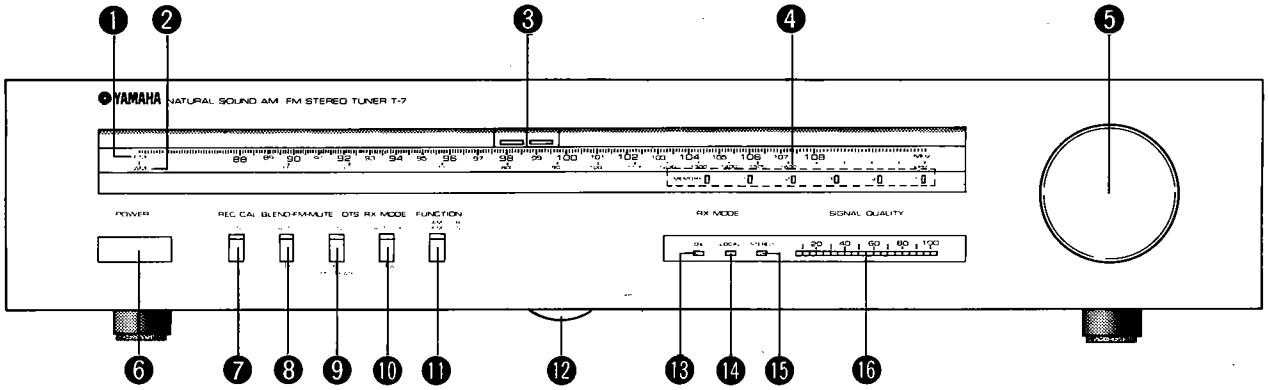
436

AM/FM STEREO TUNER

T-7

SERVICE MANUAL

■ FRONT PANEL



❶ FM DIAL SCALE
❷ AM DIAL SCALE
❸ TUNING INDICATOR
❹ PRESET TUNING BUTTONS
❺ TUNING KNOB
* ❻ POWER SWITCH
❼ REC CAL SWITCH
❽ BLEND SWITCH
❾ MUTE/OTS SWITCH
❿ RX MODE SWITCH
⓫ FUNCTION SWITCH
⓬ OUTPUT LEVEL VOLUME
⓭ DX INDICATOR
⓮ LOCAL INDICATOR
⓯ STEREO INDICATOR
⓰ SIGNAL QUALITY INDICATOR

** NOTE: On British, North European and Australian models, the switch is labeled "ON" and "STANDBY".*

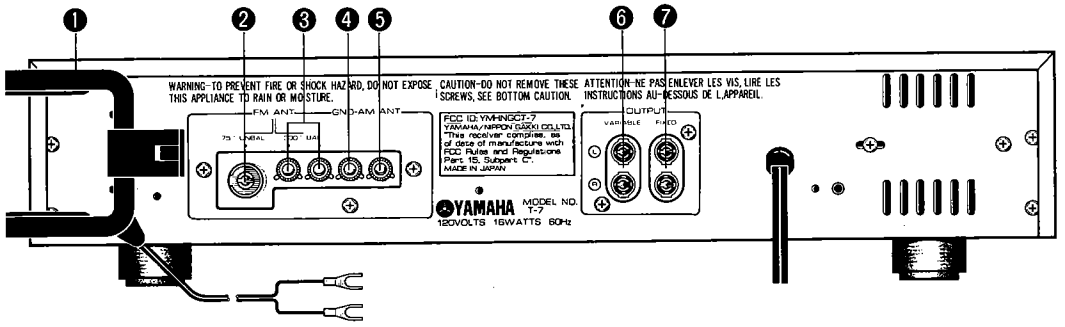
■ CONTENTS

004414

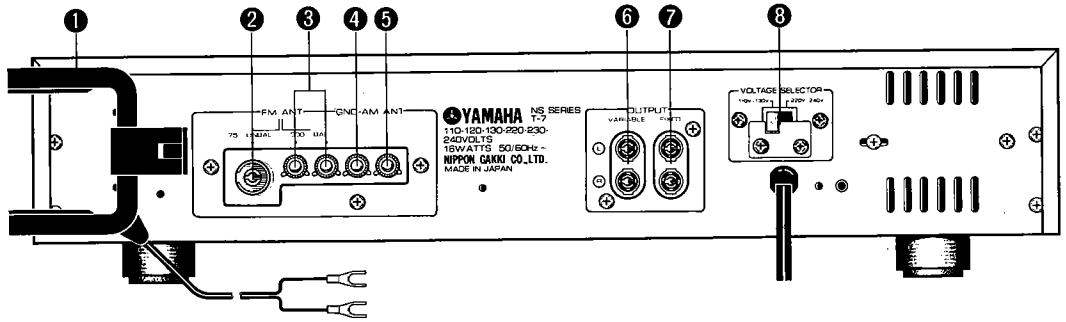
SINCE 1887 YAMAHA
NIPPON GAKKI CO., LTD. HAMAMATSU, JAPAN
80' 8 2.4K K.T. Printed in Japan

■ REAR PANELS

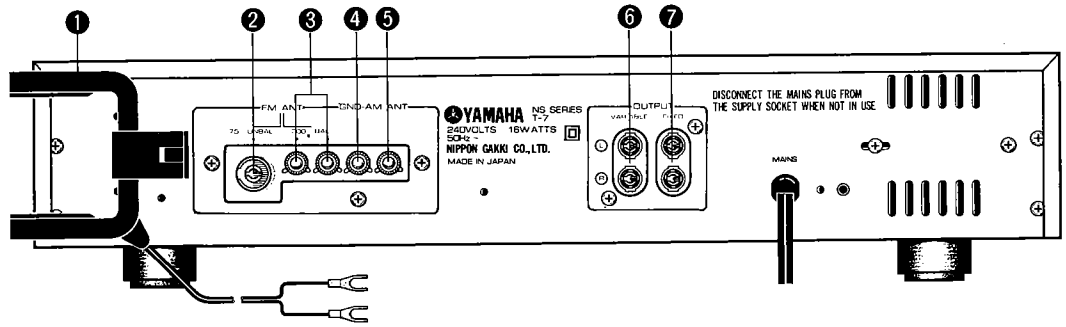
■ U.S. & CANADIAN MODELS



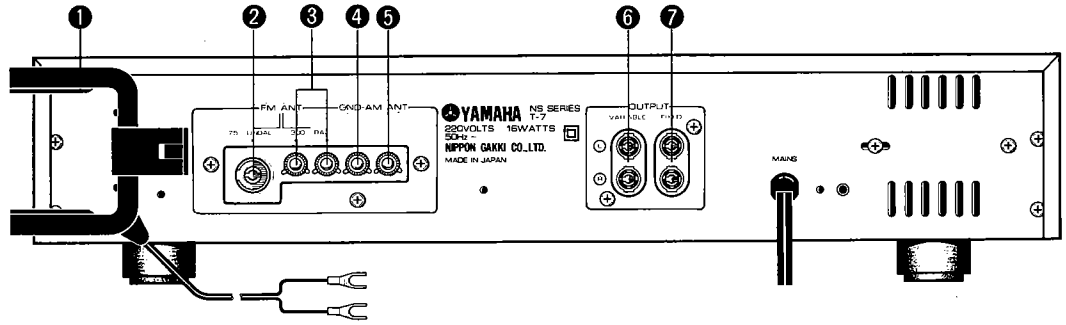
■ GENERAL MODEL



■ BRITISH MODEL



■ NORTH EUROPEAN MODEL



❶ AM LOOP ANTENNA
❷ FM ANTENNA TERMINAL (75Ω Unbalance)
❸ FM ANTENNA TERMINAL (300Ω Balance)
❹ GND (Ground) TERMINAL
❺ AM ANTENNA TERMINAL
❻ OUTPUT TERMINAL (Variable)
❼ OUTPUT TERMINAL (Fixed)
❽ VOLTAGE SELECTOR

■ SPECIFICATIONS

■ FM SECTION

Tuning Range		87.6 to 108 MHz
50 dB Quieting Sensitivity		
Mono (DX)		3.2μV (15.3 dBf)
Stereo (DX, Blend on)		20μV (31.2 dBf)
(DX, Blend off)		38μV (36.8 dBf)
Usable Sensitivity		
IHF Mono	1.7μV (300Ω) 9.8 dBf	
(98 MHz, 40 kHz dev.)	0.85μV (75Ω) 9.8 dBf	
DIN Mono	1.2μV	
(40 kHz dev., S/N 26 dB)		
Stereo	35μV	
(40 kHz dev., S/N 46 dB)		
Image Response Ratio (98 MHz)		100 dB
IF Response Ratio (98 MHz)		100 dB
Spurious Response Ratio (98 MHz)		100 dB
AM Suppression Ratio (IHF)		67 dB
Capture Ratio (IHF)		1.5 dB
Alternate Channel Selectivity		IHF Local 55 dB, DX90 dB DIN Local 30 dB, DX70 dB
Signal-to-Noise Ratio (at 85 dBf)		
Mono	90 dB	
Stereo	85 dB	
DIN (40 kHz dev.) Mono	84 dB	
Stereo	79 dB	
Distortion		
Mono	100 Hz	Local 0.03%, DX0.1%
	1k Hz	Local 0.04%, DX0.3%
	6k Hz	Local 0.07%, DX0.7%
	10k Hz	Local 0.05%, DX0.1%
Stereo	100 Hz	Local 0.04%, DX0.5%
	1k Hz	Local 0.04%, DX0.5%
	6k Hz	Local 0.07%, DX0.8%
	10k Hz	Local 0.08%, DX1.5%
	15k Hz	Local 0.2%, DX3.0%
Intermodulation Distortion (IHF)		
Mono	Local 0.04%, DX0.5%	
Stereo	Local 0.04%, DX1.0%	
Stereo Separation		
DC to 1k Hz	Local 60 dB, DX30 dB	
2k Hz to 10 kHz	Local 52 dB, DX25 dB	
Frequency Response		
50 Hz to 10k Hz	±0.3 dB	
20 Hz to 15k Hz	±0.3, −0.5 dB	
10 Hz to 18k Hz	+0.5, −3.0 dB	
Subcarrier Product Ratio		70 dB
Muting Threshold (DX)		5μV (19.2 dBf)
Auto-DX Threshold		50μV (39.2 dBf)

■ AM SECTION

Tuning Range	525 to 1,605 kHz
Usable Sensitivity (IHF)	15μV
Alternate Channel Selectivity	
1,000 kHz ± 10 kHz	Local 17 dB, DX27 dB
Signal-to-Noise Ratio	52 dB
Image Response Ratio	50 dB (1,000 kHz)
Spurious Response Ratio	50 dB
Distortion	0.3%

■ AUDIO SECTION

Output Level/Impedance	
FM	1V/600Ω (Fixed)
(100% mod. 1 kHz)	500 mV/3.3kΩ (Variable center)
	1V/600Ω (Variable max.)
AM	300 mV/600Ω (Fixed)
(30% mod. 1 kHz)	150 mV/3.3kΩ (Variable center)
	300 mV/600Ω (Variable max.)
Rec Cal Signal	500 mV/600Ω (Fixed)
(333 Hz:	250 mV/3.3kΩ (Variable center)
Corresponding to	
50% FM modulation)	

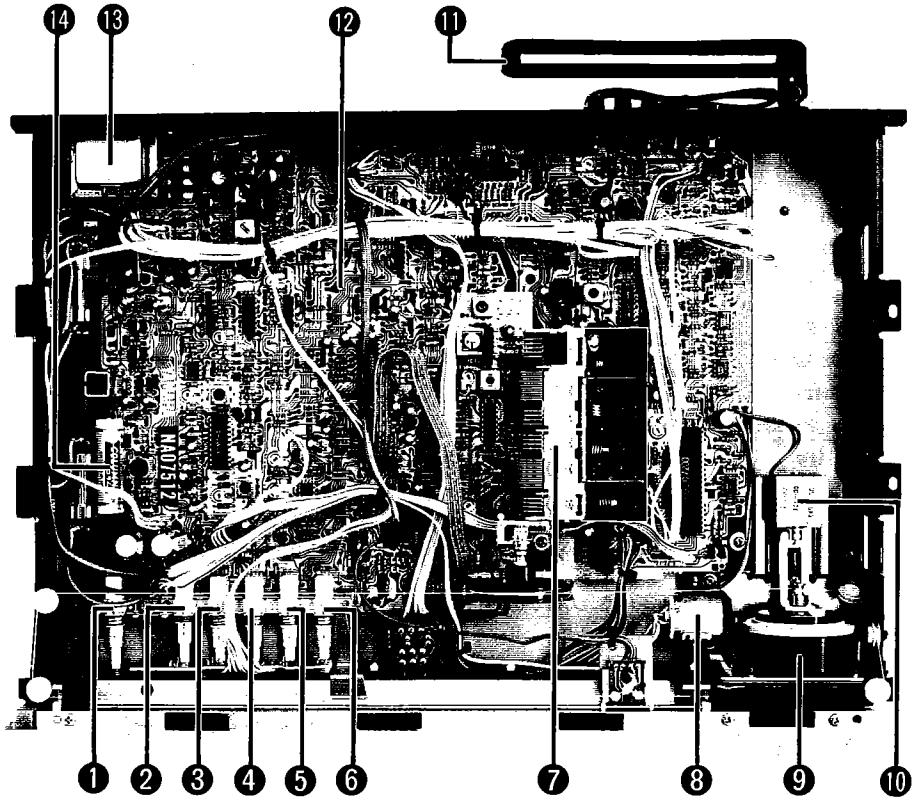
■ GENERAL

Semiconductors	86 Transistors, 20 ICs, 4 FETs, 38 Diodes, 3 Zener Diodes, 14 LEDs
Power Supply	
U.S. & Canadian Models	120V, 60 Hz
General Model	110 ~ 130V/ 220 ~ 240V, 50/60 Hz
North European Model	220V, 50 Hz
British & Australian Models	240V, 50 Hz
Power Consumption	
U.S. & Canadian Models	16W
General, North European British & Australian Models	16W
Dimensions (W x H x D)	435 x 95 x 335 mm (17-1/8" x 3-3/4" x 13-1/8")
Weight	5.2 kg (11.5 lbs)

Specifications subject to change without notice.

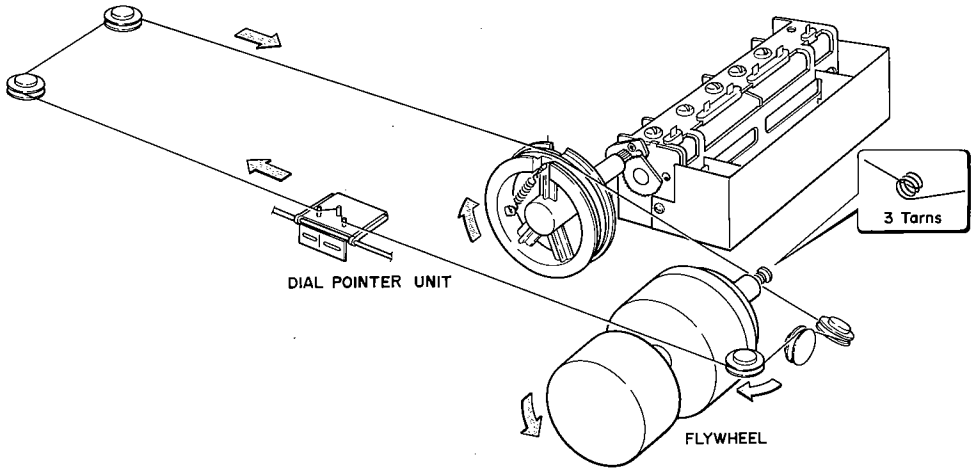
■INTERNAL VIEW

■ TOP VIEW



❶ POWER SWITCH (SW102)
❷ REC CAL SWITCH (SW101-1)
❸ BLEND SWITCH (SW101-2)
❹ MUTE/OTS SWITCH (SW101-3)
❺ RX MODE SWITCH (SW101-4)
❻ FUNCTION SWITCH (SW101-5)
❼ RF PACK (Front end) (PA00051)
❽ MOTOR (JC00056)
❾ FLY WHEEL
❿ SOLENOID
⓫ AM LOOP ANTENNA
⓬ TUNER C. BOARD
⓭ POWER TRANSFORMER
⓮ MEMORY BACKUP BATTERY

■DIAL MECHANISM



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■ DISASSEMBLY PROCEDURES

1. Top and Bottom cover removal

Remove screws ① to ⑨ in photo 1 and remove the bottom and top covers.

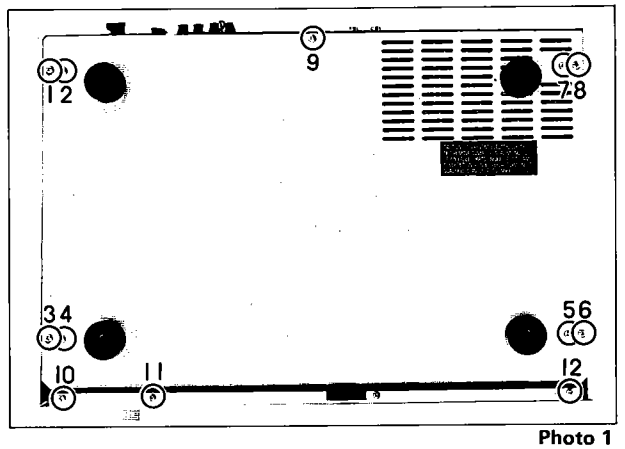


Photo 1

2. Panel unit removal

Disconnect the connector and snapmate connector (see Fig. 2) show in Photo 2.

Remove the screws ⑩ to ⑫ in Photo 1 and the screws ① to ③ in Photo 2 and then remove the front panel.

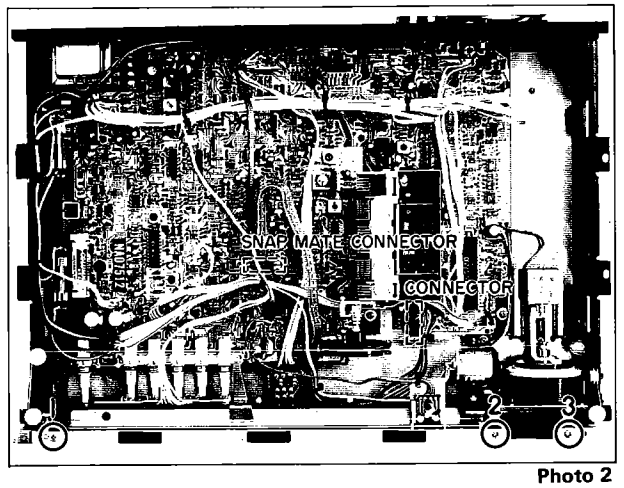


Photo 2

3. Tuning knob removal

Use a 2mm hexagonal wrench to loosen the set screw in Photo 3 and then remove the tuning knob.

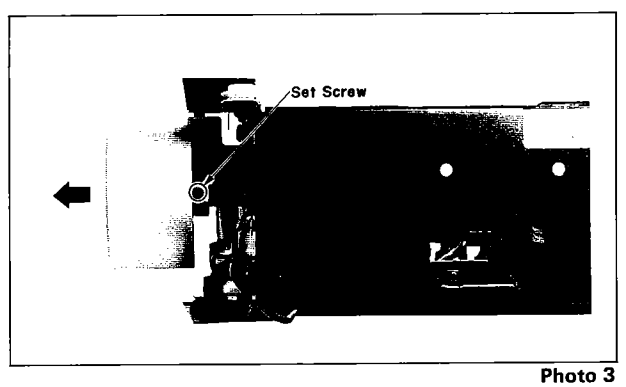


Photo 3

4. Drive unit removal

a. Remove the front panel.

b. Remove the tuning knob.

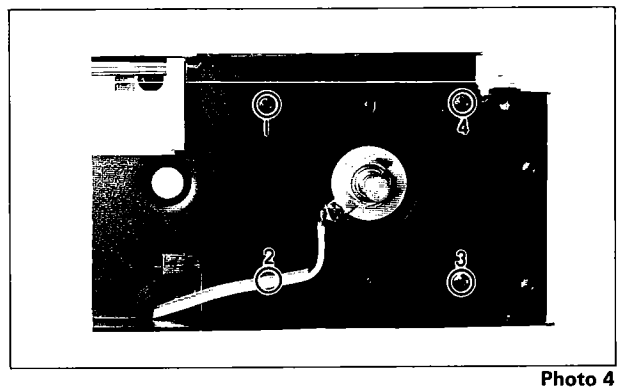


Photo 4

c. You will find that if you wind adhesive tape to secure the dial string to the pulley so that the string does not get tangled up (see Fig. 1), the replacement operation will be facilitated.

d. Use a 2mm hexagonal wrench to remove the hexagonal nut and the detach the lead wire in Photo 4.

e. Remove the screws ① to ④ in photo 4 and dial string and then remove the drive unit.

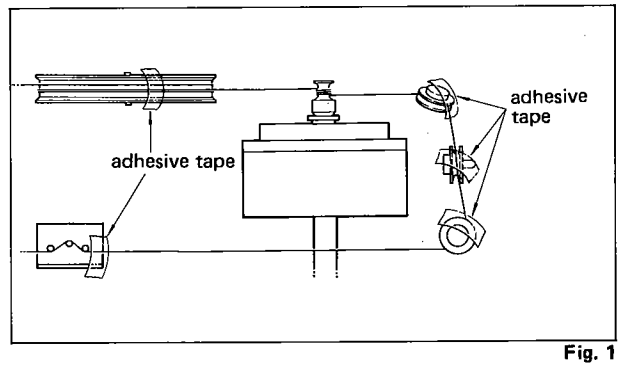
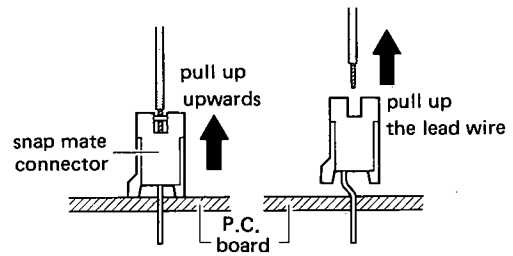


Fig. 1

REMOVE SNAP MATE CONNECTOR



1. Pull up the upper part of the snap mate connector, you will pull up the lead wires.
2. When you attach the ribbon wires to the snap mate connector, at first pull up, the upper part of the snap mate connector.
   Put the lead wires in the hole of the snap mate connector and then push down the upper part of the snap mate connector. The lead wires are locked up.

Fig. 2

5. Motor replacement procedures

You will be able to replace the motor without removing the front panel and the drive unit.

a. Remove the screws ① to ② which fix the motor stay, and then take out the motor.

b. Remove the screws ③ to ④ which fix the screw ③ to ④ , and then replace the motor.

c. Attach the motor so that the ⊖ lead wire (green) may be upper side.

d. Slide the motor stay right and left and then fix the motor stay so that the gap between the motor shaft and the clutch rubber may be 0.4 ± 0.2mm. After tighten up the screws, lock the screws.

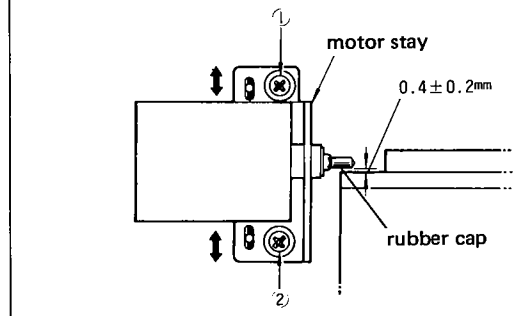


Fig. 3

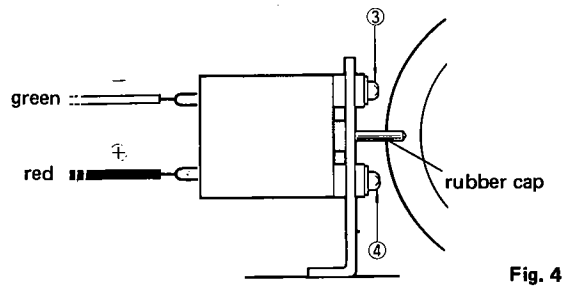


Fig. 4

6. Solenoid Replacement procedure

Proceed with step 4, and remove the drive unit, and then replace the solenoid.

a. Remove the screws ① to ③ , and then replace the solenoid.

b. Fix the clutch lever with the screw ① . The gap should be 1.5 ± 0.1mm on condition that the flywheel is connected to the clutch rubber.

* Put a gage between the flywheel and the clutch rubber and decide the position of the solenoid and fix it with the screws ② to ③ . (see Fig. 6)

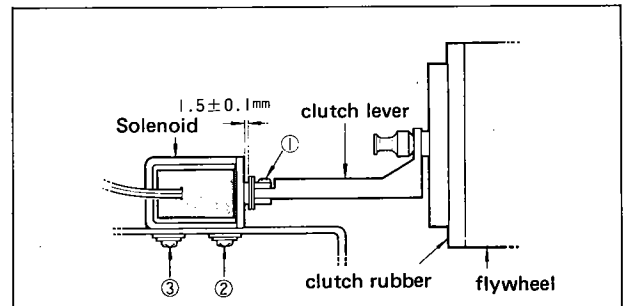


Fig. 5

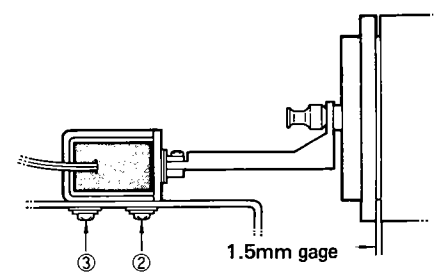


Fig. 6

** Use a gage when you decide the position.*

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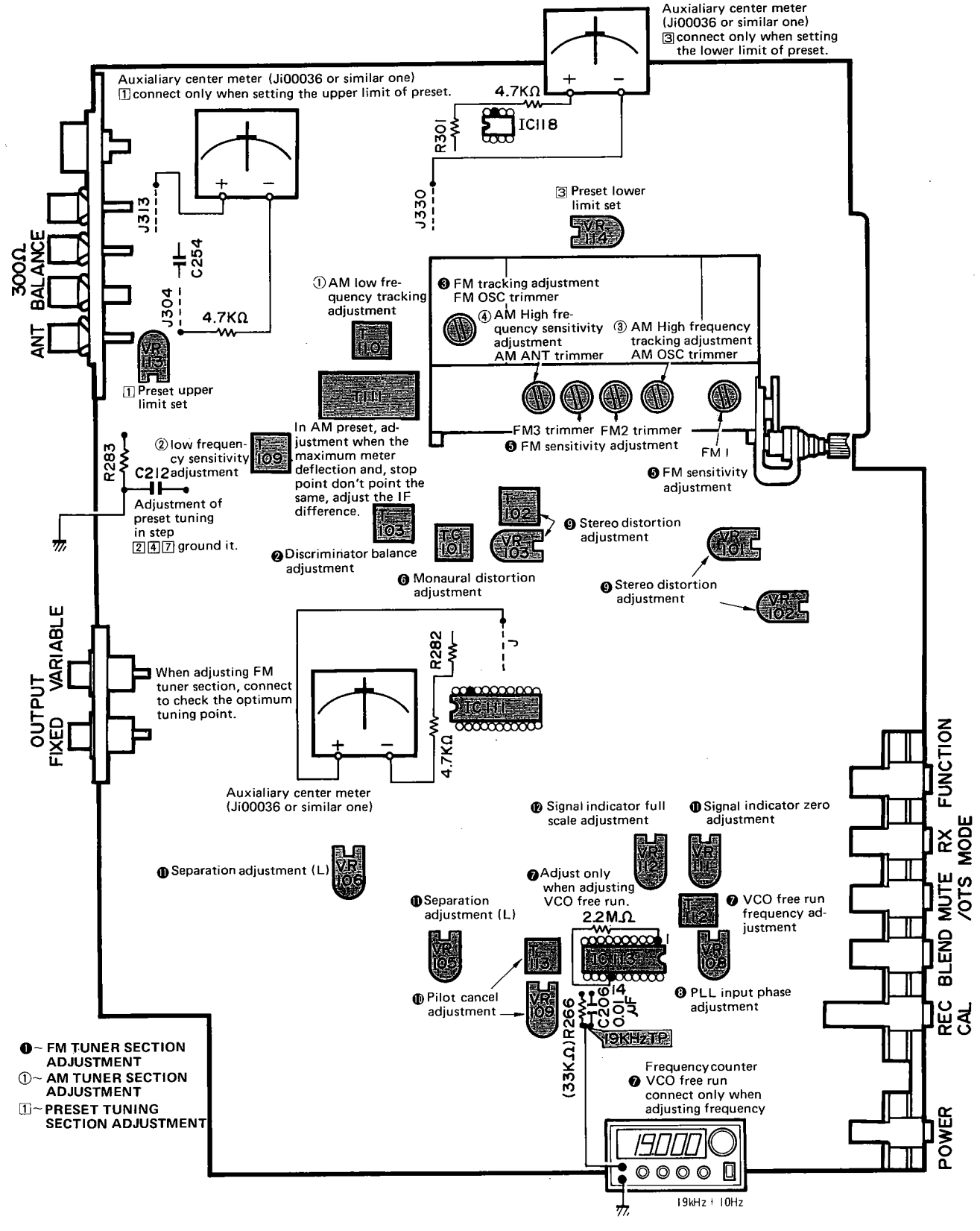
■ADJUSTMENT

I. TEST POINT (TUNER CIRCUIT BOARD)

Before adjusting, Connect the center meter (Ji00036 or similar one) in series with the resistor 4.7kΩ between PIN 20 (IC111) and ground.



1. Set the switches to the following positions.

SWITCH	POSITION
FUNCTION	FM
RX MODE	AUTO DX
MUTE/OTS	ON
BLEND	OFF
REC CAL	OFF

2. After the power switch is pushed on, wait five minutes before measuring.

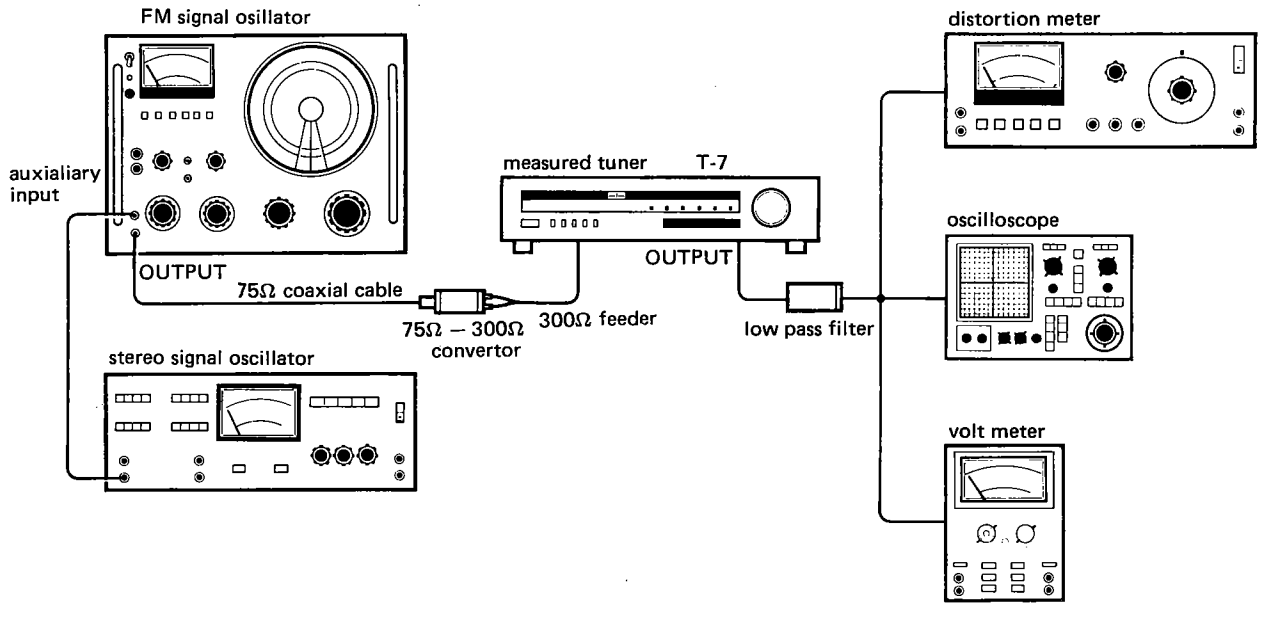
II. POWER SUPPLY VOLTAGE CHECK

Check the voltages at the power supply terminals as follows.

TERMINALS	VOLTAGE
+12	+12.5 ± 1V
–12	–13.5 ± 1V
+ 9	+ 9.5 ± 1V
9B	+10.5 ± 1V
+ 7	+ 7.0 ± 1V
– 7	– 7.5 ± 1V

III. CONNECTION

Use a low pass filter.



Measuring instrument abbreviation

FM SG	:	FM signal generator	DIST. M	:	Distortion meter
AM SG	:	AM	FC	:	Frequency counter
SSG	:	Stereo signal generator	VTVM	:	Volt meter
OSC	:	Oscilloscope	DMM	:	Digital multimeter

■ FM TUNER SECTION ADJUSTMENT

Step	Adjustment item	Connection terminal	Measuring instrument	Adjustment part	Adjustment method		
1	Pointer alignment (Tuning indicator)			Tuning knob pointer	Rotate the tuning knob and align pointer with the starting point of the dial scale	± 1mm	
2	Discriminator balance	IC111 PIN 20 — E	Auxialiary center meter	T103 secondary core of discriminator coil	Move core until tuning meter pointer deflects to 0 with noise at detuned point near 98MHz.		
3	Tracking adjustment I	300Ω FM Antenna terminal IC111 PIN 20 — E	FM SG (108MHz) Auxialiary center meter	FM OSC trimmer	Rotate tuning knob and align pointer with 108MHz on dial scale. Rotate trimmer and set to center of tuning meter.	less than ± 1mm	
4	Tracking adjustment II	300Ω FM antenna terminal IC111 PIN 20 — E	FM SG (108MHz) Auxialiary center meter	FM OSC trimmer	Correct so as to be in the rating.	88～104 MHz ±2mm 88MHz ±3mm except above ±4mm	Adjust only when pointer deviates with step 3.
5	Sensitivity adjustment	300Ω FM antenna	FM SG (98MHz)	RF trimmer (FM1, FM2, FM3)	Adjust so that sensitivity is maximum.		
6	Monaural distortion adjustment	300Ω FM antenna output L	FM SG (98MHz, 70dBμ 1kHz, 100% modulation	TC101	Reduce distortion to minimum	less than 0.1%	
7	VCO free run frequency adjustment	300Ω FM antenna 19kHz TP	DIST. M, OSC (98MHz, 70dBμ unmodulated FC	VR108	Connect 2.2MΩ between PIN 14 and PIN 1 (±12V) and force the set in stereo mode. Set VCO frequency to 19kHz with VR108.	19kHz ±10Hz	
8	PLL input phase adjustment	300Ω FM antenna output L	FM SG SSG (98MHz, 70dBμ 1kHz, 100% modulation L-R) OSC, VTVM	T112	Adjust so that (L-R) out put is maximum.		
9	Stereo distortion adjustment	300Ω FM antenna output	FM SG SSG (98MHz, 70dBμ 1kHz, 100% modulation stereo, L,R DIST.M, OSC	T102, VR101 VR102, VR103	Reduce distortion to minimum	less than 0.1%	
10	Pilot canceling adjustment	300Ω FM antenna output disconnect LPF	FM SG, SSG (98MHz, 70dBμ pilot 9% modulation OSC, VTVM	VR109, T113	Adjust so that 19kHz leakage level is reduced to minimum.	less than —70dBm	
11	Separation adjustment	300Ω FM antenna output	FM SG, SSG (98MHz, 70dBμ 1kHz, 100% modulation stereo OSC VTVM	VR105 (L) VR106 (R)	Add stereo signal to either channel. Input L → output R Reduce output level to minimum with VR105 Input R → output L Reduce output level to minimum.	More than 58dB	
12	Signal indicator full scale adjustment	300Ω FM antenna	FM SG 100dBμ	VR112	Adjust so that all the LEDS of signal indicator are ON		
13	Signal indicator zero adjustment	300Ω FM antenna	FM SG less than 0dBμ	VR111	Adjust so that all the LEDS of signal indicator are off.		

■ AM TUNER SECTION ADJUSTMENT

- Proceed with the AM section adjustments after having finished the FM section adjustments.
- Connect the loop antenna to ANT terminals.

Step	Adjustment item	Measuring instrument	Adjustment part	Adjustment method	Rating	Remarks
1	Low frequency range tracking adjustment	AM SG (600kHz, 60dBμ)	T110 local oscillator coil CTE 6013	Align pointer with 600kHz using tuning knob, rotate coil core and adjust for a maximum signal quality meter deflection.		
2	Low frequency range sensitivity adjustment	AM SG (600kHz, 60dBμ)	T109 GE 10035	Adjust for a maximum signal meter pointer deflection at same tuning point as under step 1.		
3	High frequency range tracking adjustment	AM SG (1350kHz, 60dBμ)	RF trimmer (AM OSC)	Align pointer with 1350kHz using tuning knob, rotate trimmer and set for a maximum signal meter pointer deflection.		
4	High frequency range sensitivity adjustment	AM SG (600kHz / 1350kHz / 60dBμ)	RF trimmer (AM ANT)	Adjust for a maximum signal quality meter pointer deflection at step 3 tuning point.		
5	Sensitivity difference adjustment	AM SG (600kHz / 1350kHz / 60dBμ)		Repeat steps 1 to 4 and adjust so that the difference is reduced to minimum.	Scale deviation. less than ± 1.5mm 600kHz 1350kHz	
6	Middle frequency range tracking adjustment	AM SG (950kHz, 60dBμ)		Set for maximum signal quality meter pointer deflection.	Scale deviation. less than ± 2mm	
7	Signal quality meter adjustment	AM SG (100dBμ / less than 0dBμ)		Check that all the LEDs of signal indicator are ON at 100dBμ and that all the LEDs are off at less than 0dBμ.		

■ REC CAL OUTPUT VOLTAGE CHECK

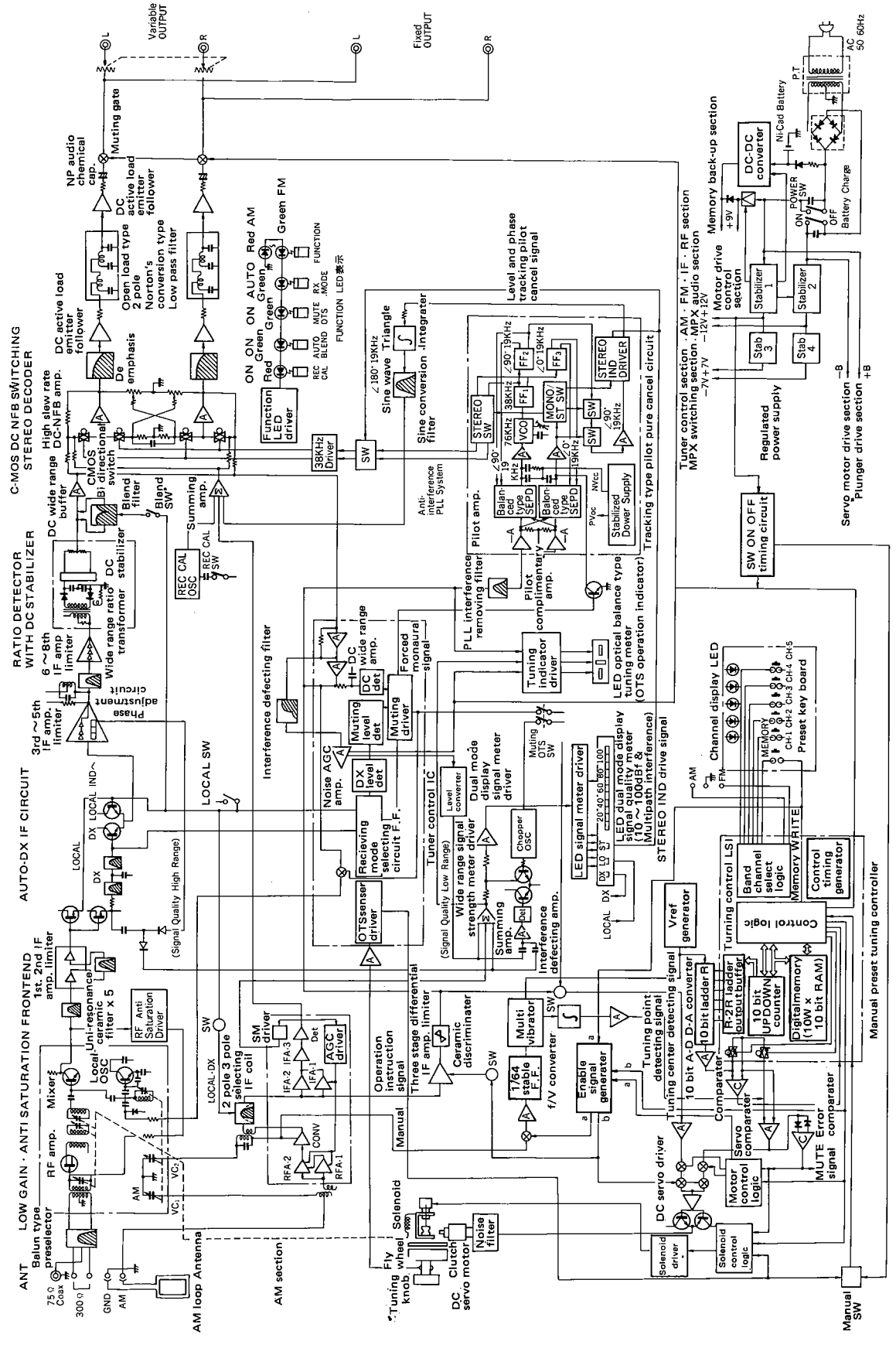
Step	Adjustment item	Connection terminal	Measuring instrument	Adjustment part	Adjustment method	Rating	Remarks
1	REC CAL output check	Output	OSC FC VTVM		Check that specified output is gained at oscilator frequency 333 ± 66Hz	−4±2.5dBm triangle wave	Volume max at variable output

■ PRESET TUNING SECTION ADJUSTMENTS

- Buck up operation check.
  Before power switch is ON, check the voltages of the terminal 9B and cathode of Diode 134 are above +3V.

Step	Adjustment item	Connection terminal	Measuring instrument	Adjustment part	Adjustment method	Rating	Remarks
1	Preset upper limit set	IC116 PIN 1 to 7	Connect auxiliary center meter in series to 4.7kΩ	VR113	1. Align pointer with 91MHz. 2. Adjust so that center meter aligns with 0, as the memory button is depressed.		
2	Preset upper limit check				1. Align pointer to the most right part and preset to the preset button 5. 2. Check that pointer moves to 91MHz, when preset button 5 is depressed. (Check that preset is not able 91MHz.)	91+0.4MHz 91—0.6MHz	Check that LED of preset button 5 is ON. Ground the connecting point between R238 and C212
3	Preset lower limit set	IC118 PIN 7 to E	Connect auxiliary center meter in series to 4.7kΩ	VR114	1. Rotate VR114 counter-clock wise. 2. Align pointer to the left part of dial scale, and preset to preset button . 3. Move pointer to another part and tune automatically at preset button 1. 4. Rotate tuning knob with a insulator (prevent touch switch operation) and align pointer with 87MHz. 5. Adjust so that center meter aligns with 0, as memory button is depressed.		When aligning pointer don't touch tuning knob with hand.
4	Preset lower limit check				1. Align pointer to the most left part and preset to the preset button 2. Check that pointer moves to 75MHz, when preset button 1 is depressed. (check that preset is not able under 87MHz.)	N. European model $87^{+0.4}_{-0.1}$MHz Other models $87^{+0.7}_{-0}$MHz	Check that LED of preset button 1 is ON Ground the connecting point between R238 and C212
5	FM S curve (capture) operation check	300Ω FM antenna	FM SG (84MHz, 60dBμ)		1. Tune at 98MHz and preset button 2. 2. Detune from 98MHz and depress preset button 2. 3. Check that pointer aligns with 98MHz and S, curve operation is done. (Observe the action when pointer approaches 98MHz)		Check that LED of preset button 2 is ON
6	AM S curve (capture) operation check		AM SG (950kHz 80dBμ)		1. Tune at 950kHz and preset to preset button 3. 2. Detune from 950kHz and depress preset button 2. 3. Check that pointer aligns with 950kHz, and S curve operation is done. (Observe the action when pointer approaches 950kHz)		Check that LED of preset button 3 is ON
7	Preset button 4 preset check				Memorize preset button 4 and check that auto tuning is able.		When checking the stop point ground connecting point between R238 and C212.

■ BLOCK DIAGRAM



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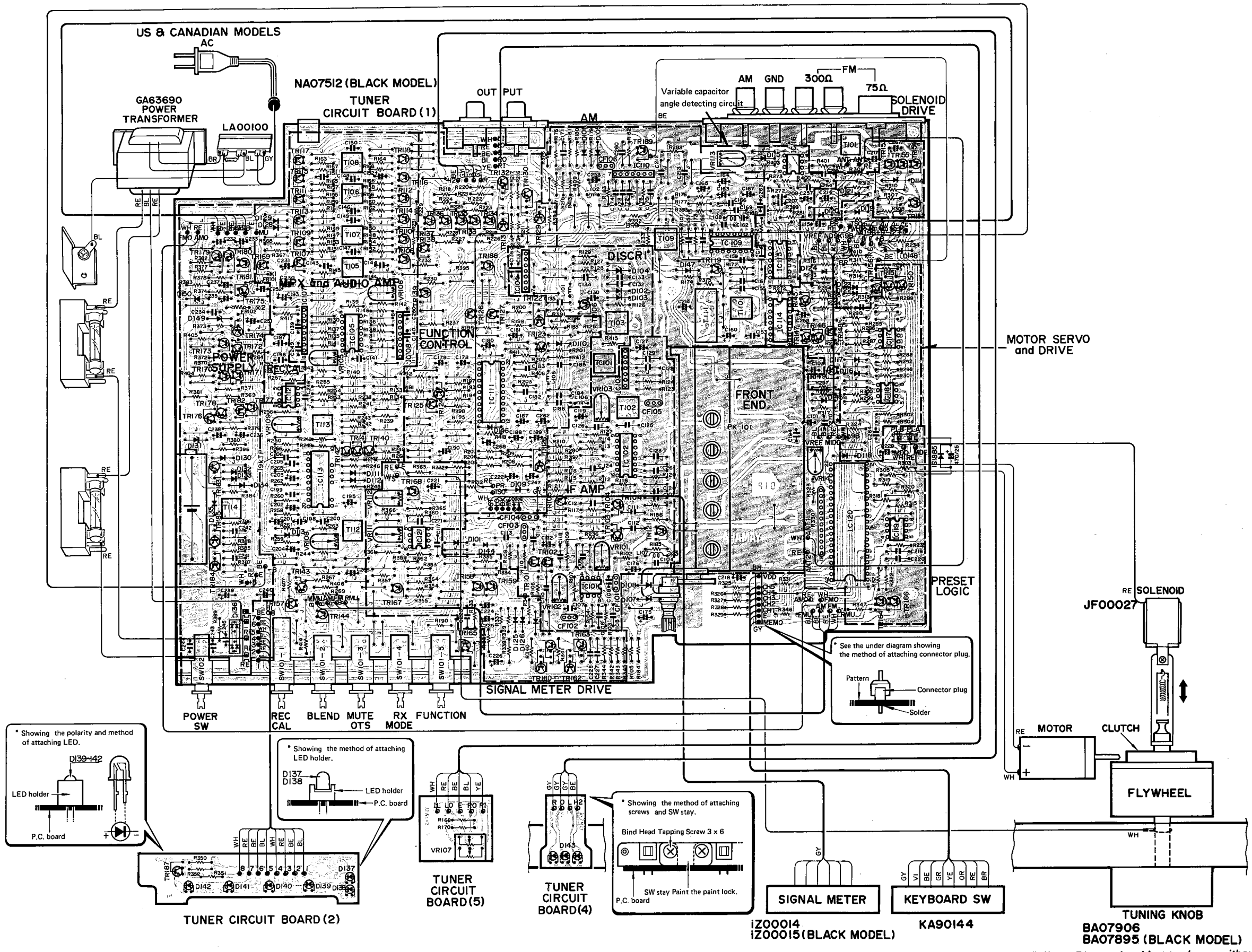
■WIRING



** Wiring Diagram is subject to change without notice.*

PARTS LIST

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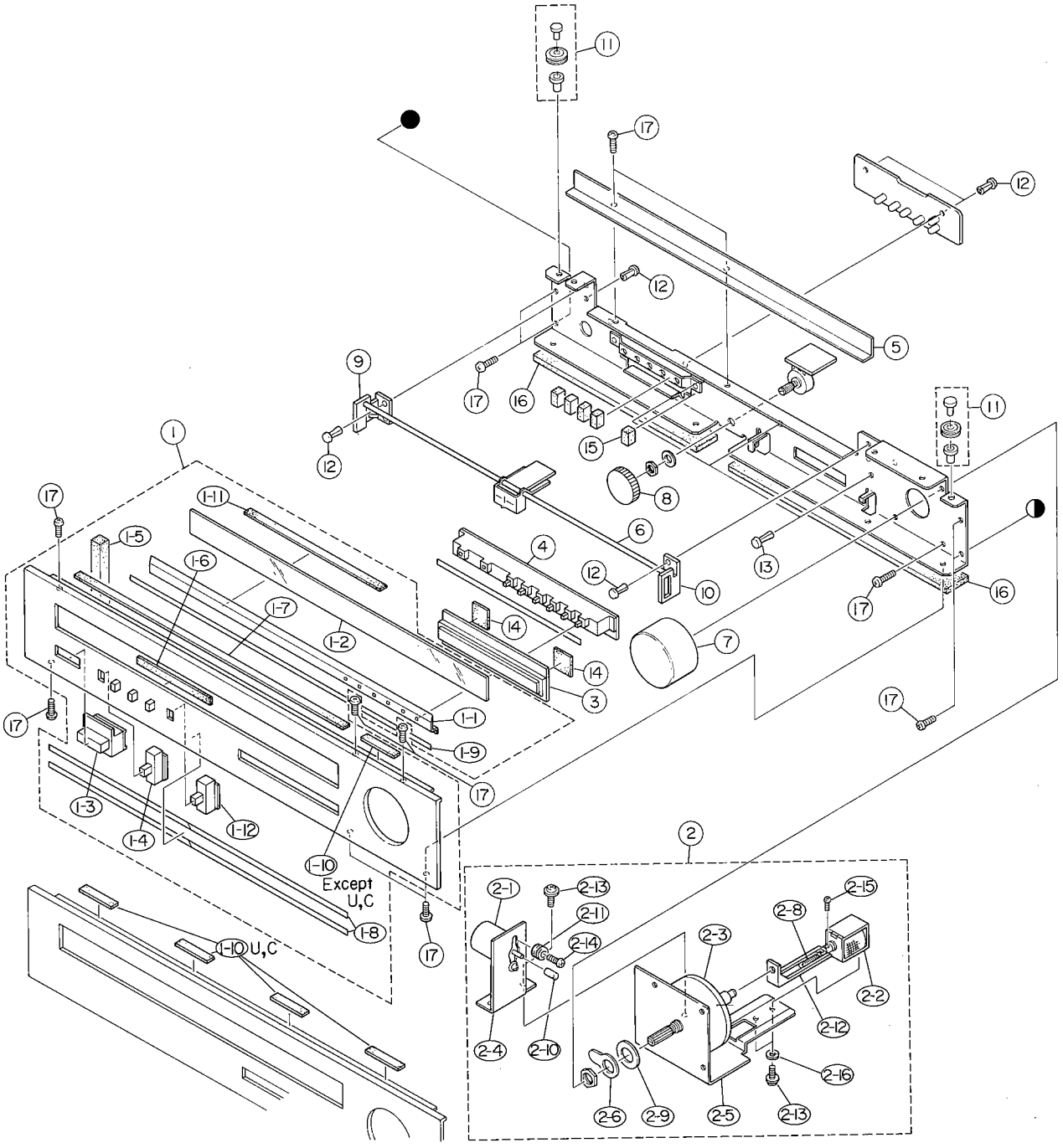
■ **CONTENTS**

SINCE 1887 YAMAHA
NIPPON GAKKI CO., LTD. HAMAMATSU, JAPAN

004414

80' 8 2.4K K.T Printed in Japan

■EXPLODED VIEW (FRONT)



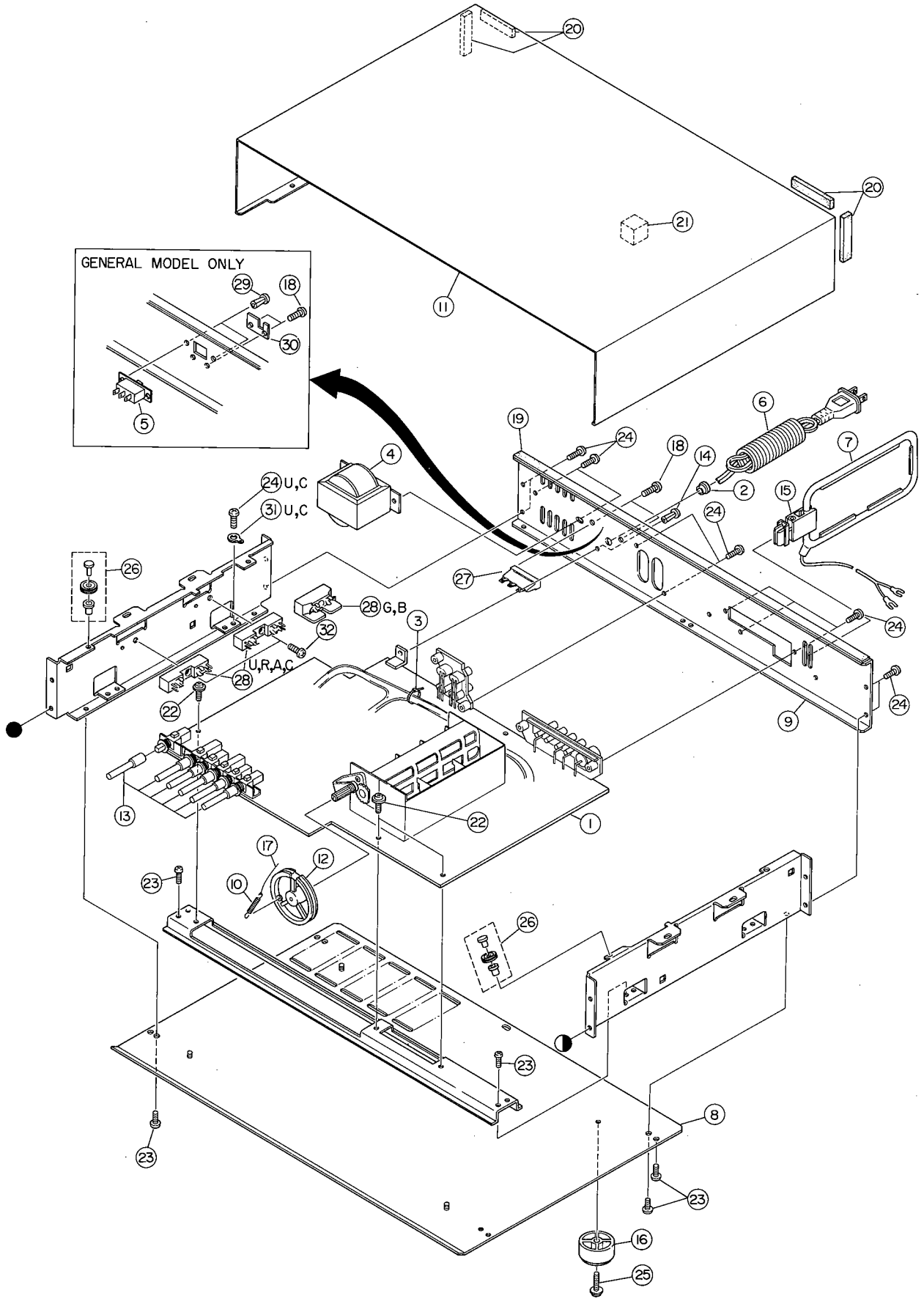
■PARTS LIST

R: General
U: U.S.A.
C: Canadian
A: Australian
G: North European
B: British

	Ref. No.	Part No.	Description	(部 品 名)	Remarks	Common model	Markets
	1	32 00 00 NB 09 77 80	Front Panel Unit	パネルユニット			R
※	"	32 00 00 NB 09 77 90	"	〃			U, C
※	"	32 00 00 NB 09 78 00	"	〃			A, G, B
※	"	32 00 00 NB 09 78 10	" (Black Model)	〃 (ブラック)			R
※	"	32 00 00 NB 09 78 20	" (")	〃 (〃)			U, C
※	"	32 00 00 NB 09 78 30	" (")	〃 (〃)			A, G, B

	Ref. No.	Part No.	Description	(部 品 名)	Remarks	Common model	Markets
※	1-1	32 00 00 BA 07 93 30	Dial Scale	ダイアル目盛板			
※	〃	32 00 00 BA 07 93 40	〃 (Black Model)	〃 (ブラック)			
※	1-2	32 00 00 CB 09 77 30	Dial Panel	ダイアルパネル			
※	1-3	32 00 00 NB 09 59 00	Push Button Ass'y	プッシュボタンAss'y			
※	〃	32 00 00 NB 09 66 50	〃 (Black Model)	〃 (ブラック)			
※	1-4	32 00 00 NB 09 59 10	〃	〃			
※	〃	32 00 00 NB 09 66 60	〃 (Black Model)	〃 (ブラック)			
	1-5	32 00 00 CB 09 31 40	Shade Tape	シャコウテープ			
※	1-6	32 00 00 CB 09 72 50	Spacer	スペーサー			
※	1-7	42 00 00 CB 08 26 40	Tape (Anti-Vibration) 7 x 285 x t3 mm	防振テープ			
	1-8	42 00 00 CB 07 41 90	Tape 5 x 310 mm	テープ			
	1-9	42 00 00 CB 07 41 90	〃 5 x 155 mm	〃			
	1-10	42 00 00 CB 07 59 80	〃 (Anti-Vibration) 7 x 30 x t3 mm	防振テープ		CT-610	
	1-11	42 00 00 CB 09 31 00	Shade Dumper	シャコウダンパー			
※	1-12	32 00 00 NB 09 74 20	Push Button Ass'y	プッシュボタンAss'y			
※	〃	32 00 00 NB 09 81 10	〃 (Black Model)	〃 (ブラック)			
※	2	32 00 00 NB 09 58 70	Drive Unit	ドライブユニット			
※	2-1	42 00 00 JC 00 05 60	D.C. Motor VA204B	DCモーター			
※	2-2	42 00 00 JF 00 02 70	Solenoid TDS-06A	ソレノイド			
※	2-3	32 00 00 NB 09 59 50	Tuning Unit	チューニングユニット			
※	2-4	32 00 00 AA 60 20 30	Stay, Motor	モーターステイ			
※	2-5	32 00 00 AA 60 20 10	Base	ベース			
※	2-6	42 00 00 LA 00 11 70	Earth Terminal 9.5 mm	アースラグ			
※	2-8	32 00 00 AA 60 20 20	Spring	スプリング			
※	2-9	42 00 00 CB 09 75 30	Isolation Fiber ϕ9.5, t1	絶縁ファイバー			
※	2-10	42 00 00 CB 09 75 10	Cap	キャップ			
※	2-11	32 00 00 CB 09 74 90	Motor Holder	モーター取付座			
※	2-12	32 00 00 CB 09 75 00	Cluch Lever	クラッチレバー			
※	2-13	42 00 00 EZ 00 09 40	IT Screw M3 x 4 (ZMC2-Y)	I.Tネジ			
※	2-14	42 00 00 EZ 00 09 20	Screw (With Spacer) M2 x 5 x 1.5 (ZMC2-Y)	ショルティック			
※	2-15	42 00 00 ED 02 00 60	Bind Head Screw M2 x 6 (ZMC2-Y)	鉄バインド小ネジ			
※	2-16	42 00 00 EV 20 03 00	Plain Washer ϕ3 (ZMC2-Y)	平座金(内径3㎜、外径8㎜)			
※	3	42 00 00 iZ 00 01 40	L. E. D. Signal Meter	LEDシグナルメーター			
※	〃	42 00 00 iZ 00 01 50	〃 (Black Model)	〃 (ブラック)			
※	4	42 00 00 KA 90 14 40	Key Board Switch	キーボードスイッチ			
※	5	32 00 00 AA 60 23 40	Back Panel	バックパネル			
※	〃	32 00 00 AA 60 25 80	〃 (Black Model)	〃 (ブラック)			
※	6	32 00 00 AA 60 23 30	Dial Pointer Shaft	指針シャフト			
※	7	32 00 00 BA 07 90 60	Knob, Tuning	チューニングツマミ			
※	〃	32 00 00 BA 07 89 50	〃 (Black Model)	〃 (ブラック)			
	8	32 00 00 CB 08 48 20	Knob, Level	レベルツマミ		T-2	
※	9	32 00 00 CB 09 70 30	Holder, Shaft (Left)	シャフトホルダーL			
※	〃	32 00 00 CB 09 84 40	〃 (Black Model)	〃 (ブラック)			
※	10	32 00 00 CB 09 70 40	〃 (Right)	シャフトホルダーR			
※	〃	32 00 00 CB 09 84 50	〃 (Black Model)	〃 (ブラック)			
	11	32 00 00 CB 09 58 50	Pully Ass'y	滑車Ass'y		T-550	
	12	42 00 00 CB 06 88 80	Plastic Rivet	プラスチックリベット			
※	13	32 00 00 CB 09 74 00	Spacer, P. Circuit Board	基板スペーサー			
※	14	42 00 00 CB 09 72 70	Spacer	スペーサー			
※	15	42 00 00 CB 09 86 10	Shade Tape 6 x 15 x t2	シャコウテープ			
	16	42 00 00 CB 08 15 20	Tape (Anti-Vibration)	防振テープ			
	17	42 00 00 EN 33 00 10	Bind Head Tapping Screw (Type II) 3x8 (FCM3-Bℓ)	鉄バインドタッピングネジ(2種)			

■EXPLODED VIEW (REAR)



■PARTS LIST

	Ref. No.	Part No.	Description	(部 品 名)	Remarks	Common model	Markets
※	1	32 00 00 NA 07 51 00	Tuner Circuit Board	チューナシート			R, C
※	〃	32 00 00 NA 07 51 10	〃	〃			A, G, B
※	〃	32 00 00 NA 07 51 20	〃	〃			U
※	〃	32 00 00 NA 07 51 30	〃 (Black Model)	〃 (ブラック)			R, C
※	〃	82 00 00 NA 07 51 40	〃 (〃)	〃 (〃)			A, G, B
※	〃	32 00 00 NA 07 51 50	〃 (〃)	〃 (〃)			U
	2	42 00 00 CB 06 86 30	Cord Stopper	コードストッパー			U, C
	〃	42 00 00 CB 07 27 50	〃	〃			R, A, G, B
	3	42 00 00 CB 06 92 50	Binding Tie	インシュロックタイ			
※	4	42 00 00 GA 63 69 00	Power Transformer	電源トランス			U, C
※	〃	42 00 00 GA 63 72 00	〃	〃			R
※	〃	42 00 00 GA 63 70 00	〃	〃			G
※	〃	42 00 00 GA 63 71 00	〃	〃			A, B
	5	42 00 00 KA 40 03 50	Voltage Selector (Slide Switch)	電圧切替器			R
	6	42 00 00 MG 00 07 80	AC. Cord (Black) 2 m 6A-250V	電源コード		TC-920	R
	〃	42 00 00 MG 00 08 40	〃 2 m 10A-125V	〃			U, C
	〃	42 00 00 MG 00 09 20	〃 2.5 m 7.5A-250V	〃			A
※	〃	42 00 00 MG 00 09 60	〃 2 m 2.5A-250V	〃			G
	〃	42 00 00 MG 00 10 00	〃 2 m 6A 300/500V	〃		K-950	B
	7	42 00 00 Mi 06 97 60	Loop Antenna 10.9μH	ループアンテナ			
※	8	32 00 00 AA 60 23 20	Bottom Cover	ボトムカバー			
※	9	32 00 00 AA 60 34 80	Rear Panel	リアパネル			U, C
※	〃	32 00 00 AA 60 34 90	〃	〃			R
※	〃	32 00 00 AA 60 35 00	〃	〃			G
※	〃	32 00 00 AA 60 35 10	〃	〃			B, A
	10	32 00 00 AA 08 98 60	Spring (Dial)	ダイアルスプリング		CT-410 II, 510, V2	
※	11	32 00 00 AA 60 22 90	Top Cover	トップカバー			
※	〃	32 00 00 AA 60 25 50	〃 (Black Model)	〃 (ブラック)			
※	12	32 00 00 CB 08 90 60	Pully (For Variable Capacitor)	バリコンプーリー			
	13	32 00 00 CB 09 29 00	Extension Rod	延長ロッド		T-550	
	14	42 00 00 CB 06 88 80	Plastic Rivet	プラスチックリベット			
※	15	32 00 00 CB 09 05 50	Holder (Loop Antenna)	アンテナホルダー			
	16	32 00 00 CB 07 94 90	Leg	脚		CR-1020 CR-2020	
	17	42 00 00 CB 07 70 70	Dial String φ0.39 x 1.5 m	ダイアル糸			
	18	42 00 00 ED 33 00 60	Bind Head Screw 3 x 6 (ZMC2-Bℓ)	バインド小ネジ			
	19	42 00 00 CB 07 58 90	Tape (Anti-Vibration)	防振テープ		CT-610	
	20	32 00 00 CB 09 40 20	Spacer	スペーサー		CR-240	
※	21	32 00 00 CB 09 88 00	〃	〃			
	22	42 00 00 EK 03 00 60	B.W. Head Tapping Screw(Type II)3x8, φ10 (ZMC2-Y)	鉄BWヘッドタッピングネジ(2種)			
	23	42 00 00 EN 33 00 10	Bind Head Tapping Screw(Type II)3x8(FCM3-Bℓ)	鉄バインドタッピングネジ(2種)			
	24	42 00 00 EN 30 10 10	Bonding Head Tapping Screw(TypeII)3x8(ZMC2-Bℓ)	鉄ボンディングタッピングネジ(2種)			
	25	42 00 00 EK 03 01 00	B.W.Head Tapping Screw(TypeII)3x14 (ZMC2-Y)	鉄BWヘッドタッピングネジ(2種)			
	26	32 00 00 CB 09 58 50	Pully Ass'y	滑車Ass'y		T-550	
	27	42 00 00 LA 00 10 00	Lug Terminal Plate	ラグ端子板			U, C
	〃	42 00 00 LA 00 29 50	Terminal (2P)	2P中継端子台			A, G, B
	28	42 00 00 LB 20 13 00	Fuse Holder with Wrapping Terminal	ヒューズホルダー(ラッピング用)			R, U, A, C
	〃	42 00 00 LB 20 14 70	Fuse Holder	ヒューズホルダー			G, B
	29	42 00 00 CB 06 88 80	Plastic Rivet	プラスチックリベット			R
	30	32 00 00 CB 08 63 90	Switch Guard	VSストッパー			R
	31	42 00 00 LA 00 02 80	Earth Lug	アースラグ			U, C
	32	42 00 00 EN 03 00 60	Bind Head Tapping Screw(TypeII)3x10(ZMC2-Y)	バインドタッピングネジ(2種ミゾ)			
※		32 00 00 MZ 07 89 10	Wire Kit (Tuner P. C. Board)	チューナー線材キット			R, A
※		32 00 00 MZ 07 89 20	〃	〃			U, C
※		32 00 00 MZ 07 89 30	〃	〃			G, B
		42 00 00 LB 10 04 80	Plug For Antenna (75 Ω)	75Ω同軸ケーブルプラグ			
		42 00 00 Mi 06 44 00	Antenna (FM)	FMQマッチアンテナ			
		42 00 00 Mi 06 99 20	Cord (1 m)	接続コード			

■PARTS LIST(ELECTRICITY)

Ref. No.	Part No.	Description	(部 品 名)	Remarks	Common model	Markets
※	32 00 00 NA 07 51 00	Tuner Circuit Board	チューナーシート			R,C
※	32 00 00 NA 07 51 10	〃	〃			A,G,B
※	32 00 00 NA 07 51 20	〃	〃			U
※	32 00 00 NA 07 51 30	〃 (Black Model)	〃 (ブラック)			R,C
※	32 00 00 NA 07 51 40	〃 (〃)	〃 (〃)			A,G,B
※	32 00 00 NA 07 51 50	〃 (〃)	〃 (〃)			U
C101	42 00 00 UW 83 81 00	Electrolytic Cap. 100μF 16V	ケミコン			
C102	42 00 00 Fi 17 41 00	Ceramic Cap. 0.01μF 25V	セラコン			
C103	42 00 00 UW 81 84 70	Electrolytic Cap. 470μF 6.3V	ケミコン			
C104	42 00 00 Fi 17 11 00	Ceramic Cap. 10pF 50V	セラコン			
C105 C106	42 00 00 Fi 17 41 00	〃 0.01μF 25V	〃			
C107	42 00 00 FG 50 02 00	〃 2pF 50V	〃			
C108	42 00 00 FG 50 01 00	〃 1pF 50V	〃			
C109～C112	42 00 00 Fi 17 41 00	〃 0.01μF 25V	〃			
C113 C114	42 00 00 FG 21 14 70	〃 47pF 50V	〃			
C117 C118	42 00 00 Fi 17 41 00	〃 0.01μF 25V	〃			
C119	42 00 00 UW 84 71 00	Electrolytic Cap. 10μF 25V	ケミコン			
C120 C121	42 00 00 Fi 17 41 00	Ceramic Cap. 0.01μF 25V	セラコン			
C122	42 00 00 UW 86 61 00	Electrolytic Cap. 1μF 50V	ケミコン			
C123～C126	42 00 00 Fi 17 41 00	Ceramic Cap. 0.01μF 25V	セラコン			
C127	42 00 00 UW 84 71 00	Electrolytic Cap. 10μF 25V	ケミコン			
C128 C129	42 00 00 Fi 17 41 00	Ceramic Cap. 0.01μF 25V	セラコン			
C130	42 00 00 FG 51 04 00	〃 4pF 50V	〃			
C132～C134	42 00 00 FG 21 14 70	〃 47pF 50V	〃			
C135	42 00 00 FG 71 31 00	〃 0.001μF 50V	〃			
C136	42 00 00 FG 51 21 00	〃 100pF 50V	〃			
C137	42 00 00 FG 51 11 00	〃 10pF 50V	〃			
C139 C140	42 00 00 FG 51 08 00	〃 8pF 50V	〃			
C141	42 00 00 FG 51 13 90	〃 39pF 50V	〃			
C143 C144	42 00 00 FA 85 41 00	Mylar Cap. 0.01μF 50V	マイラーコン			A, G, B
※ C143 C144	42 00 00 FA 85 41 60	〃 0.016μF 50V	〃			R,U,C
C145 C146	42 00 00 FS 25 26 80	Semi Conductive Ceramic Cap. 680pF 50V	SAコン			
C147 C148	42 00 00 FA 85 32 20	Mylar Cap. 0.0022μF 50V	マイラーコン			
C149 C150	42 00 00 FA 85 32 70	〃 0.0027μF 50V	〃			
C151 C152	42 00 00 FV 36 62 20	Electrolytic Cap. (NP) 2.2μF 50V	NPケミコン			
C153	42 00 00 FS 25 23 30	Semi Conductive Ceramic Cap. 330pF 50V	SAコン			
C154	42 00 00 FG 21 14 70	Ceramic Cap. 47pF 50V	セラコン			
C155	42 00 00 Fi 17 41 00	〃 0.01μF 25V	〃			
C156	42 00 00 FG 51 11 00	〃 10pF 50V	〃			
C157	42 00 00 Fi 17 41 00	〃 0.01μF 25V	〃			
C158	42 00 00 FG 71 31 00	〃 0.001μF 50V	〃			
C159	42 00 00 Fi 17 41 00	〃 0.01μF 25V	〃			
C160	42 00 00 UW 84 71 00	Electrolytic Cap. 10μF 25V	ケミコン			
C161 C162	42 00 00 Fi 17 41 00	Ceramic Cap. 0.01μF 25V	セラコン			
C163	42 00 00 UW 86 61 00	Electrolytic Cap. 1μF 50V	ケミコン			
C164	42 00 00 UW 84 71 00	〃 10μF 25V	〃			
C165	42 00 00 UW 56 52 20	〃 0.22μF 50V	〃			
C166	42 00 00 Fi 17 41 00	Ceramic Cap. 0.01μF 25V	セラコン			
C167	42 00 00 UW 83 81 00	Electrolytic Cap. 100μF 16V	ケミコン			
C168	42 00 00 FS 25 25 60	Semi Conductive Ceramic Cap. 560pF 50V	SAコン			
C169	42 00 00 Fi 17 34 70	Ceramic Cap. 0.0047μF 25V	セラコン			
C170～C174	42 00 00 Fi 17 41 00	〃 0.01μF 25V	〃			
C175	42 00 00 UW 86 61 00	Electrolytic Cap. 1μF 50V	ケミコン			

Ref. No.	Part No.	Description	(部 品 名)	Remarks	Common model	Markets
C176	42 00 00 UW 84 71 00	Electrolytic Cap. 10μF 25V	ケ ミ コ ン			
C178	42 00 00 UW 84 71 00	〃 〃	〃			
C179 C180	42 00 00 UW 84 71 00	〃 〃	〃			
C181	42 00 00 UW 56 52 20	〃 0.22μF 50V	〃			
C182	42 00 00 Fi 17 11 00	Ceramic Cap. 10pF	セ ラ コ ン			
C183 C184	42 00 00 FG 21 21 00	〃 100pF 50V	〃			
C185	42 00 00 Fi 17 32 20	〃 0.0022μF 25V	〃			
C186	42 00 00 FG 71 31 00	〃 0.001μF 50V	〃			
C187	42 00 00 UW 81 74 70	Electrolytic Cap. 47μF 6.3V	ケ ミ コ ン			
C188	42 00 00 UW 84 71 00	〃 10μF 25V	〃			
C189	42 00 00 UW 86 61 00	〃 1μF 50V	〃			
C190	42 00 00 UW 86 62 20	〃 2.2μF 50V	〃			
C193	42 00 00 UW 86 63 30	〃 3.3μF 50V	〃			
C194	42 00 00 FG 50 03 00	Ceramic Cap. 3pF 50V	セ ラ コ ン			
C195	42 00 00 UW 84 71 00	Electrolytic Cap. 10μF 25V	ケ ミ コ ン			
C196	42 00 00 FG 51 21 00	Ceramic Cap. 100pF 50V	セ ラ コ ン			
C197	42 00 00 FA 85 42 70	Mylar Cap. 0.027μF 50V	マ イ ラ ー コ ン			
C198	42 00 00 FS 23 44 70	Semi Conductive Ceramic Cap. 0.047μF 50V	S B L コ ン			
C199	42 00 00 FA 85 33 30	Mylar Cap. 0.0033μF 50V	マ イ ラ ー コ ン			
C200	42 00 00 FS 25 26 80	Semi Conductive Ceramic Cap. 680pF 50V	S A コ ン			
C201	42 00 00 UW 84 71 00	Electrolytic Cap. 10μF 25V	ケ ミ コ ン			
C202	42 00 00 UW 56 52 20	〃 0.22μF 50V	〃			
C203	42 00 00 UW 86 61 00	〃 1μF 50V	〃			
C204	42 00 00 UW 84 71 00	〃 10μF 25V	〃			
C205	42 00 00 FA 85 33 30	Mylar Cap. 0.0033μF 50V	マ イ ラ ー コ ン			
C206	42 00 00 Fi 17 41 00	Ceramic Cap. 0.01μF 25V	セ ラ コ ン			
C207 C208	42 00 00 Fi 19 21 00	〃 100pF 50V	〃			
C212 C213	42 00 00 Fi 17 41 00	〃 0.01μF 25V	〃			
C214	42 00 00 FM 22 62 20	Electrolytic Cap. 2.2μF 25V	B P コ ン			
C215	42 00 00 UW 84 71 00	Electrolytic Cap. 10μF 25V	ケ ミ コ ン			
C216	42 00 00 UW 86 61 00	〃 1μF 50V	〃			
C217	42 00 00 UW 84 71 00	〃 10μF 25V	〃			
C218	42 00 00 UW 83 74 70	〃 47μF 16V	〃			
C219	42 00 00 Fi 17 41 00	Ceramic Cap. 0.01μF 25V	セ ラ コ ン			
C220	42 00 00 FG 71 31 00	〃 0.001μF 50V	〃			
C221	42 00 00 UW 86 61 00	Electrolytic Cap. 1μF 50V	ケ ミ コ ン			
C222	42 00 00 UW 84 71 00	〃 10μF 25V	〃			
C223	42 00 00 Fi 17 41 00	Ceramic Cap. 0.01μF 25V	セ ラ コ ン			
C224～C226	42 00 00 UW 84 71 00	Electrolytic Cap. 10μF 25V	ケ ミ コ ン			
C227	42 00 00 Fi 17 41 00	Ceramic Cap. 0.01μF 25V	セ ラ コ ン			
C228	42 00 00 Fi 17 32 20	〃 0.0022μF 25V	〃			
C229	42 00 00 UW 83 84 70	Electrolytic Cap. 470μF 16V	ケ ミ コ ン			
C230	42 00 00 UW 83 73 30	〃 33μF 16V	〃			
C231	42 00 00 UW 83 82 20	〃 220μF 16V	〃			
C232	42 00 00 UW 84 71 00	〃 10μF 25V	〃			
C233	42 00 00 UW 83 73 30	〃 33μF 16V	〃			
C234～C238	42 00 00 UW 84 71 00	〃 10μF 25V	〃			
C239 C240	42 00 00 UW 84 91 00	〃 1000μF 25V	〃			
C241 C242	42 00 00 FG 71 24 70	Ceramic Cap. 470pF 50V	セ ラ コ ン			
C243～C245	42 00 00 FS 21 41 50	Semi Conductive Ceramic Cap. 0.015μF 50V	S B L コ ン			
C246	42 00 00 Fi 17 41 00	Ceramic Cap. 0.01μF 25V	セ ラ コ ン			

Ref. No.	Part No.	Description		(部 品 名)	Remarks	Common model	Markets
C247	42 00 00 UW 86 61 00	Electrolytic Cap.	1μF 50V	ケ ミ コ ン			
C249 C250	42 00 00 FG 51 11 00	Ceramic Cap.	10pF 50V	セ ラ コ ン			
C251 ~ C253	42 00 00 UW 84 71 00	Electrolytic Cap.	10μF 25V	〃			
C254 C255	42 00 00 Fi 17 41 00	Ceramic Cap.	0.01μF 25V	〃			
C257	42 00 00 UW 84 71 00	Electrolytic Cap.	10μF 25V	ケ ミ コ ン			
C258	42 00 00 UW 56 52 20	〃	0.22μF 50V	〃			
C260 C261	42 00 00 Fi 17 41 00	Ceramic Cap.	0.01μF 25V	セ ラ コ ン			
C262	42 00 00 UW 84 71 00	Electrolytic Cap.	10μF 25V	ケ ミ コ ン			
C263	42 00 00 Fi 19 14 70	Ceramic Cap.	47pF 50V	セ ラ コ ン			
C264	42 00 00 FG 51 21 00	〃	100pF 50V	〃			
C265	42 00 00 UW 56 52 20	Electrolytic Cap.	0.22μF 50V	ケ ミ コ ン			
C266	42 00 00 UW 86 62 20	〃	2.2μF 50V	〃			
C267	42 00 00 UW 56 52 20	〃	0.22μF 50V	〃			
C268	42 00 00 UW 86 61 00	〃	1μF 50V	〃			
C269	42 00 00 FG 51 21 00	Ceramic Cap.	100pF 50V	セ ラ コ ン			
C270	42 00 00 FG 54 41 00	〃	0.01μF 50V	〃			
C271	42 00 00 FG 50 02 00	〃	2pF 50V	〃			
TC101	42 00 00 FY 00 01 10	Trimmer Cap.	8pF	トリマーコン			
※ T101	42 00 00 GE 30 04 20	FM ANT Coil		FM ANT コイル			
T102	42 00 00 GE 10 02 60	IF Coil		IF コ イ ル			
T103	42 00 00 GE 10 03 30	FM Discr. Coil		FMディスクリコイル			
T105 T106	42 00 00 GE 20 02 60	MPX LPF Coil		MPX LPFコイル			
T107 T108	42 00 00 GE 20 02 70	〃		〃			
T109	42 00 00 GE 10 03 50	AM ANT Coil		AM ANT コイル			
T110	42 00 00 GE 10 01 50	AM OSC Coil		AM OSC コイル			
T111	42 00 00 GE 10 03 40	AM IFT Coil		AM IFT コイル			
T112 T113	42 00 00 GE 20 03 20	MPX B.P.F.		MPXバンドパスフィルタ			
T114	42 00 00 GE 90 04 10	DC-DC Converter Coil		DC-DCコンバーターコイル			
L101 L102	42 00 00 GE 30 01 50	RF Inductor	8.2mH	RFインダクター			
L105 L106	42 00 00 GE 30 01 50	〃	〃	〃			
L107	42 00 00 GE 30 04 40	〃	0.33μH	〃			A, G, B,
L108	42 00 00 GE 30 04 30	〃	220μH	〃			
CF101~ CF105	42 00 00 GG 00 03 90	Ceramic Filter CFM-107S-11U		セラミックフィルタ			
CF106	42 00 00 GG 00 04 20	AM Ceramic Discr.		AMセラミックディスクリ			
R101 ~ R103	42 00 00 HK 35 52 20	Carbon Resistor RD-25 SM-8	220Ω	カーボン抵抗			
R104 R105	42 00 00 HK 35 54 70	〃	470Ω	〃			
R106 R107	42 00 00 HK 35 52 20	〃	220Ω	〃			
R108 R109	42 00 00 HK 35 64 70	〃	4.7kΩ	〃			
R110	42 00 00 HK 35 54 70	〃	470Ω	〃			
R112	42 00 00 HK 35 61 00	〃	1kΩ	〃			
R113 ~ R115	42 00 00 HK 35 71 00	〃	10kΩ	〃			
R116 R117	42 00 00 HK 35 54 70	〃	470Ω	〃			
R118	42 00 00 HK 35 72 20	〃	22kΩ	〃			
R120	42 00 00 HK 35 54 70	〃	470Ω	〃			
R121	42 00 00 HK 35 81 00	〃	100kΩ	〃			
R122 R123	42 00 00 HK 35 52 20	〃	220Ω	〃			
R124	42 00 00 HK 35 53 30	〃	330Ω	〃			
R125	42 00 00 HK 35 52 20	〃	220Ω	〃			
R126	42 00 00 HK 35 51 00	〃	100Ω	〃			
R127 R128	42 00 00 HK 35 66 80	〃	6.8kΩ	〃			
R129	42 00 00 HK 35 84 70	〃	470kΩ	〃			
R130 R131	42 00 00 HK 35 64 70	〃	4.7kΩ	〃			
R133 R134	42 00 00 HK 35 63 90	〃	3.9kΩ	〃			

Ref. No.	Part No.	Description		(部 品 名)	Remarks	Common model	Markets
R135 R136	42 00 00 HK 35 81 00	Carbon Resistor RD-25 SM-8	100kΩ	カ ー ボ ン 抵 抗			
R137 R138	42 00 00 HK 35 76 80	〃	68kΩ	〃			
R139 R140	42 00 00 HK 35 81 00	〃	100kΩ	〃			
R141 R142	42 00 00 HK 35 72 20	〃	22kΩ	〃			
R143 R144	42 00 00 HK 35 71 50	〃	15kΩ	〃			
R145 R146	42 00 00 HK 35 64 70	〃	4.7kΩ	〃			
R147 R148	42 00 00 HK 35 53 30	〃	330Ω	〃			
R149 R150	42 00 00 HK 35 64 70	〃	4.7kΩ	〃			
R151 R152	42 00 00 HK 35 73 30	〃	33kΩ	〃			
R153 R154	42 00 00 HK 35 62 70	〃	2.7kΩ	〃			
R155 R156	42 00 00 HK 35 53 30	〃	330Ω	〃			
R157 R158	42 00 00 HK 35 54 70	〃	470Ω	〃			
R159 R160	42 00 00 HK 35 62 70	〃	2.7kΩ	〃			
R161 R162	42 00 00 HK 35 73 30	〃	33kΩ	〃			
R163 R164	42 00 00 HK 35 54 70	〃	470Ω	〃			
R165～ R168	42 00 00 HK 35 71 00	〃	10kΩ	〃			
R169 R170	42 00 00 HK 35 61 00	〃	1kΩ	〃			
R171	42 00 00 HK 35 61 50	〃	1.5kΩ	〃			
R172	42 00 00 HK 35 62 20	〃	2.2kΩ	〃			
R173	42 00 00 HK 35 52 20	〃	220Ω	〃			
R174	42 00 00 HK 35 81 00	〃	100kΩ	〃			
R175～ R177	42 00 00 HK 35 71 00	〃	10kΩ	〃			
R178	42 00 00 HK 35 61 00	〃	1kΩ	〃			
R179 R180	42 00 00 HK 35 71 00	〃	10kΩ	〃			
R181	42 00 00 HK 35 64 70	〃	4.7kΩ	〃			
R182	42 00 00 HK 35 61 00	〃	1kΩ	〃			
R183 R184	42 00 00 HK 35 52 20	〃	220Ω	〃			
R185	42 00 00 HK 35 71 00	〃	10kΩ	〃			
R186	42 00 00 HK 35 74 70	〃	47kΩ	〃			
R187	42 00 00 HK 35 71 00	〃	10kΩ	〃			
R188	42 00 00 HK 35 72 00	〃	22kΩ	〃			
R190	42 00 00 HK 35 81 00	〃	100kΩ	〃			
R191	42 00 00 HK 35 63 30	〃	3.3kΩ	〃			
R192	42 00 00 HK 35 92 20	〃	2.2MΩ	〃			
R193	42 00 00 HK 35 71 00	〃	10kΩ	〃			
R194	42 00 00 HK 35 81 00	〃	100kΩ	〃			
R195	42 00 00 HK 35 62 70	〃	2.7kΩ	〃			
R196	42 00 00 HK 35 81 00	〃	100kΩ	〃			
R197	42 00 00 HK 35 61 00	〃	1kΩ	〃			
R198 R199	42 00 00 HK 35 72 20	〃	22kΩ	〃			
R200	42 00 00 HK 35 64 70	〃	4.7kΩ	〃			
R201 R202	42 00 00 HK 35 81 00	〃	100kΩ	〃			
R203	42 00 00 HK 35 73 30	〃	33kΩ	〃			
R205	42 00 00 HK 35 63 30	〃	3.3kΩ	〃			
R206	42 00 00 HK 35 71 00	〃	10kΩ	〃			
R207	42 00 00 HK 35 71 50	〃	15kΩ	〃			
R208	42 00 00 HK 35 81 00	〃	100kΩ	〃			
R209	42 00 00 HK 35 63 30	〃	3.3kΩ	〃			
R210	42 00 00 HK 35 62 20	〃	2.2kΩ	〃			
R211	42 00 00 HK 35 73 30	〃	33kΩ	〃			
R212	42 00 00 HK 35 74 70	〃	47kΩ	〃			
R213	42 00 00 HK 35 81 00	〃	100kΩ	〃			
R214～ R218	42 00 00 HK 35 72 20	〃	22kΩ	〃			

Ref. No.	Part No.	Description		(部 品 名)	Remarks	Common model	Markets
R219	42 00 00 HK 35 71 00	Carbon Resistor RD-25 SM-8	10kΩ	カーボン抵抗			
R220 R221	42 00 00 HK 35 54 70	〃	470Ω	〃			
R222 R223	42 00 00 HK 35 51 00	〃	100Ω	〃			
R224	42 00 00 HK 35 44 70	〃	47Ω	〃			
R225	42 00 00 HK 35 51 00	〃	100Ω	〃			
R226	42 00 00 HK 35 71 00	〃	10kΩ	〃			
R227	42 00 00 HK 35 61 00	〃	1kΩ	〃			
R228	42 00 00 HK 35 71 00	〃	10kΩ	〃			
R229	42 00 00 HK 35 64 70	〃	4.7kΩ	〃			
R230	42 00 00 HK 35 74 70	〃	47kΩ	〃			
R231	42 00 00 HK 35 64 70	〃	4.7kΩ	〃			
R232 R233	42 00 00 HK 35 72 20	〃	22kΩ	〃			
R235	42 00 00 HK 35 71 00	〃	10kΩ	〃			
R236	42 00 00 HK 35 54 70	〃	470Ω	〃			
R237	42 00 00 HK 35 81 00	〃	100kΩ	〃			
R238	42 00 00 HK 35 82 20	〃	220kΩ	〃			
R239	42 00 00 HK 35 81 00	〃	100kΩ	〃			
R240	42 00 00 HK 35 71 00	〃	10kΩ	〃			
R241	42 00 00 HK 35 82 20	〃	220kΩ	〃			
R242 R243	42 00 00 HK 35 71 00	〃	10kΩ	〃			
R244	42 00 00 HK 35 76 80	〃	68kΩ	〃			
R245 R246	42 00 00 HK 35 71 00	〃	10kΩ	〃			
R247	42 00 00 HK 35 63 30	〃	3.3kΩ	〃			
R248	42 00 00 HK 35 81 00	〃	100kΩ	〃			
R249	42 00 00 HK 35 84 70	〃	470kΩ	〃			
R250	42 00 00 HK 35 61 00	〃	1kΩ	〃			
R251 R252	42 00 00 HK 35 74 70	〃	47kΩ	〃			
R253	42 00 00 HK 35 81 00	〃	100kΩ	〃			
R254	42 00 00 HK 35 71 00	〃	10kΩ	〃			
R255	42 00 00 HK 35 66 80	〃	6.8kΩ	〃			
R256	42 00 00 HK 35 81 00	〃	100kΩ	〃			
R257	42 00 00 HK 35 74 70	〃	47kΩ	〃			
R258	42 00 00 HK 35 72 20	〃	22kΩ	〃			
R259	42 00 00 HK 35 82 20	〃	220kΩ	〃			
R260	42 00 00 HK 35 72 20	〃	22kΩ	〃			
R261	42 00 00 HK 35 61 00	〃	1kΩ	〃			
R262	42 00 00 HK 35 61 20	〃	1.2kΩ	〃			
R263	42 00 00 HU 57 71 50	Metal Film Resistor	15kΩ	金属被膜抵抗			
R264	42 00 00 HK 35 73 30	Carbon Resistor RD-25 SM-8	33kΩ	カーボン抵抗			
R265	42 00 00 HK 35 72 20	〃	22kΩ	〃			
R266	42 00 00 HK 35 73 30	〃	33kΩ	〃			
R267	42 00 00 HK 35 81 00	〃	100kΩ	〃			
R268	42 00 00 HK 35 91 00	〃	1MΩ	〃			
R269	42 00 00 HK 35 84 70	〃	470kΩ	〃			
R271	42 00 00 HK 35 91 00	〃	1MΩ	〃			
R272	42 00 00 HK 35 53 30	〃	330Ω	〃			
R273 R280	42 00 00 HK 35 81 00	〃	100kΩ	〃			
R281	42 00 00 HU 57 81 50	Metal Film Resistor	150kΩ	金属被膜抵抗			
R283	42 00 00 HK 35 81 00	Carbon Resistor RD-25 SM-8	100kΩ	カーボン抵抗			
R284	42 00 00 HK 35 92 20	〃	2.2MΩ	〃			
R285	42 00 00 HK 35 81 00	〃	100kΩ	〃			
R286	42 00 00 HK 35 92 20	〃	2.2MΩ	〃			

Ref. No.	Part No.	Description		(部 品 名)	Remarks	Common model	Markets
R287	42 00 00 HK 35 81 00	Carbon Resistor RD-25 SM-8	100kΩ	カーボン抵抗			
R288	42 00 00 HK 35 74 70	〃	47kΩ	〃			
R289	42 00 00 HK 35 61 00	〃	1kΩ	〃			
R290	42 00 00 HK 35 81 00	〃	100kΩ	〃			
R291	42 00 00 HK 35 92 20	〃	2.2MΩ	〃			
R292	42 00 00 HK 35 74 70	〃	47kΩ	〃			
R293 R294	42 00 00 HK 35 82 20	〃	220kΩ	〃			
R295	42 00 00 HK 35 74 70	〃	47kΩ	〃			
R296	42 00 00 HK 35 81 00	〃	100kΩ	〃			
R297	42 00 00 HK 35 74 70	〃	47kΩ	〃			
R298 R299	42 00 00 HK 35 81 00	〃	100kΩ	〃			
R300	42 00 00 HK 35 92 20	〃	2.2MΩ	〃			
R301	42 00 00 HK 35 74 70	〃	47kΩ	〃			
R302 R303	42 00 00 HK 35 91 00	〃	1MΩ	〃			
R304 R305	42 00 00 HK 35 63 90	〃	3.9kΩ	〃			
R306	42 00 00 HK 35 81 00	〃	100kΩ	〃			
R307	42 00 00 HK 35 61 00	〃	1kΩ	〃			
R308	42 00 00 HK 35 61 00	〃	1kΩ	〃			
R309	42 00 00 HK 35 72 20	〃	22kΩ	〃			
R310	42 00 00 HK 35 84 70	〃	470kΩ	〃			
R311	42 00 00 HK 35 81 00	〃	100kΩ	〃			
R312	42 00 00 HK 35 82 20	〃	220kΩ	〃			
R313	42 00 00 HK 35 71 80	〃	18kΩ	〃			
R314	42 00 00 HK 35 82 20	〃	220kΩ	〃			
R315	42 00 00 HK 35 72 20	〃	22kΩ	〃			
R316	42 00 00 HK 35 74 70	〃	47kΩ	〃			
R317	42 00 00 HK 35 74 70	〃	47kΩ	〃			
R318	42 00 00 HK 35 71 00	〃	10kΩ	〃			
R319	42 00 00 HK 35 92 20	〃	2.2MΩ	〃			
R320	42 00 00 HK 35 92 20	〃	2.2MΩ	〃			
R321	42 00 00 HK 35 83 30	〃	330kΩ	〃			
R322	42 00 00 HK 35 81 00	〃	100kΩ	〃			
R323	42 00 00 HK 35 71 00	〃	10kΩ	〃			
R324～ R329	42 00 00 HK 35 81 00	〃	100kΩ	〃			
R330	42 00 00 HZ 00 13 30	Ladder Resistor YT-02	10kΩ	ラダー抵抗	R-2R R=10kΩ		
R331	42 00 00 HK 35 54 70	Carbon Resistor RD-25S	470Ω	カーボン抵抗			
R332	42 00 00 HK 35 63 90	〃	3.9kΩ	〃			
R333	42 00 00 HK 35 91 00	〃	1MΩ	〃			
R334	42 00 00 HK 35 63 90	〃	3.9kΩ	〃			
R335 R336	42 00 00 HK 35 71 00	〃	10kΩ	〃			
R337	42 00 00 HK 35 81 00	〃	100kΩ	〃			
R338	42 00 00 HK 35 72 20	〃	22kΩ	〃			
R339	42 00 00 HK 35 81 00	〃	100kΩ	〃			
R340	42 00 00 HK 35 71 00	〃	10kΩ	〃			
R341	42 00 00 HK 35 74 70	〃	47kΩ	〃			
R342	42 00 00 HK 35 71 00	〃	10kΩ	〃			
R343 R344	42 00 00 HK 35 91 00	〃	1MΩ	〃			
R345 R346	42 00 00 HK 35 71 00	〃	10kΩ	〃			
R347	42 00 00 HK 35 91 00	〃	1MΩ	〃			
R348	42 00 00 HK 35 81 00	〃	100kΩ	〃			
R350	42 00 00 HK 35 66 80	〃	6.8kΩ	〃			
R351	42 00 00 HV 35 51 00	Flame Proof Carbon Resistor RDF-25	100Ω	不燃化カーボン抵抗			
R352	42 00 00 HK 35 61 20	Carbon Resistor RD-25 SM-8	1.2kΩ	カーボン抵抗			

Ref. No.	Part No.	Description		(部 品 名)	Remarks	Common model	Markets
R353	42 00 00 HK 35 81 00	Carbon Resistor RD-25 SM-8	100kΩ	カ ー ボ ン 抵 抗			
R354 R355	42 00 00 HK 35 71 00	〃	10kΩ	〃			
R357	42 00 00 HK 35 84 70	〃	470kΩ	〃			
R359	42 00 00 HK 35 91 00	〃	1MΩ	〃			
R360	42 00 00 HK 35 76 80	〃	68kΩ	〃			
R361	42 00 00 HK 35 81 00	〃	100kΩ	〃			
R362	42 00 00 HK 35 72 20	〃	22kΩ	〃			
R363	42 00 00 HK 35 71 00	〃	10kΩ	〃			
R364	42 00 00 HK 35 61 20	〃	1.2kΩ	〃			
R365	42 00 00 HK 35 74 70	〃	47kΩ	〃			
R366	42 00 00 HK 35 66 80	〃	6.8kΩ	〃			
R367	42 00 00 HK 35 61 00	〃	1kΩ	〃			
R368	42 00 00 HK 35 72 20	〃	22kΩ	〃			
R369 R370	42 00 00 HK 35 71 00	〃	10kΩ	〃			
R371 R372	42 00 00 HK 35 72 20	〃	22kΩ	〃			
R373 R374	42 00 00 HK 35 55 60	〃	560Ω	〃			
R375	42 00 00 HK 35 74 70	〃	47kΩ	〃			
R376	42 00 00 HK 35 71 00	〃	10kΩ	〃			
R377	42 00 00 HU 57 76 20	Metal Film Resistor	62kΩ	金 属 被 膜 抵 抗			
R378	42 00 00 HK 35 76 80	Carbon Resistor RD-25 SM-8	68kΩ	カ ー ボ ン 抵 抗			
R379	42 00 00 HK 35 71 80	〃	18kΩ	〃			
R380	42 00 00 HK 35 64 70	〃	4.7kΩ	〃			
R381	42 00 00 HK 35 62 70	〃	2.7kΩ	〃			
R382	42 00 00 HK 35 62 70	〃	2.7kΩ	〃			
R383	42 00 00 HK 35 72 20	〃	22kΩ	〃			
R384	42 00 00 HK 35 61 00	〃	1kΩ	〃			
R385 R386	42 00 00 HK 35 82 20	〃	220kΩ	〃			
R387 R388	42 00 00 HK 35 91 00	〃	1MΩ	〃			
R389	42 00 00 HK 35 61 50	〃	1.5kΩ	〃			
R391	42 00 00 HK 35 61 00	〃	1kΩ	〃			
R392	42 00 00 HK 35 74 70	〃	47kΩ	〃			
R393	42 00 00 HK 35 71 00	〃	10kΩ	〃			
R394	42 00 00 HK 35 82 20	〃	220kΩ	〃			
R395	42 00 00 HK 35 71 00	〃	10kΩ	〃			
R396	42 00 00 HK 35 45 60	〃	56Ω	〃			
R397	42 00 00 HK 35 84 70	〃	470kΩ	〃			
R398	42 00 00 HK 35 71 00	〃	10kΩ	〃			
R399	42 00 00 HU 57 81 80	Metal Film Resistor	180kΩ	金 属 被 膜 抵 抗			
R400	42 00 00 HK 35 81 00	Carbon Resistor RD-25S	100kΩ	カ ー ボ ン 抵 抗			
R401	42 00 00 HK 35 64 70	〃	4.7kΩ	〃			
R403	42 00 00 HK 35 71 00	〃	10kΩ	〃			
R404 R405	42 00 00 HK 35 81 00	〃	100kΩ	〃			
R406 R407	42 00 00 HK 35 91 00	〃	1MΩ	〃			
R408	42 00 00 HK 35 76 80	〃	68kΩ	〃			
R409	42 00 00 HK 35 92 20	〃	2.2MΩ	〃			
R410	42 00 00 HK 35 82 20	〃	220kΩ	〃			
R411	42 00 00 HK 35 91 00	〃	1MΩ	〃			
R412	42 00 00 HK 35 72 20	〃	22kΩ	〃			
R413	42 00 00 HK 35 71 00	〃	10kΩ	〃			
R414	42 00 00 HK 35 61 00	〃	1kΩ	〃			
R415	42 00 00 HK 35 71 00	〃	10kΩ	〃			
R416	42 00 00 HK 35 81 00	〃	100kΩ	〃			
R417	42 00 00 HK 35 53 30	〃	330Ω	〃			

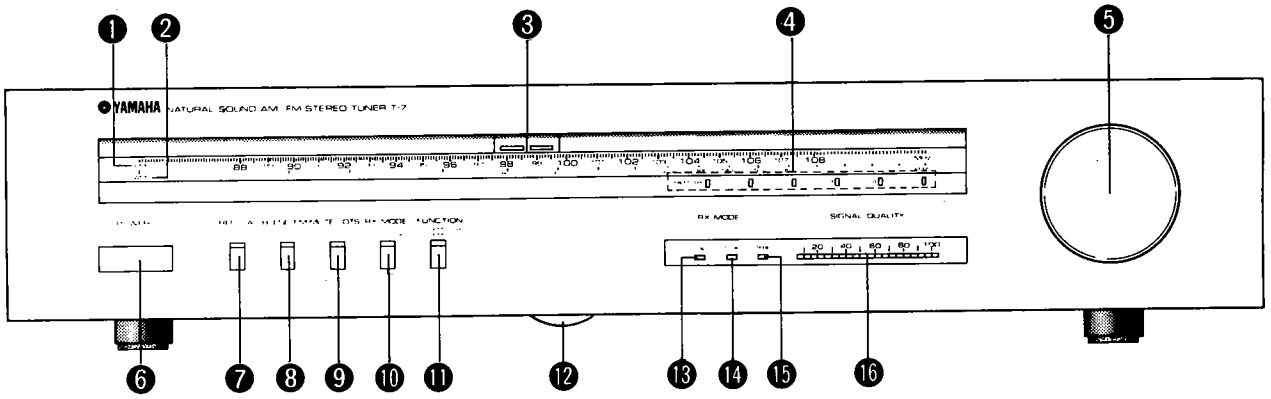
Ref. No.	Part No.	Description	(部品名)	Remarks	Common model	Markets
R418	42 00 00 HK 35 54 70	Carbon Resistor RD-25 SM-8 470Ω	カーボン抵抗			
※ FR101 FR102	42 00 00 HW 39 41 00	Fuse Resistor 0.25W10 (150mA 10)	ヒューズ抵抗			
VR101～VR103	42 00 00 HT 37 00 10	Semi Variable Resistor B1kΩ	半固定抵抗			
VR105 VR106	42 00 00 HT 37 00 50	〃 B5kΩ	〃			
VR107	42 00 00 HS 41 06 70	Variable Resistor B10kΩ x 2	可変抵抗器			
VR108	42 00 00 HT 37 00 20	Semi Variable Resistor B10kΩ	半固定抵抗			
VR109	42 00 00 HT 37 01 00	〃 B50kΩ	〃			
VR111	42 00 00 HT 37 01 30	〃 B500kΩ	〃			
VR112	42 00 20 HT 37 00 20	〃 B10kΩ	〃			
VR113	42 00 00 HT 37 01 00	〃 B50kΩ	〃			
VR114	42 00 00 HT 37 00 70	〃 B3kΩ	〃			
TR101 TR102	42 00 00 iE 00 00 90	FET 2SK19 (GR)	FET			
TR103～TR105	42 00 00 iC 20 21 80	Transistor 2SC2021 (Q,R,S)	トランジスタ	Inter-changeable	(併用)	
〃	42 00 00 iC 23 20 10	〃 2SC2320 (F)	〃			
TR106	42 00 00 iA 09 37 00	〃 2SA937 (Q,R,S)	〃	Inter-changeable	(併用)	
〃	42 00 00 iA 09 99 10	〃 2SA999 (E,F)	〃			
TR107～TR110	42 00 00 iC 20 21 80	〃 2SC2021 (Q,R,S)	〃	Inter-changeable	(併用)	
〃	42 00 00 iC 23 20 10	〃 2SC2320 (E,F)	〃			
TR111～TR114	42 00 00 iA 09 37 00	〃 2SA937 (Q,R,S)	〃	Inter-changeable	(併用)	
〃	42 00 00 iA 09 99 10	〃 2SA999 (E,F)	〃			
TR115 TR116	42 00 00 iD 06 55 00	〃 2SD655 (D,E,F)	〃			
TR117 TR118	42 00 00 iC 20 21 80	〃 2SC2021 (Q,R,S)	〃	Inter-changeable	(併用)	
〃	42 00 00 iC 23 20 10	〃 2SC2320 (E,F)	〃			
TR119	42 00 00 iD 06 55 00	〃 2SD655 (D,E,F)	〃			
TR121 TR122	42 00 00 iC 20 21 80	〃 2SC2021 (Q,R,S)	〃	Inter-changeable	(併用)	
〃	42 00 00 iC 23 20 10	〃 2SC2320 (E,F)	〃			
TR123～TR126	42 00 00 iA 09 37 00	〃 2SA937 (Q,R,S)	〃	Inter-changeable	(併用)	
〃	42 00 00 iA 09 99 10	〃 2SA999 (E,F)	〃			
TR127～TR130	42 00 00 iC 20 21 80	〃 2SC2021 (Q,R,S)	〃	Inter-changeable	(併用)	
〃	42 00 00 iC 23 20 10	〃 2SC2320 (E,F)	〃			
TR131	42 00 00 iA 08 81 00	〃 2SA881A (P,Q,R)	〃			
TR132	42 00 00 iA 09 37 00	〃 2SA937 (Q,R,S)	〃	Inter-changeable	(併用)	
〃	42 00 00 iA 09 99 10	〃 2SA999 (E,F)	〃			
TR133～TR136	42 00 00 iC 20 21 80	〃 2SC2021 (Q,R,S)	〃	Inter-changeable	(併用)	
〃	42 00 00 iC 23 20 10	〃 2SC2320 (E,F)	〃			
TR137 TR138	42 00 00 iA 09 37 00	〃 2SA937 (Q,R,S)	〃	Inter-changeable	(併用)	
〃	42 00 00 iA 09 99 10	〃 2SA999 (E,F)	〃			
TR139	42 00 00 iC 20 21 80	〃 2SC2021 (Q,R,S)	〃	Inter-changeable	(併用)	
〃	42 00 00 iC 23 20 10	〃 2SC2320 (E,F)	〃			
TR140 TR141	42 00 00 iA 09 37 00	〃 2SA937 (Q,R,S)	〃	Inter-changeable	(併用)	
〃	42 00 00 iA 09 99 10	〃 2SA999 (E,F)	〃			
TR142～TR145	42 00 00 iC 20 21 80	〃 2SC2021 (Q,R,S)	〃	Inter-changeable	(併用)	
〃	42 00 00 iC 23 20 10	〃 2SC2320 (E,F)	〃			
TR146	42 00 00 iA 09 37 00	〃 2SA937 (Q,R,S)	〃	Inter-changeable	(併用)	
〃	42 00 00 iA 09 99 10	〃 2SA999 (E,F)	〃			
TR147	42 00 00 iC 20 21 80	〃 2SC2021 (Q,R,S)	〃	Inter-changeable	(併用)	
〃	42 00 00 iC 23 20 10	〃 2SC2320 (E,F)	〃			
TR148 TR149	42 00 00 iA 09 37 00	〃 2SA937 (Q,R,S)	〃	Inter-changeable	(併用)	
〃	42 00 00 iA 09 99 10	〃 2SA999 (E,F)	〃			
TR150	42 00 00 iC 26 73 00	〃 2SC2673A (P,Q,R)	〃			
TR151	42 00 00 iA 08 81 00	〃 2SA881A (P,Q,R)	〃			
TR152	42 00 00 iC 15 09 00	〃 2SC1509 (P,Q,R,S)	〃	Inter-changeable	(併用)	
〃	42 00 00 iD 04 38 00	〃 2SD438	〃			

Ref. No.	Part No.	Description	(部 品 名)	Remarks	Common model	Markets
TR153～TR155	42 00 00 iA 09 37 00	Transistor	2SA937 (Q,R,S)	トランジスタ	Inter-changeable	(併用)	
〃	42 00 00 iA 09 99 10	〃	2SA999 (E,F)	〃			
TR156～TR158	42 00 00 iC 20 21 80	〃	2SC2021 (Q,R,S)	〃	Inter-changeable	(併用)	
〃	42 00 00 iC 23 20 10	〃	2SC2320 (E,F)	〃			
TR159	42 00 00 iA 09 37 00	〃	2SA937 (Q,R,S)	〃	Inter-changeable	(併用)	
〃	42 00 00 iA 09 99 10	〃	2SA999 (E,F)	〃			
TR160～TR167	42 00 00 iC 20 21 80	〃	2SC2021 (Q,R,S)	〃	Inter-changeable	(併用)	
〃	42 00 00 iC 23 20 10	〃	2SC2320 (E,F)	〃			
TR168～TR170	42 00 00 iA 09 37 00	〃	2SA937 (Q,R,S)	〃	Inter-changeable	(併用)	
〃	42 00 00 iA 09 99 10	〃	2SA999 (E,F)	〃			
TR171 TR172	42 00 00 iC 20 21 80	〃	2SC2021 (Q,R,S)	〃	Inter-changeable	(併用)	
〃	42 00 00 iC 23 20 10	〃	2SC2320 (E,F)	〃			
TR173	42 00 00 iA 09 37 00	〃	2SA937 (Q,R,S)	〃	Inter-changeable	(併用)	
〃	42 00 00 iA 09 99 10	〃	2SA999 (E,F)	〃			
TR174	42 00 00 iC 26 73 00	〃	2SC2673A (P,Q,R)	〃			
TR175	42 00 00 iB 05 44 10	〃	2SB544 P2 (E,F)	〃			
TR176	42 00 00 iB 06 32 00	〃	2SB632 (E,F)	〃			
TR177 TR178	42 00 00 iC 20 21 80	〃	2SC2021 (Q,R,S)	〃	Inter-changeable	(併用)	
〃	42 00 00 iC 23 20 10	〃	2SC2320 (E,F)	〃			
TR179 TR180	42 00 00 iA 09 37 00	〃	2SA937 (Q,R,S)	〃	Inter-changeable	(併用)	
〃	42 00 00 iA 09 99 10	〃	2SA999 (E,F)	〃			
TR181	42 00 00 iD 04 00 10	〃	2SD400 P2 (E,F)	〃			
TR182	42 00 00 iE 10 05 00	FET	2SK68A (K,L,M,N)	FET			
TR183	42 00 00 iC 23 20 10	Transistor	2SC2320 (E,F)	トランジスタ			
TR184 TR185	42 00 00 iC 20 21 80	〃	2SC2021 (Q,R,S)	〃	Inter-changeable	(併用)	
〃	42 00 00 iC 23 20 10	〃	2SC2320 (E,F)	〃			
TR187	42 00 00 iC 26 73 00	〃	2SC2673A (P,Q,R)	〃			
TR188	42 00 00 iC 20 21 80	〃	2SC2021 (Q,R,S)	〃	Inter-changeable	(併用)	
〃	42 00 00 iC 23 20 10	〃	2SC2320 (E,F)	〃			
TR189	42 00 00 iA 09 37 00	〃	2SA09370 (Q,R,S)	〃	Inter-changeable	(併用)	
〃	42 00 00 iA 09 99 10	〃	2SA999 (E,F)	〃			
D101～D103	42 00 00 iF 00 00 40	Diode	1S1555	ダイオード	Inter-changeable	(併用)	
〃	42 00 00 iF 00 06 70	〃	1S2473	〃			
D104	42 00 00 iF 00 18 40	Zener Diode	RD3-OEB2	ツェナーダイオード			
D105～D113	42 00 00 iF 00 00 40	Diode	1S1555	ダイオード	Inter-changeable	(併用)	
〃	42 00 00 iF 00 06 70	〃	1S2473	〃			
D114	42 00 00 iH 00 02 40	〃	1S1885	〃			
D115	42 00 00 iF 00 06 40	Zener Diode	HZ7B	ツェナーダイオード			
D116～D130	42 00 00 iF 00 00 40	Diode	1S1555	ダイオード	Inter-changeable	(併用)	
〃	42 00 00 iF 00 06 70	〃	1S2473	〃			
D131	42 00 00 iF 00 18 50	Zener Diode	RD10EB2	ツェナーダイオード			
D132～D135	42 00 00 iF 00 00 40	Diode	1S1555	ダイオード	Inter-changeable	(併用)	
〃	42 00 00 iF 00 06 70	〃	1S2473	〃			
D136	42 00 00 iH 00 08 10	〃	1B4B41	ダイオード			
D137	42 00 00 iF 00 18 70	LED Red	SLR53UW	LED			
D138～D141	42 00 00 iF 00 18 60	〃 Green	SLR54GC	〃			
D142	42 00 00 iF 00 18 70	〃 Red	SLR53UW	〃			
D143	42 00 00 iF 00 18 30	LED Dial Pointer	LS003GN	LED指針			
D144～D147	42 00 00 iF 00 00 40	Diode	1S1555	ダイオード	Inter-changeable	(併用)	
〃	42 00 00 iF 00 06 70	〃	1S2473	〃			
D148	42 00 00 iH 00 02 40	〃	1S1885	〃			
D149 D150	42 00 00 iF 00 06 40	Zener Diode	HZ7B	ツェナーダイオード			

Ref. No.	Part No.	Description	(部 品 名)	Remarks	Common model	Markets
IC101	42 00 00 iG 00 24 20	IC LA1222	I C			
IC102	42 00 00 iG 03 87 00	〃 LA1231N	〃			
IC103	42 00 00 iG 03 45 00	〃 μPC577H (F)	〃			
IC104	42 00 00 iG 03 49 00	〃 M5214L	〃			
IC105	42 00 00 iG 03 74 00	〃 μPD4066C	〃			
IC107 IC108	42 00 00 iG 03 54 00	〃 LA3170	〃			
IC109	42 00 00 iG 03 17 00	〃 LA1240	〃			
IC110	42 00 00 iG 00 03 90	〃 μPC577H	〃			
IC111	42 00 00 iG 03 21 00	〃 LA2300	〃			
IC112	42 00 00 iG 00 13 90	〃 NJM4558DV	〃			
IC113	42 00 00 iG 02 92 00	〃 LA3380	〃			
IC114	42 00 00 iG 03 91 00	〃 TC4520	〃			
IC115	42 00 00 iG 03 90 00	〃 HD14077BP	〃			
IC116～IC119	42 00 00 iG 00 13 90	〃 NJM4558DV	〃			
IC120	42 00 00 iG 03 84 00	〃 LC7200	〃			
IC121	42 00 00 iG 00 13 90	〃 NJM4558DV	〃			
SW101	42 00 00 KA 80 14 40	Push Switch 4-2-2-2-2	プッシュスイッチ			
SW102	42 00 00 KA 80 14 20	〃 2-2	〃			
PJ101	42 00 00 LB 40 03 10	Pin Jack 4P	ピンジャック			
※ PK101	42 00 00 PA 00 05 10	RF Pack FR-651U	フロントエンド			
※ BT101	42 00 00 PC 60 00 60	Ni-Cad Battery S-101	ニッカド蓄電池			
	42 00 00 LA 00 21 10	Wrapping Terminal 2P	i型ラッピング端子板			
	42 00 00 LA 00 23 20	〃 3P	〃			
	42 00 00 LA 00 27 70	Antenna Terminal 5P	アンテナ端子板			
	42 00 00 LB 00 20 60	Connector 6P	スナップメイトコネクター			
	32 00 00 BA 07 72 90	Heat Sink	放熱板		A-550	
	42 00 00 EN 03 00 10	BW Head Tapping Screw Type II 3x6(ZMC2-Y)	鉄バインドタッピングネジ(2種)			
※	32 00 00 CB 09 79 30	LED Holder	LEDホルダー	Double		
※	32 00 00 CB 09 71 60	Holder (Dial Pointer)	指針ホルダー			
※	32 00 00 BA 07 84 60	Cover (Dial Pointer)	指針カバー			
※	32 00 00 BA 07 89 80	〃 (Black Model)	〃			
	32 00 00 CB 09 12 90	P.C. Board Holder	基板ホルダー		T-550	
	42 00 00 CB 06 92 50	Cable Crip	インシュロックタイ			
※	32 00 00 CB 09 75 20	LED Holder	LEDホルダー			
※	42 00 00 LB 90 10 80	Connector Plug 8P	コネクタープラグ			
※	32 00 00 AA 60 27 10	Switch Stay	スイッチステイ			
※	32 00 00 CB 09 75 20	LED Holder	LEDホルダー	Single		

T-7

■FRONT PANEL



❶ FM DIAL SCALE
❷ AM DIAL SCALE
❸ TUNING INDICATOR
❹ PRESET TUNING BUTTONS
❺ TUNING KNOB
* ❻ POWER SWITCH
❼ REC CAL SWITCH
❽ BLEND SWITCH
❾ MUTE/OTS SWITCH
❿ RX MODE SWITCH
⓫ FUNCTION SWITCH
⓬ OUTPUT LEVEL VOLUME
⓭ DX INDICATOR
⓮ LOCAL INDICATOR
⓯ STEREO INDICATOR
⓰ SIGNAL QUALITY INDICATOR

** NOTE: On British, North European and Australian models, the switch is labeled "ON" and "STANDBY".*

■ SPECIFICATIONS

■ FM SECTION

Tuning Range		87.6 to 108 MHz
50 dB Quieting Sensitivity		
Mono (DX)		3.2μV (15.3 dBf)
Stereo (DX, Blend on)		20μV (31.2 dBf)
(DX, Blend off)		38μV (36.8 dBf)
Usable Sensitivity		
IHF Mono	1.7μV (300Ω) 9.8 dBf	
(98 MHz, 40 kHz dev.)	0.85μV (75Ω) 9.8 dBf	
DIN Mono	1.2μV	
(40 kHz dev., S/N 26 dB)		
Stereo	35μV	
(40 kHz dev., S/N 46 dB)		
Image Response Ratio (98 MHz)		100 dB
IF Response Ratio (98 MHz)		100 dB
Spurious Response Ratio (98 MHz)		100 dB
AM Suppression Ratio (IHF)		67 dB
Capture Ratio (IHF)		1.5 dB
Alternate Channel Selectivity		IHF Local 55 dB, DX90 dB DIN Local 30 dB, DX70 dB
Signal-to-Noise Ratio (at 85 dBf)		
Mono	90 dB	
Stereo	85 dB	
DIN (40 kHz dev.) Mono	84 dB	
Stereo	79 dB	

Distortion			
Mono	100 Hz	Local 0.03%,	DX0.1%
	1k Hz	Local 0.04%,	DX0.3%
	6k Hz	Local 0.07%,	DX0.7%
	10k Hz	Local 0.05%,	DX0.1%
Stereo	100 Hz	Local 0.04%,	DX0.5%
	1k Hz	Local 0.04%,	DX0.5%
	6k Hz	Local 0.07%,	DX0.8%
	10k Hz	Local 0.08%,	DX1.5%
	15k Hz	Local 0.2%,	DX3.0%

Intermodulation Distortion (IHF)	
Mono	Local 0.04%, DX0.5%
Stereo	Local 0.04%, DX1.0%
Stereo Separation	
DC to 1k Hz	Local 60 dB, DX30 dB
2k Hz to 10 kHz	Local 52 dB, DX25 dB
Frequency Response	
50 Hz to 10k Hz	±0.3 dB
20 Hz to 15k Hz	±0.3, −0.5 dB
10 Hz to 18k Hz	+0.5, −3.0 dB
Subcarrier Product Ratio	70 dB
Muting Threshold (DX)	5μV (19.2 dBf)
Auto-DX Threshold	50μV (39.2 dBf)

■ AM SECTION

Tuning Range	525 to 1,605 kHz
Usable Sensitivity (IHF)	15μV
Alternate Channel Selectivity	
1,000 kHz ± 10 kHz	Local 17 dB, DX27 dB
Signal-to-Noise Ratio	52 dB
Image Response Ratio	50 dB (1,000 kHz)
Spurious Response Ratio	50 dB
Distortion	0.3%

■ AUDIO SECTION

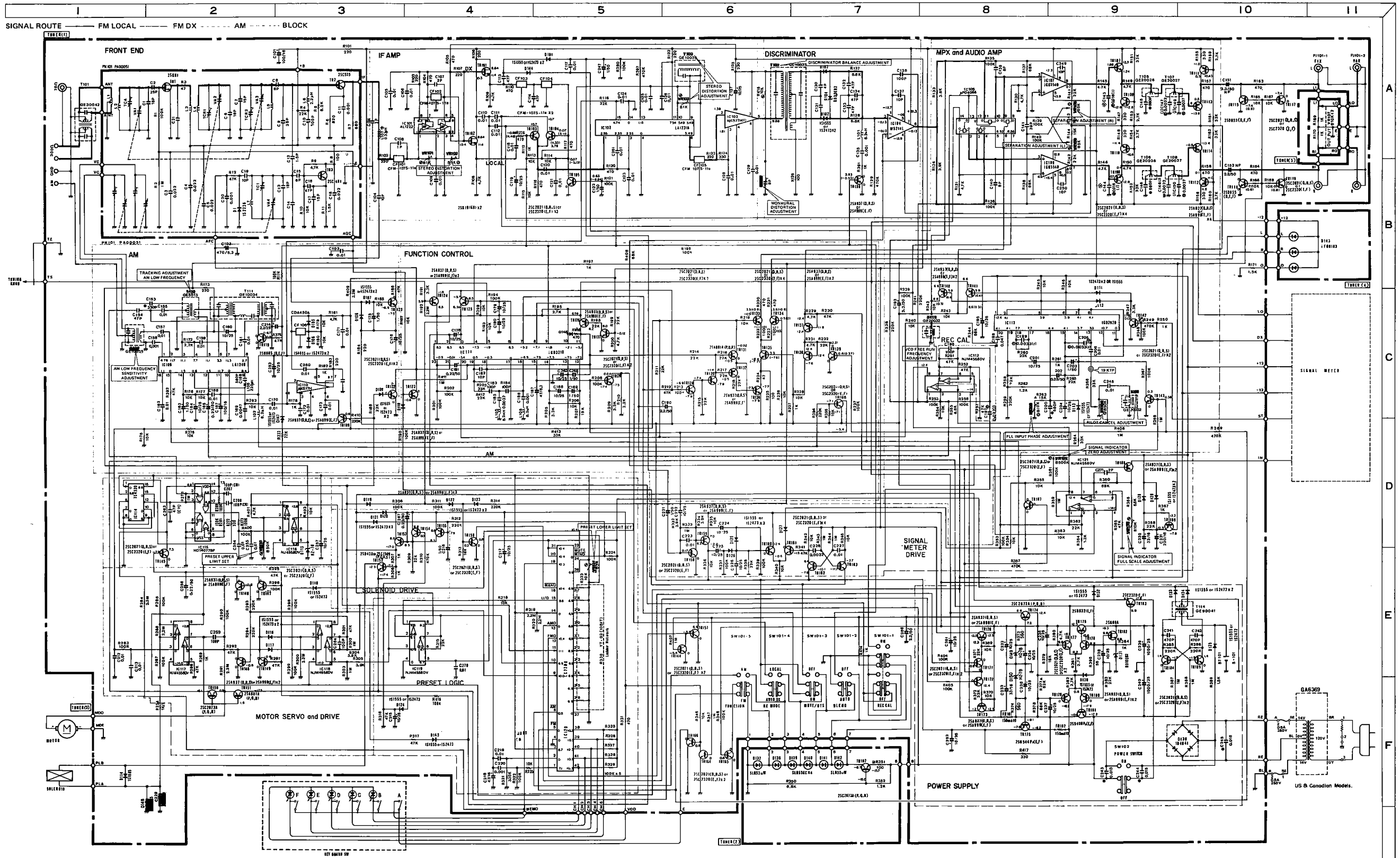
Output Level/Impedance	
FM	1V/600Ω (Fixed)
(100% mod. 1 kHz)	500 mV/3.3kΩ (Variable center)
	1V/600Ω (Variable max.)
AM	300 mV/600Ω (Fixed)
(30% mod.,1 kHz)	150 mV/3.3kΩ (Variable center)
	300 mV/600Ω (Variable max.)
Rec Cal Signal	500 mV/600Ω (Fixed)
(333 Hz:	250 mV/3.3kΩ (Variable center)
Corresponding to	
50% FM modulation)	

■ GENERAL

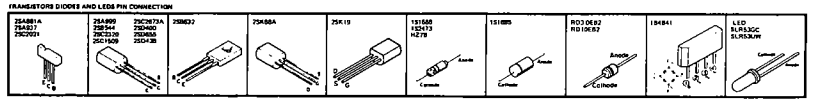
Semiconductors	86 Transistors, 20 ICs, 4 FETs, 38 Diodes, 3 Zener Diodes, 14 LEDs
Power Supply	
U.S. & Canadian Models	120V, 60 Hz
General Model	110 ~ 130V/ 220 ~ 240V, 50/60 Hz
North European Model	220V, 50 Hz
British & Australian Models	240V, 50 Hz
Power Consumption	
U.S. & Canadian Models	16W
General, North European	16W
British & Australian Models	
Dimensions (W x H x D)	435 x 95 x 335 mm (17-1/8" x 3-3/4" x 13-1/8")
Weight	5.2 kg (11.5 lbs)

Specifications subject to change without notice.

SCHEMATIC DIAGRAM



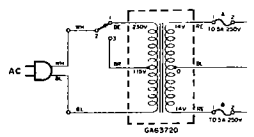
TRANSISTORS DIODES AND LEDS PIN CONNECTION



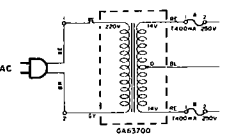
PARTIAL CHANGES MADE ACCORDING TO DESTINATION

	R.U.C.	A.B.G.
C143, C144	0.016	0.01
※	J269	RF Inductor 0.33μH

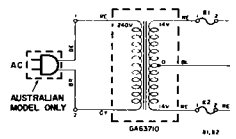
GENERAL MODEL

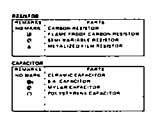


NORTH EUROPEAN MODEL



AUSTRALIAN & BRITISH MODEL



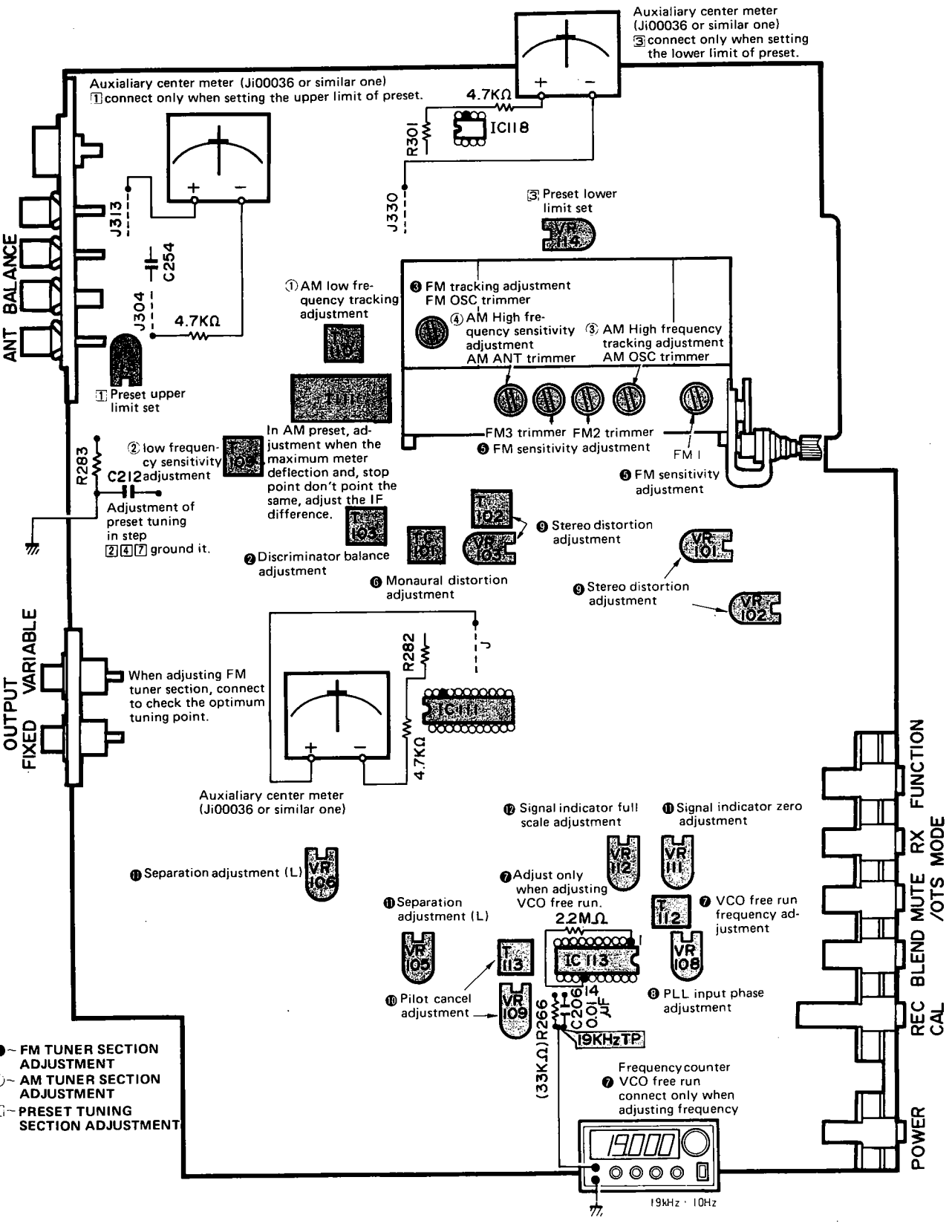


*All voltages measured with a 10MΩ/V DC electric volt meter, under no-signal condition.
FUNCTION → FM
RX MODE → AUTO DX (at local position)
BLEND → AUTO
REC CAL → OFF
The voltages are measured at FM reception mode. The voltages ( ) are at detuned mode, but the voltages at IC109, 110 are at AM reception mode.
* Schematic Diagram is subject to change without notice.

ADJUSTMENT

TEST POINT (TUNER CIRCUIT BOARD)

fore adjusting, Connect the center meter (Ji00036 or similar one) in series with the resistor 4.7kΩ between PIN (IC111) and ground.



1. Set the switches to the following positions.

SWITCH	POSITION
FUNCTION	FM
RX MODE	AUTO DX
MUTE/OTS	ON
BLEND	OFF
REC CAL	OFF

2. After the power switch is pushed on, wait five minutes before measuring.

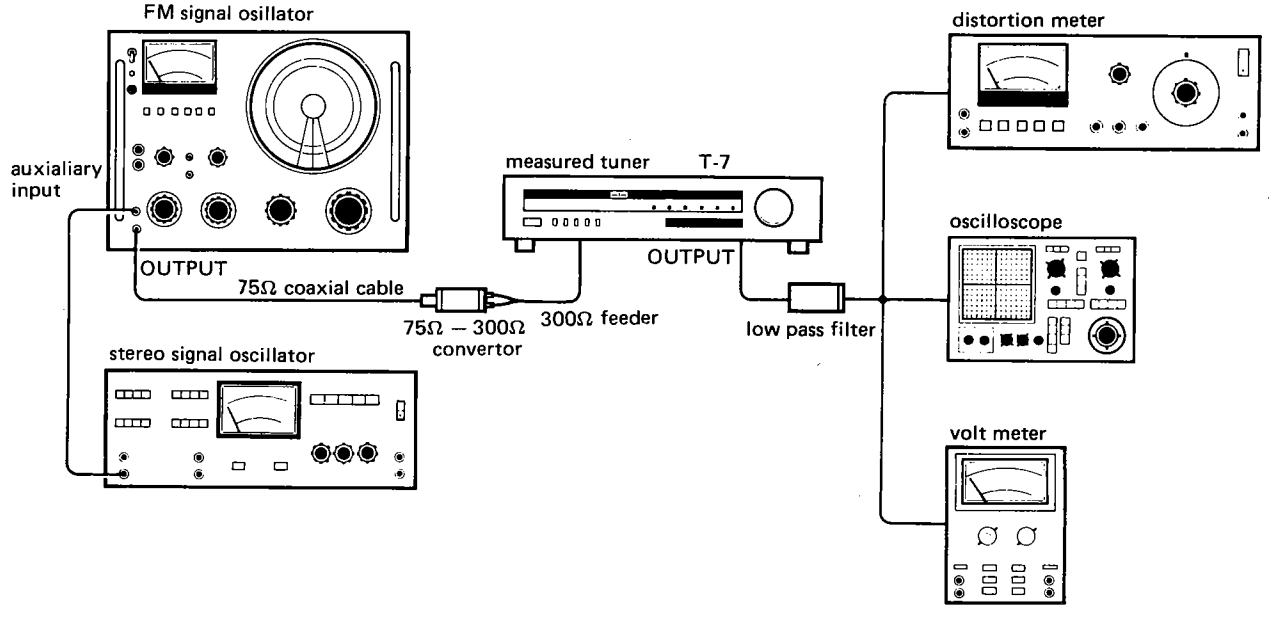
II. POWER SUPPLY VOLTAGE CHECK

Check the voltages at the power supply terminals as follows.

TERMINALS	VOLTAGE
+12	+12.5 ± 1V
−12	−13.5 ± 1V
+ 9	+ 9.5 ± 1V
9B	+10.5 ± 1V
+ 7	+ 7.0 ± 1V
− 7	− 7.5 ± 1V

III. CONNECTION

Use a low pass filter.



Measuring instrument abbreviation

FM SG	:	FM signal generator	DIST. M	:	Distortion meter
AM SG	:	AM	FC	:	Frequency counter
SSG	:	Stereo signal generator	VTVM	:	Volt meter
OSC	:	Oscilloscope	DMM	:	Digital multimeter

■ FM TUNER SECTION ADJUSTMENT

Step	Adjustment item	Connection terminal	Measuring instrument	Adjustment part	Adjustment method	Rating	Remarks
1	Pointer alignment (Tuning indicator)			Tuning knob pointer	Rotate the tuning knob and align pointer with the starting point of the dial scale	± 1mm	
2	Discriminator balance	IC111 PIN 20 – E	Auxialiary center meter	T103 secondary core of discriminator coil	Move core until tuning meter pointer deflects to 0 with noise at detuned point near 98MHz.		
3	Tracking adjustment I	300Ω FM Antenna terminal IC111 PIN 20 – E	FM SG (108MHz) Auxialiary center meter	FM OSC trimmer	Rotate tuning knob and align pointer with 108MHz on dial scale. Rotate trimmer and set to center of tuning meter.	less than ± 1mm	
4	Tracking adjustment II	300Ω FM antenna terminal IC111 PIN 20 – E	FM SG (108MHz) Auxialiary center meter	FM OSC trimmer	Correct so as to be in the rating.	88～104 MHz ±2mm 88MHz ±3mm except above ±4mm	Adjust only when pointer deviates with step 3.
5	Sensitivity adjustment	300Ω FM antenna	FM SG (98MHz)	RF trimmer (FM1, FM2, FM3)	Adjust so that sensitivity is maximum.		
6	Monaural distortion adjustment	300Ω FM antenna output L	FM SG (98MHz, 70dBμ 1kHz, 100% modulation)	TC101	Reduce distortion to minimum	less than 0.1%	
7	VCO free run frequency adjustment	300Ω FM antenna 19kHz TP	DIST. M, OSC (98MHz, 70dBμ unmodulated) FC	VR108	Connect 2.2MΩ between PIN 14 and PIN 1 (±12V) and force the set in stereo mode. Set VCO frequency to 19kHz with VR108.	19kHz ±10Hz	
8	PLL input phase adjustment	300Ω FM antenna output L	FM SG SSG (98MHz, 70dBμ 1kHz, 100% modulation L-R) OSC, VTVM	T112	Adjust so that (L-R) out put is maximum.		
9	Stereo distortion adjustment	300Ω FM antenna output	FM SG SSG (98MHz, 70dBμ 1kHz, 100% modulation stereo, L,R) DIST.M, OSC	T102, VR101 VR102, VR103	Reduce distortion to minimum	less than 0.1%	
10	Pilot canceling adjustment	300Ω FM antenna output disconnect LPF	FM SG, SSG (98MHz, 70dBμ pilot 9% modulation) OSC, VTVM	VR109, T113	Adjust so that 19kHz leakage level is reduced to minimum.	less than −70dBm	
11	Separation adjustment	300Ω FM antenna output	FM SG, SSG (98MHz, 70dBμ 1kHz, 100% modulation stereo) OSC VTVM	VR105 (L) VR106 (R)	Add stereo signal to either channel. Input L → output R Reduce output level to minimum with VR105 Input R → output L Reduce output level to minimum.	More than 58dB	
12	Signal indicator full scale adjustment	300Ω FM antenna	FM SG 100dBμ	VR112	Adjust so that all the LEDS of signal indicator are ON		
13	Signal indicator zero adjustment	300Ω FM antenna	FM SG less than 0dBμ	VR111	Adjust so that all the LEDS of signal indicator are off.		

■ AM TUNER SECTION ADJUSTMENT

- Proceed with the AM section adjustments after having finished the FM section adjustments.
- Connect the loop antenna to ANT terminals.

Adjustment item	Measuring instrument	Adjustment part	Adjustment method	Rating	Remarks
Low frequency range tracking adjustment	AM SG (600kHz, 60dBμ)	T110 local oscillator coil CTE 6013	Align pointer with 600kHz using tuning knob, rotate coil core and adjust for a maximum signal quality meter deflection.		
Low frequency range sensitivity adjustment	AM SG (600kHz, 60dBμ)	T109 GE 10035	Adjust for a maximum signal meter pointer deflection at same tuning point as under step 1.		
High frequency range tracking adjustment	AM SG (1350kHz, 60dBμ)	RF trimmer (AM OSC)	Align pointer with 1350kHz using tuning knob, rotate trimmer and set for a maximum signal meter pointer deflection.		
High frequency range sensitivity adjustment	AM SG (600kHz / 1350kHz / 60dBμ)	RF trimmer (AM ANT)	Adjust for a maximum signal quality meter pointer deflection at step 3 tuning point.		
Sensitivity difference adjustment	AM SG (600kHz / 1350kHz / 60dBμ)		Repeat steps 1 to 4 and adjust so that the difference is reduced to minimum.	Scale deviation. less than ± 1.5mm 600kHz 1350kHz	
Middle frequency range tracking adjustment	AM SG (950kHz, 60dBμ)		Set for maximum signal quality meter pointer deflection.	Scale deviation. less than ± 2mm	
Signal quality meter adjustment	AM SG (100dBμ / less than 0dBμ)		Check that all the LEDs of signal indicator are ON at 100dBμ and that all the LEDs are off at less than 0dBμ.		

■ REC CAL OUTPUT VOLTAGE CHECK

Adjustment item	Connection terminal	Measuring instrument	Adjustment part	Adjustment method	Rating	Remarks
REC CAL output check	Output	OSC FC VTVM		Check that specified output is gained at oscilator frequency 333 ± 66Hz	−4±2.5dBm triangle wave	Volume max at variable output

■ PRESET TUNING SECTION ADJUSTMENTS

- Buck up operation check.
  Before power switch is ON, check the voltages of the terminal 9B and cathode of Diode 134 are above +3V.

Step	Adjustment item	Connection terminal	Measuring instrument	Adjustment part	Adjustment method	Specs.	Remarks
1	Preset upper limit set	IC116 PIN 1 to 7	Connect auxiliary center meter in series to 4.7kΩ	VR113	1. Align pointer with 91MHz. 2. Adjust so that center meter aligns with 0, as the memory button is depressed.		
2	Preset upper limit check				1. Align pointer to the most right part and preset to the preset button 5. 2. Check that pointer moves to 91MHz, when preset button 5 is depressed. (Check that preset is not able 91MHz.)	91+0.4MHz 91−0.6MHz	Check that LED of preset button 5 is ON. Ground the connecting point between R238 and C212
3	Preset lower limit set	IC118 PIN 7 to E	Connect auxiliary center meter in series to 4.7kΩ	VR114	1. Rotate VR114 counter-clock wise. 2. Align pointer to the left part of dial scale, and preset to preset button 3. Move pointer to another part and tune automatically at preset button 1. 4. Rotate tuning knob with a insulator (prevent touch switch operation) and align pointer with 87MHz. 5. Adjust so that center meter aligns with 0, as memory button is depressed.		When aligning pointer don't touch tuning knob with hand.
4	Preset lower limit check				1. Align pointer to the most left part and preset to the preset button 2. Check that pointer moves to 75MHz, when preset button 1 is depressed. (check that preset is not able under 87MHz.)	N. European model $87^{+0.4}_{-0.1}$MHz Other models $87^{+0.7}_{-0}$MHz	Check that LED of preset button 1 is ON Ground the connecting point between R238 and C212
5	FM S curve (capture) operation check	300Ω FM antenna	FM SG (84MHz, 60dBμ)		1. Tune at 98MHz and preset button 2. 2. Detune from 98MHz and depress preset button 2. 3. Check that pointer aligns with 98MHz and S, curve operation is done. (Observe the action when pointer approaches 98MHz)		Check that LED of preset button 2 is ON
6	AM S curve (capture) operation check		AM SG (950kHz 80dBμ)		1. Tune at 950kHz and preset to preset button 3. 2. Detune from 950kHz and depress preset button 2. 3. Check that pointer aligns with 950kHz, and S curve operation is done. (Observe the action when pointer approaches 950kHz)		Check that LED of preset button 3 is ON
7	Preset button 4 preset check				Memorize preset button 4 and check that auto tuning is able.		When checking the stop point ground connecting point between R238 and C212.

■BLOCK DIAGRAM