

MODEL NO. AF-5300E,K

AIWA® [SERVICE MANUAL]



Cord No.: 05-530-000-18

DATE OF ISSUE 11/1978

SPECIFICATIONS

Model type: Stereo cassette system
Semiconductors: 8 IC's, 1 FET, 61 transistors
 31 diodes, 5 LED's
Power supply: AC 120V/220V
 switchable 50/60 Hz (E model)
 AC 120V/240V
 switchable 50/60 Hz (K model)
Power consumption: 170W
Dimensions: 591(W) x 168(H) x 469(D) mm
 (w/dust cover)
Weight: 13 kg (w/dust cover)
Accessories: Indoor FM antenna 1
 Head cleaning stick 1
 Cassette tape 1

< Tuner Section >

Frequency range:
 FM: 87.5~108 MHz
 (3.4~2.8 m)
 SW: 5.7~16.7 MHz
 (53~18 m)
 MW: 515~1650 kHz
 (582~182 m)
 LW: 145~350 kHz
 (2069~857 m)

Sensitivity:
 (IHF, THD 3%)
 (S/N 20 dB)

(S/N 20 dB) FM: 6±2 dB (at 88, 98, 108 MHz)
 SW: 27±5 dB (at 6 MHz)
 25±3 dB (at 10 MHz)
 24±3 dB (at 16 MHz)
 MW: 50±3 dB (at 600 kHz)
 49±3 dB (at 1000, 1600 kHz)
 LW: 62±3 dB (at 150 kHz)
 60±3 dB (at 240, 340 kHz)

FM Frequency response: 30~15,000 Hz
FM Signal to noise ratio: 70±5 dB
 (Weighted)

FM distortion: 0.1±0.05%
Muting level: 17±3 dB

Antennas: FM: 300 ohms (balanced)
 75 ohms (unbalanced)
 AM: Built-in antenna, terminal for
 external antenna

< FM Multiplex Section >

Separation: 43±3 dB (at 1 kHz)
Distortion: Less than 0.5%
Two signal selectivity: Less than 60 dB

< Turntable Section >

Model type: Belt drive automatic turntable
Motor: FG servo motor
Speeds: 33-1/3 and 45 rpm
Signal to noise ratio: More than 60 dB
 (Weighted, DIN B)

Wow and flutter: Less than 0.12% (DIN)
Cartridge type: Moving magnet (MM)
Separation: 19 dB (33-1/3 rpm, 1 kHz)
Tracking force: 2±0.3g

< Cassette Tape Deck Section >

Track format: 4 tracks 2 channel

Tape speed: 4.76 cm/sec. ±1.5%
Recording time: 60 minutes (C-60)
Recording system: AC bias
Erasing system: AC erase
Record bias frequency: 61 kHz
Frequency response: Normal (LH) tape: 30~12,500 Hz
 Fe-Cr tape: 30~16,000 Hz
 CrO₂ tape: 30~16,000 Hz
 According to DIN 45500 Blatt 8
 Normal (LH) tape: 30~12,500 Hz
 Fe-Cr tape: 30~15,000 Hz
 CrO₂ tape: 30~15,000 Hz
 Normal (LH), 1.0 +1.0%
 Fe-Cr tape: -0.5%
 CrO₂ tape: 1.5 +1.0%
 -0.5%

Distortion:

Signal to noise ratio: Normal (LH) tape: 43±2 dB
 (Un-weighted, REC/PB) Fe-Cr, CrO₂ tape: 44±3 dB
Erase ratio: 65±5 dB
Wow and Flutter: Less than 0.07% (WRMS)
 According to DIN 45500 Blatt 8
 Less than 0.18%

Pinch roller pressure: 275±25g
Take-up torque: 50±10g-cm
FF torque: 100±10g cm
Rawind torque: 95 +10
 -5g-cm
FF & rawind time: 80±10 sec. (C-60)

< Audio Section >

Circuitry: Pure complementary SEPP OTL
Continuous output power: 18W+18W (8 ohms)
 (20 Hz~40 kHz/THD 1%) 20W+20W (4 ohms)
 20W+20W (8 ohms)
 25W+25W (4 ohms)
 35W +35W (8 ohms)
Music output power: 40W+40W (4 ohms)
 +8 ±2 dB (at 100 Hz)
Loudness response: -6 ±2 dB (at 10 kHz)
 (With volume at -40 dB)
Tone controls: Bass: 100 Hz ±8 dB
 Treble: 10 kHz ±9 dB

Gain and input impedance: MIC: 1 mV (200 ohms~
 10 k-ohms)
 DIN IN: 200 mV (500 k-ohms)
 (TAPE PLAY)

Output level and impedance: DIN OUT: 0.45 mV/k-ohm
 (TAPE REC)
 SPEAKERS: 4~8 ohms
 PHONES: 8 ohms

- Specifications and design are subject to change without notice due to product improvements.
- Dolby Noise Reduction Circuit under License from Dolby Laboratories Incorporated.
- The word "Dolby" and "Double-D" symbol are trademarks of Dolby Laboratories Incorporated.

DISASSEMBLY INSTRUCTIONS

1. To Remove Turntable

- 1) Remove the platter
- 2) Loosen 2 turntable frame securing screws and slide in directions shown by arrows.
- 3) Disconnect 3 turntable connectors. (Refer to Fig. 1)

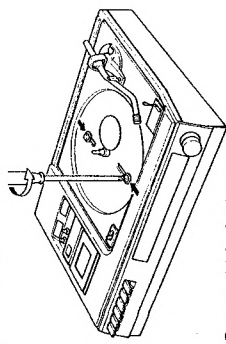


Fig. 1

2. To Remove Main Cabinet

- 1) Pull out the 2 knobs.
- 2) Remove 8 screws. (Refer to Fig. 2, 3)

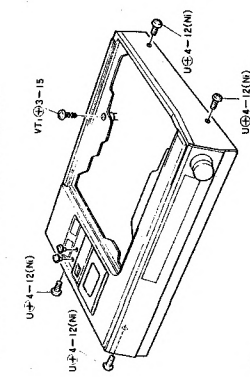


Fig. 2

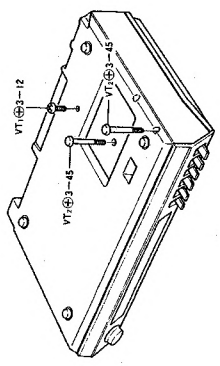


Fig. 3

3. To Remove Tuner Circuit Board

- 1) Remove the dial drum. (Refer to Fig. 4)
- 2) Remove 2 stoppers and 5 screws. (Refer to Fig. 5)

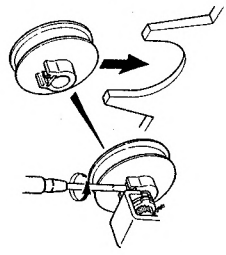
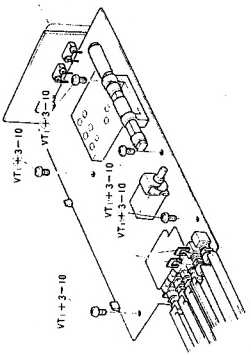


Fig. 4

Fig. 5



4. To Remove Main Amp. Circuit Board

- 1) Remove 3 screws. (Refer to Fig. 6)

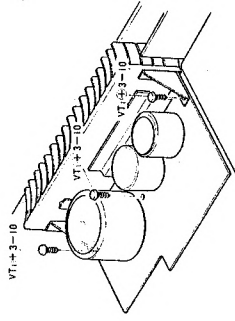


Fig. 6

5. To Remove Front Panel

- 1) Pull out the control knobs.
2. Remove 6 screws. (Refer to Fig. 7)

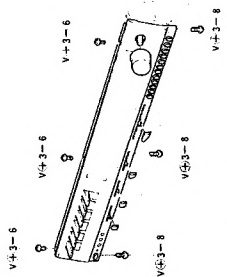


Fig. 7

6. To Remove FM Pre-set Circuit Board

- 1) Remove 2 screws. (Refer to Fig. 8)

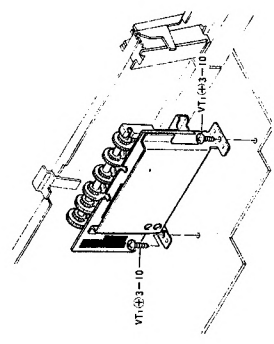


Fig. 8

7. To Remove Pre Amp./Switch Circuit Board

- 1) Remove 11 screws. (Refer to Fig. 9)

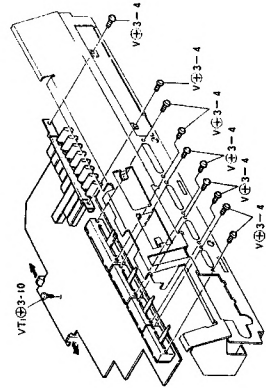
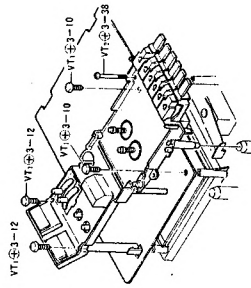


Fig. 9

9. To Remove Cassette Grille

- 1) Remove 7 screws. (Refer to Fig. 10, 11)



8. To Remove Rec./Pb. Circuit Board

- 1) Remove the rec./pb. circuit board. (Refer to Fig. 10)

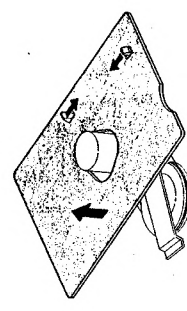


Fig. 10

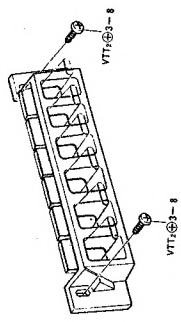
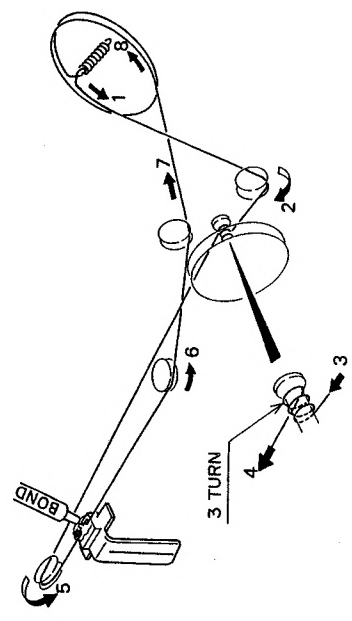
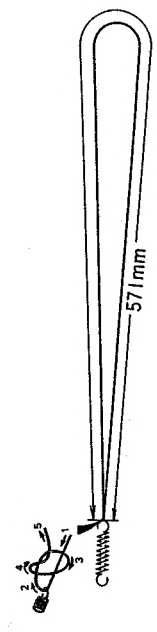
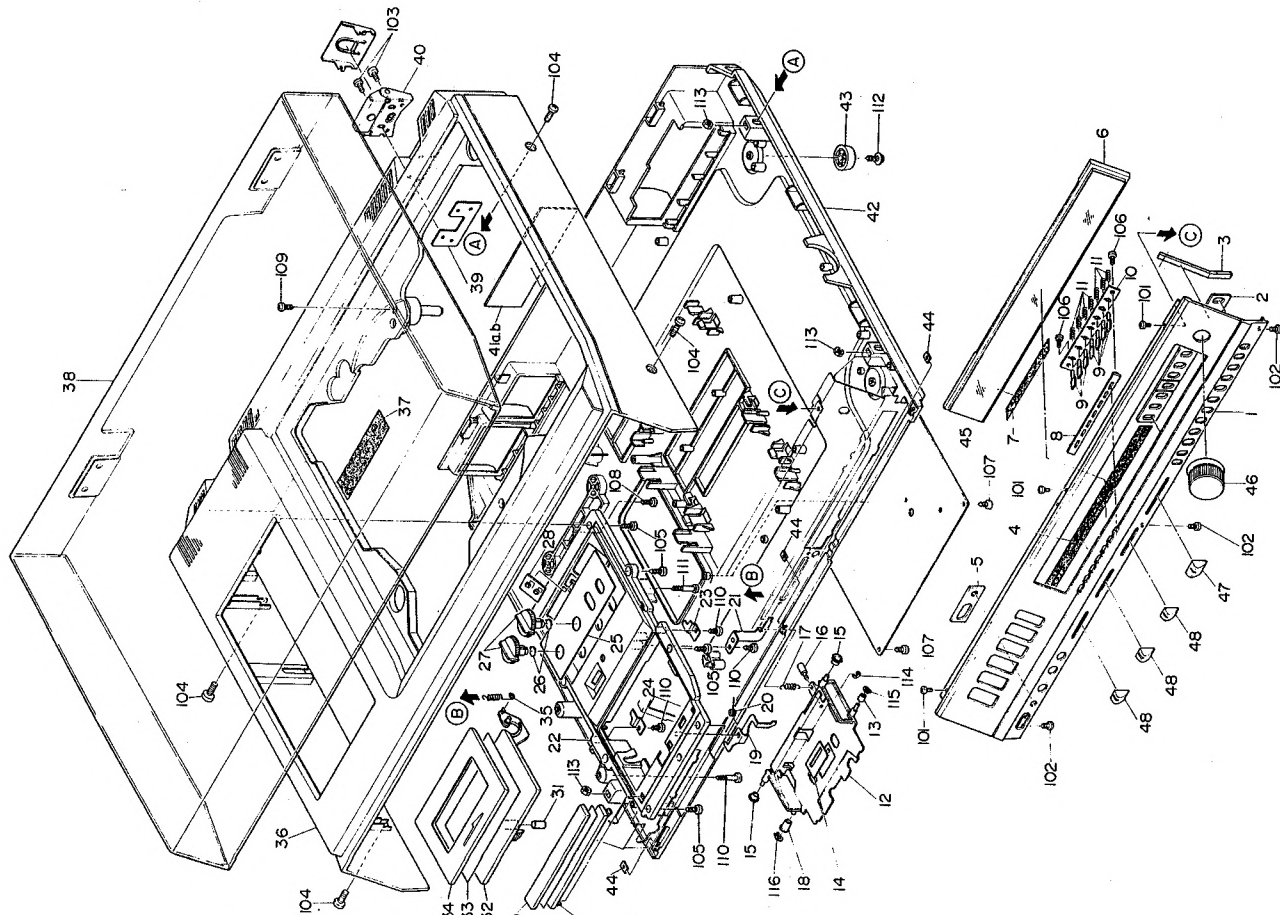


Fig. 11

DIAL CORD STRINGING



EXPLODED VIEW-1



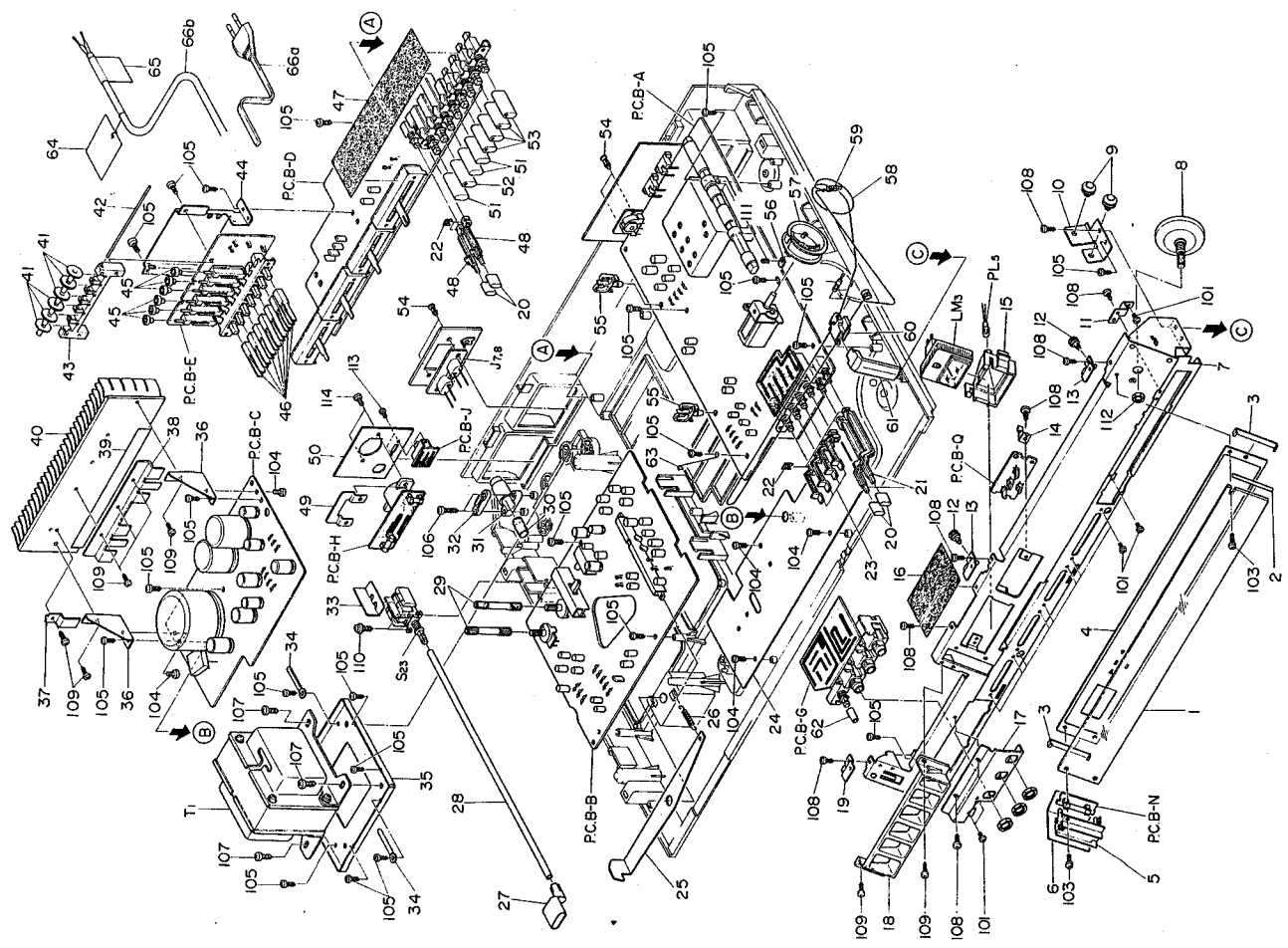
PARTS LIST

MECHANICAL PARTS

* mark in this part list shows exclusive part (which is used) for only Model AF-5300.

Ref. No.	Part No.	Part No. Changed to	Description	Common Model	Q'ty
1-7	09-047-131-01		Panel Assembly		1
1-1	82-493-008-01		Front panel		1
1-2	82-493-217-01		Push-button guide A		1
1-3	82-493-255-01		Se-cushion		1
1-4	82-493-042-01		Blind himeron cloth		1
1-5	82-493-219-01		Power button guide		1
1-6	82-493-007-01		Dial window		1
1-7	82-493-252-01		Himeron cloth, Pre-set		1
1-8	82-493-218-01		Push-button guide B		1
1-9	82-493-039-01		Pre-set button		7
1-10	82-493-210-01		Holder, Pre-set button		1
1-11	82-493-242-01		C spring		7
1-12	82-474-229-01		Up-plate ass'y	AF-5050	1
1-13	82-386-211-11		Collar, Up-plate	AD-1250	1
1-14	82-474-072-01		Label, Tape indication	AF-5050	1
1-15	82-470-224-01		Push gear	AF-3030	2
1-16	82-474-260-01		C/O, shaft	AF-5050	1
1-17	82-474-240-01		H spring, Up-plate	AF-5050	1
1-18	82-386-258-01		Gear, Up-plate	AD-1250	1
1-19	82-474-221-01		Cassette lock lever	AF-5050	1
1-20	82-474-288-01		T spring, Cassette lock lever	AF-5050	1
1-21	82-474-225-01		Holder N	AF-5050	1
1-22	82-493-005-01		Cassette grille A		1
1-23	82-493-236-01		Holder, Cassette lid R		1
1-24	82-493-237-01		Holder, Cassette lid L		1
1-25	82-493-020-01		Plate, Rec. volume		1
1-26	82-493-256-01		Knob spring	TPR-950	2
1-27	82-541-025-01		Knob		1
1-28	82-493-046-01		Rec. plate E		1
1-29	82-493-029-01		Head cover		1
1-30	82-493-030-01		Decorative plate, Head cover		1
1-31	82-474-303-01		Cushion P, Cassette holder	AF-5050	1
1-32	82-474-012-01		Cassette lid	AF-5050	1
1-33	82-470-282-01		Adhesive paper, Cassette lid	AF-3030	1
1-34	82-493-045-01		Decorative plate, Head cover		1
1-35	82-474-239-01		H spring	AF-5050	1
1-36	82-493-001-01		Main cabinet		1
1-37	82-493-055-01		Himeron cloth 20 x 63		1
1-38	82-493-003-01		Dust cover ass'y		1
1-39	82-493-211-01		Holder, Hinge		1
1-40	87-064-090-01		Hinge ass'y		2
1-41a	82-493-040-01		Name plate, Spec. (E model only)		1
1-41b	82-493-048-01		Name plate, Spec. (K model only)		1
1-42	87-085-002-01		Rear cabinet		1
1-43	87-085-161-01		Foot		4
1-44	82-461-378-01		Leaf nut	TPR-930	3
1-45	82-493-202-01		Bottom plate		1
1-46	82-494-031-01		Knob, Tuning	AF-5600	1
1-47	82-474-042-01		Slide knob B	AF-5050	1
1-48	82-474-041-01		Slide knob A	AF-5050	3

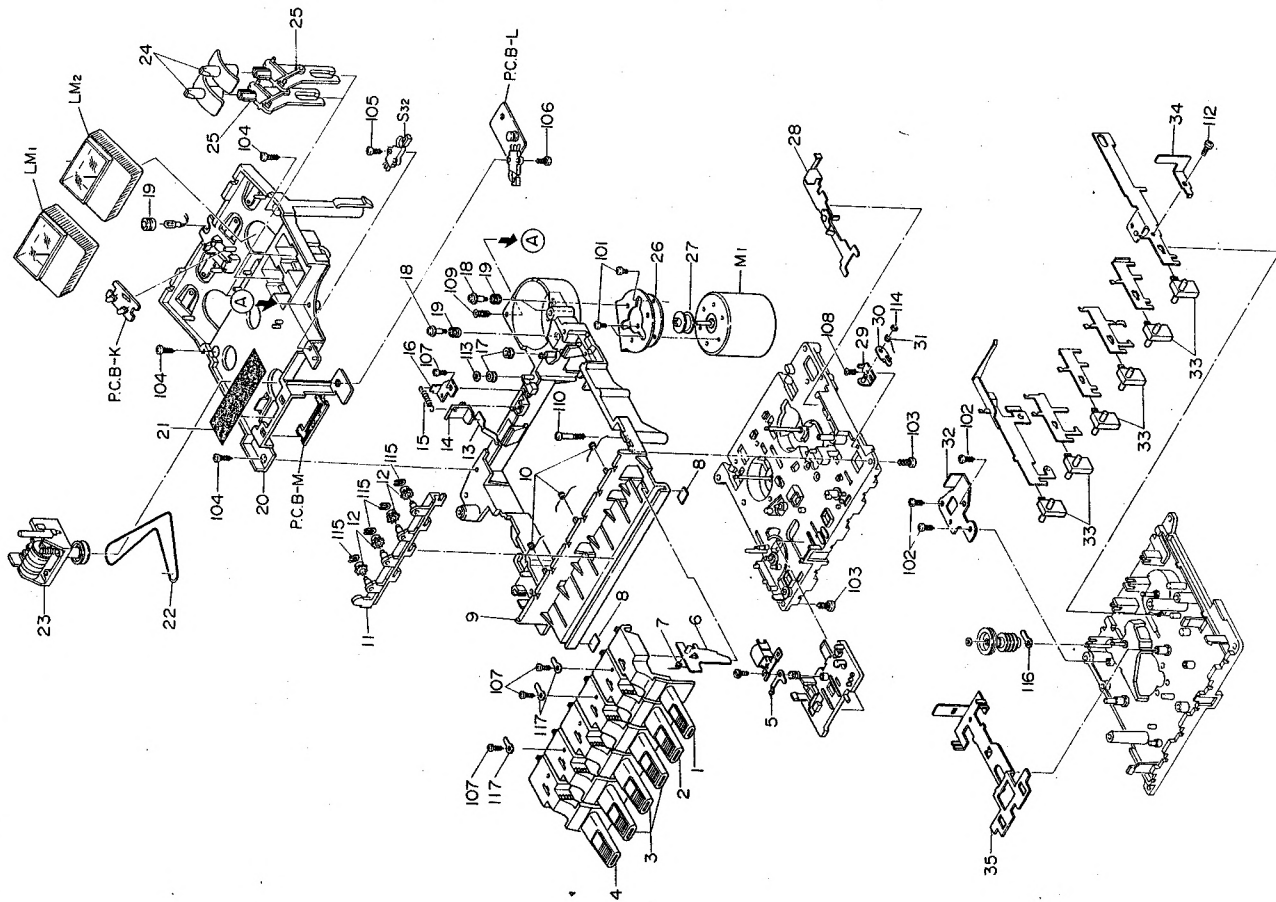
EXPLODED VIEW-2



Ref. No.	Part No.	Part No. Changed to	Description	Common Model	Q'ty
2-1	82-493-015-01		Back plate, Tuning dial		1
2-2	82-493-253-01		Sheet 3.5 x 4.2		1
2-3	82-493-241-01		Clamp, Dial plate		2
2-4	82-493-010-01		Dial plate		1
2-5	82-493-250-01		Lamp holder		1
2-6	82-493-257-01		Sheet fibre		1
2-7	82-493-244-01		Front chassis ass'y		1
2-8	82-493-234-01		Tuning shaft ass'y		1
2-9	87-071-020-01		Roller 126		1
2-10	82-493-209-01		Holder, Pulley		1
2-11	82-493-213-01		Holder, Push-switch		1
2-12	87-071-019-01		Roller 76		1
2-13	82-493-248-01		Holder, Front panel A		1
2-14	82-493-243-01		Holder, LED circuit board		2
2-15	82-493-215-01		Reflector plate, Meter		1
2-16	82-493-254-01		Himeron cloth 45 x 90		1
2-17	82-493-206-01		Holder, MIC jack		1
2-18	82-493-017-01		Push-key guide		1
2-19	82-493-251-01		Holder, Front panel		1
2-20	82-493-023-01		Push-button C		1
2-21	82-493-223-01		Rod A		1
2-22	82-385-383-01		Stopper, Rod		4
2-23	82-493-224-01		Rod B	AD-6300	2
2-24	82-493-664-01		Shield plate, Pulley		8
2-25	82-493-214-01		Rec. lever		4
2-26	82-493-238-01		E spring		1
2-27	82-493-051-01		Power button		1
2-28	82-493-222-01		Switch joint, Power		1
2-29	82-493-220-01		Shaft, Rec. volume		1
2-30	87-830-605-01		Tube 66 x 50 (E model only)		2
2-31	87-085-094-01		AC cord holder A		1
2-32	87-085-095-01		AC cord holder B		1
2-33	87-493-632-01		Shield plate, AC		1
2-34	87-038-039-01		Wire binder		1
2-35	82-493-204-01		Holder, Transformer		2
2-36	82-493-230-01		Holder, Heat sink		1
2-37	82-474-211-01		Transistor clamp		1
2-38	82-493-606-01		Transistor clamp	AF-5050	1
2-39	82-493-607-01		Insulation film		1
2-40	82-493-605-01		Heat sink		1
2-41	82-493-022-01		Knob, Pre-set		1
2-42	82-493-229-01		Shaft, Pre-set		6
2-43	82-493-212-01		Holder, Pre-set knob		1
2-44	82-493-205-01		Holder, Pre-set		1
2-45	82-493-227-01		Gear, Pre-set		1
2-46	82-493-226-01		Rod D		6
2-47	82-493-258-01		Himeron cloth		7
2-48	82-493-225-01		Rod C		1
2-49	82-488-234-01		Holder, Voltage selector		2
2-50	82-493-013-01		AC cord plate	AX-7400	1
2-51	82-485-036-01		Push-button B		1
2-52	82-485-038-01		Push-button B (orange)	AF-5090	3
2-53	82-485-037-01		Push-button B (green)	AF-5090	1
2-54	87-094-053-01		Nylon rivet		4
2-55	87-064-089-01		Cable clip		4
2-56	82-461-378-01		Leaf nut		2
2-57	82-470-240-01		Dial drum	TPR-330	1
2-58	87-496-086-01		Dial string	AF-3030	1
2-59	82-439-359-01		Drum spring		1
2-60	82-474-053-01		Holder, Dial pointer	TPR-300	1
2-61	82-493-012-01		Tuning pointer	AF-5050	1
2-62	82-471-212-01		Speaker selector knob		1
2-63	87-056-014-01		Dial wire guide		1
2-64	87-056-008-01		Tag, Voltage selector (K model only)		1
2-65	87-034-877-01		Label, AC power cord (K model only)		1
2-66a	87-034-877-01		AC power cord (E model only)		1
2-66b	87-034-872-01		AC power cord (K model only)		1

EXPLODED VIEW-3

As this is a PM-1 mechanism, the exploded view is omitted (see the supplement PM-1 mechanism adjustment manual). The exploded view below shows the additional mechanism of the PM-1. Also shown are the attachments of the motor and a list of such.



Ref. No.	Part No.	Part No. Changed to	Description	Common Model	Qty
3-1	82-493-028-01		Pause key	.	1
3-2	82-493-028-01		Push-key (blue)	.	1
3-3	82-493-025-01		Push-key	.	3
3-4	82-493-027-01		Push-key (red)	.	1
3-5	82-539-206-01		Earth plate, Erase head	TPR-905	1
3-6	82-474-209-01		Push-lever	AF-5050	6
3-7	82-474-234-01		Spring, Push-key	AF-5050	6
3-8	82-385-342-01		Spacer, Chassis	AD-6300	2
3-9	82-290-201-01		Sub-chassis	.	1
3-10	82-474-236-01		Spring, Push-key	AF-5050	3
3-11	82-474-211-01		Shaft, Gear	AF-5050	1
3-12	82-470-224-01		Gear	AF-3030	1
3-13	82-474-318-01		P spring	AF-5050	4
3-14	82-474-316-01		Cassette holder	AF-5050	1
3-15	82-474-320-01		E spring	AF-5050	1
3-16	82-474-317-01		Spring, Holder	AF-5050	1
3-17	82-474-321-01		Roller, Counter	AF-5050	2
3-18	87-081-483-01		Motor screw M2.6	AF-5050	3
3-19	82-439-319-01		Rubber cushion B	TPR-300	4
3-20	82-493-203-01		Holder, Counter	.	1
3-21	82-493-055-01		Himeron cloth 20 x 63	.	1
3-22	82-493-232-01		Counter	.	1
3-23	87-040-105-01		Selector knob	.	2
3-24	82-493-050-01		Selector lever	.	2
3-25	82-493-249-01		Holder M	AF-5050	1
3-26	82-474-224-01		Motor pulley	TPR-950	1
3-27	82-541-279-01		Up-plate lock lever ass'y	AF-5050	1
3-28	82-474-305-01		Holder lock plate ass'y	TPR-300	1
3-29	82-439-455-01		Lock plate	TPR-300	1
3-30	82-439-457-01		Spring, Lock plate	TPR-300	1
3-31	82-439-275-01		Auxiliary metal fitting, Motor	.	1
3-32	82-493-246-01		Knob	AF-5050	6
3-33	82-290-222-01		Rec. plate spring	TPR-300	1
3-34	82-474-245-01		Brake plate	.	1
3-35	82-439-269-01			.	1

The following is the part number list of the motor marked parts of the PM-1 mechanism

Ref. No.	Part No.	Description	Qty	Ref. No.	Part No.	Description	Qty
1-13	82-385-332-11	Spring B, Head adjusting	1	2-49	82-493-247-01	Main belt	1
1-14	87-046-130-01	Rec./Pb head	1	2-50	82-439-489-01	Flywheel ass'y	1
1-31	87-046-127-01	Erase head	1	2-51	82-385-314-21	Rubber belt	1
2-33	82-439-228-31	Mounting screw	1	2-52	82-385-311-01	Screw for thrust	1
		REC plate spring		2-53	82-474-219-11	Lower shaft bearing plate	1
				2-60	82-385-309-21	Worm gear B ass'y	1

Ref. No.	Part No.	Description	Q'ty
1-101	87-261-094-21	V + 3-6	3
1-102	87-261-095-21	V + 2-8	3
1-103	87-261-096-21	V + 3-10	8
1-104	87-263-172-11	U + 4-12	4
1-105	87-351-074-21	VT ₁ + 2.6-8	8
1-106	87-351-094-21	VT ₁ + 3-6	2
1-107	87-351-096-21	VT ₁ + 3-10	5
1-108	87-351-097-21	VT ₁ + 3-12	1

Ref. No.	Part No.	Description	Q'ty
2-101	87-261-092-21	V + 3-4	12
2-102	87-261-094-21	V + 3-6	2
2-103	87-261-095-21	V + 3-8	2
2-104	87-351-094-21	VT ₁ + 3-6	3
2-105	87-351-096-21	VT ₁ + 3-10	25
2-106	87-351-102-21	VT ₁ + 3-20	2

Ref. No.	Part No.	Description	Q'ty
3-101	87-251-070-21	U + 2.6-3	3
3-102	87-251-095-21	VT ₁ + 3-8	3
3-103	87-351-096-21	VT ₁ + 3-10	5
3-104	87-351-097-21	VT ₁ + 3-12	4
3-105	87-341-037-21	UT ₁ + 2-10	1
3-106	87-341-038-21	UT ₁ + 2-12	1
3-107	87-341-075-21	UT ₁ + 2.6-6	4
3-108	87-321-073-21	QT ₁ + 2.6-8	1
3-109	87-321-096-21	QT ₁ + 3-8	1

HARDWARE NOMENCLATURE

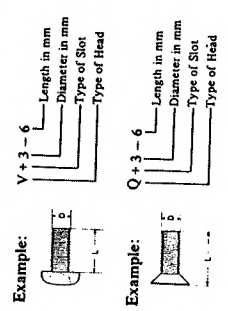
- V: Pan head screw
- U: Binding head screw
- VT₁: Pan head tapping screw
- UT₁: Binding head tapping screw
- VT₂: Pan head tapping screw
- QT₁: Flat countersunk head tapping screw
- VT_F: Flange and Pan head tapping screw
- VS: Pan head screw with spring washer
- UTT: Pan head tap-tight screw
- VT_T: Pan head tap-tight screw
- VT_F: Flange and Pan head tapping screw

Ref. No.	Part No.	Description	Q'ty
1-109	87-351-095-21	VT ₁ + 3-15	1
1-110	87-341-073-21	UT ₁ + 2.6-6	3
1-111	87-352-107-21	VT ₁ + 3-45	2
1-112	87-510-095-01	VTF + 3-8	4
1-113	87-391-034-11	N-4	4
1-114	87-441-009-01	STE-3	1
1-115	87-442-002-01	STP-2	1
1-116	87-442-004-01	STP-4	1

Ref. No.	Part No.	Description	Q'ty
2-107	87-081-876-01	UTT + 4-8	4
2-108	87-081-782-01	VTT ₁ + 3-4	10
2-109	87-081-785-01	VTT ₁ + 3-8	8
2-110	87-513-096-01	VTF ₁ + 3-10	2
2-111	87-374-092-11	SS3-4	1
2-112	87-081-253-11	N-9	1
2-113	87-253-033-01	U + 2-4(Black)	2
2-114	87-253-095-01	U + 3-8(Black)	2

Ref. No.	Part No.	Description	Q'ty
3-110	87-352-105-21	VT ₁ + 3-35	1
3-111	87-081-276-01	VT ₁ + 3-38	1
3-112	87-480-071-01	VS + 2.6-4	1
3-113	87-081-300-01	FW2.6-6-0.5	1
3-114	87-441-003-01	STE-1.5	1
3-115	87-442-004-01	STP-4	4
3-116	87-450-411-01	LB-1	1
3-117	87-450-412-01	LB-2	3

- STP: Powerful stop ring
- STE: E ring
- FW: Fiber washer
- LB: Lug terminal plate
- N: Nut
- SS: Set screw



Description of special circuitry

Preset tuning circuit

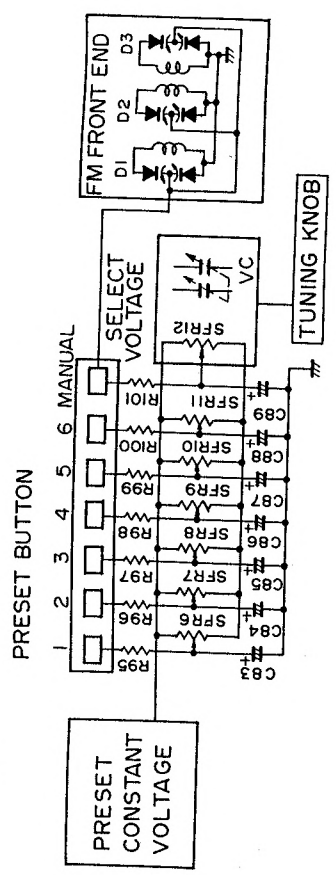


Fig. 1

LC resonance circuits, which are composed of coils (L) and capacitors (C), are almost always used in the front end circuitry of FM tuners commonly employed today. This tuning circuit features variable capacitors which are used to select the desired reception frequency by varying the capacitance. However, this model features a preset tuning circuit system. It is an electronic tuning circuit which substitutes varactor diodes for the capacitors of the LC resonance circuit and which allows the supplied voltage to be varied in order to achieve the same effect as the LC resonance circuit.

By varying the reverse bias voltage, which is a characteristic of varactor diodes, the junction capacitance (C) is made to change. In other words, the voltage-dependency characteristics of the diodes are used to produce the desired effect. (See Fig. 2)

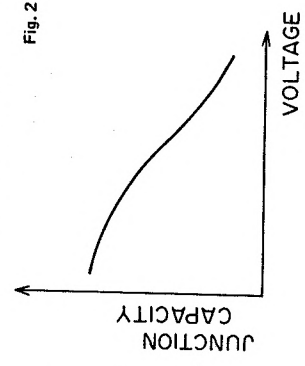
[Reference]

$$\frac{C_{\text{max}} + C_D}{C_{\text{min}} + C_D} = \left(\frac{f_{\text{max}}}{f_{\text{min}}} \right)^2 = k$$

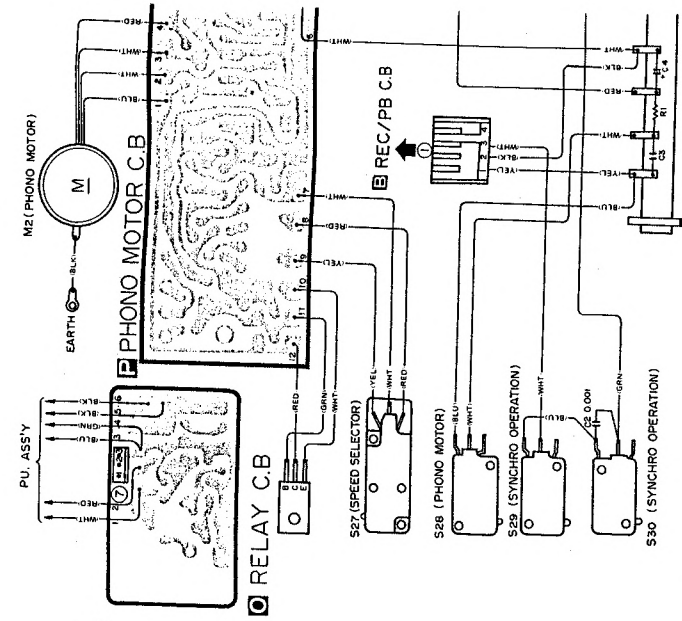
C_{max} C_{min} : Maximum and minimum values of varactor diode capacitance
 C_D : Stray capacitance, trimmer capacitance
 f_{max} : Maximum reception frequency
 f_{min} : Minimum reception frequency

Since tough demands are placed on the selectivity of FM tuners, devices with as high a Q factor as possible are required. For this reason, epitaxial planar devices which allow devices with a low resistance to be used, are employed.

Fig. 2



In Fig. 1 each of the preset buttons is provided with a variable resistor (VR through VR) for each of the broadcasting stations (six with this model). Once the resistances of these resistors are preset to the reception frequency of the corresponding broadcasting station, the voltage, which is supplied from the preset regulated power supply to the position at which the desired broadcasting station is tuned with the preset button, is supplied to the varactor diodes (D1, D2, D3, 1SV55) via the variable resistors, the required capacitance is provided, and the resonance frequency of the resonance circuit composed of the diodes and coils is determined. This circuit system, which connects the varactor diodes displaying the two characteristics alternately in the reverse direction and which supplies the voltage at the midpoint, displays commendable values with respect to the dynamic range for high input signals, intermodulation distortion and others. As has already been mentioned, the control voltage is an important factor with the preset tuning circuit, and it is essential that the control voltage be stabilized and that the frequency drift be improved by the APC circuit. If, in an electronic preset tuning circuit, the resistance is set beforehand to correspond to the required broadcasting stations with the variable resistors, there is no need to rotate a tuning knob and all that has to be done in order to tune a station and receive the program is to depress the corresponding preset button. However, in the manual mode, the system can be made to function in the same way as a conventional tuner since the broadcasting station is tuned in with the tuning knob.



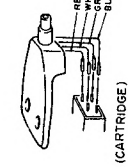
6 Meter Level Adjustment

Settings:

- Input signal: AUX. -14 dB, 400 Hz
- DOLBY NR switch: OFF
- Adjustment locations: SFR405 (L-ch) SFR406 (R-ch)

Method:

Adjust SFR405, 406 so that the level is 0VU.



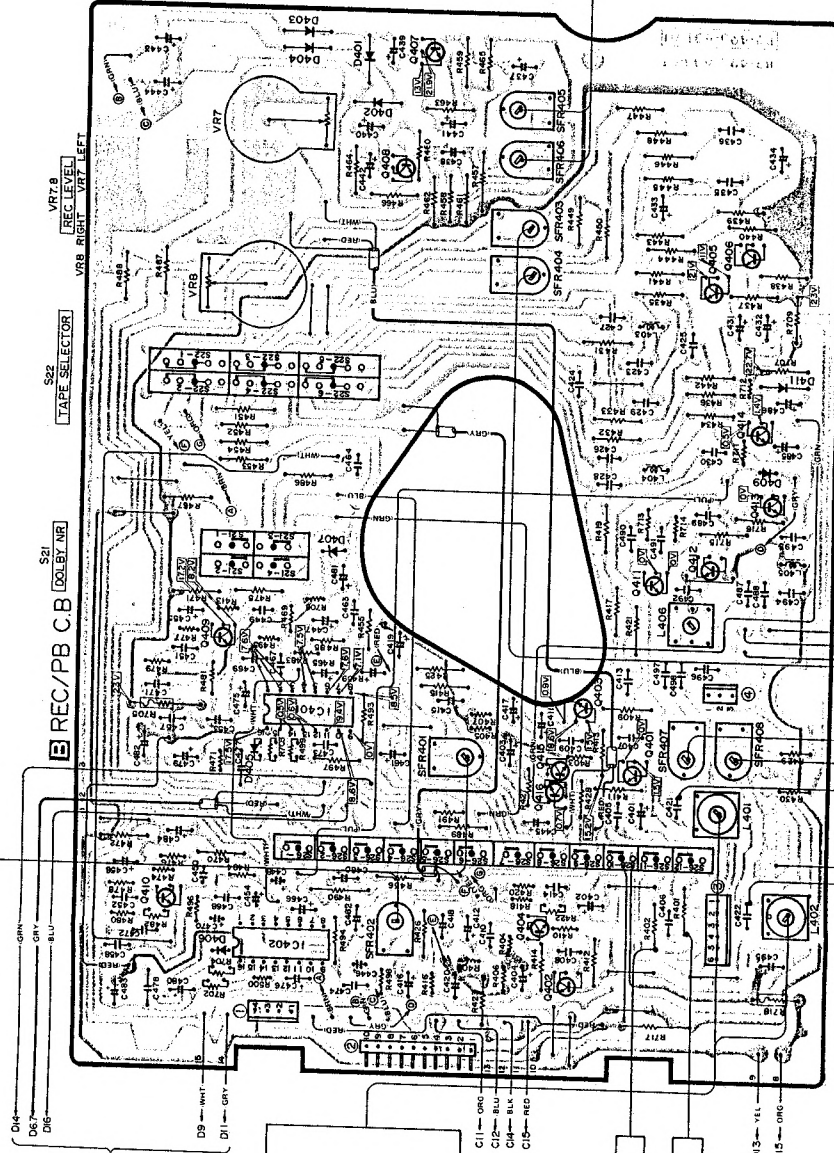
3 Playback Level Adjustment

Settings:

- Test tape: TTA-161
- TAPE SELECTOR switch: LH
- Adjustment locations: SFR401 (L-ch) SFR402 (R-ch)

Method:

Play back the test tape and adjust so that the output is 280 mV.



PRE AMP/SWITCH C.B.

Trap Coil Adjustment

Settings:

- Recording mode
- TAPE SELECTOR switch: CrO₂
- REC VOLUME: MAX
- Test points: TP11 (L-ch), TP12 (R-ch)
- Adjustment locations: L401 (L-ch), L402 (R-ch)

Method:

Adjust L401, L402 so that the voltage is reduced to minimum value.

MAIN AMP C.B.

TP10 Bias Test Point (R-ch)

TP9 Bias Test Point (L-ch)

PRE AMP/SWITCH C.B.

TP12 Bias Test Point (R-ch)

TP11 Bias Test Point (L-ch)

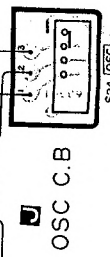
REC/PB, Frequency Characteristic Adjustment

Settings:

- Test tape: TTA-119E
- DOLBY NR switch: OFF
- Adjustment locations: SFR403 (L-ch) SFR404 (R-ch)

Method:

Play back test tape and adjust so that the output of the 10 kHz portions of the 10 kHz section reaches the maximum and evenness for both channels.



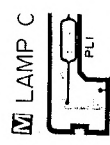
1 Azimuth Adjustment

Settings:

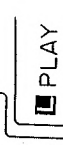
- Play back mode
- Output level: MAX
- Test tape: TTA-117E
- Adjustment location: azimuth adjusting screw

Method:

Play back the test tape and adjust so that the output of the 10 kHz section reaches the maximum and evenness for both channels.



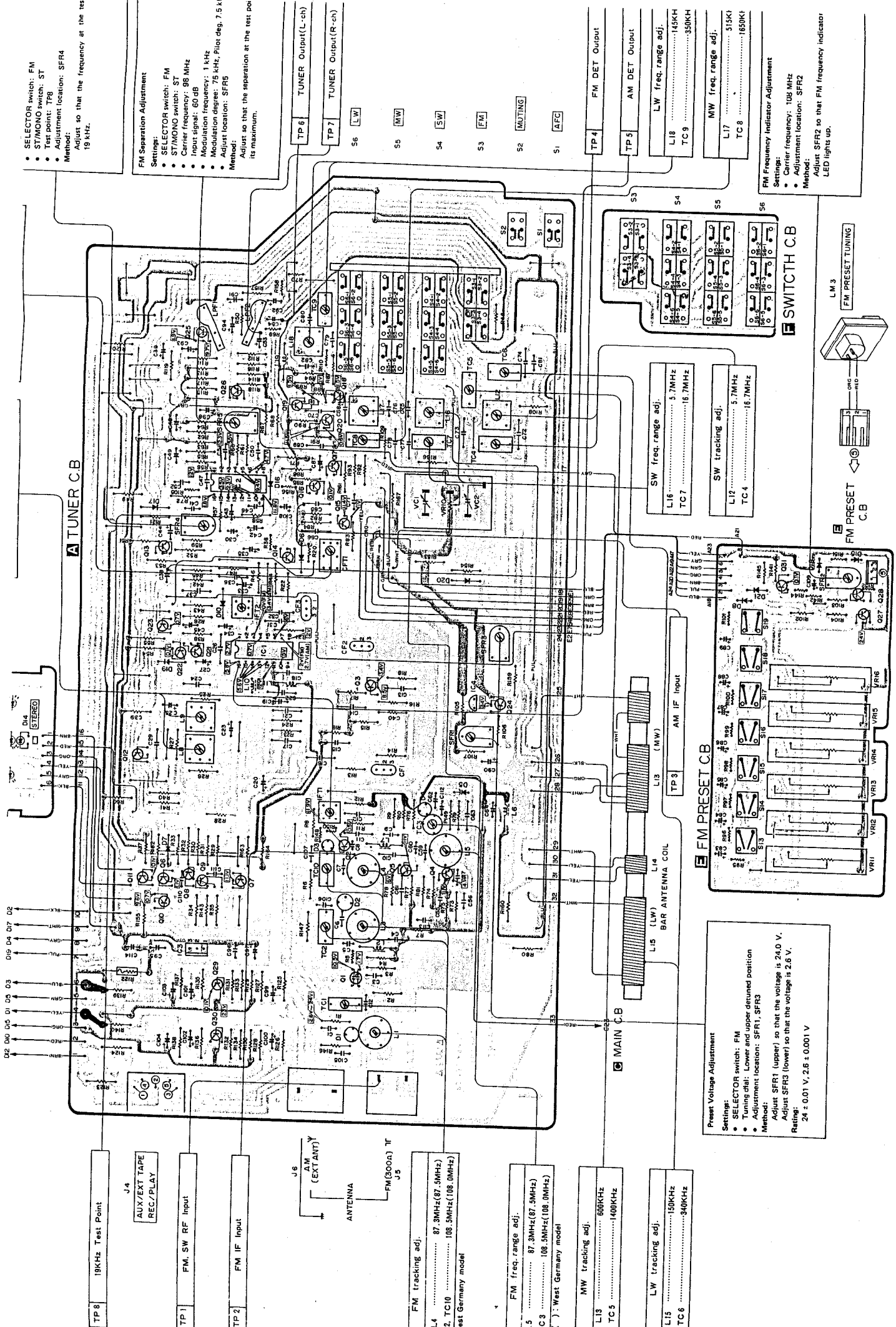
(VU METER LAMP)



(CASSETTE ROOM)

(MUTING)

(AUTO STOP)



• SELECTOR switch: FM
• ST/MONO switch: ST
• Test point: TP8
• Adjustment location: SFR4
Method:
Adjust so that the frequency at the test point is 19 kHz.

FM Separation Adjustment
Settings:
• SELECTOR switch: FM
• ST/MONO switch: ST
• Carrier frequency: 98 MHz
• Input signal: 60 dB
• Modulation frequency: 1 kHz
• Modulation depth: 75 kHz, Pilot deg. 7.5 kHz
Method:
Adjust so that the separation at the test point is maximum.

TP6 TUNER Output(L-ch)
TP7 TUNER Output(R-ch)
S6 LW
S5 MW
S4 SW
S3 FM
S2 MUTE
S1 AFC

TP4 FM DET Output
TP5 AM DET Output
LW freq. range adj.
L18 145KHz
TC9 350KHz
MW freq. range adj.
L17 515KHz
TC8 165KHz

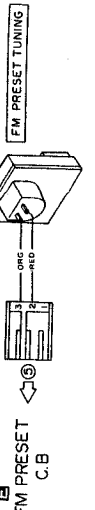
FM Frequency Indicator Adjustment
Settings:
• Carrier frequency: 108 MHz
• Adjustment location: SFR2
Method:
Adjust SFR2 so that FM frequency indicator LED lights up.

TUNER C.B.

FM PRESET C.B.

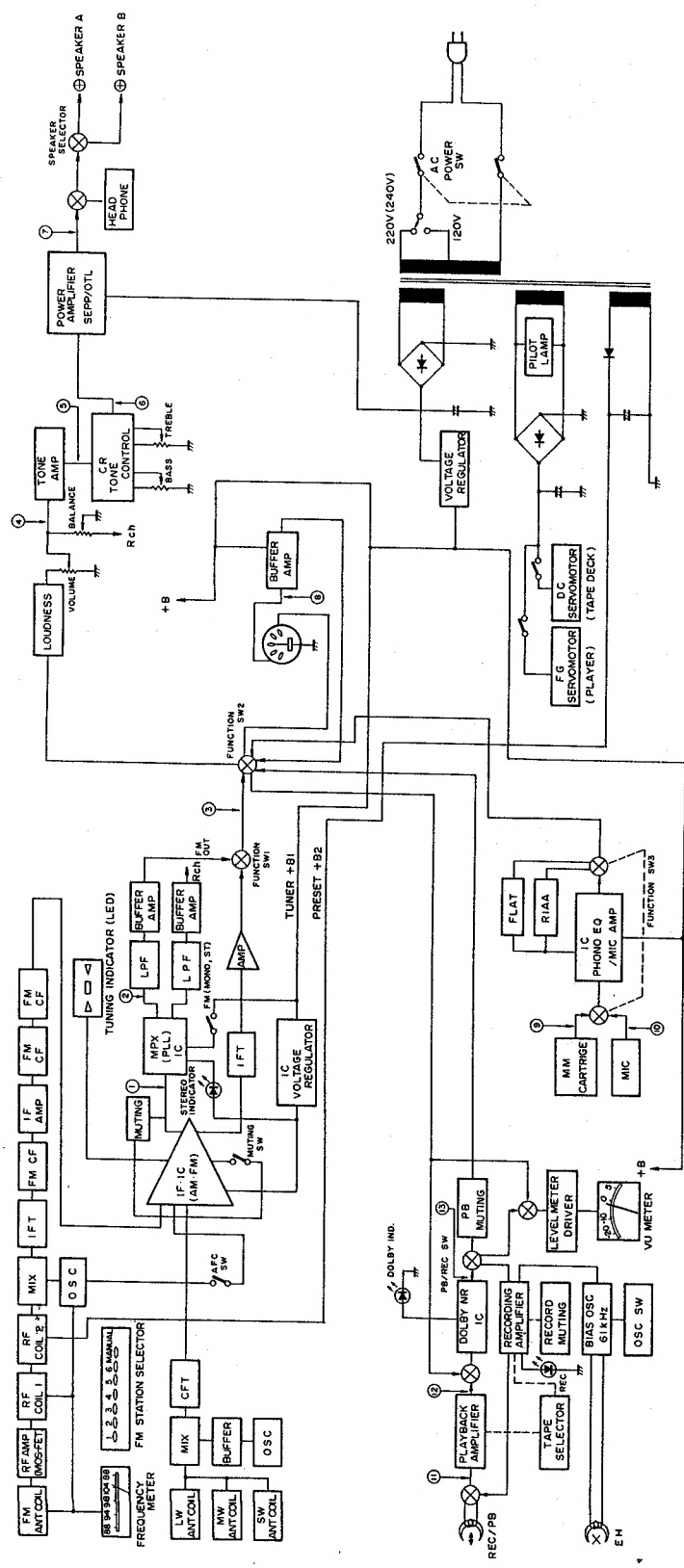
SWITCH C.B.

Preset Voltage Adjustment
Settings:
• SELECTOR switch: FM
• Tuning dial: Lower and upper detuned position
• Adjustment location: SFR1, SFR3
Method:
Adjust SFR1 (upper) so that the voltage is 24.0 V.
Adjust SFR3 (lower) so that the voltage is 2.6 V.
Rating:
24 ± 0.01 V, 2.6 ± 0.001 V



MANUAL
FM PRESET SELECTOR
1 2 3 4 5 6

BLOCK DIAGRAM



LEVEL DIAGRAM

