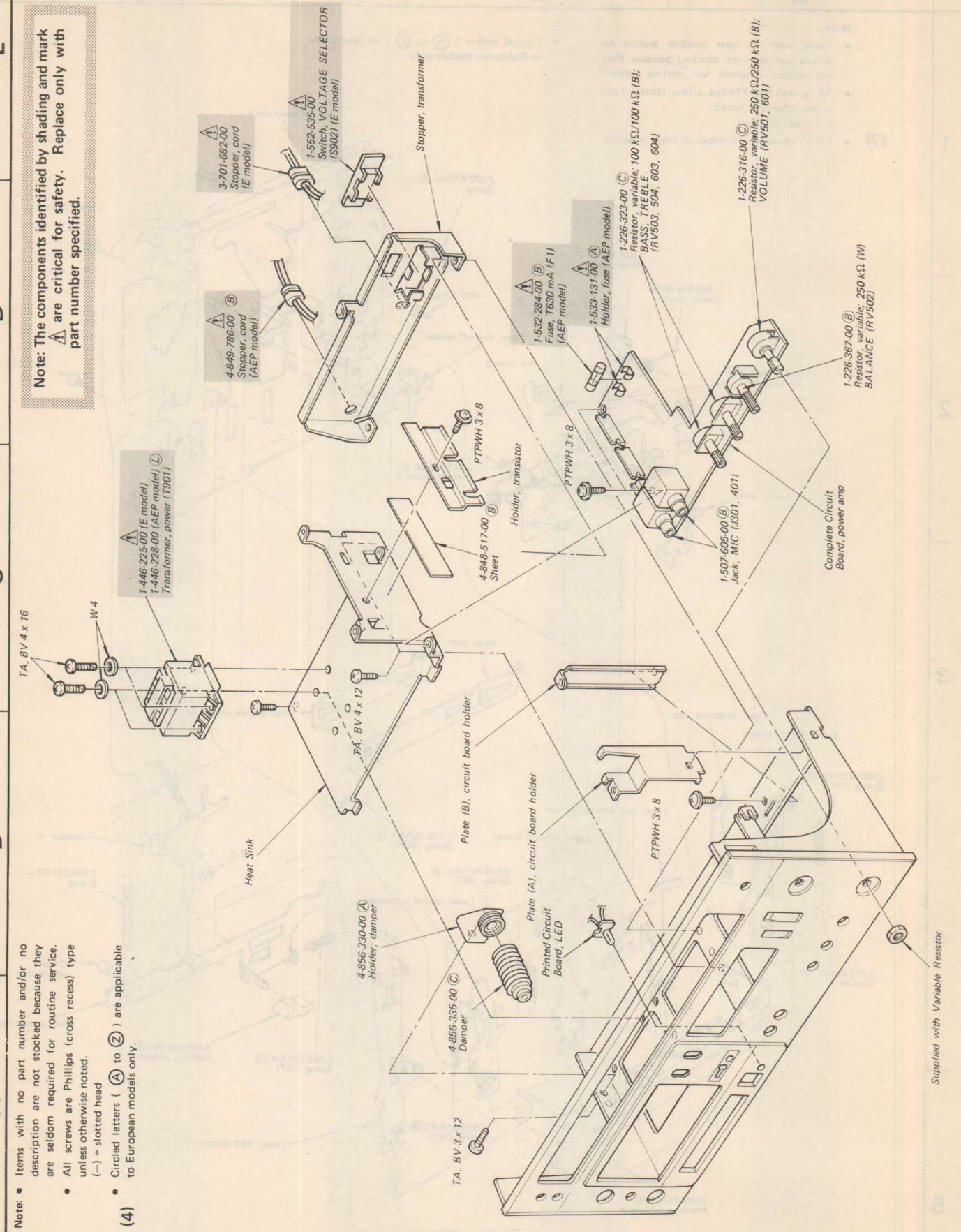
Ref. No.	Switch	Position
S4-1 to 4-10	FUNCTION (1)	FM STEREO
S301-1, 2	HNR	OFF
S302-1 to 302-4	FUNCTION (2)	SOURCE
S303-1 to 303-4	FUNCTION (3)	TUNER
S304-1 to 304-4	TAPE SELECT	NORMAL
S305-1 to 305-7	RECORD/PLAYBACK	PLAYBACK
S306	ISS	1
S901	POWER	OFF
S902	VOLTAGE SELECTOR	220 V-240 V
S903	MOTOR	OFF

Note: The components identified by shading and mark are critical for safety. Replace only with part number specified.

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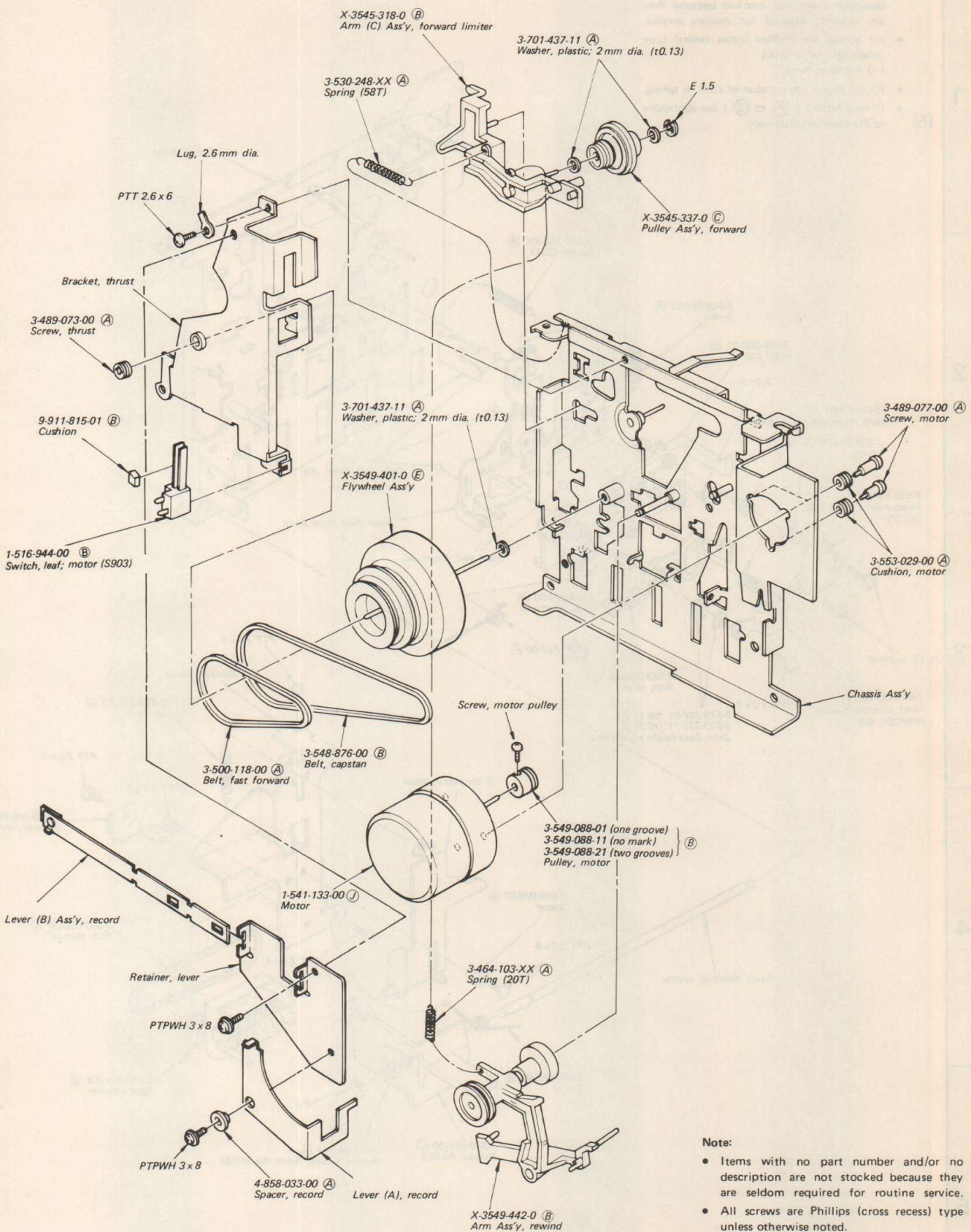
Note: The components identified by shading and mark **A** are critical for safety. Replace only with part number specified.

Note: Items with no part number and/or no description are not stocked because they are seldom required for routine service. All screws are Phillips (cross recess) type unless otherwise noted. Circled letters (A to Z) are applicable to European models only.



Note:
 • Items with no part number and/or no description are not stocked because they are seldom required for routine service.
 • All screws are Phillips (cross recess) type unless otherwise noted.
 (-) = slotted head
 • (□T) shows the number of coils in spring.
 • Circled letters (A to Z) are applicable to European models only.

(6)



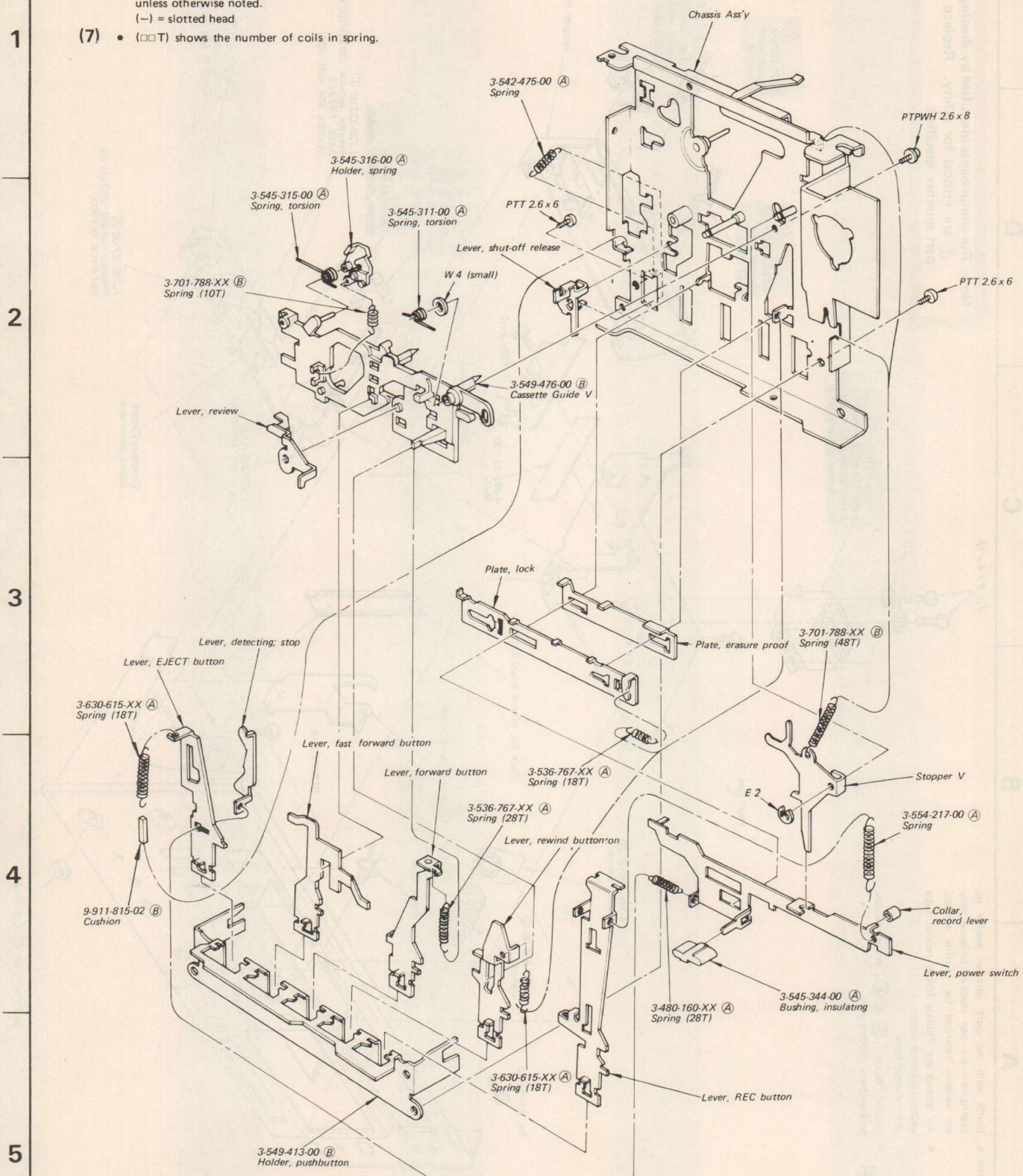
Note:

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted. (-) = slotted head
- (□□T) shows the number of coils in spring.
- Circled letters (A to Z) are applicable to European models only.

Note:

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted. (-) = slotted head
- (7) • (□□T) shows the number of coils in spring.

- Circled letters (A to Z) are applicable to European models only.



SECTION 6

ELECTRICAL PARTS LIST

Note: Circled letters (A) to (Z) are applicable to European models only.

Ref. No. Part No. Description

SEMICONDUCTORS

Transistors

- ⇒ Q1-3 8-729-671-14 (B) 2SC710-14
- Q101 8-729-663-47 (B) 2SC1364
- ⇒ Q301, 401 8-729-665-47 (B) 2SC1362
- Q302 8-727-788-00 (B) 2SA678
- ⇒ Q901 8-729-316-12 (D) 2SC1061

ICs

- IC101 8-751-680-01 (I) CX168
- IC201 8-759-833-50 (F) LA3350
- IC301 8-759-145-58 (D) μ PC4558C
- ⇒ IC501, 601 8-759-313-51 (G) HA1350S

Diodes

- D101-104, D201 8-719-815-55 (B) 1S1555
- D202, 301 8-719-901-31 (B) SLP131B
- ⇒ D901 8-719-500-34 (C) S3VC40
- ⇒ D902 8-719-200-02 (B) 10E2
- ⇒ D903 8-719-501-34 (C) S3VC40R
- ⇒ D904 8-719-931-25 (B) EQB01-25

COILS

- L4 1-407-189-XX (A) 8.2 μ H, microinductor
- L51 (1-405-813-00 (B) LW Osc (AEP model)
1-405-814-00 MW Osc (E model)
- L52 (1-405-814-00 (B) MW Osc (AEP model)
1-405-815-00 SW1 Osc (E model)
- L53 (1-405-812-00 (B) SW Osc (AEP model)
1-405-820-00 SW2 Osc (E model)
- L54 1-401-742-11 MW Ferrite-rod Antenna (E model)
- L54, 55 1-401-750-00 (D) MW/LW Ferrite-rod Antenna (AEP model)
- L55 1-401-745-00 SW1 Antenna (E model)
- L56 (1-401-741-00 (B) SW Antenna (AEP model)
1-401-746-00 SW2 Antenna (E model)
- L57 1-401-749-00 (B) LW Ext Antenna (AEP model)

⇒ Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.

Ref. No. Part No. Description

- L101 1-407-741-00 (B) 18 μ H, microinductor
- L102 1-407-178-XX (A) 1 μ H, microinductor
- L301, 401 1-407-964-00 (B) 33 mH, microinductor
- L302 1-407-213-XX (B) 1.5 mH, microinductor
- L303 1-433-202-00 (B) Bias osc

TRANSFORMERS

- CFU101 1-403-827-00 (C) AM IFT Triple Tune
- T101 1-404-011-00 (C) FM IFT

- T901 (A) 1-446-225-00 Power (E model)
(L) 1-446-228-00 Power (AEP model)

CAPACITORS

All capacitors are in μ F and ceramic unless otherwise noted. 50WV or less are not indicated except for electrolytics. p : μ F, elect : electrolytic

- C1 1-102-952-00 (A) 16 p
- C2 1-102-949-00 (A) 12 p
- C3 1-101-005-00 (A) 0.022
- C4, 5 1-101-002-00 (A) 0.0022
- C6 1-102-962-00 (A) 30 p
- C7 1-101-081-00 (A) 130 p
- C8 1-101-005-00 (A) 0.022
- C9 1-101-982-00 (A) 24 p
- C10 1-102-684-00 (A) 8 p
- C11 1-101-978-00 (A) 10 p
- C12 1-102-643-00 (A) 27 p
- C13 1-101-586-00 (A) 0.75 p
- C14, 15 1-101-005-00 (A) 0.022
- C50 1-121-414-00 (A) 100 6.3 V elect
- C52 1-121-391-00 (A) 1 50 V elect
- C53 (1-103-703-00 (A) 120 p polystyrol (AEP model)
1-103-714-00 360 p polystyrol (E model)
- C54 (1-103-714-00 (A) 360 p polystyrol (AEP model)
1-103-729-00 1500 p polystyrol (E model)
- C55 (1-103-739-00 (B) 3900 p polystyrol (AEP model)
1-103-743-00 5600 p polystyrol (E model)
- C56 (1-102-283-00 8 p (E model)
1-102-693-00 (A) 39 p (AEP model)

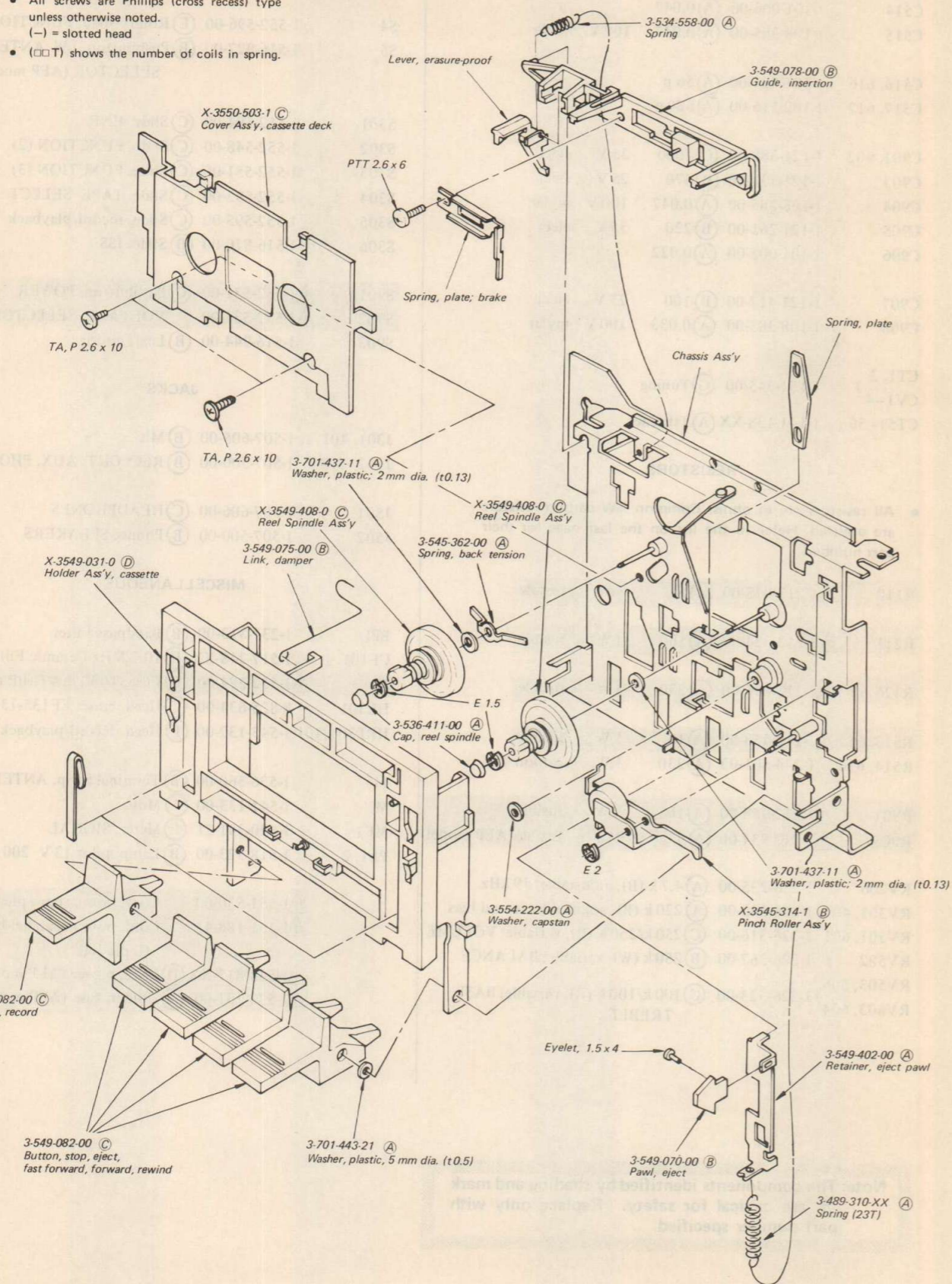
Note: The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

A B C D

Note:

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted. (-) = slotted head
- (8) (□T) shows the number of coils in spring.

- Circled letters (A) to (Z) are applicable to European models only.



Note: Circled letters (A to Z) are applicable to European models only.

Note: Circled letters (A to Z) are applicable to European models only.

Ref. No.	Part No.	Description
C57	1-102-283-00 (A) 8 p	
C58	1-102-295-00	18 p (E model)
	1-102-253-00 (A) 10 p (AEP model)	
C59	1-102-951-00 (A) 15 p (AEP model)	
C60	1-102-961-00	27 p (E model)
	1-102-958-00 (A) 20 p (AEP model)	
C61	1-102-934-00 (A) 1 p (AEP model)	
C62	1-102-942-00 (A) 5 p	
C63	1-102-934-00	1 p (E model)
C64	1-102-942-00	5 p (E model)
C101	1-121-395-00 (A) 4.7	25 V elect
C102, 103	1-101-925-00 (A) 0.047	
C104	1-101-005-00 (A) 0.022	
C105	1-121-751-00 (B) 330	6.3 V elect
C106	1-121-450-00 (A) 2.2	50 V elect
C107	1-121-651-00 (A) 10	16 V elect
C108	1-107-085-00 (A) 100 p	silvered mica
C109	1-121-651-00 (A) 10	16 V elect
C110	1-121-352-00 (A) 47	10 V elect
C111	1-161-043-00 (A) 0.0022	(semiconductor)
C112	1-121-726-00 (A) 0.47	50 V elect
C113	1-101-002-00 (A) 0.0022	
C114	1-121-391-00 (A) 1	50 V elect
C115	1-121-651-00 (A) 10	16 V elect
C116	1-101-925-00 (A) 0.047	
C117	1-101-005-00 (A) 0.022	
C118	1-121-651-00 (A) 10	16 V elect
C119-125	1-101-005-00 (A) 0.022	
C126	1-121-352-00 (A) 47	10 V elect
C127	1-121-398-00 (A) 10	25 V elect
C201	1-103-729-00 (A) 1500 p	polystyrol
C202	1-121-651-00 (A) 10	16 V elect
C203	1-102-973-00 (A) 100 p	
C204, 205	1-121-726-00 (A) 0.47	50 V elect
C206	1-101-925-00 (A) 0.047	
C207	1-121-409-00 (A) 47	16 V elect
C208	1-121-391-00 (A) 1	50 V elect

Ref. No.	Part No.	Description
C209, 210	1-161-018-00 (A) 0.027	(semiconductor)
C211, 212	1-121-726-00 (A) 0.47	50 V elect
C301, 401	1-108-595-00 (A) 0.047	mylar
C302, 402	1-108-228-00 (A) 0.0015	mylar
C303	1-121-245-00 (B) 1000	16 V elect
C304, 404	1-102-074-00 (A) 0.001	
C305, 405	1-108-251-00 (A) 0.1	mylar
C306, 406	1-121-391-00 (A) 1	50 V elect
C307, 407	1-121-915-00 (B) 4.7	25 V elect
C308, 408	1-121-402-00 (A) 33	10 V elect
C309, 409	1-108-237-00 (A) 0.0068	mylar
C310, 410	1-108-239-00 (A) 0.01	mylar
C311, 411	1-108-230-00 (A) 0.0022	mylar
C312, 412,	1-108-351-00 (A) 0.0012	mylar
C313, 413		
C314, 414	1-102-815-00 (A) 110 p	
C315, 415	1-101-881-00 (A) 47 p	
C316,	1-121-395-00 (A) 4.7	25 V elect
C317		
C318	1-108-237-00 (A) 0.0068	mylar
C319	1-102-074-00 (A) 0.001	
C320	1-108-409-00 (A) 0.001	200 V mylar
C321	1-108-415-00 (A) 0.0033	200 V mylar
C322	1-108-419-00 (A) 0.0068	200 V mylar
C323, 423	1-102-123-00 (A) 0.0033	
C324, 424	1-121-391-00 (A) 1	50 V elect
C325, 425	1-102-975-00 (A) 100 p	
C501, 601	1-108-239-00 (A) 0.01	mylar
C502, 602	1-121-726-00 (A) 0.47	50 V elect
C503, 603	1-121-413-00 (A) 100	6.3 V elect
C504, 604	1-108-591-00 (A) 0.033	mylar
C505, 605	1-108-252-00 (B) 0.15	mylar
C506, 606	1-108-567-00 (A) 0.0033	mylar
C507, 607	1-108-242-00 (A) 0.022	mylar
C508, 608	1-102-117-00 (A) 820 p	
C509, 609	1-102-962-00 (A) 30 p	
C510	1-101-006-00 (A) 0.047	
C511, 611	1-101-005-00 (A) 0.022	
C512	1-101-006-00 (A) 0.047	

Ref. No.	Part No.	Description
C513	1-108-385-00 (A) 0.047	100 V mylar
C514	1-101-006-00 (A) 0.047	
C515	1-108-385-00 (A) 0.047	100 V mylar
C516, 616	1-101-884-00 (A) 56 p	
C517, 617	1-102-116-00 (A) 680 p	
C901, 902	1-121-388-00 (C) 1000	35 V elect
C903	1-121-733-00 (B) 470	25 V elect
C904	1-108-385-00 (A) 0.047	100 V mylar
C905	1-121-261-00 (B) 220	35 V elect
C906	1-101-005-00 (A) 0.022	
C907	1-121-417-00 (B) 100	25 V elect
C908	1-108-383-00 (A) 0.033	100 V mylar
CT1, 2	1-151-345-00 (G) Tuning	
CV1-4		
CT51-56	1-141-138-XX (A) Trimmer	

RESISTORS

- All resistors are in ohms. Common 1/4W carbon resistors are omitted. Refer to the list on the last page for their part numbers.

R110	(A) 1-212-875-00 (A) 56	1/4W	fusible
R211	(A) 1-213-084-00 (A) 100	1W	fusible
R326	(A) 1-213-096-00 (A) 330	1W	fusible
R513, 613	(A) 1-212-958-00 (A) 10	1/2W	fusible
R514, 614	1-244-861-00 (A) 330	1/2W	carbon
R901	(A) 1-212-958-00 (A) 10	1/2W	fusible
R905	(A) 1-212-934-00 (A) 1	1/2W	fusible (AEP model)
RV206	1-226-235-00 (A) 4.7 k (B), adjustable; 19 kHz		
RV301, 401	1-226-240-00 (A) 220 k (B), adjustable; record bias		
RV501, 601	1-226-316-00 (C) 250 k/250 k (B), variable; VOLUME		
RV502	1-226-367-00 (B) 250 k (W), variable; BALANCE		
RV503, 504	1-226-323-00 (C) 100 k/100 k (B), variable; BASS, TREBLE		
RV603, 604			

Note: The components identified by shading and mark (A) are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description
SWITCHES		
S4	1-552-596-00 (E) Rotary-slide, FUNCTION (1)	
S5	1-516-927-00 (B) Pushbutton, LW ANTENNA SELECTOR (AEP model)	
S301	1-552-594-00 (C) Slide, HNR	
S302	1-552-548-00 (C) Slide, FUNCTION (2)	
S303	1-552-551-00 (C) Slide, FUNCTION (3)	
S304	1-552-593-00 (C) Slide, TAPE SELECT	
S305	1-552-595-00 (C) Slide, record/playback	
S306	1-516-870-00 (B) Slide, ISS	
S901	(A) 1-552-531-00 (C) Pushbutton, POWER	
S902	(A) 1-552-535-00	VOLTAGE SELECTOR (E model)
S903	1-516-944-00 (B) Leaf, motor	
JACKS		
J301, 401	1-507-605-00 (B) MIC	
J302-304	1-507-500-00 (B) REC OUT, AUX, PHONO	
J501	1-507-606-00 (C) HEADPHONES	
J502	1-507-500-00 (B) Phono, SPEAKERS	
MISCELLANEOUS		
BPF	1-231-313-00 (B) Bandpass Filter	
CF101	1-517-248-XX (H) 10.7 MHz Ceramic Filter	
F1	(A) 1-532-284-00 (B) Fuse, T630 mA (AEP model)	
HE301	8-825-634-00 (C) Head, erase; EF135-136C	
HRP301,401	1-543-132-00 (I) Head, record/playback	
J1	1-536-560-00 (B) Terminal Strip, ANTENNA	
M	1-541-133-00 (J) Motor	
ME1	1-520-341-21 (F) Meter, SIGNAL	
PL1, 2	1-518-323-00 (B) Lamp, pilot 13 V 200 mA; dial	
(A) 1-551-530-00	Cord, power; euro-plug (E model)	
(A) 1-551-188-41	Cord, power; parallel-blade plug (E model)	
(A) 1-534-817-XX (D)	Cord, power (AEP model)	
(A) 1-533-131-00 (A)	Holder, fuse (AEP model)	

Note: Circled letters (A to Z) are applicable to European models only.

ACCESSORIES & PACKING MATERIALS

<u>Part No.</u>	<u>Description</u>	<u>Part No.</u>	<u>Description</u>
X-3701-105-0	Tips Ass'y, head cleaning (E model)		
1-501-161-00	(F) Antenna, feeder	4-858-084-00	(B) Cushion, upper
1-534-492-00	(C) Cord, antenna	4-858-085-00	(B) Cushion, lower; left
3-701-630-00	(A) Bag, plastic	4-858-086-00	(B) Cushion, lower; right
3-770-626-51	(C) Manual, instruction	4-858-087-00	(E) Carton
4-858-078-00	(B) Sheet, protection	4-859-912-00	(A) Bag, plastic

Part No.	Description	Image
1-501-161-00	Antenna, feeder	
1-534-492-00	Cord, antenna	
3-701-630-00	Bag, plastic	
3-770-626-51	Manual, instruction	
4-858-078-00	Sheet, protection	

Part No.	Description	Image
4-858-084-00	Cushion, upper	
4-858-085-00	Cushion, lower; left	
4-858-086-00	Cushion, lower; right	
4-858-087-00	Carton	
4-859-912-00	Bag, plastic	

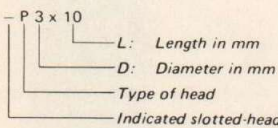
1/4 WATT CARBON RESISTORS ^(A)

Note: Circled letter ^(A) is applicable to European models only.

Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.
1.0	1-246-401-00	10	1-246-425-00	100	1-246-449-00	1.0k	1-246-473-00	10k	1-246-497-00	100k	1-246-521-00	1.0M	1-246-545-00
1.1	1-246-402-00	11	1-246-426-00	110	1-246-450-00	1.1k	1-246-474-00	11k	1-246-498-00	110k	1-246-522-00	1.1M	1-210-814-00
1.2	1-246-403-00	12	1-246-427-00	120	1-246-451-00	1.2k	1-246-475-00	12k	1-246-499-00	120k	1-246-523-00	1.2M	1-210-815-00
1.3	1-246-404-00	13	1-246-428-00	130	1-246-452-00	1.3k	1-246-576-00	13k	1-246-500-00	130k	1-246-524-00	1.3M	1-210-816-00
1.5	1-246-405-00	15	1-246-429-00	150	1-246-453-00	1.5k	1-246-577-00	15k	1-246-501-00	150k	1-246-525-00	1.5M	1-210-817-00
1.6	1-246-406-00	16	1-246-430-00	160	1-246-454-00	1.6k	1-246-578-00	16k	1-246-502-00	160k	1-246-526-00	1.6M	1-210-818-00
1.8	1-246-407-00	18	1-246-431-00	180	1-246-455-00	1.8k	1-246-579-00	18k	1-246-503-00	180k	1-246-527-00	1.8M	1-210-819-00
2.0	1-246-408-00	20	1-246-432-00	200	1-246-456-00	2.0k	1-246-580-00	20k	1-246-504-00	200k	1-246-528-00	2.0M	1-210-820-00
2.2	1-246-409-00	22	1-246-433-00	220	1-246-457-00	2.2k	1-246-581-00	22k	1-246-505-00	220k	1-246-529-00	2.2M	1-210-821-00
2.4	1-246-410-00	24	1-246-434-00	240	1-246-458-00	2.4k	1-246-582-00	24k	1-246-506-00	240k	1-246-530-00	2.4M	1-244-754-00
2.7	1-246-411-00	27	1-246-435-00	270	1-246-459-00	2.7k	1-246-583-00	27k	1-246-507-00	270k	1-246-531-00	2.7M	1-244-755-00
3.0	1-246-412-00	30	1-246-436-00	300	1-246-460-00	3.0k	1-246-584-00	30k	1-246-508-00	300k	1-246-532-00	3.0M	1-244-756-00
3.3	1-246-413-00	33	1-246-437-00	330	1-246-461-00	3.3k	1-246-585-00	33k	1-246-509-00	330k	1-246-533-00	3.3M	1-244-757-00
3.6	1-246-414-00	36	1-246-438-00	360	1-246-462-00	3.6k	1-246-586-00	36k	1-246-510-00	360k	1-246-534-00	3.6M	1-244-758-00
3.9	1-246-415-00	39	1-246-439-00	390	1-246-463-00	3.9k	1-246-587-00	39k	1-246-511-00	390k	1-246-535-00	3.9M	1-244-759-00
4.3	1-246-416-00	43	1-246-440-00	430	1-246-464-00	4.3k	1-246-488-00	43k	1-246-512-00	430k	1-246-536-00	4.3M	1-244-760-00
4.7	1-246-417-00	47	1-246-441-00	470	1-246-465-00	4.7k	1-246-489-00	47k	1-246-513-00	470k	1-246-537-00	4.7M	1-244-761-00
5.1	1-246-418-00	51	1-246-442-00	510	1-246-466-00	5.1k	1-246-490-00	51k	1-246-514-00	510k	1-246-538-00	5.1M	1-244-762-00
5.6	1-246-419-00	56	1-246-443-00	560	1-246-467-00	5.6k	1-246-491-00	56k	1-246-515-00	560k	1-246-539-00		
6.2	1-246-420-00	62	1-246-444-00	620	1-246-468-00	6.2k	1-246-492-00	62k	1-246-516-00	620k	1-246-540-00		
6.8	1-246-421-00	68	1-246-445-00	680	1-246-469-00	6.8k	1-246-493-00	68k	1-246-517-00	680k	1-246-541-00		
7.5	1-246-422-00	75	1-246-446-00	750	1-246-470-00	7.5k	1-246-494-00	75k	1-246-518-00	750k	1-246-542-00		
8.2	1-246-423-00	82	1-246-447-00	820	1-246-471-00	8.2k	1-246-495-00	82k	1-246-519-00	820k	1-246-543-00		
9.1	1-246-424-00	91	1-246-448-00	910	1-246-472-00	9.1k	1-246-496-00	91k	1-246-520-00	910k	1-246-544-00		

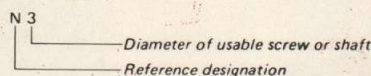
HARDWARE NOMENCLATURE

Screw:



Unless otherwise indicated, it means cross-recessed head (Phillips type).

Nut, Washer, Retaining ring:



Reference Designation	Shape	Description	Remarks
SCREWS			
P		pan-head screw	binding-head (B) screw for replacement
PWH		pan-head screw with washer face	binding-head (B) screw and flat washer for replacement
PS PSP		pan-head screw with spring washer	binding-head (B) screw and spring washer for replacement
PSW PSPW		pan-head screw with spring and flat washers	binding-head (B) screw and spring and flat washers for replacement
R		round-head screw	binding-head (B) screw for replacement
K		flat-countersunk-head screw	
RK		oval-countersunk-head screw	
B		binding-head screw	
T		truss-head screw	binding-head (B) screw for replacement
F		flat-fillister-head screw	
RF		fillister-head screw	
BV		braizer-head screw	

Reference Designation	Shape	Description	Remarks
SELF-TAPPING SCREWS			
TA		self-tapping screw	ex: TA, P 3 x 10
PTP		pan-head self-tapping screw	binding-head self-tapping (TA, B) screw for replacement
PTPWH		pan-head self-tapping screw with washer face	binding-head self-tapping (TA, B) screw and flat washer for replacement
PTTWH		pan-head thread-rolling screw with washer face	binding-head (B) screw and flat washer for replacement
SET SCREWS			
SC		set screw	
SC		hexagon-socket set screw	ex: SC 2.6 x 4, hexagon socket
NUT			
N		nut	
WASHERS			
W		flat washer	
SW		spring washer	
LW		internal-tooth lock washer	ex: LW3, internal
LW		external-tooth lock washer	ex: LW3, external
RETAINING RINGS			
E		retaining ring	
G		grip-type retaining ring	

STEREO CASSETTE-RECEIVER

HST-39

AEP Model
E Model

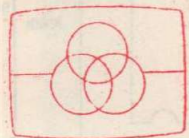
No. 1
Jan. 1979

SUPPLEMENT

Subject: Printed Circuit Board Modification

This supplement updates the service manual to include the production changes of the main circuit board and the power amp circuit board.

File this supplement with the service manual.



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HST-39

Supplement No. 1

1. CHANGED PARTS LIST

AEP model

Ref. No.	Former Part No./Part Value	New Part No./Part Value
C1	1-102-952-00 (A) 16 p	1-102-958-00 (A) 20 p
C58	1-102-253-00 (A) 10 p	1-102-283-00 (A) 8 p
C60	1-102-958-00 (A) 20 p	1-102-951-00 (A) 15 p
C65	_____	1-102-816-21 (A) 120 p
C66	_____	1-102-977-21 (A) 200 p
C326, 426	_____	1-102-973-00 (A) 100 p
C327, 328	_____	1-101-004-00 (A) 0.01
R54	_____	1-246-489-00 (A) 4.7 k ¼ W carbon
R904	_____	1-244-869-00 (A) 680 ½ W carbon
R906	_____	1-244-875-00 (A) 1.2 k ½ W carbon
RV301, 401	1-226-240-00 (A) 220 k (B), adjustable; record bias	1-226-239-00 (A) 100 k (B), adjustable; record bias

E model

Ref. No.	Former Part No./Part Value	New Part No./Part Value
C1	1-102-952-00 16 p	1-102-958-00 20 p
C60	1-102-961-00 27 p	1-102-960-00 24 p
C326, 426	_____	1-102-973-00 100 p
C327, 328	_____	1-101-004-00 0.01
R904	_____	1-244-869-00 680 ½ W carbon
R906	_____	1-244-875-00 1.2 k ½ W carbon
RV301, 401	1-226-240-00 220 k (B), adjustable; record bias	1-226-239-00 100 k (B), adjustable; record bias

• Circled letters (A to Z) are applicable to European models only.

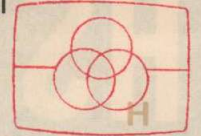
2. INTERCHANGEABILITY

The former and new circuit boards are interchangeable.

• Replacement Semiconductors

For replacement, use semiconductors except in ().

Q1-3 : 2SC710-14 (2SC710) 	IC501, 601 : HA1350S (HA1350)
Q101 : 2SC1364 Q301, 401 : 2SC1362 (2SC631A) 	D101-104 } : 1S1555 D201 } : 1S1555 D902 : 10E2 (GP08A)
Q302 : 2SA678 	D202, 301 : SLP131B
Q901 : 2SC1061 (2SC1173) 	D901 : S3VC40 (MI-151R)
IC101 : CX168 	D903 : S3VC40R (MI-151)
IC201 : LA3350 	D904 : EQB01-25 (EQA01-25)
IC301 : μPC4558C 	



3. MOUNTING DIAGRAM (AEP model)

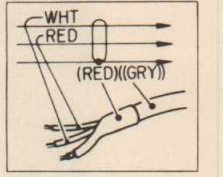
- Conductor Side -

[Red dashed box]: changed portion

Replacement Semiconductors: See page 3.

Q, IC	D
1	
2	
302	
IC101	
101	
2	
102	
103	
201	
IC201	
104	
3	
401,301	
IC301	
301	
4	
202	
Q, IC	D

Note:
• Color code of sleeving over the end of the jacket.



• [Red dashed box] : indicates side identified with part number.

• [Red solid line] : B+ pattern

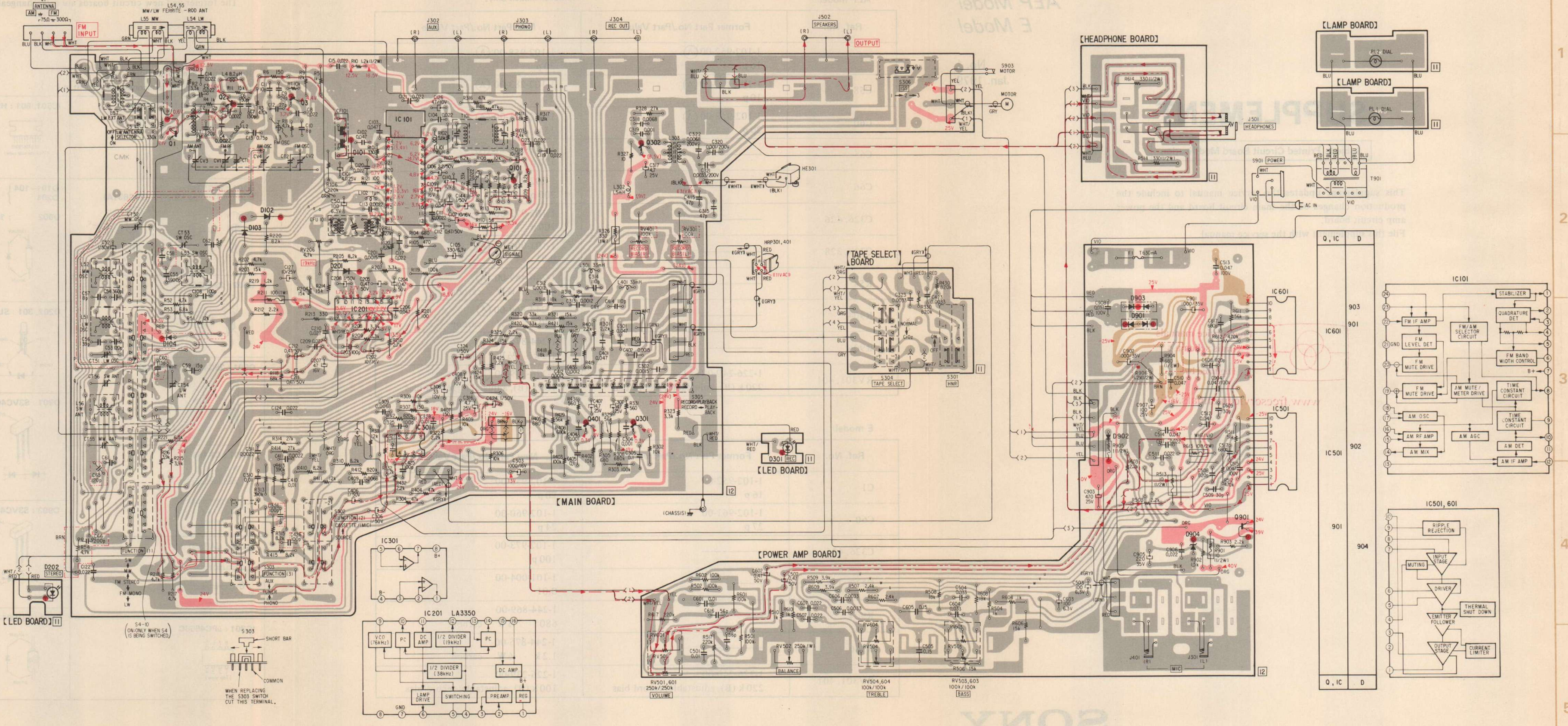
• [Black solid line] : B- pattern

• Signal-Path

• [Red dashed line with arrow] : L-CH audio

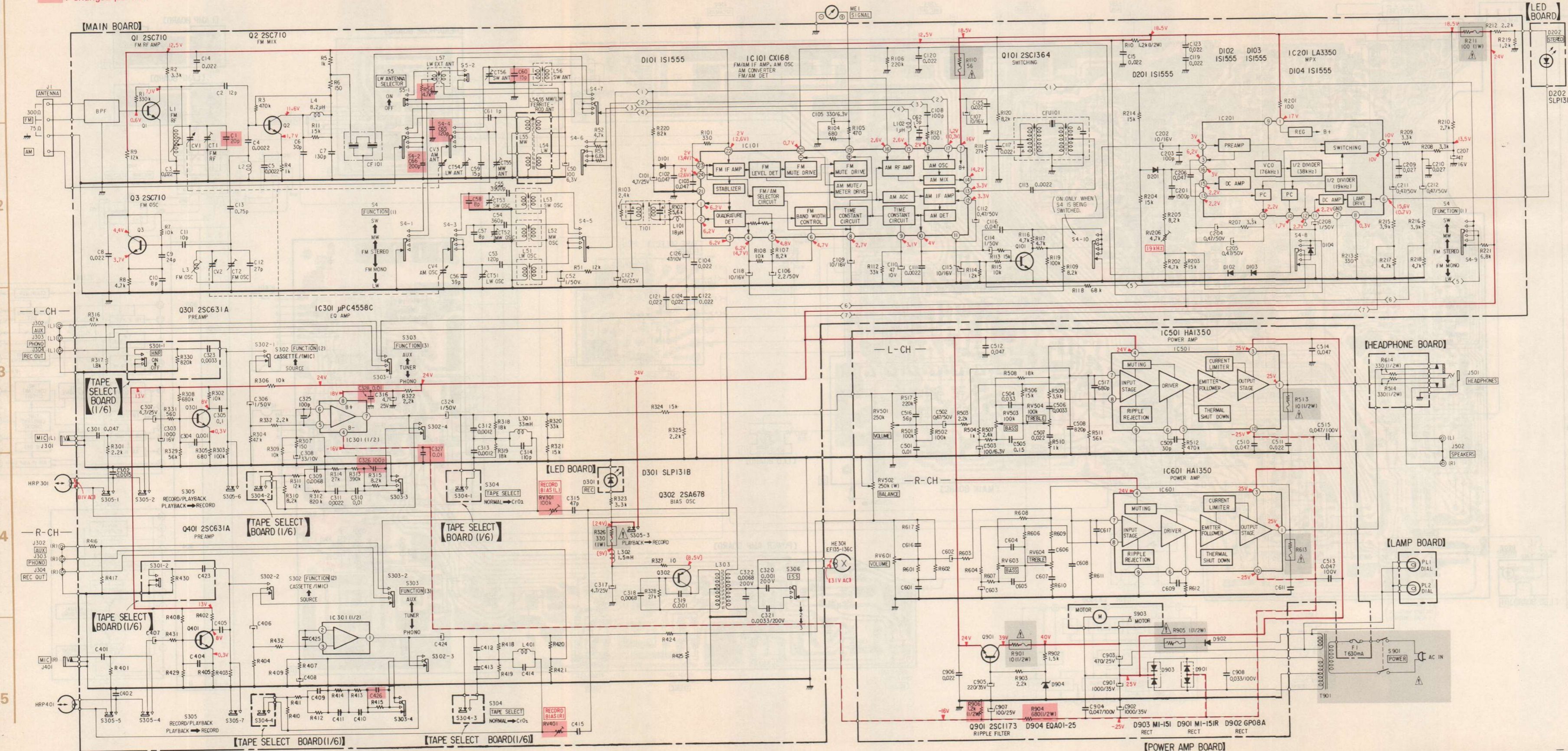
• [Black dashed line with arrow] : R-CH audio

• [Red solid line with arrow] : FM or common



4. SCHEMATIC DIAGRAM (AEP model)

changed portion



- Note:
- Components for right channel have same values as for left channel.
 - All capacitors are in μF unless otherwise noted. $\text{pF} : \mu\text{F}$ 50 WV or less are not indicated except for electrolytics.
 - All resistors are in ohms, $\frac{1}{4}\text{W}$ unless otherwise noted. $\text{k}\Omega : 1000 \Omega$, $\text{M}\Omega : 1000 \text{k}\Omega$
 - All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
 - : fusible resistor.
 - : internal component.
 - : B+ bus.
 - : B- bus.
 - : panel designation.
 - : adjustment for repair.
 - Voltages are dc with respect to ground unless otherwise noted.
 - Readings are taken under no signal (detuned) conditions with a VOM (20 $\text{k}\Omega/\text{V}$).
 - () : AM
 - < > : LED (D202): ON
 - (()) : record (with VTVM)
 - Voltage variations may be noted due to normal production tolerances.

• Switch

Ref. No.	Switch	Position
S4-1 to 4-10	FUNCTION (1)	FM STEREO
S301-1, 2	HNR	OFF
S302-1 to 302-4	FUNCTION (2)	SOURCE
S303-1 to 303-4	FUNCTION (3)	TUNER
S304-1 to 304-4	TAPE SELECT	NORMAL
S305-1 to 305-7	RECORD/PLAYBACK	PLAYBACK
S306	ISS	1
S901	POWER	OFF
S902	VOLTAGE SELECTOR	220 V-240 V
S903	MOTOR	OFF

Note: The components identified by shading and mark are critical for safety. Replace only with part number specified.

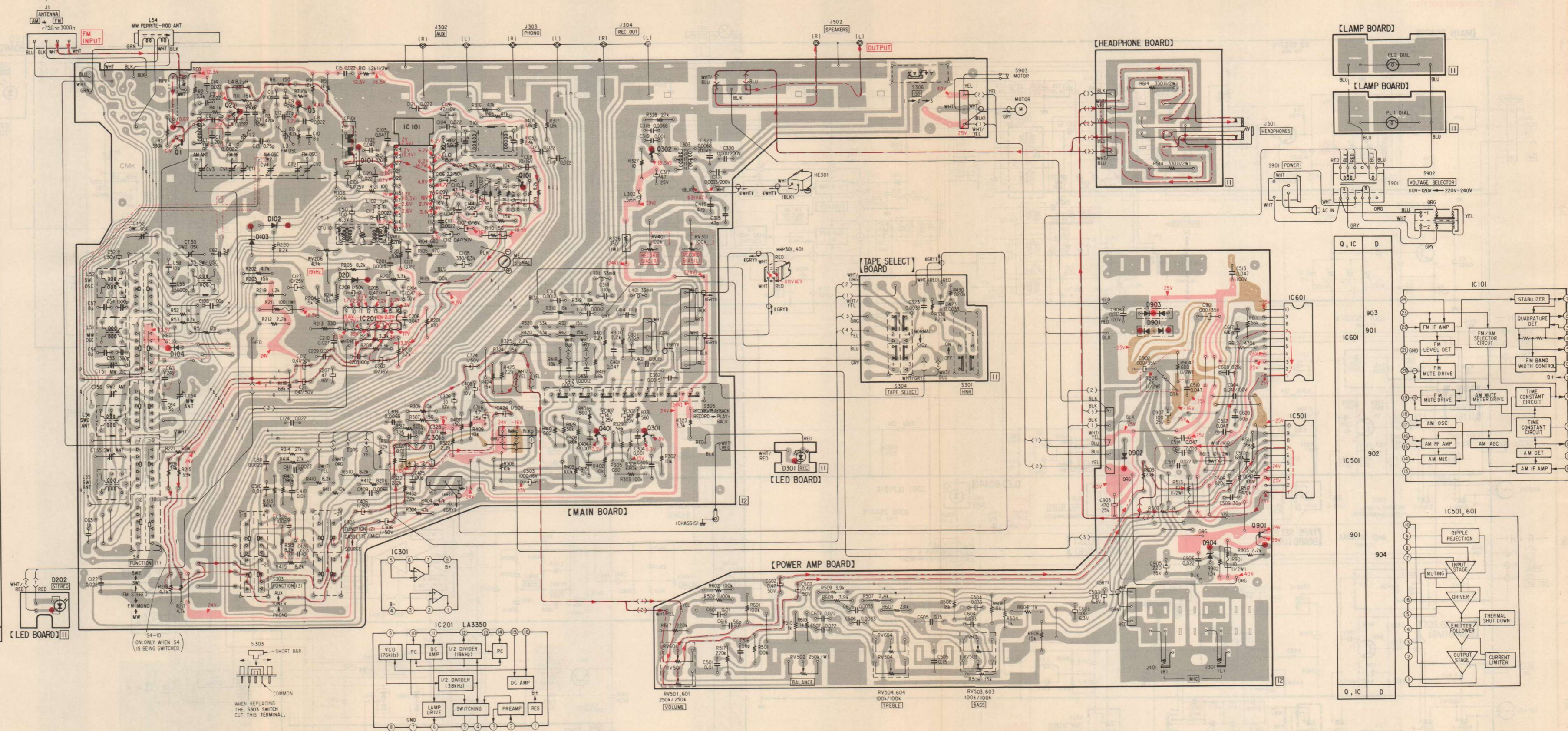
5. MOUNTING DIAGRAM (E model)

— Conductor Side —

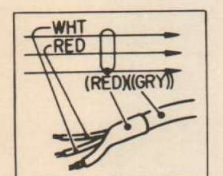
[Red outline]: changed portion

Replacement Semiconductors: See page 3.

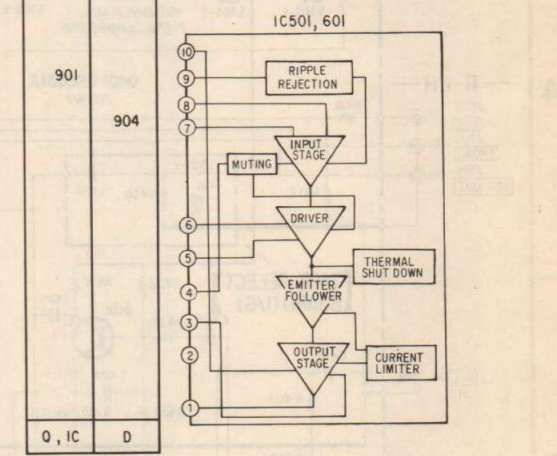
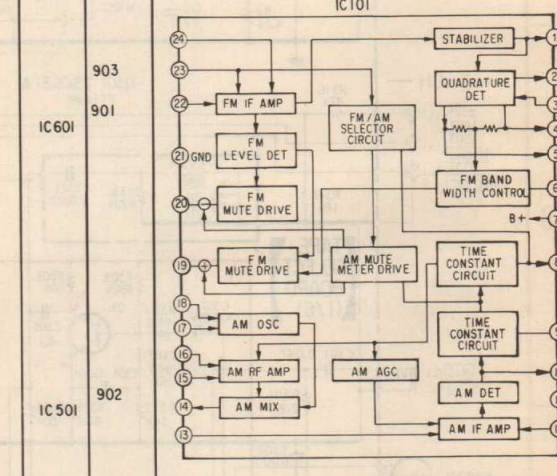
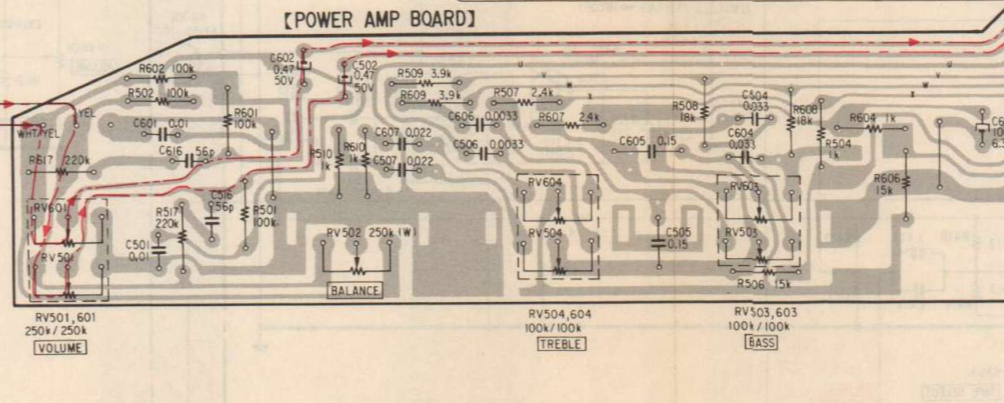
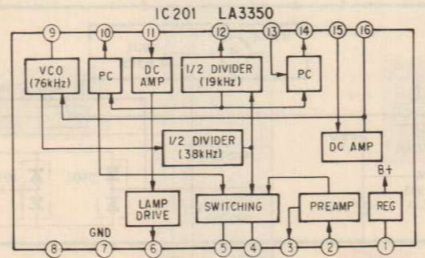
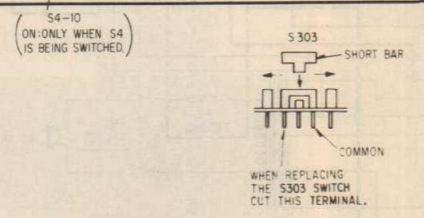
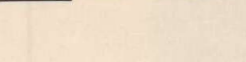
Q, IC	D
1	101
2	101
3	101
101	101
102	101
201	101
104	101
401, 301	301
IC 301	301
202	202



Note:
 • Color code of sleeving over the end of the jacket.

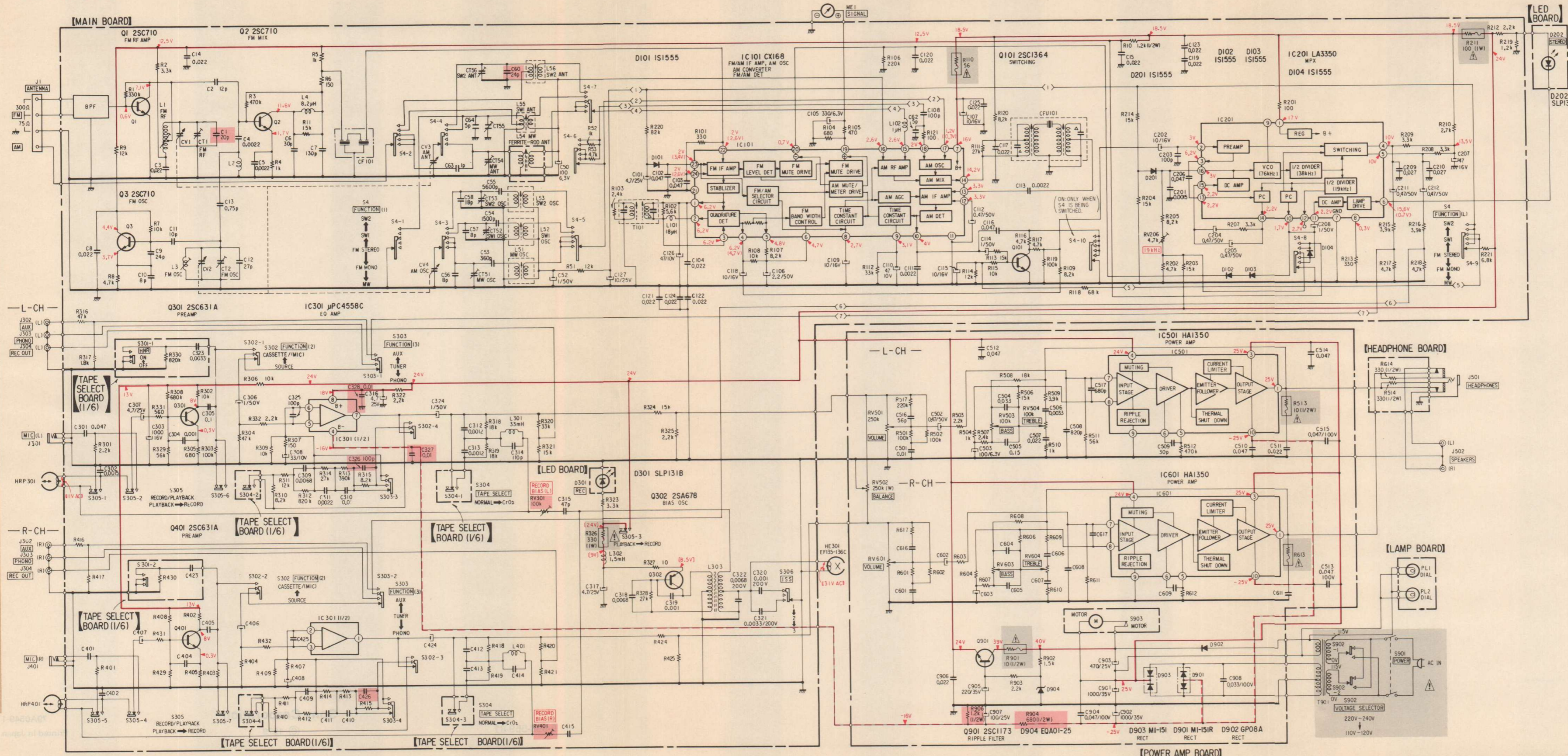


- [Symbol] : indicates side identified with part number.
- [Red outline] : B+ pattern
- [Brown outline] : B- pattern
- Signal Path
 - : L-CH audio
 - : R-CH audio
 - : FM or common



6. SCHEMATIC DIAGRAM (E model)

changed portion



- Note:**
- Components for right channel have same values as for left channel.
 - All capacitors are in μF unless otherwise noted. pF : μF 50 WV or less are not indicated except for electrolytics.
 - All resistors are in ohms, $\frac{1}{4}\text{W}$ unless otherwise noted. $\text{k}\Omega$: 1000 Ω , $\text{M}\Omega$: 1000 $\text{k}\Omega$
 - All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
 - --- : fusible resistor.
 - Δ : internal component.
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 - --- : B- bus.
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 - () : AM
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S304-1 to 304-4	TAPE SELECT	NORMAL
S305-1 to 305-7	RECORD/PLAYBACK	PLAYBACK
S306	ISS	1
S901	POWER	OFF
S902	VOLTAGE SELECTOR	220 V-240 V
S903	MOTOR	OFF

Note: The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

