YAMAHA Hi-Fi STEREO

SERVICE MANUAL

MODEL **CT-800**

YAMAHA

CONTENTS

SPECIFICATIONS

FM:

Tuning Range	88MHz to 108MHz
Sensitivity	
Mono: IHF/DIN (40kHz Deviation S/N 26dB)	1.7μV/1.1μV)
Stereo: DIN (40kHz Deviation S/N 46dB DIN#45500)	40μV
Quieting Slope	55dB at 5μV
	60dB at 10μV
Limiting Level (–3dB)	1.1μV
Image Frequency Rejection	90dB
IF Rejection	100dB
Spurious Response Rejection	100dB
AM Rejection	55dB
Capture Ratio	1.0dB
Selectivity	
IHF/DIN (300kHz 40kHz Deviation)	80dB/65dB
Signal-to-Noise Ratio	
Mono: 75kHz Deviation/DIN (40kHz Deviation)	75dB/69dB
Stereo: 75kHz Deviation/DIN (40kHz Deviation)	72dB/66dB
Stereo Separation	
400Hz (75kHz Deviation)/DIN (1kHz Deviation)	45dB/45dB
50 Hz to 10,000Hz (75kHz Deviation)/DIN (40kHz Deviation)	35dB/35dB

Total Harmonic Distortion (Antenna Level; 1mV)

Mono: 400Hz (75kHz Deviation)/DIN (1kHz 40kHz Deviation)	0.15/0.15%
: 50Hz to 10,000Hz /DIN (40kHz Deviation)	0.30/0.30%
Stereo: 400Hz (75kHz Deviation/DIN (1kHz 40kHz Deviation)	0.30/0.30%
: 50Hz to 10,000Hz /DIN (40kHz Deviation)	1.0/1.0%
Frequency Response	
50 to 10,000Hz	+0.5dB, –0.5dB
20 to 15,000Hz	+1.5dB, –1.5dB
Sub-Carrier Suppression	60dBat 10μV
Muting Over ride Signal Level	10μV~50μV
Stereo Level	10μV~50μV

AM:

Tuning Range	525kHz to 1,605kHz
Sensitivity	52dB/m
Selectivity (at 1,000kHz)	30dB
Signal-to-Noise Ratio (at 80dB/m)	45dB
Image Frequency Rejection (at 1,000kHz)	70dB
Total Harmonic Distortion (at 80dB/m)	0.8%

General

Transistors	58
FETs	5
Diodes	36
Zener Diodes	4
ICs	2
Power Source	AC 110, 117, 130, 220, 240V 50/60Hz
Power Consumption	12 Watts
AC Outlet (unswitched)	1
Dimensions (WxHxD)	436mm (17¼") x 144mm (5½") x 323mm (12¼")
Weight	7.5kg (16½ lbs.)

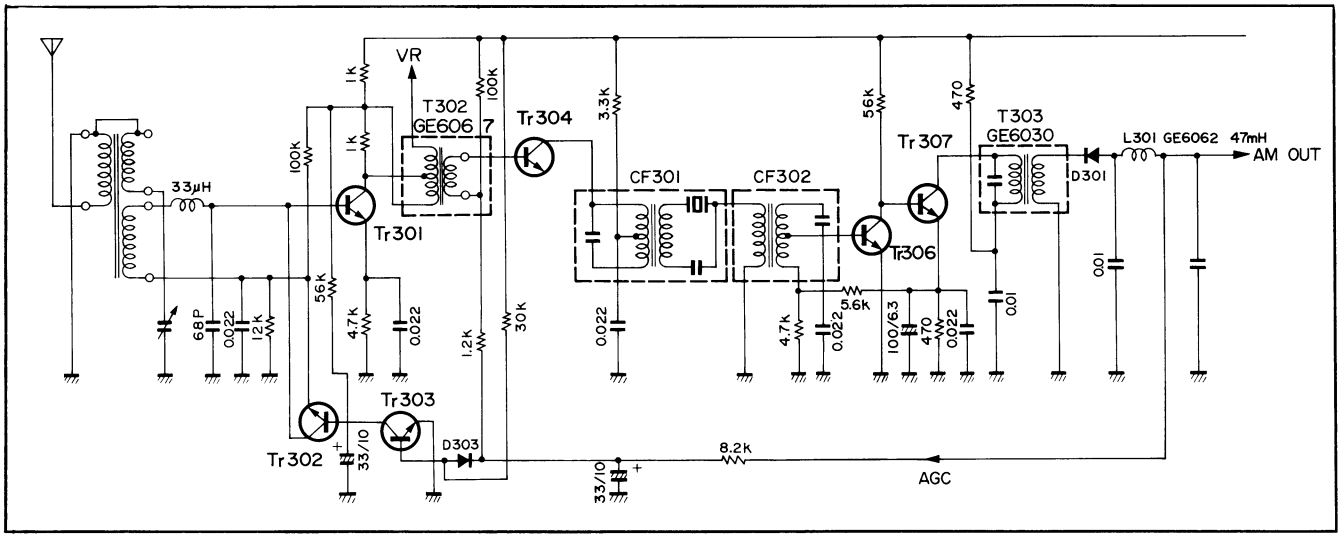
CIRCUIT DESCRIPTION

- MULTIPLEX DEMODULATOR WITH TRANSISTOR SWITCHING CIRCUIT EMPLOYING NEGATIVE FEEDBACK ..... Refer to CR-800's SERVICE MANUAL.

- MUTING CIRCUIT ..... Refer to CR-800's SERVICE MANUAL.

- AUTO-TOUCH AFC CIRCUIT OFF ..... Refer to CR-800's SERVICE MANUAL.

- **AM AGC CIRCUIT**



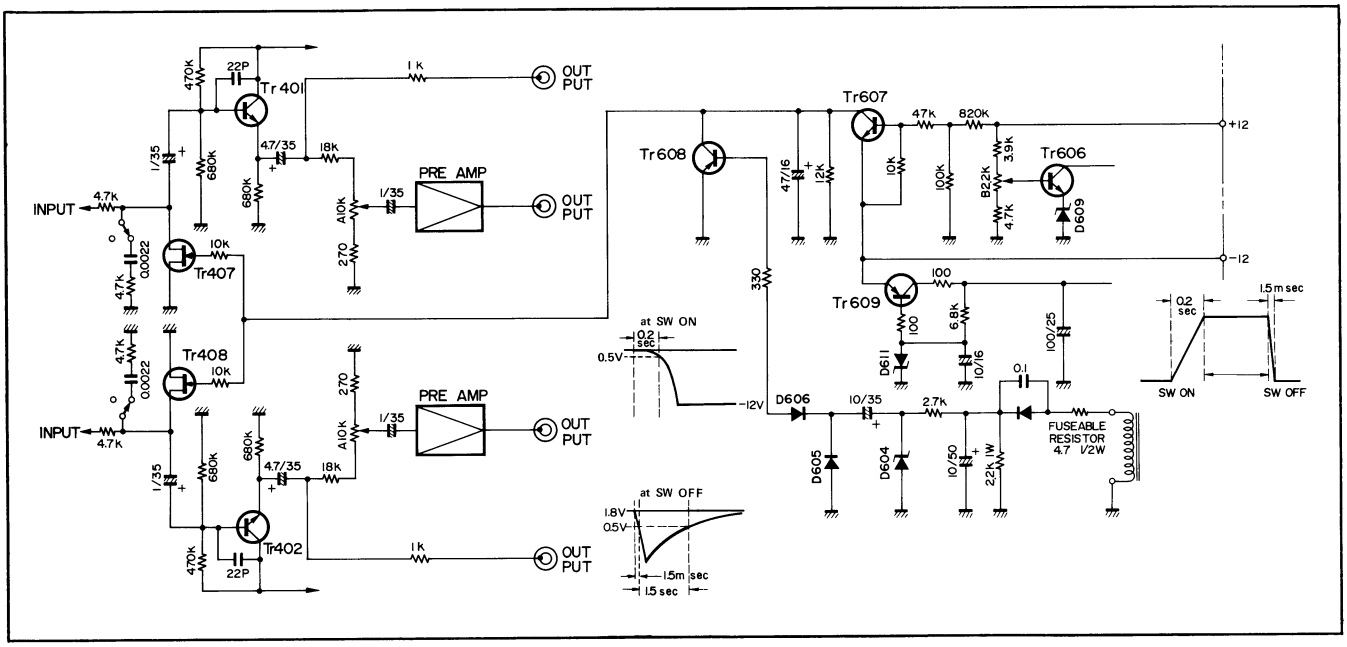
The AGC current drops in accordance with received signal strength, which correspondingly raises the Tr303 C-3 impedance; at the same time the Tr302 C-E impedance drops.

This causes the current fed to the base of Tr301 to lower, a system which assures lowest possible noise and distortion, even with excessively strong signals.

VOLTAGE TABLE AM AGC CIRCUIT

	AT STRONG INPUT SIGNAL			AT NORMAL INPUT SIGNAL			AT OUT OF TUNE		
	C	B	E	C	B	E	C	B	E
TR 301	9.0	2.45	5.1	10.2	1.2	0.53	10.2	1.1	0.48
TR 302	2.45	0.94	2.45	1.2	0.7	1.2	1.1	0.07	1.1
TR 303	0.94	0.45	0	0.7	0.62	0	0.07	0.64	0
TR 304	10.2	0.074	0	10.2	0.27	0.034	10.2	1.08	0.67

• TRANSIENT NOISE CANCELLATION CIRCUIT



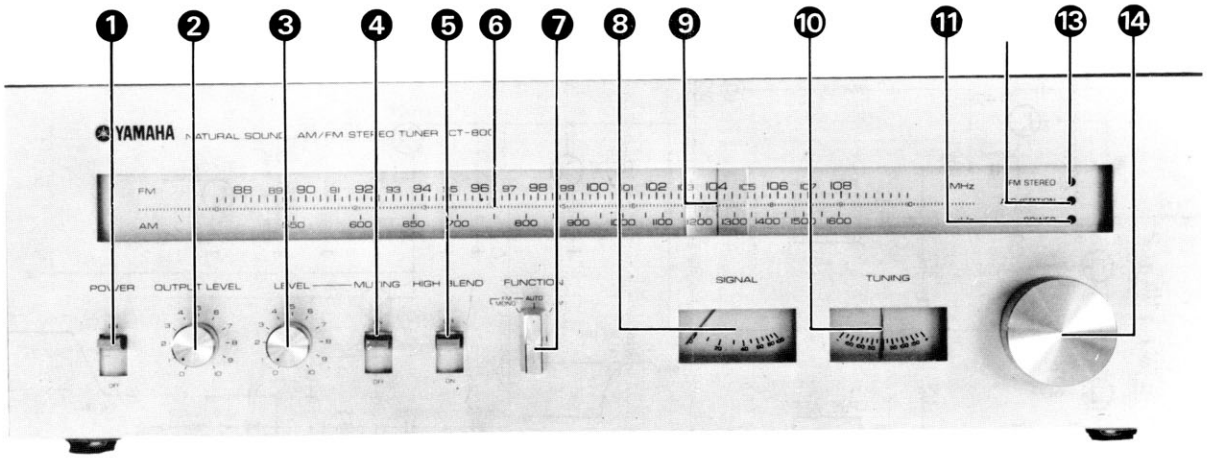
When the Power switch is off, Tr407 and Tr408 are on, and thus ground the audio signal. When the Power switch is turned on it takes approximately 0.2 seconds for Tr407 and Tr408 to go off, during which time the audio signal is still grounded.

In this way all noise connected with the switching is cancelled.

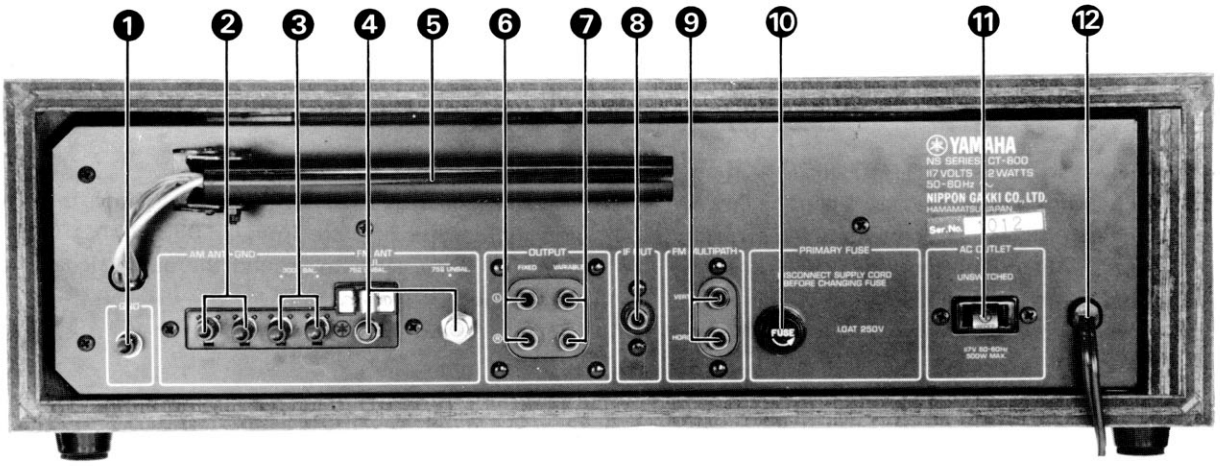
Then, when the Power switch is turned off, the last 1.5 millisecond of pulse from Tr608 switches Tr407 and Tr408 on again to ground the audio signal and cut all lingering noise.

EXTERNAL VIEW

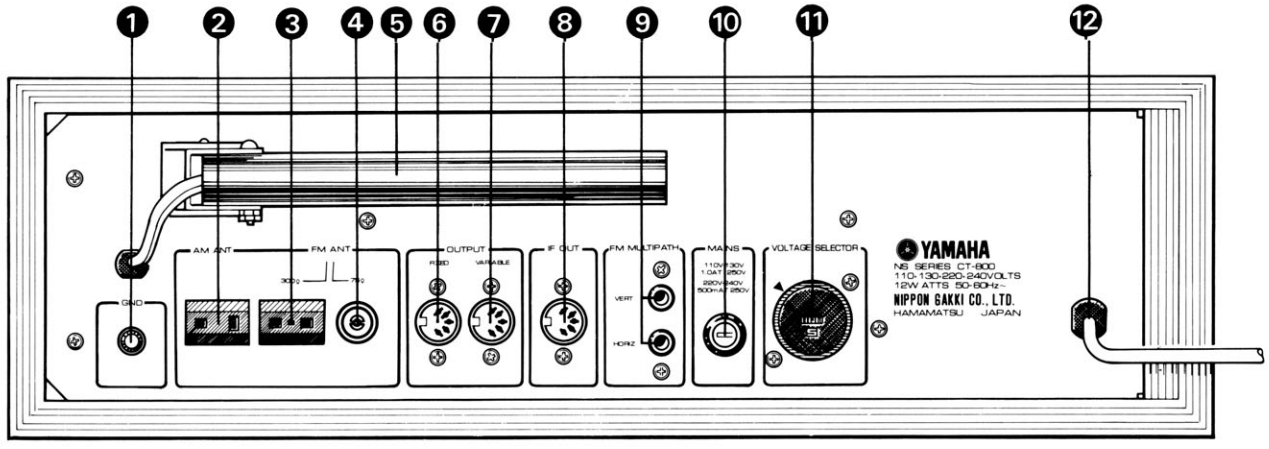
FRONT PANEL



REAR PANEL(U.S.&CANADIAN MODELS)



REAR PANEL(EUROPEAN MODEL)



FRONT PANEL

❶ POWER SWITCH
❷ OUTPUT LEVEL CONTROL
❸ MUTING LEVEL CONTROL
❹ MUTING SWITCH
❺ HIGH BLEND SWITCH
❻ DIAL SCALE
❼ FUNCTION SWITCH
❽ SIGNAL METER
❾ DIAL POINTER
❿ TUNING METER
⓫ POWER INDICATOR
⓬ AFC/STATION INDICATOR
⓭ FM STEREO INDICATOR
⓮ TUNING KNOB

REAR PANEL (U.S.& CANADIAN MODELS)

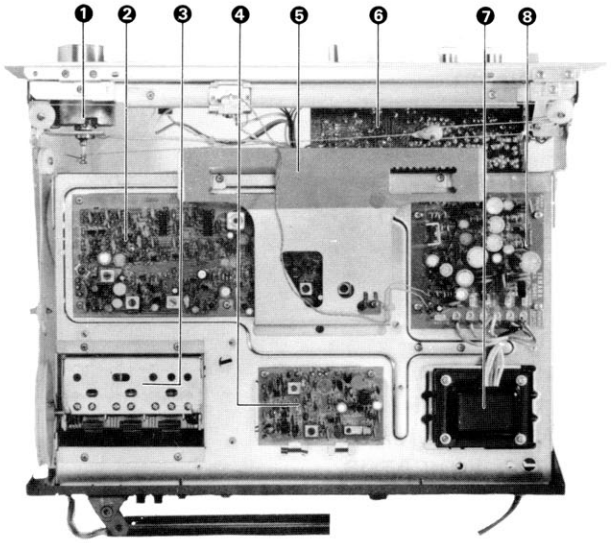
❶ GROUND TERMINAL
❷ AM ANTENNA TERMINAL
❸ FM ANTENNA TERMINAL (300Ω BALANCED)
❹ FM ANTENNA TERMINAL & CONNECTOR (75Ω UNBALANCED)
❺ AM FERRITE BAR ANTENNA
❻ OUTPUT JACKS (FIXED)
❼ OUTPUT JACKS (VARIABLE)
❽ IF OUT JACK
❾ FM MULTIPATH JACKS
❿ PRIMARY FUSE (1.0A 250V)
⓫ AC OUTLET (UNSWITCHED)
⓬ AC CORD

REAR PANEL(EUROPEAN MODEL)

❶ GROUND TERMINAL
❷ AM ANTENNA CONNECTOR
❸ FM ANTENNA CONNECTOR (300Ω BALANCED)
❹ FM ANTENNA CONNECTOR (75Ω UNBALANCED)
❺ AM FERRITE BAR ANTENNA
❻ OUTPUT CONNECTOR (FIXED)
❼ OUTPUT CONNECTOR (VARIABLE)
❽ IF OUT CONNECTOR
❾ FM MULTIPATH JACKS
❿ PRIMARY FUSE (0.5A 250V)
⓫ VOLTAGE SELECTOR
⓬ AC CORD

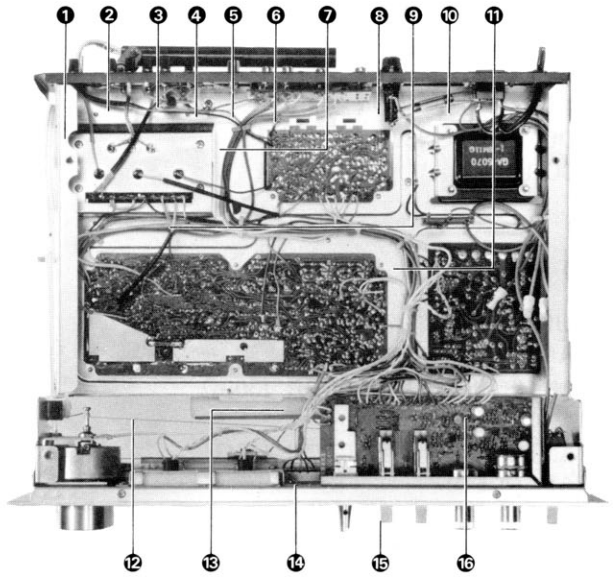
INTERNAL VIEW

TOP VIEW



❶ FLYWHEEL
❷ TUNER CIRCUIT BOARD
NA06461:
SOUTH AFRICAN MODEL
NA06462:
U.S. & CANADIAN MODELS
NA06463:
GENERAL, AUSTRALIAN &
EUROPEAN MODELS
❸ RF FRONT END: FL422U
EXCEPT SOUTH AFRICAN MODEL
: FL 422S
SOUTH AFRICAN MODEL
❹ AM CIRCUIT BOARD
NA06447:
EXCEPT SOUTH AFRICAN MODEL
NA06448:
SOUTH AFRICAN MODEL
❺ LEAD GUIDE METAL
❻ FUNCTION CIRCUIT BOARD NA06450
❼ POWER TRANSFORMER: GA60701
❽ POWER CIRCUIT BOARD NA06451

BOTTOM VIEW

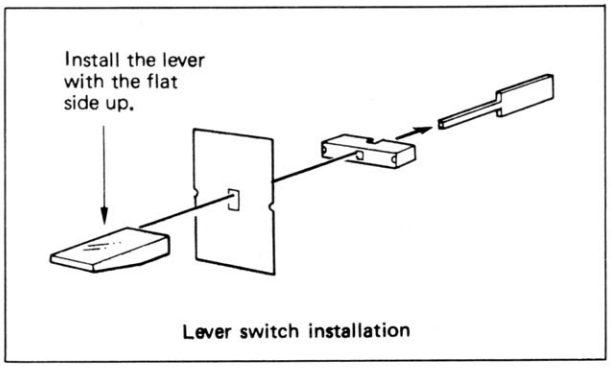


❶ POWER SWITCH
❷ VARIABLE RESISTOR (OUTPUT LEVEL CONTROL : A10kΩ x 2)
❸ VARIABLE RESISTOR (MUTING LEVEL CONTROL : B10kΩ)
❹ LEVER SWITCH (MUTING)
❺ LEVER SWITCH (HIGH BLEND)
❻ ROTARY SWITCH (FUNCTION)
❼ FUNCTION CIRCUIT BOARD
❽ SIGNAL METER
❾ POWER CIRCUIT BOARD
❿ TUNING METER
⓫ TUNER CIRCUIT BOARD
⓬ POWER TRANSFORMER
⓭ AM CIRCUIT BOARD
⓮ PIN JACK CIRCUIT BOARD : NA06449
⓯ AM FERRITE BAR ANTENNA
⓰ RF FRONT END

PARTIAL DISASSEMBLY

BEFORE DISASSEMBLY

- The screwdriver for each screw should match the screw size. If you use a smaller or larger size it will damage the groove.
- If you use excessive force on the printed circuit board it will crack or cut the print wiring, so be careful.
- When using a soldering iron finish all work as quickly as possible.
- When installing switches and knobs be careful not to install them in the wrong place or upside-down. See Fig. 1.



Lever switch installation

Fig. 1

CABINET REMOVAL

a. Stand the cabinet up and remove screws (1~4) as shown in Photo 1.
b. Return the cabinet to its original position and pull forward to remove it.

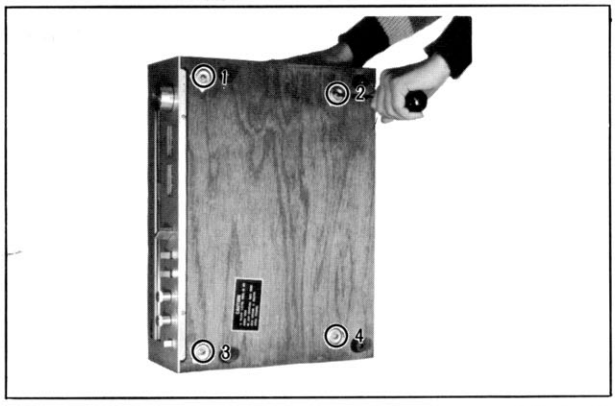


Photo 1

POWER CIRCUIT BOARD REMOVAL

Remove screws (1~4) as shown in Photo 2, then lift the power circuit board up to remove it.

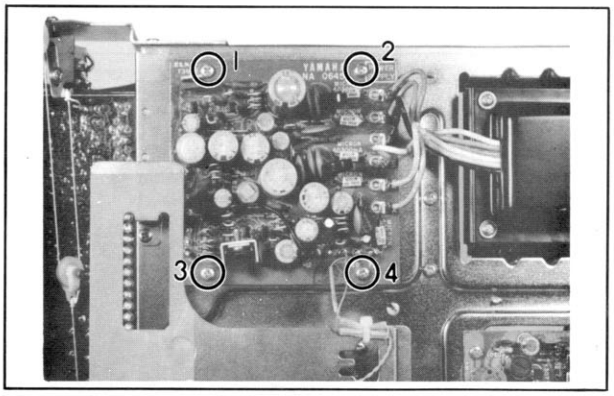


Photo 2

AM CIRCUIT BOARD REMOVAL

Remove screws (1, 2) as shown in Photo 3, then slide the AM circuit board in the direction shown by the arrow and lift up to remove it.

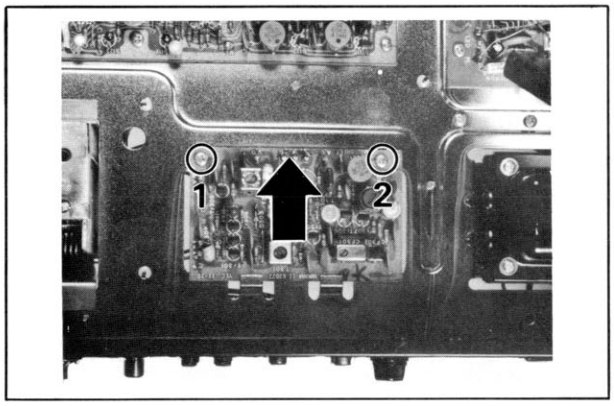


Photo 3

TUNER CIRCUIT BOARD REMOVAL

a. Remove screw 1 and loosen screws 2, 3 as shown in Photo 4, then slide the lead guide metal in the direction shown by the arrow to remove it.

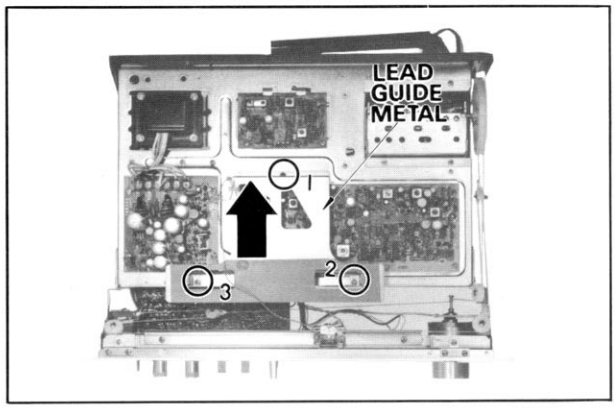


Photo 4

b. Remove screws (1~6) as shown in Photo 5, then remove the tuner circuit board.

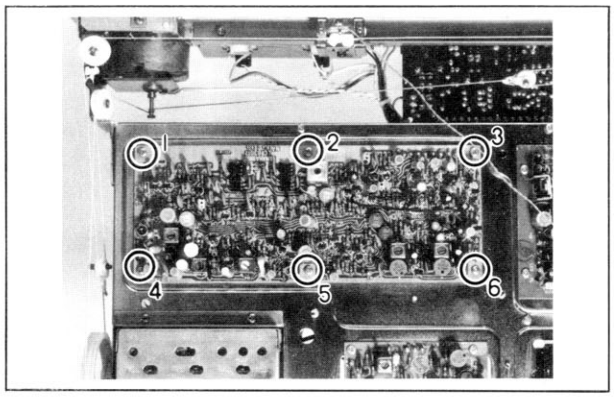


Photo 5

FRONT PANEL REMOVAL

a. Use the hexagonal wrench to loosen the Tuning knob and Function switch, then remove them.
b. Pull off the Output Level and Muting Level knobs.
c. Remove screws 1~4 as shown in Photo 6, then pull the front panel forward to remove it.

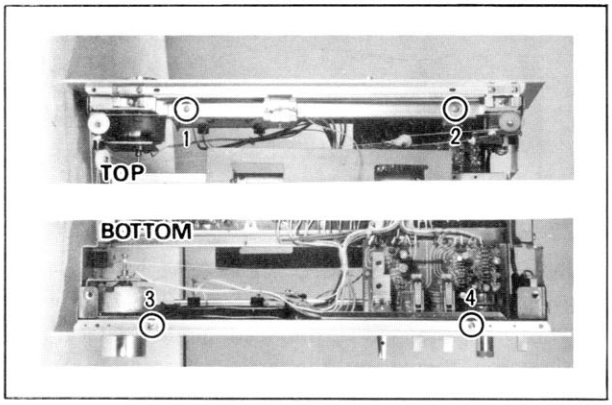


Photo 6

FUNCTION CIRCUIT BOARD REMOVAL

a. Pull off the Muting and High Blend switches.
b. Remove screws (1, 2) as shown in Photo 7, then pull off the function circuit board.

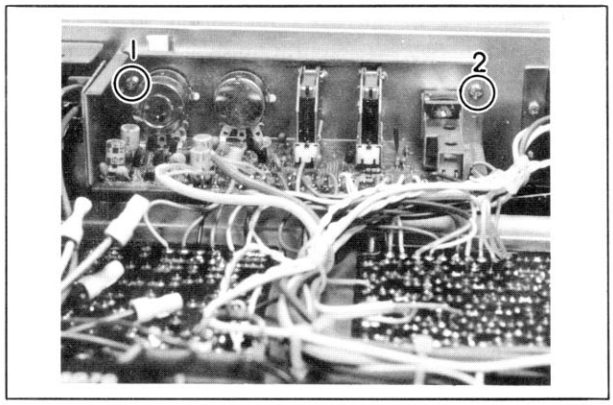


Photo 7

TUNING, SIGNAL METER REMOVAL

a. Remove screws (1, 2) as shown in Photo 8, then remove the meter holder by sliding in the direction shown by the arrow.
b. Then remove the meter(s) from the holder.
Note: When handling the meters do not knock them, or they may later fail to register properly.

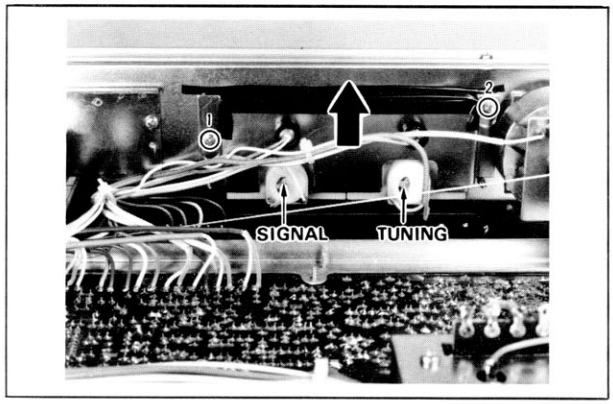
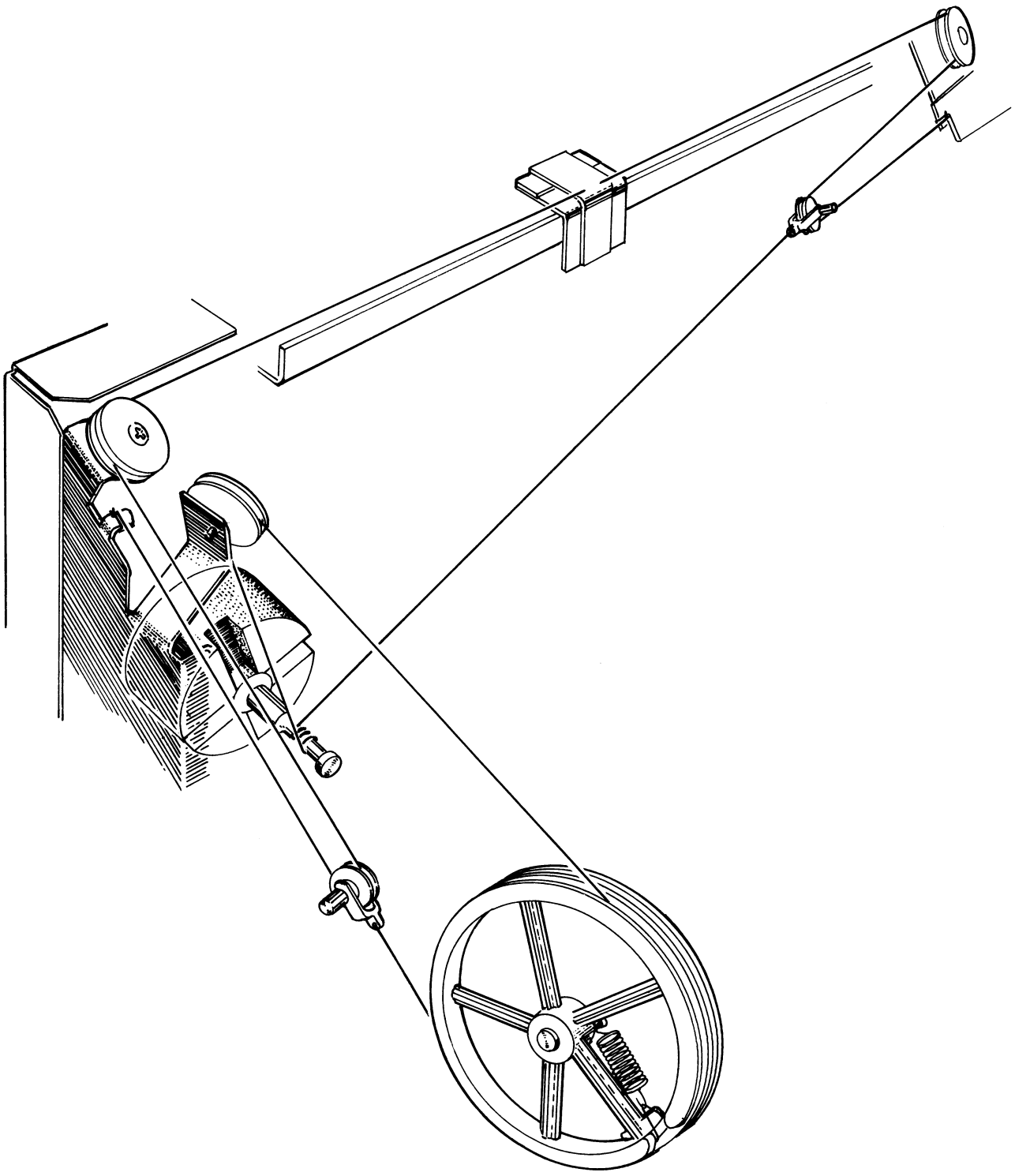


Photo 8

DIAL MECHANISM



MEASUREMENT AND ADJUSTMENT

FM SECTION ADJUSTMENT

FM-IF ADJUSTMENT

STEP	ADJUSTMENT ITEM	TERMINALS TO BE CONNECTED & INSTRUMENTS REQUIRED	ADJUSTMENT	HOW TO ADJUST	RATING OR STANDARD	REMARKS
1	S-Curve	Input jack Sweep Generator Output: 40dB/400 ±100Ω 10-E Oscilloscope (Refer to Fig. 1.)	T101 discrim coil (upper lower) core. Top: Secondary side Lower : Primary side	Adjust for symmetrical S-curve with the secondary-side core. Adjust for max. height with the primary-side core.	Output Voltage: more than 400mVp-p Intermediate Frequency: within 10.7-MHz±200-kHz Bandwidth: 300kHz (Refer to Fig. 2.)	

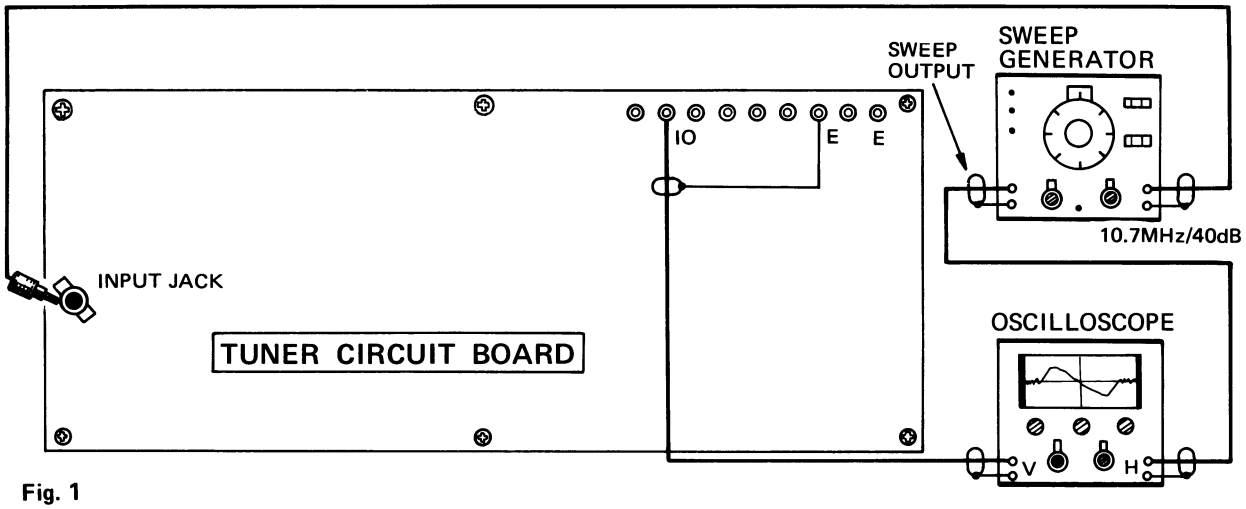
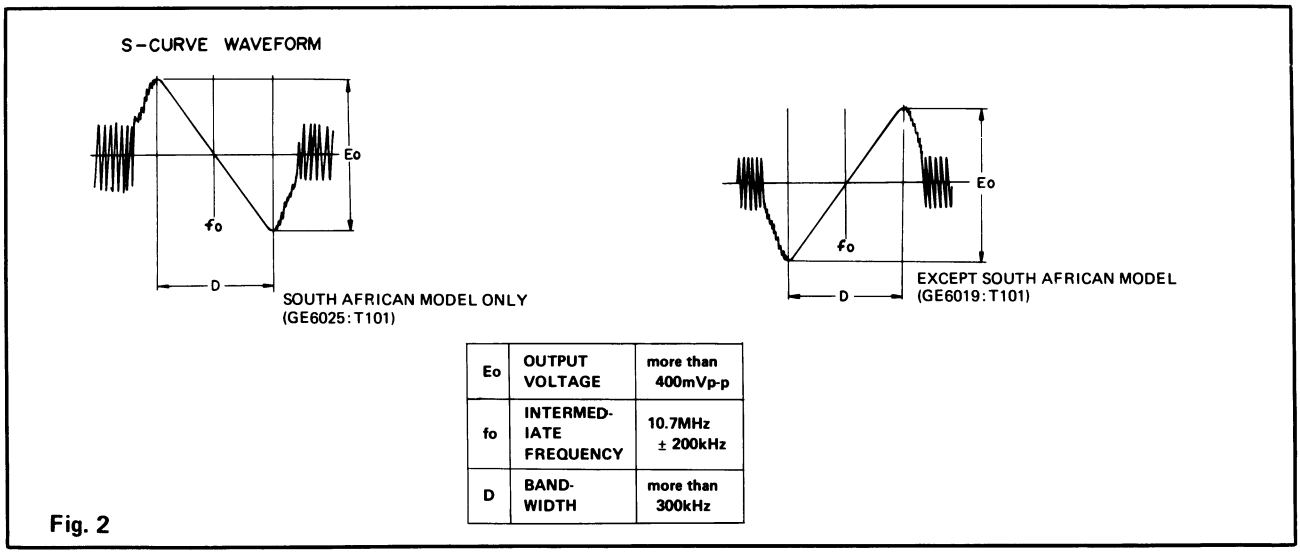


Fig. 1



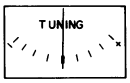
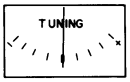
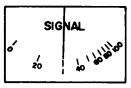
Eo	OUTPUT VOLTAGE	more than 400mVp-p
fo	INTERMED-IATE FREQUENCY	10.7MHz ± 200kHz
D	BAND-WIDTH	more than 300kHz

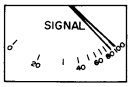
Fig. 2

FM MPX ADJUSTMENT

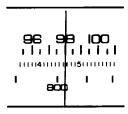
STEP	ADJUSTMENT ITEM	TERMINALS TO BE CONNECTED & INSTRUMENTS REQUIRED	ADJUSTMENT	HOW TO ADJUST	RATING OR STANDARD	REMARKS
1	19kHz Filter adjustment	FM antenna terminal FM signal generator 98MHz/60dBμ ● Modulate the stereo pilot signal only. Output terminal (Fixed) Oscilloscope, Distortion ratio meter, Electronic voltmeter.	T105 (L) T106 (R) : GE6057 Refer to Fig. 3.	Adjust for minimum 19-kHz leak element.	Leak level: less than –60dB	Should be set at tuning point.FM tuner complete adjustment – "2"
2	Separation adjustment	FM antenna terminal FM signal generator 98MHz/60dBμ Modulation Frequency:400Hz/100% stereo (L, R & L-R) Output terminal (Fixed) Oscilloscope, Distortion ratio meter, Electronic voltmeter.	VR103 (L) VR104(R) : B 22kΩ Refer to Fig. 3.	Adjustment for maximum separation (obtain this maximum by repeated left and right adjustment).	Separation: more than –45dB Standard Value: –50dB	Should be set at tuning point FM tuner complete adjustment – "2"

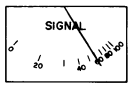
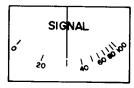
FM TUNER COMPLETE ADJUSTMENT

STEP	ADJUSTMENT ITEM	TERMINALS TO BE CONNECTED & INSTRUMENTS REQUIRED	ADJUSTMENT	HOW TO ADJUST	RATING OR STANDARD	REMARKS
1	Discrim Balance		T101 discrim Coil: Secondary side (top)	Adjust for tuning meter position at 0 with out of tune noise.		Do not connect anything to the FM antenna terminal.
2	Tuning Point Set	FM antenna terminal (300Ω) FM signal generator Modulation Frequency:400Hz/100% mono	Tuning knob	Center tuning meter at 0 by tuning.		AFC-E (AFC OFF)
3	Front-end IF tuning	FM antenna terminal (300Ω) FM signal generator 98MHz/30dBμ or so Modulation Frequency:400Hz/100% mono	Front-end IF core (primary and secondary side) Refer to Fig. 4.	Set for max. signal meter deflection.		Should be set at tuning point 2.
4	Distortion adjustment (Mono)	FM antenna terminal (300Ω) FM signal generator 98MHz/60dBμ Modulation Frequency:400Hz/100% mono Output terminal (Fixed) Oscilloscope, Distortion ratio meter, Electronic voltmeter.	T101 discrim coil:primary side (bottom) Refer to Fig. 4.	Adjust right and left little by little until achieving lowest distortion.	Distortion: less than –25dB (–0.25%) Standard Value: –58dB (–0.12%)	Should be set at tuning point 2.

STEP	ADJUSTMENT ITEM	TERMINALS TO BE CONNECTED & INSTRUMENTS REQUIRED	ADJUSTMENT	HOW TO ADJUST	RATING OR STANDARD	REMARKS
5	Distortion adjustment (Stereo)	FM antenna terminal (300Ω) FM signal generator 98MHz/60dBμ, Modulation Frequency:400Hz/100% stereo (L,R, L-R) Output terminal (Fixed) Oscilloscope, Distortion ratio meter, Electronic voltmeter.	T104 (GE (GE6059) Front-end IF core (top & bottom) Refer to Fig. 3～4.	Adjust T104 for minimum distortion at maximum L-R signal. Adjust front end IF (top & bottom) core via L or R for minimum distortion. tortion.	Distortion: less than −48dB (0.4%) Standard Value: −54dB (0.2%)	Should be set at tuning point 2.
6	Meter adjustment	FM antenna terminal (300Ω) FM signal generator 98MHz/100dBμ Modulation Frequency:400Hz/100% mono	Set VR101 (B10kΩ). Refer to Fig. 3.	Set for maximum ("100") signal meter deflection.	Allowable Error: within +0mm, −1mm 	Should be set at tuning point 2.
7	Muting level adjustment	FM antenna terminal (300Ω) FM signal generator 98MHz/20dBμ Modulation Frequency:400Hz/100% mono Output terminal (Fixed) Oscilloscope, Electronic voltmeter	Set VR102 (B4.7kΩ). Refer to Fig. 4.	Turn to the right little by little until output power appeare.	Level where output appears: 20dBμ ±3dBμ	Should be set at tuning point 2.

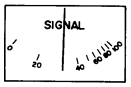
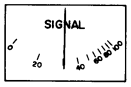
FM TRACKING ADJUSTMENT

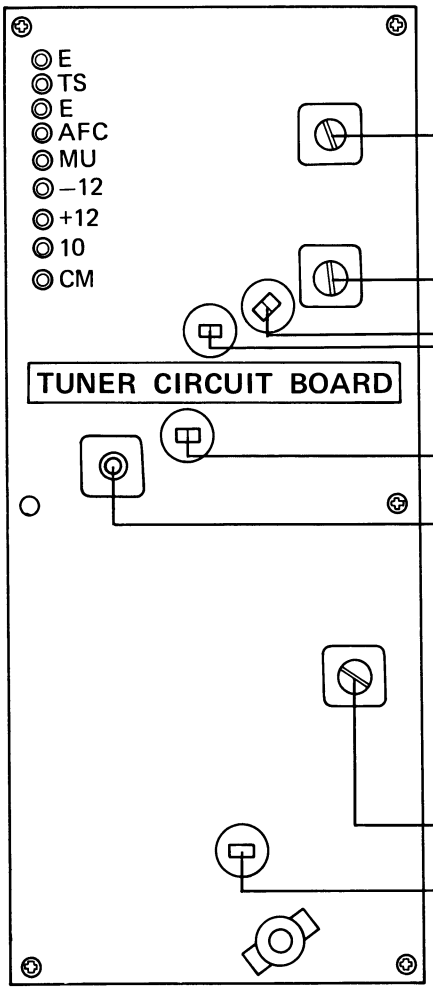
STEP	ADJUSTMENT ITEM	TERMINALS TO BE CONNECTED & INSTRUMENTS REQUIRED	ADJUSTMENT	HOW TO ADJUST	RATING OR STANDARD	REMARKS
1	Dial pointer adjustment I Dial pointer adjustment II	FM antenna terminal FM signal generator 98MHz/60dBμ	Tuning Knob Dial pointer	Turn the knob and set the tuning point at 3-2. Set to the middle of the "98" on the guage board.		AFC-E (AFC OFF)
2 2'	Low-band tracking conformation High-band tracking	FM antenna terminal FM signal generator 90MHz/60dBμ FM antenna terminal FM signal generator 106MHz/60dBμ	Tuning knob Dial pointer	Turn the knob and set the tuning point at 1. Inspect for deviation from the center of the numbers on the dial scale.	Deviation should be within ±3mm of the center of the numbers.	AFC-E (AFC OFF) CM-E If the check shows that only one of the standards (2 & 2') are not met, adjust the dial pointer for that measurement to within the standard. When both 2 & 2' are out of the standard range.

STEP	ADJUSTMENT ITEM	TERMINAL TO BE CONNECTED & INSTRUMENTS REQUIRED	ADJUST	HOW TO ADJUST	RATING OR STANDARD	REMARKS
3	Tracking adjustment I	FM antenna terminal FM signal generator 90, 98, 106MHz/60dBμ	Tuning knob Dial pointer	Reset the dial pointer so that the greatest deviation is within the standard range.		
4	Tracking adjustment II	FM antenna terminal FM signal generator 90, 98, 106MHz/60dBμ	Tuning knob	Match the dial pointer to the numbers	 At FM signal generator output: 60dBμ	When the standard is not met even after adjustments 2, 2' & 3.
		FM antenna terminal FM signal generator 88MHz/60dBμ	Front-end: LOSC(LO)core. Refer to Fig. 4.	Set the tuning point at 1.		
		FM antenna terminal FM signal generator 88MHz/30dBμ	Front-end: RF(LR1,LR2) ANT(LA)core Refer to Fig. 4.	Set the tuning point at 1. Set for maximum meter deflection.		
		FM antenna terminal FM signal generator 106MHz/60dBμ	Front-end: LOSC(TCO) trimmer Refer to Fig. 5.	Set the tuning point at 1.	 At FM signal generator output: 30dBμ	
		FM antenna terminal FM signal generator 106MHz/30dBμ	Front-end: RF(TCR1,TCR2) ANT(TCA) trimmer Refer to Fig. 5.	Set the tuning point at 1. Set for maximum meter deflection		

FM SENSITIVITY ADJUSTMENT

Only when sensivity is insufficient after FM tracking adjustment.

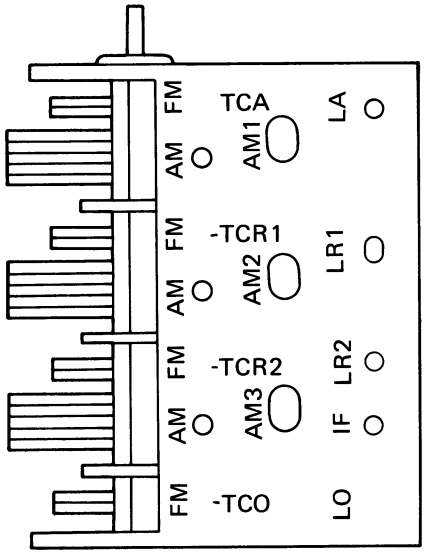
STEP	ADJUSTMENT ITEM	TERMINALS TO BE CONNECTED & INSTRUMENTS REQUIRED	ADJUSTMENT	HOW TO ADJUST	RATING OR STANDARD	REMARKS
1	Low-range sensitivity adjustment	FM antenna terminal (300Ω) FM signal generator 90MHz/30dBμ Modulation Frequency:400Hz/100% mono	Front-end: LA, LR1, LR2 cores. (Refer to Fig. 5.)	Set for maximum signal meter deflection. 	Antenna Input level: 8dBμ (2.5μV or so) at: 30dB (S/N) Standard Value: 5.5dBμ(1.8-μV or so) at: 30dB (S/N)	AFC-E (AFC OFF)
		Output terminal (Fixed) Oscilloscope, Electronic voltmeter.				
2	High-range sensitivity adjustment	FM antenna terminal (300Ω) FM signal generator 90MHz/30dBμ Modulation Frequency:400Hz/100% mono	Front-end: TCA, TCR1, TCR2 trimmers. (Refer to Fig. 5.)	Set for maximum signal meter deflection 	Antenna Input level: 7dBμ (2.2μV or so) Standard Value: 5.5dBμ (1.8-μV or so) at: 30dB (S/N)	AFC-E (AFC OFF)
		Output terminal (Fixed) Oscilloscope, Electronic voltmeter.				



FM TUNER

	PARTS NAME	ADJUSTMENT ITEM
•	T105 (GE6057)	19kHz FILTER ADJUSTMENT T105 : L T106 : R
•	T106 (GE6057)	
•	VR103 (B22kΩ)	SEPARATION ADJUSTMENT
•	VR104 (B22kΩ)	
•	VR102 (B4.7kΩ)	MUTING LEVEL ADJUSTMENT
•	T101 (GE6025) :SOUTH AFRICAN MODEL ONLY (GE6019) :EXCEPT SOUTH AFRICAN MODEL	• S-CURVE • DISCRIM BALANCE (UPPER CORE ONLY) • DISTORTION ADJUSTMENT (LOWER CORE ONLY)
•	T104 (GE6059)	DISTORTION ADJUSTMENT
•	VR101 (B10kΩ)	METER ADJUSTMENT

Fig. 3



FRONT END

FRONT END

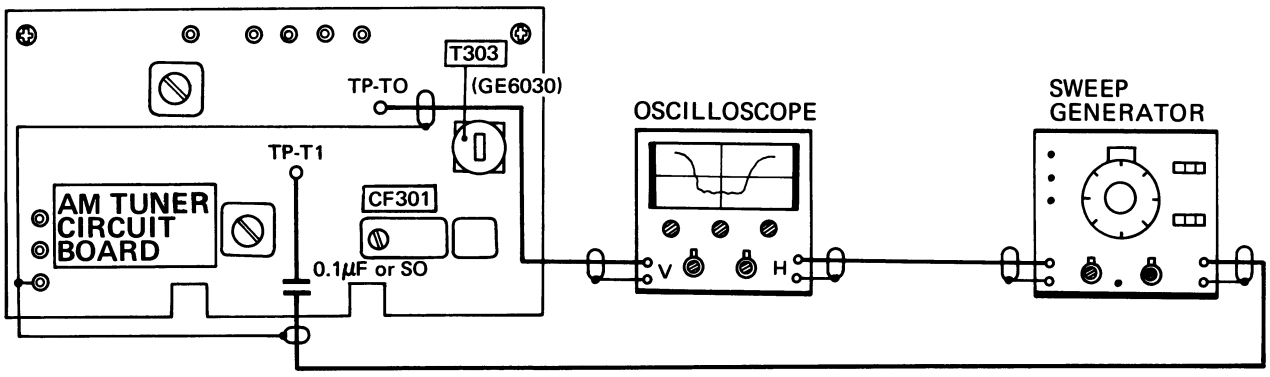
CORE	TRIMMER	ADJUSTMENT ITEM
IF		• FRONT END IF TUNING • DISTORTION ADJUSTMENT
LO LR2 LR1 LA	TCO TCR2 TCR1 TCA	• SENSITIVITY ADJUSTMENT • TRACKING ADJUSTMENT

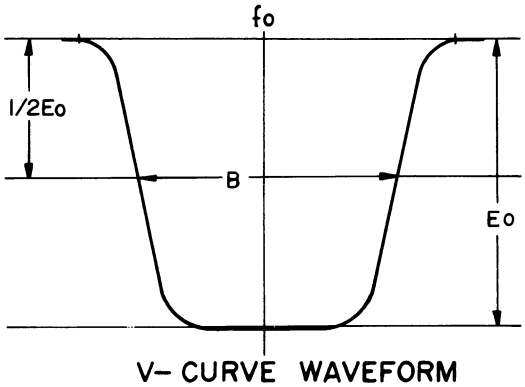
Fig. 4

AM SECTION ADJUSTMENT

AM IF ADJUSTMENT

STEP	ADJUSTMENT ITEM	TERMINALS TO BE CONNECTED & INSTRUMENTS REQUIRED	ADJUSTMENT	HOW TO ADJUST	RATING OR STANDARD	REMARKS
1	V-curve	TP TI-E (Refer to Fig. 5) AM sweep generator 455kHz/50dB (Connect the capacitor: 0.1μF or so.) TP TO-E Oscilloscope CM-E (Refer to Fig. 5.) Signal meter or resistor (600Ω)	CF301 T303 (GE6030) (Refer to Fig. 7.)	Adjust for a curve like that in Fig. 6.	Output Voltage: more than 500mV Intermediate Frequency: within 455kHz ±10kHz Bandwidth: more than 5kHz [note] Intermediate frequency in South African model: 470kHz ±10kHz	

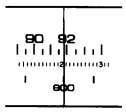
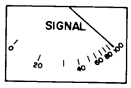
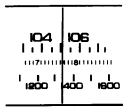
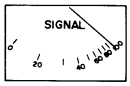




V– CURVE WAVEFORM

Eo	OUTPUT VOLTAGE	more than 500mV
fo	INTERMEDIATE FREQUENCY	455kHz ±10kHz NOTE: Intermediate Frequency in SOUTH AFRICA is 470kHz ±10kHz
B	BANDWIDTH	more than 5kHz

AM TRACKING ADJUSTMENT **Be sure to carry out this adjustment after FM adjustment.**

STEP	ADJUSTMENT ITEM	TERMINALS TO BE CONNECTED & INSTRUMENTS REQUIRED	ADJUSTMENT	HOW TO ADJUST	RATING OR STANDARD	REMARKS
1	OSC Coil	AM antenna terminal AM signal generator 600kHz Output terminal (Fixed) Oscilloscope, Electronic voltmeter.	Tuning knob T302: GE-6013 (Refer to Fig. 7.)	Set dial pointer to 600-kHz. Set T302 to tune at 600kHz.		
2	Low-range sensitivity adjustment	AM antenna terminal AM signal generator 600kHz Output terminal (Fixed) Oscilloscope, Electronic voltmeter.	Bar antenna core and T301: GE6067 (Refer to Fig. 7.)	Set for maximum sensitivity (according to the meter) at a tuning point of 600-kHz.		
3	OSC trimmer adjustment	AM antenna terminal AM signal generator 1350kHz Output terminal (Fixed) Oscilloscope, Electronic voltmeter.	Tuning knob Variable Capacitor :VC6 trimmer (Refer to Fig. 8.)	Set dial pointer to 1350kHz. Adjust at 1350kHz to tune.		Frequency gauge:1350 Liner gauge :7.7
4	High-range sensitivity adjustment	AM antenna terminal AM signal generator 1350kHz Output terminal (Fixed) Oscilloscope, Electronic voltmeter.	Variable Capacitor :VC5, VC7 trimmer (Refer to Fig. 8.)	Set for maximum sensitivity (by the signal meter) at 1350kHz tuning point.		
5	Sensitivity adjustment	AM antenna terminal AM signal generator 600kHz, 1350kHz Output terminal (Fixed) Oscilloscope, Electronic voltmeter	Repeat steps 1-4.	Set to both 600kHz and 1350kHz.		
6	Mid-range sensitivity adjustment	AM antenna terminal AM signal generator 950kHz Output terminal (Fixed) Oscilloscope, Electronic voltmeter.	Tuning knob	Tune at maximum sensitivity (on the signal meter).	Within 1.5mm deviation from the 950kHz letter.	Frequency gauge:950 =Liner gauge :5.51

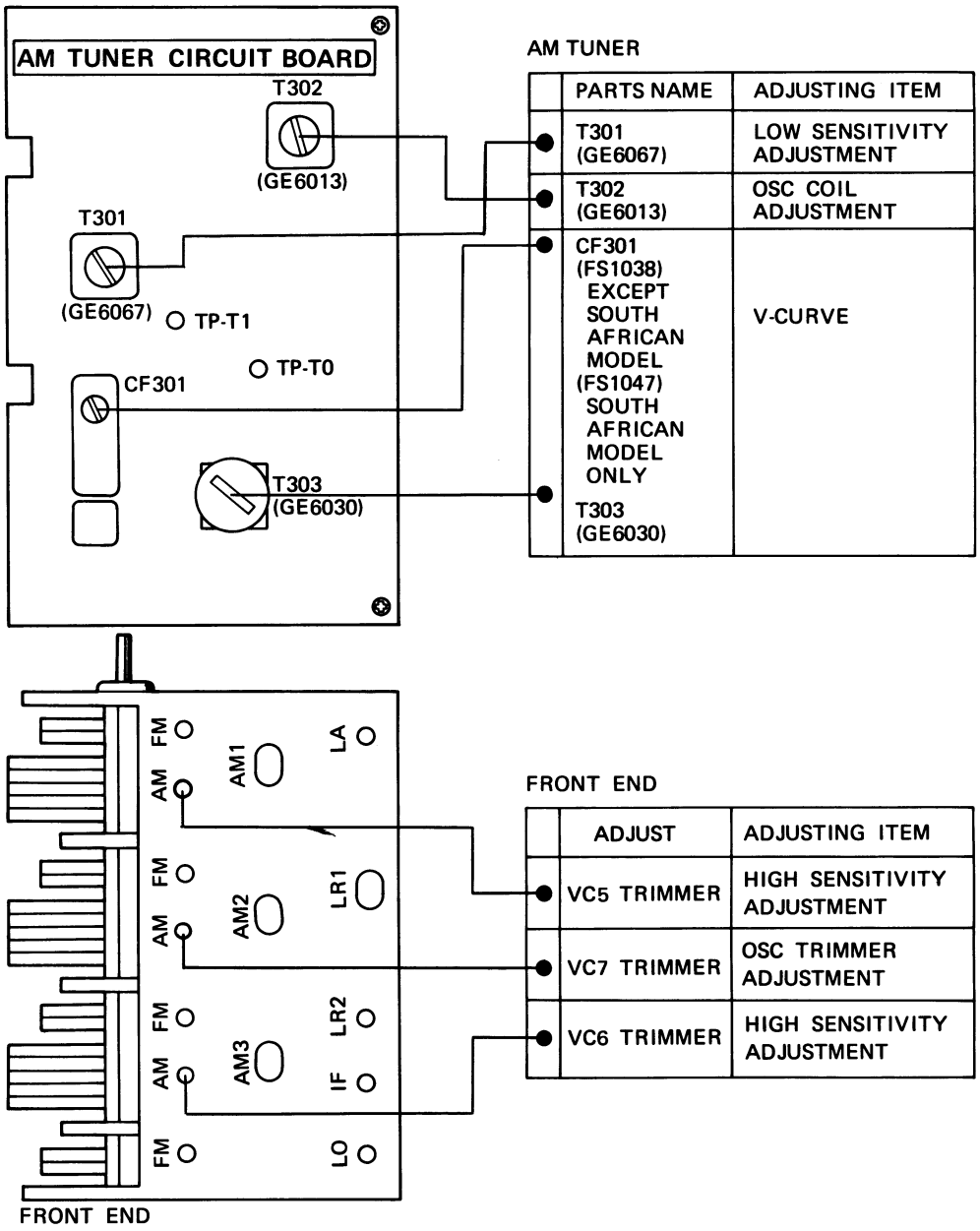


Fig. 8

Note: If the Tuning meter fails to register "O" when the set is powered and the Function switch set to AM, adjust with the special screw on the back of the meter (see Fig. 9). Do not adjust the tuner in such a case.

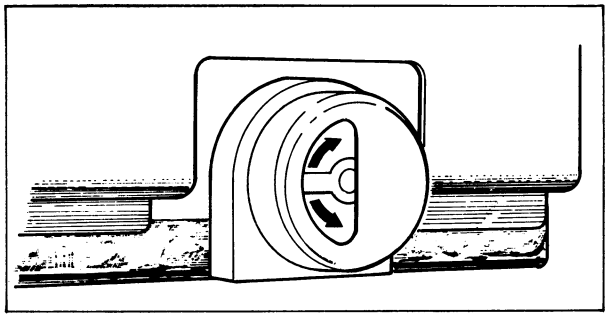
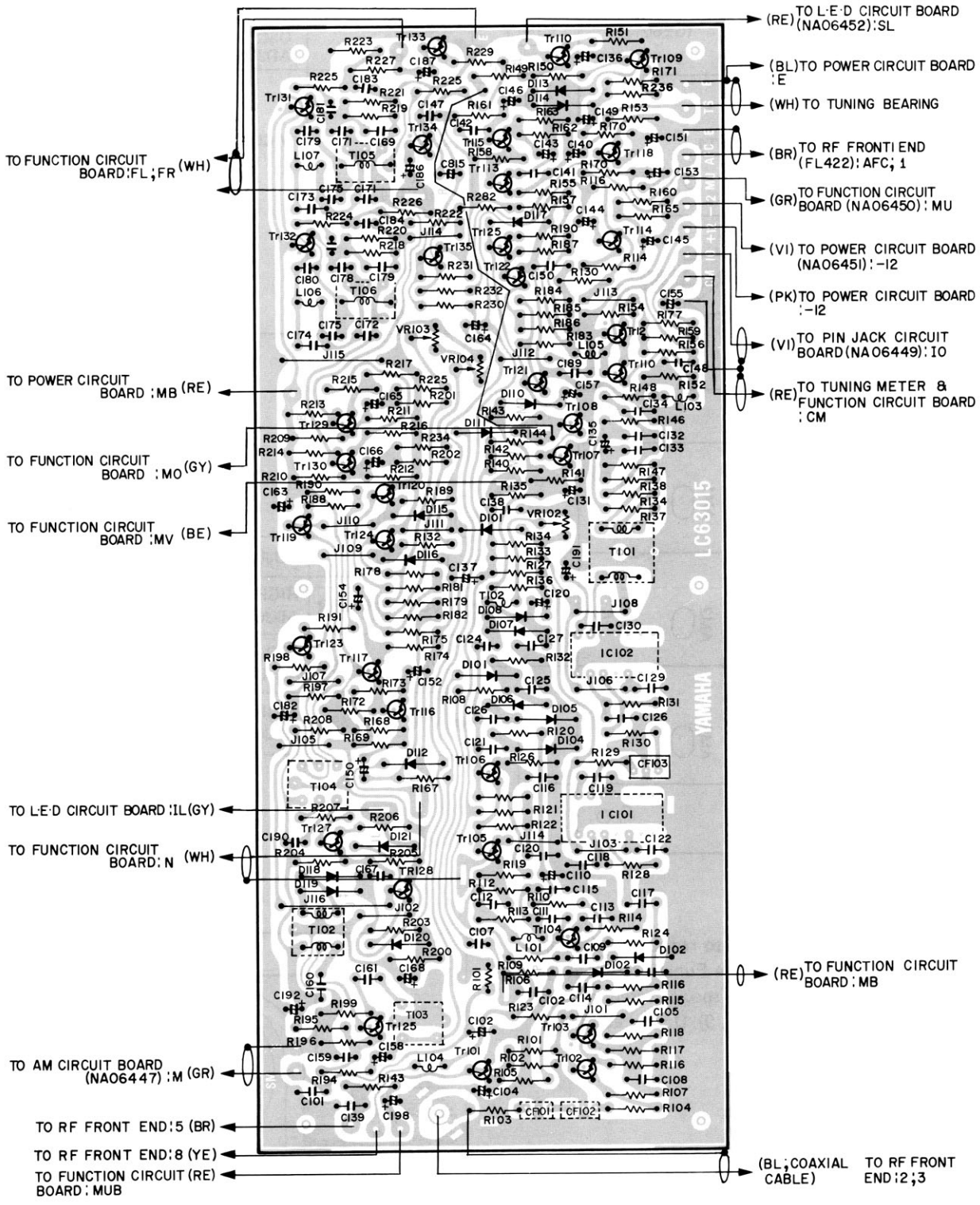


Fig. 9

PRINTED CIRCUIT BOARD

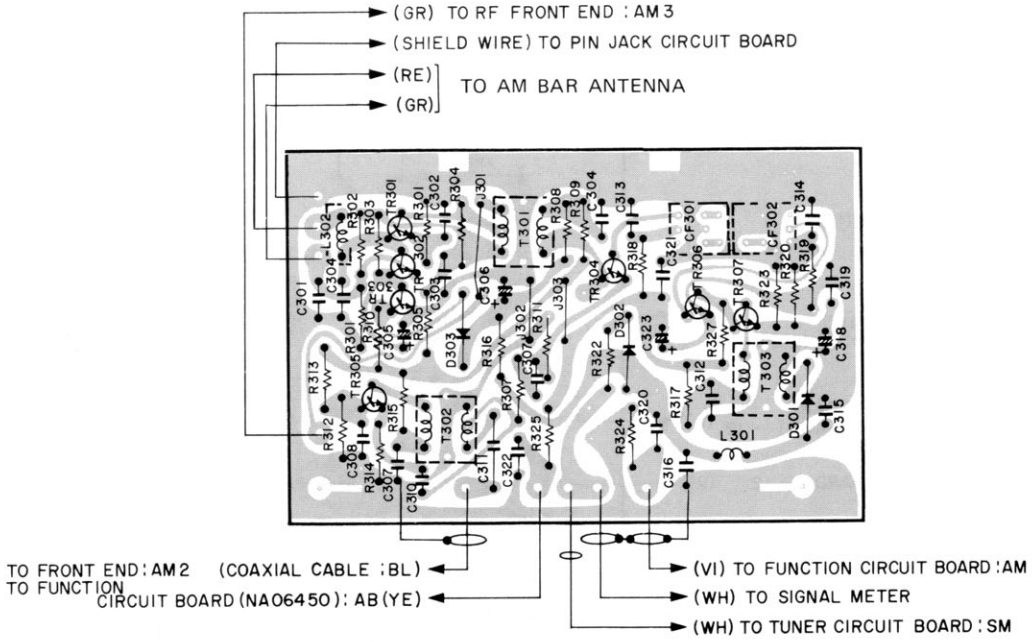
TUNER CIRCUIT BOARD

NA06461: South African Model
NA06462: U.S. & Canadian Models
NA06463: General, Australian & European Models



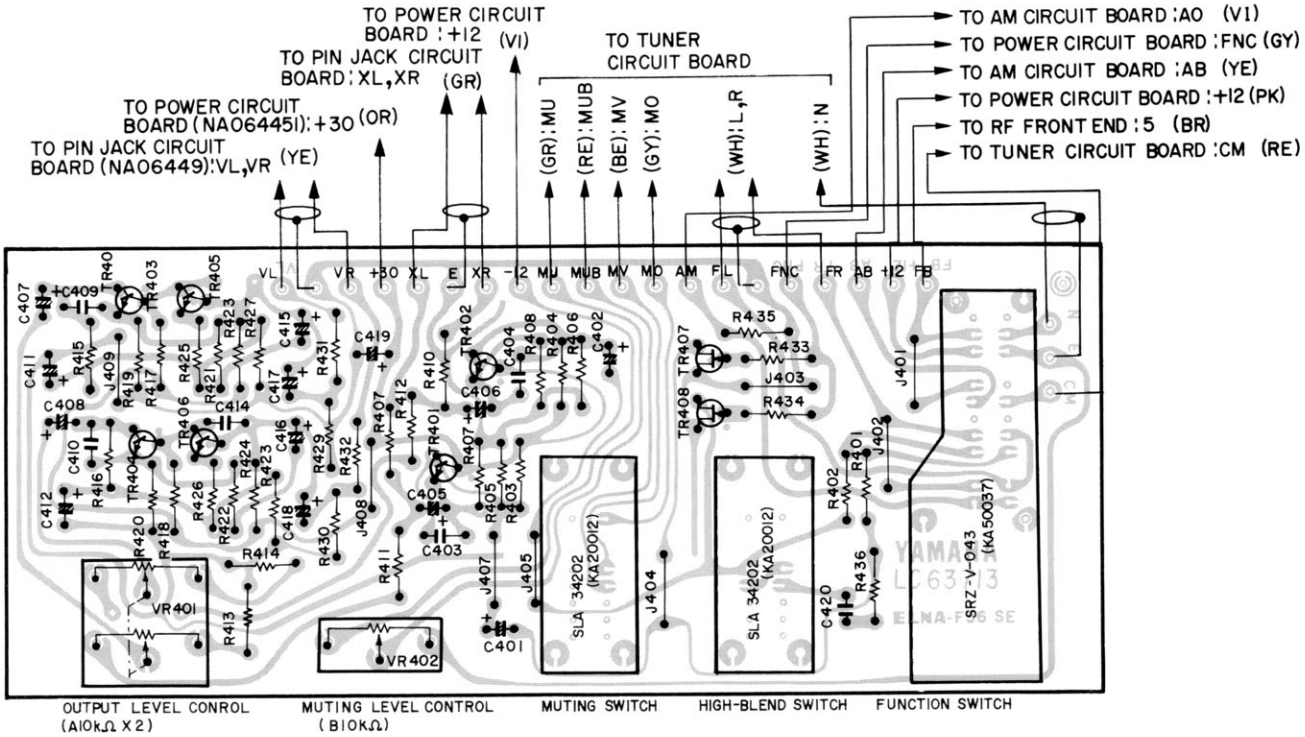
AM CIRCUIT BOARD

NA06447: General, U.S. Canadian, Australian, & European Models
NA06448: South African Model

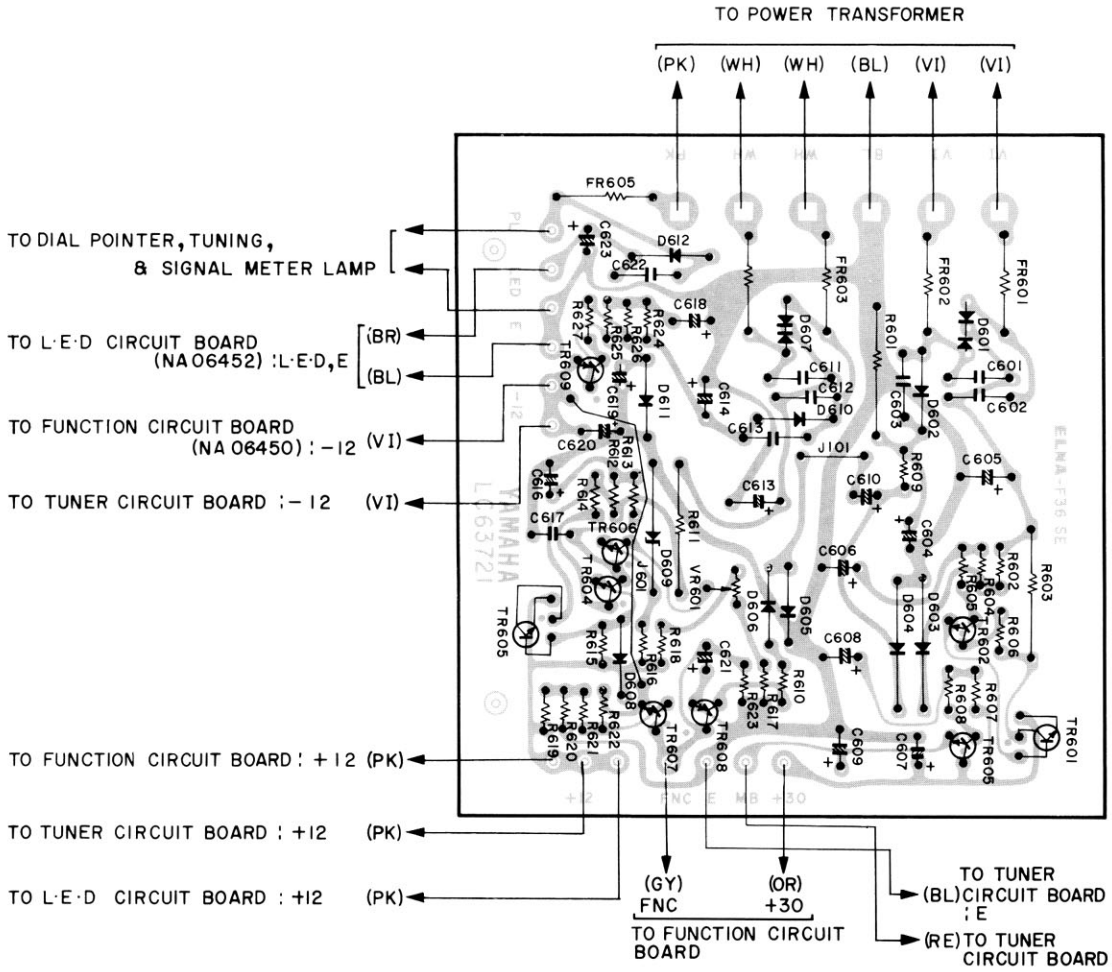


FUNCTION CIRCUIT BOARD

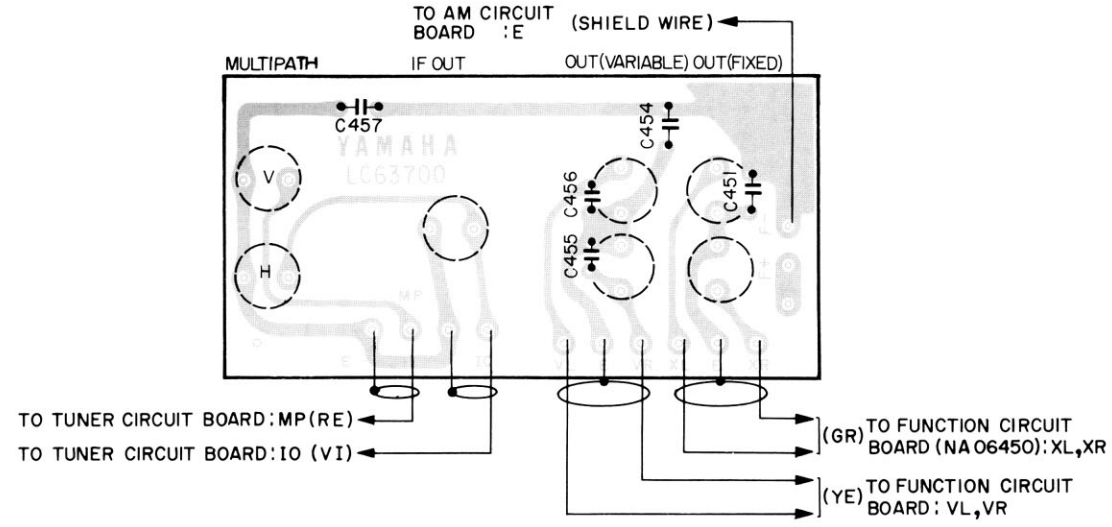
NA06450



POWER CIRCUIT BOARD NA06451

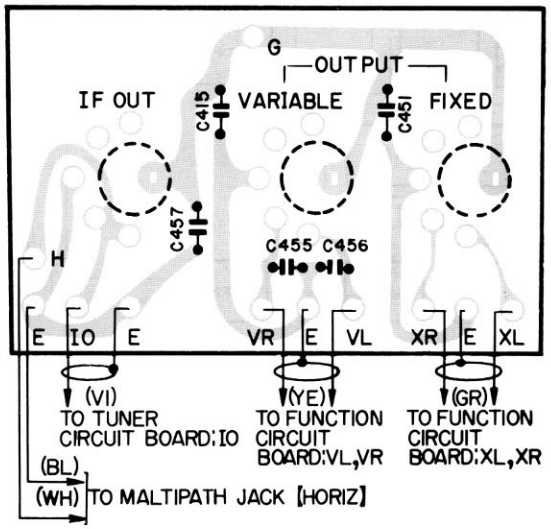


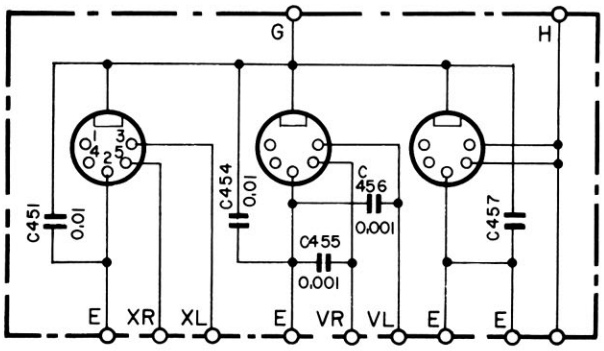
PIN JACK CIRCUIT BOARD NA06449



DIN CONNECTOR CIRCUIT BOARD

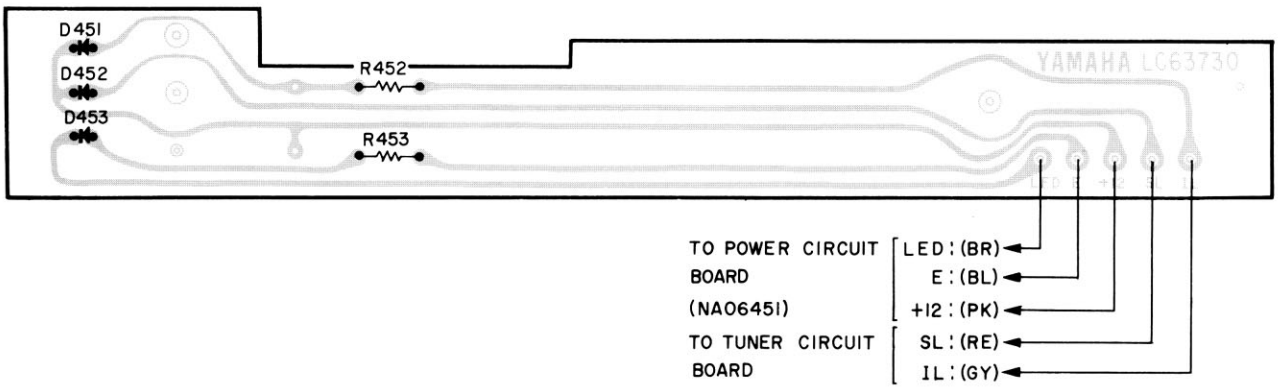
NA06453: European Model Only



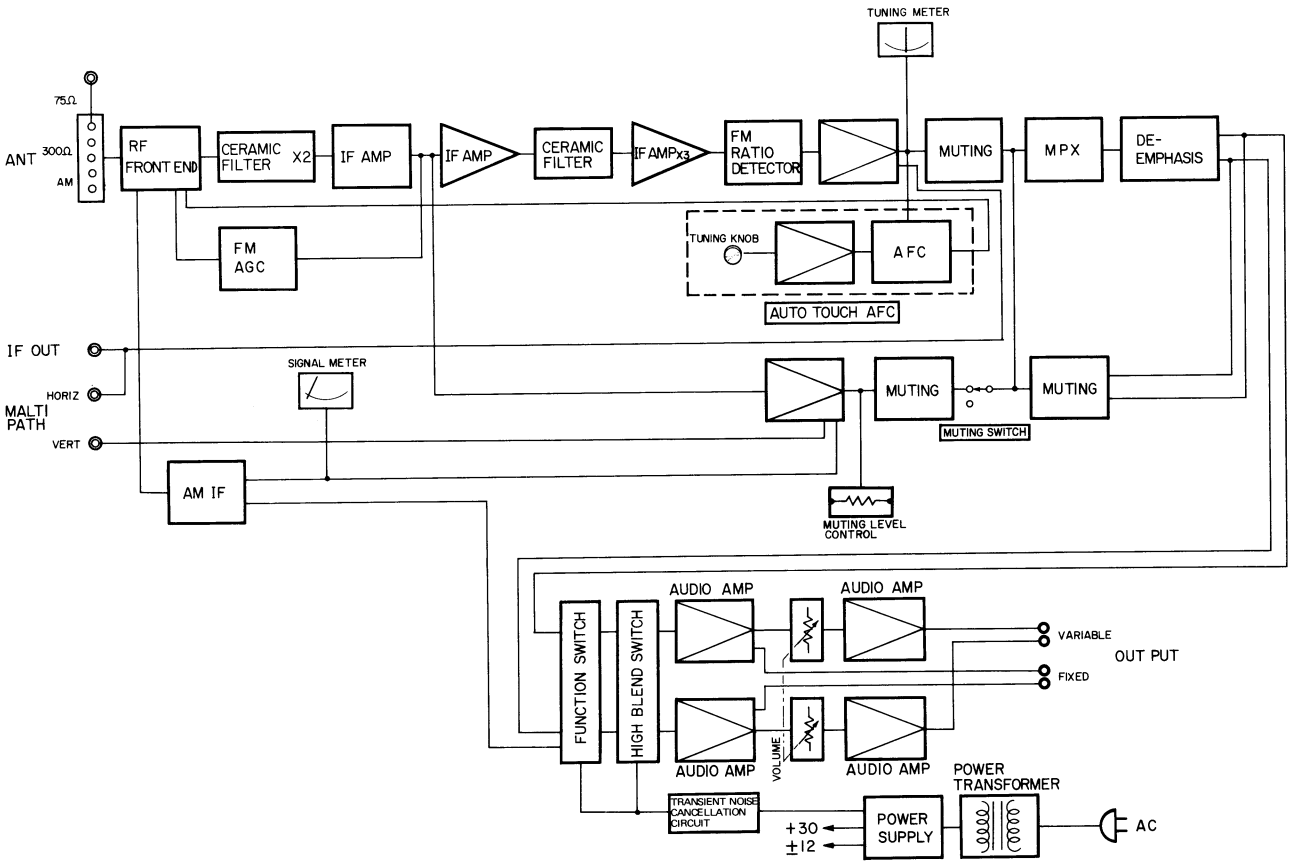


LIGHT EMITTING DIODE CIRCUIT BOARD

NA06452



BLOCK DIAGRAM



• RESISTOR

SYMBOL	PART NAME
○—W—○	FUSE RESISTOR
△	METALIZED OXIDATION RESISTOR
□	CEMENT RESISTOR
NO MARK	CARBON RESISTOR
⊠	CEMENT MOLDED RESISTOR
▲	METALIZED FILM RESISTOR

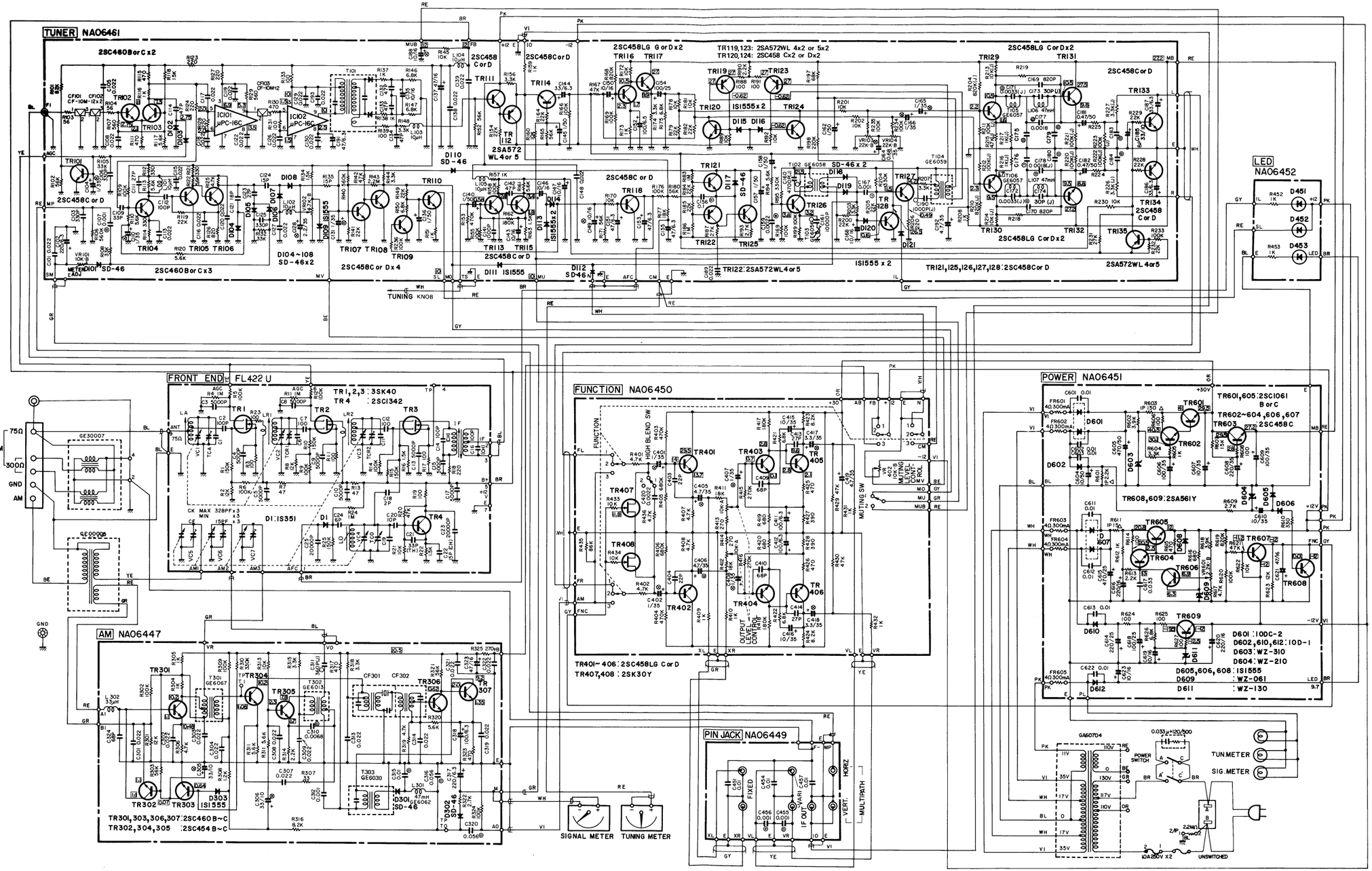
• CAPACITOR

SYMBOL	PART NAME	REMARKS
◎	MYLAR CAPACITOR	—||—
NO MARK	CERAMIC CAPACITOR	
○	POLYSTYRENE CAPACITOR	
NO MARK	(BI-POLAR) ELECTROLYTIC CAPACITOR	—N—
●	LOW-NOISE ELECTROLYTIC CAPACITOR	
⊗	TANTALUM CAPACITOR	

• WIRE COLOR ABBREVIATIONS

BL ▶ Black
BR ▶ Brown
RE ▶ Red
OR ▶ Orange
YE ▶ Yellow
GR ▶ Green
BE ▶ Blue
VI ▶ Violet
GY ▶ Gray
WH ▶ White
GG ▶ Light Green
SB ▶ Light Blue
PK ▶ Pink

OVERALL SCHEMATIC DIAGRAM



VOLTAGE TABLE

MUTING CIRCUIT

		AT OUT OF TUNE [98MHz]		AT TUNE [103.25MHz]	
		MUTING SW: OFF	MUTING SW: ON	MUTING SW: OFF	MUTING SW: ON
Tr104	C	11.2		11.8	
	B	1.15		0.76	
	E	0.5		0.11	
Tr105	C	1.75		1.4	
	B	0.68		0.68	
	E	0		0	
Tr106	C	5.0		4.2	
	B	1.75		1.4	
	E	1.1		1.1	
Tr107	C	0.7	0.7	0.025	
	B	0.42	0.4	0.64	
	E	0	0	0	
Tr108	C	0.048	0.047	12	10
	B	0.7	0.7	0.025	0.025
	E	0	0	0	0
Tr114	C	−0.19	−1.65	0.098	0.097
	B	0.43	−1.75	0.72	0.73
	E	−0.19	−0.15	0.09	0.088
Tr121	C	0.39	0.37	0.6	0.6
	B	0.06	0.08	0.3	0.3
	E	0	0	0	0
Tr122	C	−12	−12	−12	−12
	B	−0.46	−0.42	−0.215	−0.213
	E	0	0	0	0
Tr125	C	0.39	0.37	0.6	0.6
	B	−12	−12	−12	−12
	E	−12	−12	−12	−12
Tr133	C				
	B	−1.9	0.66	−1.9	−1.9
	E	0	0	0	0
Tr134	C				
	B	−1.9	0.66	−1.9	−1.9
	E	0	0	0	0
Tr135	C				
	B	9.5	7.4	9.4	10
	E	9.8	8.0	9.8	9.8

FUNCTION : FM MONO

MUTING LEVEL : "0"

FM AGC CIRCUIT

		AT OUT OF TUNE [98MHz]	AT TUNE [103.25MHz]
Tr101	C	4.1	3.0
	B	0	0.56
	E	0	0

BAFFER AMP

		AT OUT OF TUNE [98MHz]	AT TUNE [103.25MHz]
Tr111	C	12	12
	B	−0.2	0
	E	−0.78	−0.64
Tr112	C	−12	−12
	B	−0.78	−0.64
	E	−0.17	−0.08

AUTO TOUCH AFC CIRCUIT

		AT OUT OF TUNE [98MHz]		AT TUNE [103.25MHz]	
		☆UN-TOUCHED	★TOUCHED	☆UN-TOUCHED	★TOUCHED
Tr109	C	0.047	0.01	0.047	2.5
	B		0.55		0.62
	E	0	0	0	0
Tr110	C	10.5	10.5	10.0	10.2
	B	0.047	0.019	10.5	3.6
	E			9.9	3.4
Tr118	C		0.007	0.028	0.08
	B		0.6		0.59
	E				

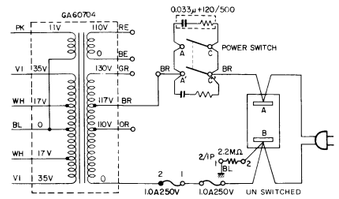
☆UNTOUCHED: When tuning knob is untouched.

★TOUCHED : When tuning knob is touched.

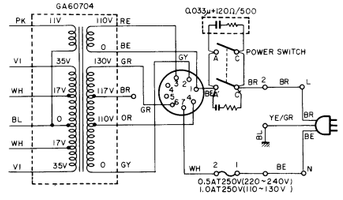
PARTIAL CHANGES MADE ACCORDING TO DESTINATION

▼ POWER SWITCH

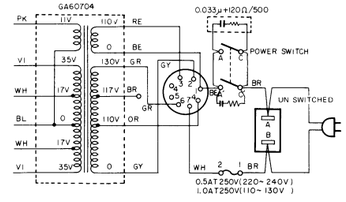
● U.S. & CANADIAN MODELS



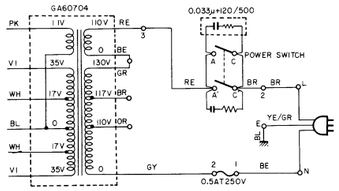
● GENERAL MODEL



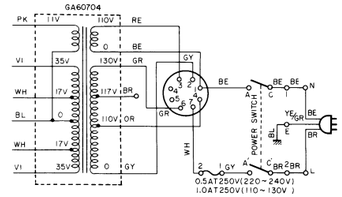
● SOUTH AFRICAN MODEL



● AUSTRALIAN MODEL

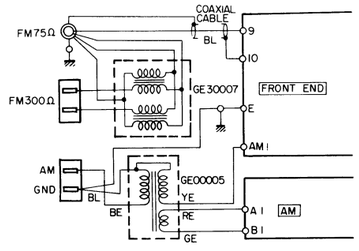


● EUROPEAN MODEL

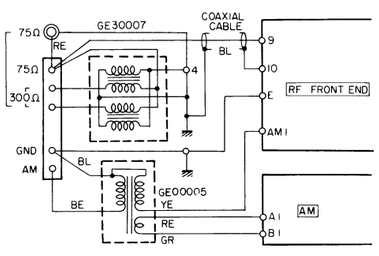


▼ ANTENNA

● EXCEPT EUROPEAN MODEL



● EUROPEAN MODEL



▼ FM TUNER

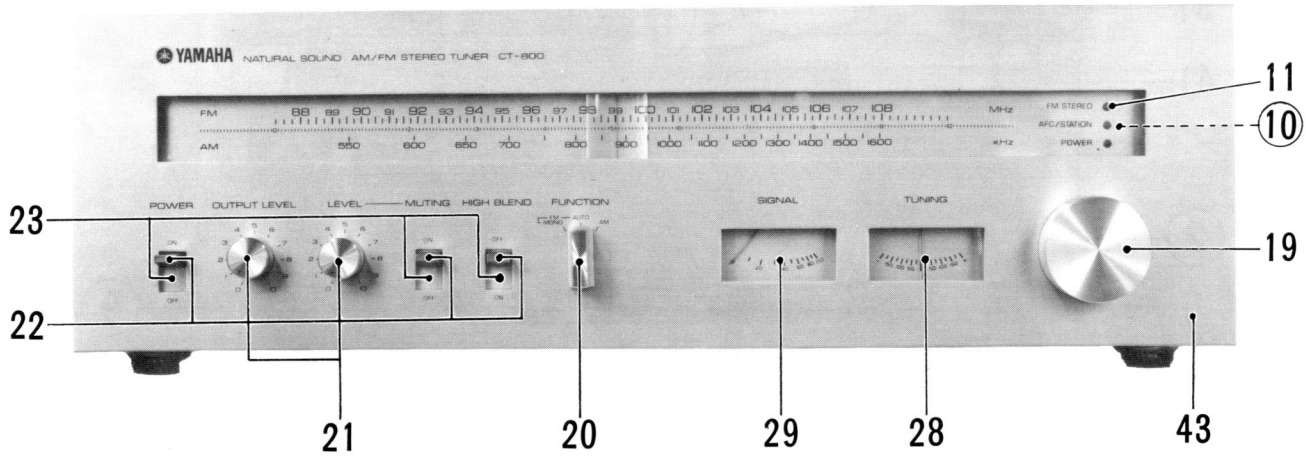
	NA. NO.	MYLER CAPACITOR (±5%)			CARBON RESISTOR (±5%)		DESCRIM TRANSFORMER	DE-EMPHASIS
		C175 C176	C179 C180	C183 C184	R218 R219	R224 R225	(T101)	(TIME CONSTANT)
SOUTH AFRICAN MODEL	NA06461	0.0027μF	0.0027μF	0.0022μF	6.8kΩ ¼W	1kΩ ¼W	GE6025	50μsec
U.S. & CANADIAN MODELS	NA06462	0.0047μF	0.0033μF	0.018μF	5.6kΩ ¼W	1.2kΩ ¼W	GE6019	75μsec
EUROPEAN, AUSTRALIAN & GENERAL MODELS	NA06463	0.0027μF	0.0027μF	0.0022μF	6.8kΩ ¼W	1kΩ ¼W	GE6019	50μsec

▼ AM TUNER

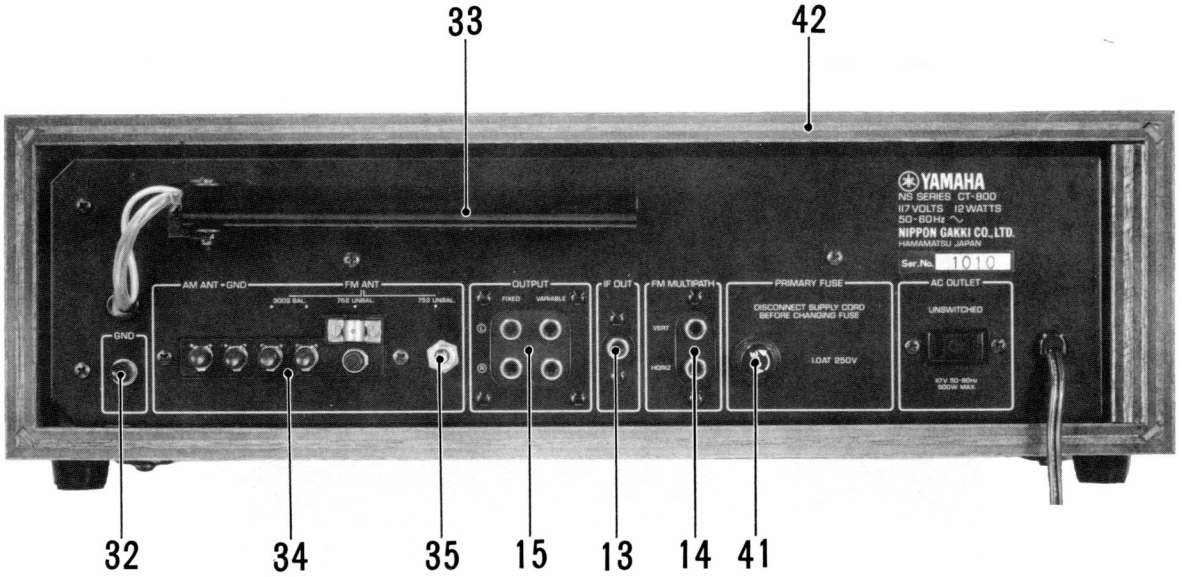
NA. NO.	AM CERAMIC FILTER	AM CERAMIC FILTER COIL
	CF301	CN302
NA06448	FSN1047	FSN1048
NA06447	FSN1038	FSN1036

PARTS LIST

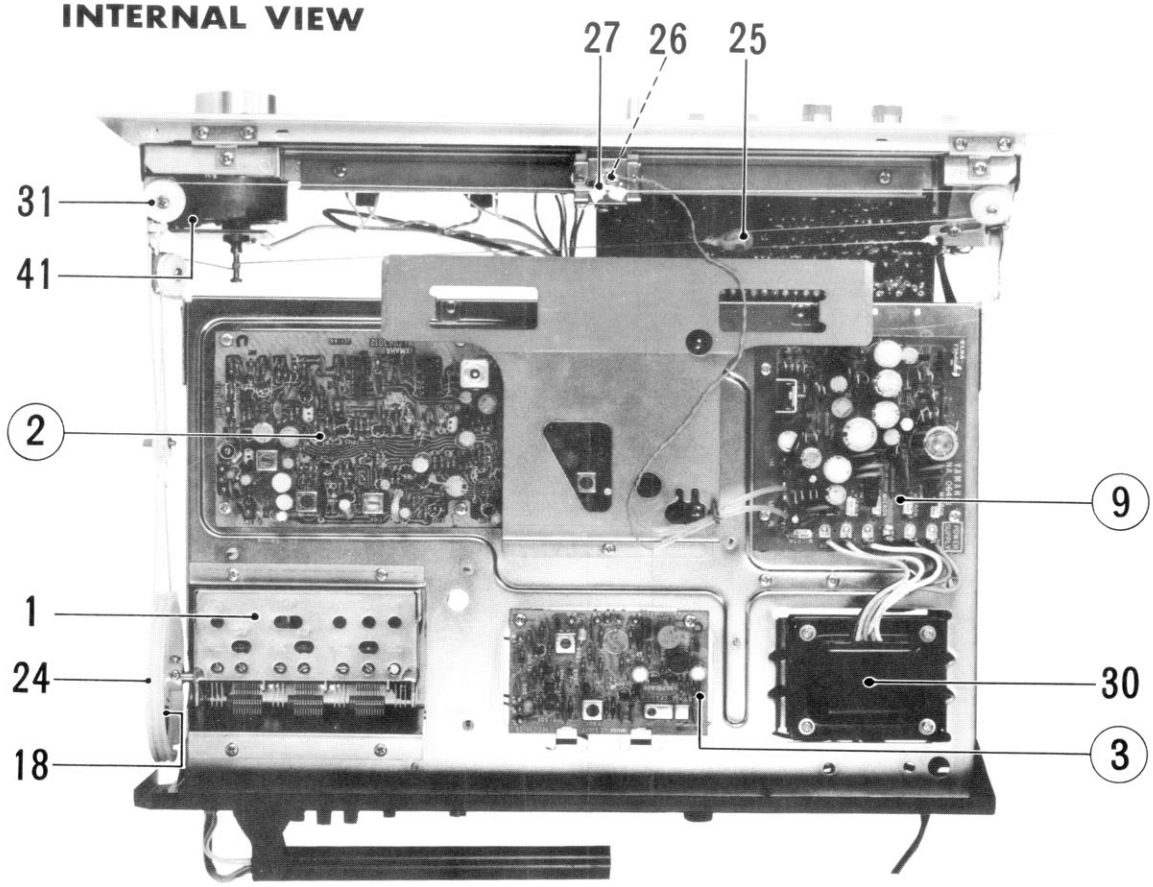
FRONT VIEW

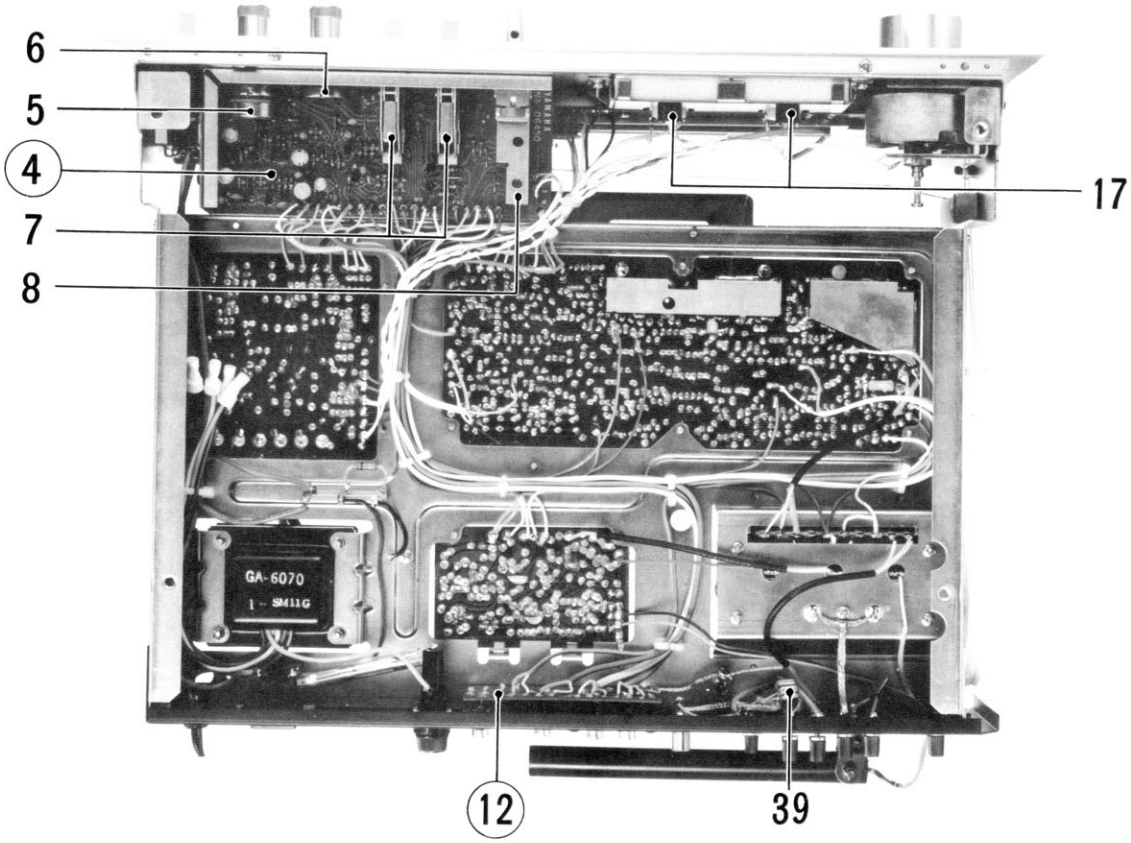


BACK VIEW



INTERNAL VIEW





Ref. No.	Part No.	Description		Remarks	Common Models	
1	PA00020	FM/AM PF pack FL422U	R F パ ッ ク	except South African model		
	PA00021	〃 FL422S	〃	South African model		
②	NA06461	Tuner circuit board ♯63016	チューナーシート	South African model	CT800	
	NA06462	〃 〃	〃	U.S. & Canadian models	〃	
	NA06463	〃 〃	〃	General, Australian & European models	〃	
	FF04310	Polystrene capacitor (X type) 1000PF	X型ポリスチレンコンデンサ			
	FF04347	〃 4700PF	〃			
	FF04410	〃 10000PF	〃			
	FP13710	Tantalum capacitor 10μF 16WV	タンタルコンデンサ			
	FP15568	〃 0.68μF 35WV	〃			
	FP15610	〃 1μF 〃	〃			
	FP15622	〃 2.2μF 〃	〃			
	FM22633	Bipolar capacitor (vert. type) 3.3μF 25WV	バイポーラケミコン			
	HT41004	Variable resistor (SV10KR) B4.7KΩ	ソリッドボリウム			
	HT41007	〃 (〃) B10KΩ	〃			
	HY00016	〃 (TM10K) B22KΩ	メタルグレーズボリウム			
	GE30001	RF inductor 10μH	RFインダクター			
	GE10005	FM IFT GE6019	F M I F T	General, U.S., Australian & European models		
	GE10006	〃 GE6025	〃	South African model		
	GE20007	MPX Coil GE6056	M P X コイル			
	GE20008	〃 GE6057	〃			
	GE20009	〃 GE6058	〃			
	GE20010	〃 GE6059	〃			
	GE20011	〃 47mH GE6062	〃			
	GG00002	Ceramic filter CF10M-12	セラミックフィルター			
	iG00003	Integrated circuit μPC-16C	I C			
	iF00004	Diode IS1555	ダイオード			
	iF00033	〃 1S188FM1	〃			
	iA05720	Transistor 2SA572 (WL 4 or 5)	トランジスタ			
	iC04583	〃 2SC458 (C or D)	〃			
	iC04585	〃 2SC458LG (C or D)	〃			
	iC04608	〃 2SC460 (B or C)	〃			

Ref. No.	Part No.	Description		Remarks	Common Models	
③	NA06447	AM circuit board #63022	A M シ ー ト	except South African model	CT800	
	NA06448	〃 #63022	〃	South African model	〃	
	FP52733	Tantalum capacitor 33μF 10WV	タ ン タ ル コ ン デ ン サ			
	GE20011	MPX coil 47mH GE6062	M P X 固 定 コ イ ル			
	GE30001	RF inductor 10μH	R F インダクター			
	GE10015	AM OSC coil GE6013	A M O S C コ イ ル			
	GE10010	AM IFT GE6030	A M I F T			
	GE90001	AM RF coil GE6067	A M R F コ イ ル			
	GE90013	Filter coil FSN1036	フィルターコイル	except South African model	CR800	
	GG00009	AM ceramic filter FSN1038	A M セラミック フィルター	〃	〃	
	GE90014	Filter coil FSN1048	フ ィ ル タ ー コ イ ル	South African model	〃	
	GG00010	AM ceramic filter FSN1047	A M セラミック フィルター	〃	〃	
	iF00002	Diode SD-46	ダ イ オ ー ド			
	iF00004	〃 IS1555	〃			
	iC04548	Transistor 2SC454 (B or C)	トランジスタ			
	iC04608	〃 2SC460 (B or C)	〃			
④	NA06450	Function circuit board #63710	ファンクション シ ー ト			
	FP15610	Tantalum capacitor 1μF 35WV	タ ン タ ル コ ン デ ン サ			
	FP15633	〃 3.3μF 〃	〃			
	FP15647	〃 4.7μF 〃	〃			
	iC04589	Transistor 2SC458LG (C or D)	トランジスタ			
	iE00001	FET (field effect transistor) 2SK30A (Y)	電 界 効 果 トランジスタ			
5	HS12039	Variable resistor A10KΩx2	ボ リ ウ ム	OUTPUT LEVEL		
6	HS12040	〃 B10KΩ	〃	LEVEL		
7	KA20012	Lever switch SLA34202	レバースイッチ	MUTING HIGH-BLEND		
8	KA50037	Rotary switch SRZ-V-043	ロータリースイッチ	FUNCTION		
9	NA06451	Power supply circuit board #63720	電 源 シ ー ト			
	HL41415	Metal oxide resister 15Ω 1W	酸 化 金 属 抵 抗			
	HL41515	〃 150Ω 〃	〃			
	HL41622	〃 2.2KΩ 〃	〃			

Ref. No.	Part No.	Description			Remarks	Common Models	
	HZ00010	Fuse resistor	4Ω 300mA	ヒューズ抵抗			
	HT41003	Variable resistor (SR19R)	B2.2KΩ	ソリッドVR			
	iH00003	Diode	10D-1	ダイオード			
	iH00008	〃	10DC-1	〃			
	iH00005	〃	10DC-2	〃			
	iF00004	〃	IS1555	〃			
	iF00032	Zener diode	WZ-061	ツェナーダイオード			
	iF00035	〃	WZ-130	〃		YP1000	
	iF00028	〃	WZ-210	〃			
	iF00022	〃	WZ-310	〃			
	iA05612	Transistor	2SA561 (Y)	トランジスタ			
	iC04583	〃	2SC458 (C)	〃			
	iC10613	〃	2SC1061 (B or C)	〃			
⑩	NA06452	L.E.D. circuit board	#63730	LEDシート			
11	IF00029	Light emitting diode	TLR102	発光ダイオード		CR400	
	CB06896	Indicator holder	#6896	インジケーターホルダー		CR1000	
⑫	NA06449	Pin-jack circuit board	#63700	ピンジャックシート	except European model		
13	LB10008	1P Pin-jack		1Pピンジャック			
14	LB20066	2P 〃		2P 〃			
15	LB40012	4P 〃		4P 〃			
	NA06453	DIN circuit board	#63750	DINシート	European model		
16	LB50009	DIN connector	5P (SMK)	5PDINコネクター			
	CB06863	Cord stopper (small)		コードストッパー	General, U.S. & Canadian models		
	CB00441	〃 (large)		〃	South African, Australian & European models		
17	JB00023	Pilot lamp (lead type)	12V 60mA	パイロットランプリード式			
18	AA06490	Dial spring	#6490	ダイアルスプリング		CR400	
19	BA06438	Knob (tuning)	#6438	チューニングツマミ		〃	
20	BA06441	Knob (switch)	#6441	スイッチツマミ		〃	
21	BA06489	Knob	#6489	ツマミ			
22	CB06857	Knob (lever switch)	#6857	レバーツマミ			

Ref. No.	Part No.	Description		Remarks	Common Models	
	CB06858	Bush for switch #6858	スイッチ用ブッシュ		CA1000	
23	CB06872	Switch apron 15 x 29 #6872	スイッチエプロン		〃	
24	CB06018	Pulley for variable capacitor	バリコンプーリー		CS50	
25	CB06665	Pulley 3.2φ x 13φ	滑車		〃	
	CG06027	Dial panel (3t Glass)	ダイアルパネル			
	BA06513	Dial scale panel #6513	ダイアル目盛板			
26	JB00009	Dial pointer Lamp (lead type) 12V 60mA	指針ランプ			
27	NB06868	Dial Pointer Unit	ダイアル指針ユニット			
28	Ji00022	Tuning meter	チューニングメーター			
29	Ji00023	Signal meter	シグナルメーター			
30	GA60701	Power transformer	電源トランス			
31	CB06599	Pulley 5.2 x 20	滑車		CR400	
	BB06241	Pulley shaft	滑車軸		〃	
32	LA00107	Ground terminal	アース端子			
33	GE00005	AM bar antenna	AMバーアンテナ			
34	LA00109	Antenna terminal board 5P	アンテナ端子板5P	excpt European model		
35	LB20016	F-type receptacle F-61A	F型レセプタクル	〃		
36	LB20015	Connector socket for 75Ω coreaxial cable	75Ω同軸ソケット	European model		
37	LB20007	DIN FM antenna CS-082	DIN FMアンテナソケット	〃		
38	LB20009	DIN AM antenna CS-080	DIN AMアンテナソケット	〃		
39	GE30007	Balun transformer GE6053	バルーントランス			
40	LB20019	Pin jack 2P JPJ096	2Pピンジャック	European model		
41	LB20044	Fuse holder (Miyama #859)	ヒューズホルダー	except European model		
42	LB20059	〃 FEB031-1401	〃	European model		
41	KA20010	Lever switch JL-04,	電源スイッチ	except European model		
	KA20011	〃 JL-08	〃	European model		
	FZ00011	Spark killer 0.033μF + 120Ω	スパークキラー	except European model		
42	320064210500	Outside case	外箱			
43	NB06865	Front panel unit	パネルユニット			
	KB00031	Fuse 0.5A 250V	ヒューズ	General, South African & Australian models		
	KB00102	Fuse UL type SS-2 1.0A 250V	〃	U.S. & Canadian models		
	KB00071	Miniature fuse 0.5AT 250V	Ⓢ 〃	European model		
	KB00082	UL lead type fuse ASF-3 1.0AT 250V	〃	U.S. & Canadian models		
	LB20025	Voltage selector	電圧切換器	General, South African & European models		
	LB20030	AC connector socket	ACコンセント	General, U.S. & Canadian models		

YAMAHA Hi-Fi STEREO CT-800 SERVICE MANUAL

SINCE 1887 YAMAHA

NIPPON GAKKI CO., LTD. HAMAMATSU, JAPAN

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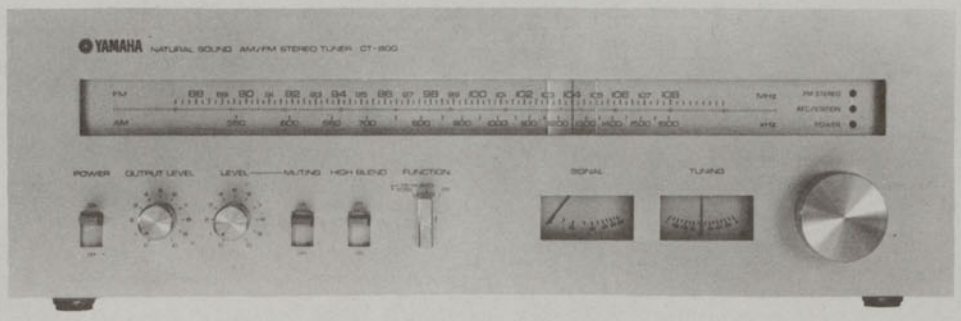
H.S.

YAMAHA Hi-Fi STEREO

PARTS LIST

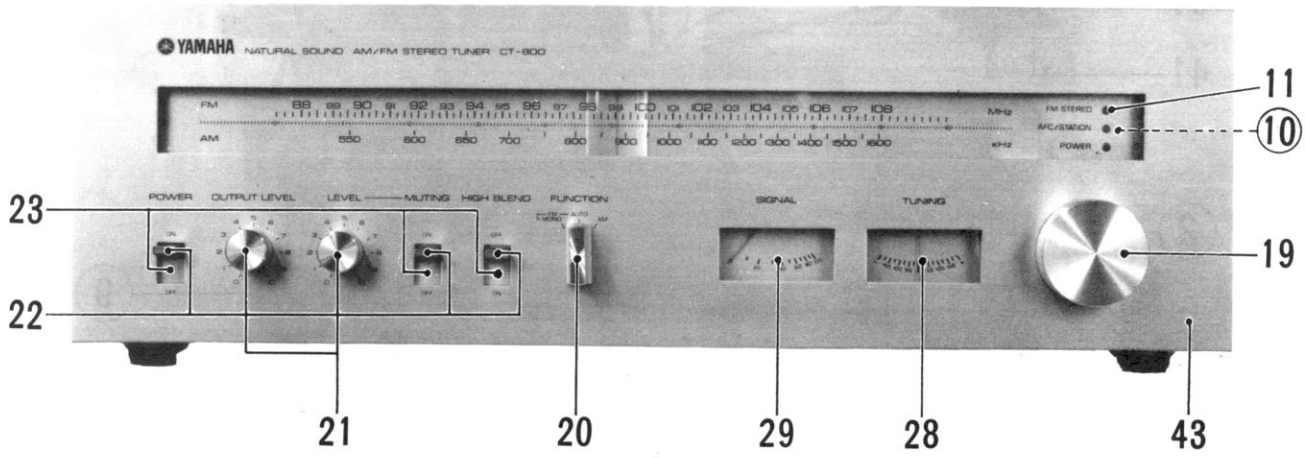
FM / AM STEREO TUNER
MODEL CT-800



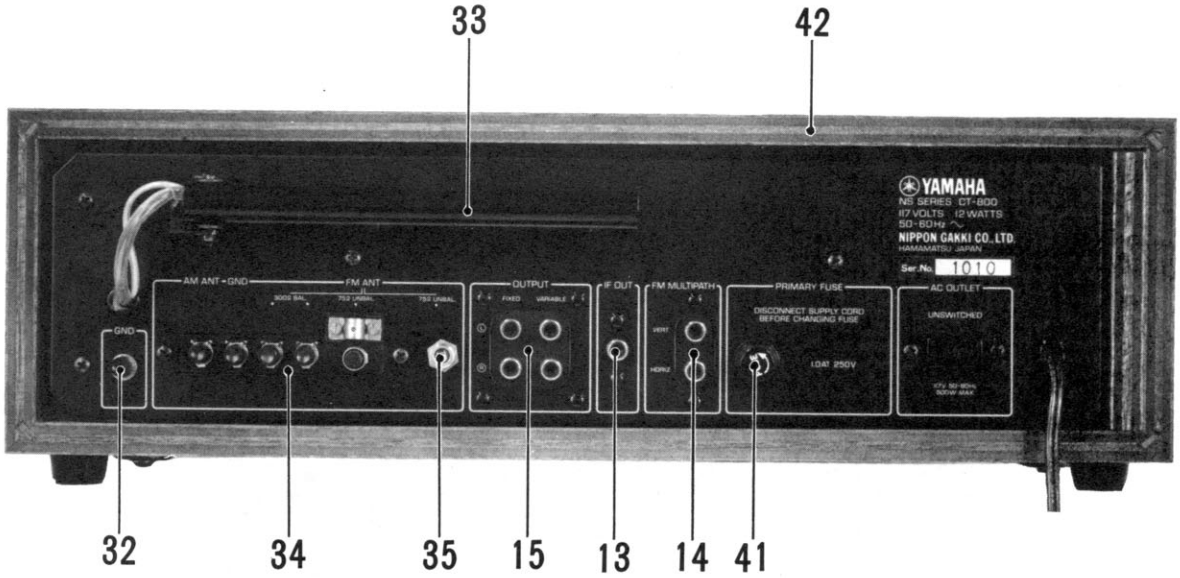
YAMAHA

APL-40 ℗ Printed in Japan. 3·75

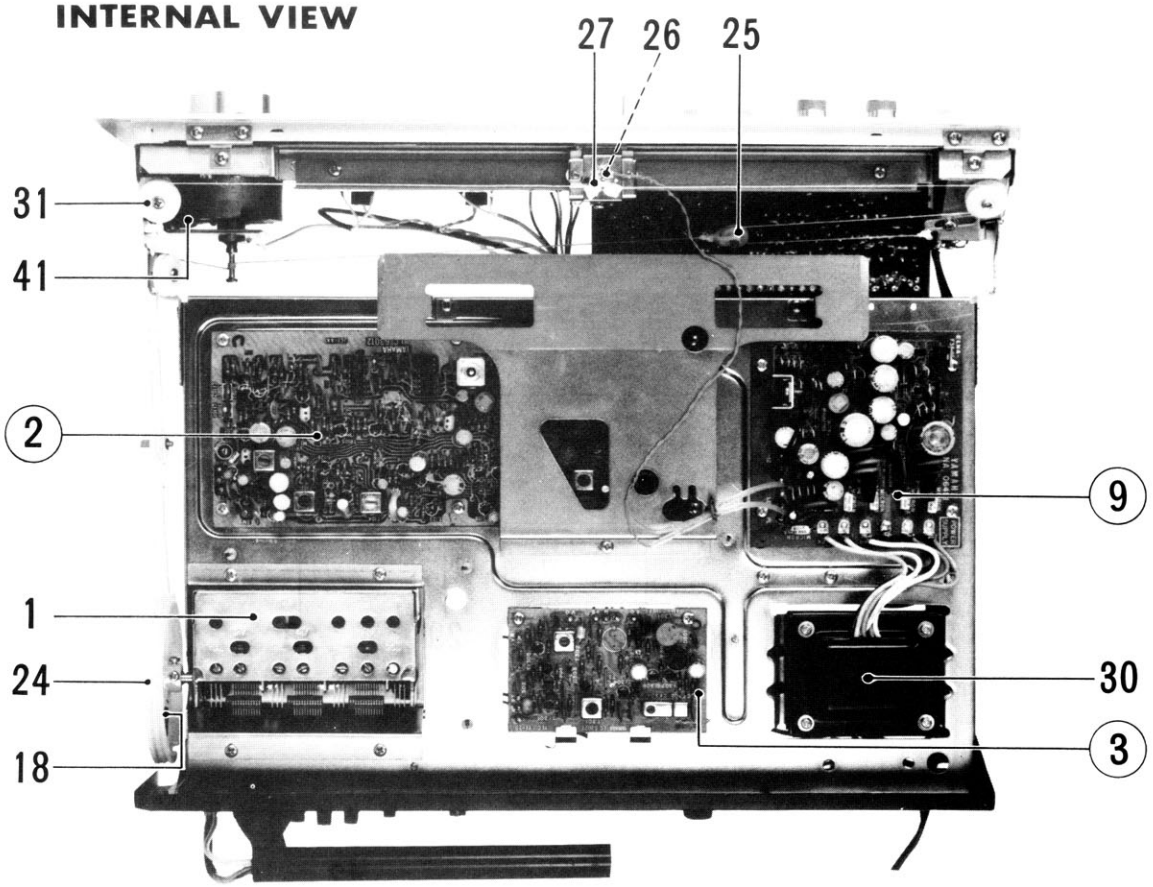
FRONT VIEW

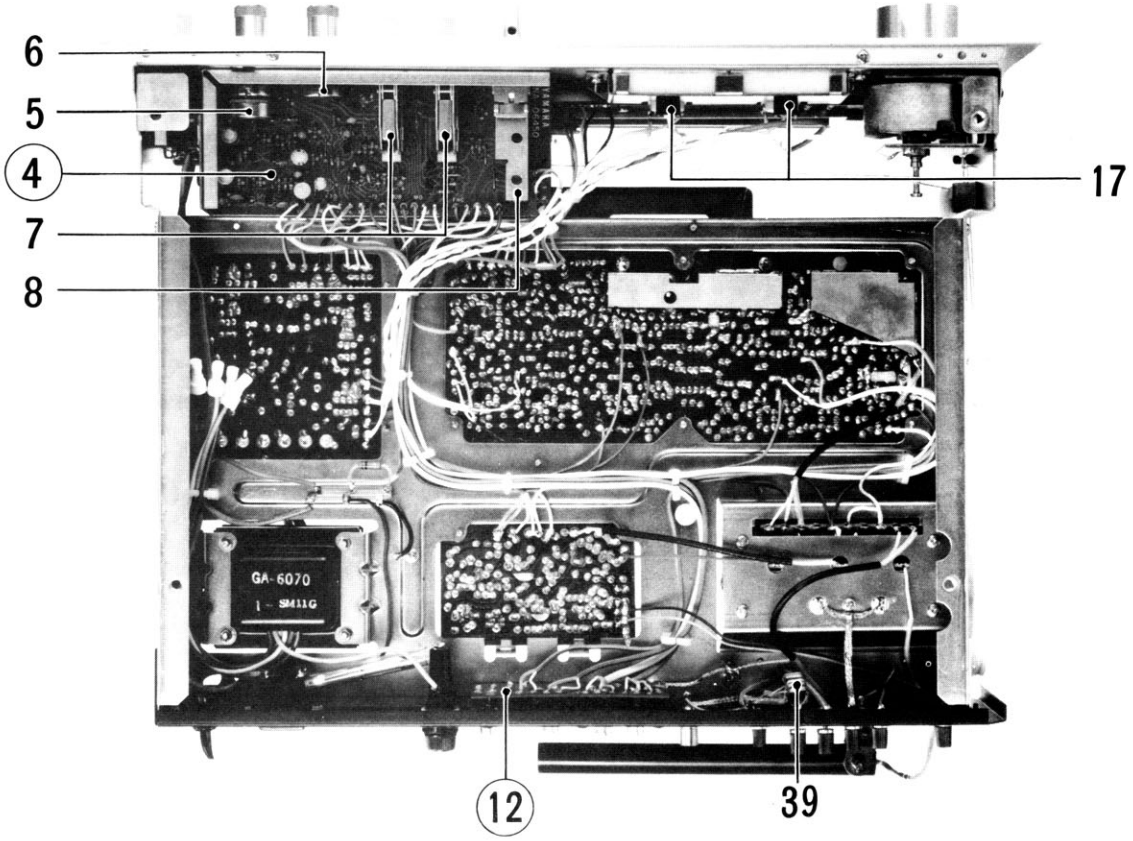


BACK VIEW



INTERNAL VIEW





Ref. No.	Part No.	Description		Remarks	Common Models	
1	PA00020	FM/AM PF Pack FL422U	R F パ ッ ク	Servicing 420000PA000230		
	PA00021	–do.– FL422S	〃	Servicing 420000PA200240		
2	320000NA064610	Tuner Circuit Board #63017	チューナーシート	South African model	CT800	
	320000NA064620	–do.– #64660	〃	U.S. & Canadian models	CT800	
	320000NA064630	–do.– #63017	〃	General, Australian & European models	CT800	
	420000FF043100	Polystrene Capacitor (X type) 1000PF	X型ポリスチレンコンデンサ			
	420000FF043470	–do.– 4700PF	〃			
	420000FF044100	–do.– 10000PF	〃			
	420000FP137100	Tantalum Capacitor 10μF 16WV	タンタルコンデンサ			
	420000FP155680	–do.– 0.68μF 35WV	〃			
	420000FP156100	–do.– 1μF 35WV	〃			
	420000FP156220	–do.– 2.2μF 35WV	〃			
	420000FM226330	Bipolar Electrolytic Capacitor (vert. type) 3.3μF 25WV	バイポーラケミコン			
	420000HT410040	Variable Resistor (SV10KR) B4.7KΩ	ソリッドボリウム			
	420000HT410070	–do.– (–do.–) B10KΩ	〃			
	420000HY000160	–do.– (TM10K) B22KΩ	メタルグレーズボリウム			
	420000GE300010	RF Inductor 10μH	RFインダクター			
	420000GE100050	FM IFT GE6019	F M I F T	General, U.S., Australian & European models		
	420000GE100060	–do.– GE6025	〃	South African model		
	420000GE200070	MPX Coil GE6056	M P X コ イ ル			
	420000GE200080	–do.– GE6057	〃			
	420000GE200090	–do.– GE6058	〃			
	420000GE200100	–do.– GE6059	〃			
	420000GE200110	–do.– 47mH GE6062	〃			
	420000GG990030	Ceramic Filter CR10M-12	セラミックフィルター			
	420000iG000030	Integrated Circuit μPC-16C	I C			
	420000iF000040	Diode IS1555	ダ イ オ ー ド			
	420000iF000330	–do.– 1S188FM1	〃			
	420000iA076300	Transistor 2SA763 (WL 4 or 5)	トランジスタ			
	iC04583	–do.– 2SC458 (C or D)	〃	Servicing 420000iC045890		
	iC04585	–do.– 2SC458LG (C or D)	〃	–do.– 420000iC045890		
	420000iC046080	–do.– 2SC460 (B or C)	〃			
	320000NA064470	AM Circuit Board #64670	A M シ ー ト	except South African model (#63022)	CT800	
	320000NA064480	–do.– #64670	〃	South African model (#63022)	CT800	
	420000FP127330	Tantalum Capacitor 33μF 10WV	タンタルコンデンサ			

Ref. No.	Part No.	Description		Remarks	Common Models	
	420000GE200110	MPX Coil 47mH GE6062	MPX固定コイル			
	420000GE300010	RF Inductor 10μH	RFインダクター			
	420000GE100150	AM OSC Coil GE6013	AM OSCコイル			
	420000GE100100	AM IFT GE6030	AM IFT			
	420000GE900010	AM RF Coil GE6067	AM RFコイル			
	420000GE900130	Filter Coil FSN1036	フィルターコイル	except South African model	CR800	
	420000GG000090	AM Ceramic Filter FSN1038	AMセラミックフィルター	–do.–	CR800	
	420000GE900140	Filter Coil FSN1048	フィルターコイル	South African model	CR800	
	420000GG000100	AM Ceramic Filter FSN1047	AMセラミックフィルター	–do.–	CR800	
	iF00002	Diode SD-46	ダイオード	Servicing 420000iF000330		
	420000iF000040	–do.– IS1555	〃			
	420000iC045480	Transistor 2SC454 (B or C)	トランジスタ			
	420000iC046080	–do.– 2SC460 (B or C)	〃			
4	320000NA064500	Function Circuit Board #63714	ファンクションシート	except U.S. model		
	320000NA065760	–do.– #64930	〃	U.S. model		
	420000FP156100	Tantalum Capacitor 1μF 35WV	タンタルコンデンサ			
	420000FP156330	–do.– 3.3μF 35WV	〃			
	420000FP156470	–do.– 4.7μF 35WV	〃			
	420000iC045890	Transistor 2SC458LG (C or D)	トランジスタ			
	420000iE000010	FET (field effect transistor) 2SK30A (Y)	電界効果トランジスタ			
5	420000HS120390	Variable Resistor A10KΩ x 2	ボリウム	OUTPUT LEVEL		
6	420000HS120400	–do.– B10KΩ	〃	LEVEL		
7	420000KA200120	Lever Switch SLA3202	レバースイッチ	MUTING HIGH-BLEND		
8	420000KA500370	Rotary Switch SRZ-V-043	ロータリースイッチ	FUNCTION		
9	320000NA064510	Power Supply Circuit Board #63723	電源シート	except U.S. model		
	320000NA066130	–do.– #64741	〃	U.S. model		
	420000HL314150	Metal Oxide Resistor 15Ω 1W	酸化金属抵抗			
	420000HL315150	–do.– 150Ω 1W	〃			
	420000HL316220	–do.– 2.2KΩ 1W	〃			
	420000HW103400	Fuse Resistor 4Ω 300mA	ヒューズ抵抗	except U.S. model (HZ00010)		
	420000HW203400	–do.– –do.–	〃	U.S. model (HZ00010)		
	420000HT410030	Variable Resistor (SR19R) B2.2KΩ	ソリッドVR			
	iH00003	Diode 10D-1	ダイオード	Servicing 420000iH000060		
	iH00008	–do.– 10DC	〃	–do.– 420000iH000140		

Ref. No.	Part No.	Description		Remarks	Common Models	
	iH00005	Diode 10DC-2	ダイオード	Servicing 420000IH000140		
	420000iF000040	–do.– IS1555	〃			
	420000iF000320	Zener Diode WZ-061	ツェナーダイオード			
	420000iF000350	–do.– WZ-130	〃			
	420000iF000280	–do.– WZ-210	〃			
	420000iF000220	–do.– WZ-310	〃			
	420000iA056120	Transistor 2SA561 (Y)	トランジスタ			
	iC04583	–do.– 2SC458 (C)	〃	Servicing 420000IC045890		
	iC06613	–do.– 2SC1061 (B or C)	〃	–do.– 420000IC078910		
10	320000NA064520	L.E.D. Circuit Board #64640	LEDシート	(#63730)		
11	420000iF000290	Light Emitting Diode TLR102	発光ダイオード		CR400	
	320000CB068960	Indicator Holder #6896	インジケーターホルダー		CR1000	
12	320000NA064490	Pin-jack Circuit Board #64630	ピンジャックシート	General Canadian & Australian models		
	320000NA066310	–do.– #64630	〃	U.S. model		
13	420000LB100080	1P Pin-jack	1Pピンジャック			
14	420000LB200660	2P 〃	2P 〃			
15	420000LB400120	4P 〃	4P 〃			
	320000NA064530	DIN Circuit Board #63750	DINシート	European model		
16	420000LB500090	DIN Connector 5P (SMK)	5P DINコネクター			
	420000CB068630	Cord Stopper (small)	コードストッパー	General, U.S. & Canadian models		
	420000CB004410	–do.– (large)	〃	South African, Australian & European models		
17	420000JB000230	Pilot Lamp (lead type) 12V 60mA	パイロットランプリード式			
18	320000AA064900	Dial spring #6490	ダイアルスプリング		CR400	
19	320000BA064380	Knob (tuning) #6438	チューニングツマミ		CR400	
20	320000BA064410	Knob (switch) #6441	スイッチツマミ		CR400	
21	320000BA064890	Knob #6489	ツマミ			
22	320000CB068570	Knob (lever switch) #6857	レバーツマミ			
	320000CB068580	Bush for Switch #6858	スイッチ用ブッシュ		CA1000	
23	420000CB068720	Switch Apron 15 x 29 #6872	スイッチエプロン		CA1000	
24	420000CB060180	Pulley for Variable Capacitor	バリコンプーリー		CS50	
25	420000CB066650	Pulley 3.2φ x 13φ	滑車		CS50	
	420000CG060270	Dial Panel (3t Glass)	ダイアルパネル			
	320000BA065130	Dial Scale Panel	ダイアル目盛板			
26	420000JB000090	Dial Pointer Lamp (lead type) 12V 60mA	指針ランプ			
27	320000NB068680	Dial Pointer Unit	ダイアル指針ユニット			
28	420000Ji000220	Tuning meter	チューニングメーター			
29	420000Ji000230	Signal Meter	シグナルメーター			

Ref. No.	Part No.	Description		Remarks	Common Models	
30	GA60701	Power Transformer	電源トランス	Servicing 420000GA607040		
31	420000CB065990	Pulley 5.2 x 20	滑車		CR400	
	320000BB062410	Pulley Shaft	滑車軸		CR400	
32	420000LA001070	Ground Terminal	アース端子			
33	GE00005	AM Bar Antenna	AMバーアンテナ	Servicing 420000GE000080		
34	420000LA001090	Antenna Terminal Board 5P	アンテナ端子板 5P	except European model		
35	420000LB200160	F-type Receptacle	F型レセプタクル	–do.–		
36	420000LB200150	Connector Socket for 75Ω Coreaxial Cable	75Ω同軸ソケット	European Model		
37	420000LB200070	DIN FM Antenna CS-082	DIN FM アンテナソケット	–do.–		
38	420000LB200090	DIN AM Antenna CS-080	DIN AM アンテナソケット	–do.–		
39	420000GE300070	Balun Transformer GE6053	バルーントランス			
40	420000LB200190	Pin Jack 2P JPJ096	2ピンジャック	European Model		
41	420000LB200440	Fuse Holder (Miyama #859)	ヒューズホルダー	except European model		
42	420000LB200590	–do.– FEB031-1401	〃	European model		
41	420000KA200100	Lever Switch JL-04,	電源スイッチ	except European model		
	420000KA200110	–do.– JL-08	〃	European model		
	420000FZ000110	Spark Killer 0.033μF + 120Ω	スパークキラー	except European model		
42	32006421050000	Outside Case	外箱			
43	320000NB068650	Front panel Unit	パネルユニット			
4	420000KB000310	Fuse 0.5A 250V	ヒューズ	General, South African & Australian models		
	420000KB001020	Fuse UL Type SS-2 1.0A 250A	〃	U.S. & Canadian models		
	420000KB000710	Miniature Fuse 0.5AT 250V	Ⓢ 〃	European model		
	420000KB000820	UL Lead Type Fuse ASF-3 1.0AT 250V	〃	U.S. & Canadian models		
	420000LB200250	Voltage Selector	電圧切換器	General, South African & European models		
	420000LB200300	AC Connector Socket	ACコンセント	General, U.S. & Canadian models		

YAMAHA

Hi-Fi Stereo

SERVICE NEWS

BULLETIN NO: 15

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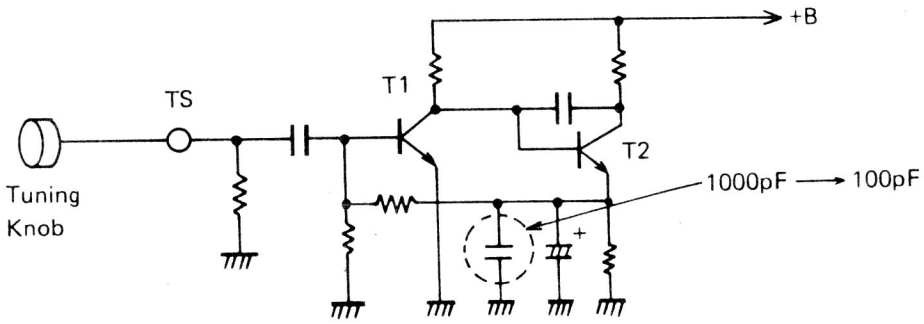
Technical Information on Auto-Touch AFC System

As you know, some Yamaha Hi-Fi stereo tuners and receivers have a unique auto-touch tuning system, which utilizes the static potential in the human body for activation. However, because the static potential available varies among individuals and geographic areas, because of temperature, humidity, floor condition etc., the auto-touch AFC circuit will not always operate properly.

1. When the humidity is high, the skin is wet, or the operator is not grounded, the static potential is low. This may cause the AFC circuit to not operate properly. Even though the tuning knob is touched directly, the AFC LED will not dim.
   When this situation occurs, please make the following modification: Change the capacitor between the base and emitter of the AFC control transistor from 1000pf to 100pf. This will increase the sensitivity of the auto-touch AFC control circuit.

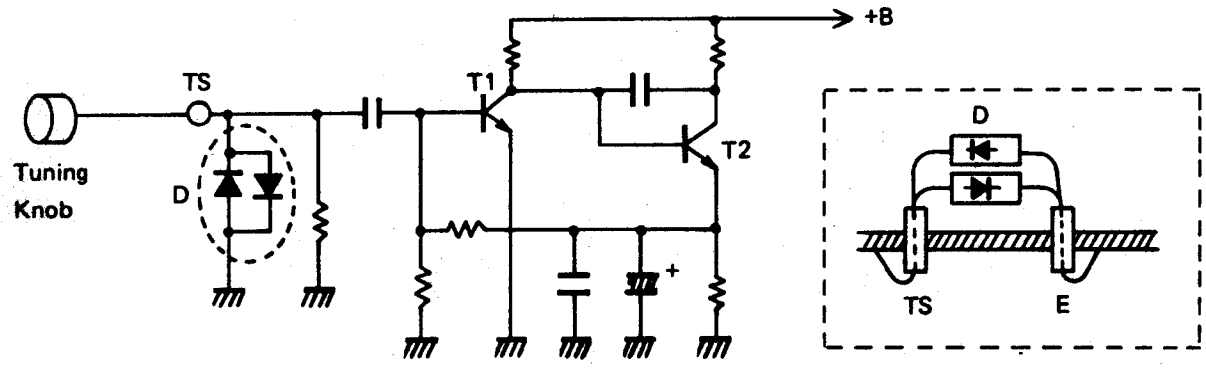


Model Affected:

CT600	S/# 12,076 ~	CR600	S/# 111,651 ~
CT800	S/# 15,951 ~	CR800	S/# 18,423 ~
		CR1000	S/# 9,531 ~

2. When the humidity is low, the skin is dry, or the floor is carpeted, the static potential is high. This may cause a very high voltage to be applied to the AFC control circuit when the tuning knob is touched and the first stage transistor of the AFC control circuit may be destroyed.

When this situation occurs, please make the following modification: Install two diodes as shown in the circuit diagram below.



Diode D is a 1S1555 or equivalent

Model Affected:	**CT600**	**S/# 12,076**		**CR800**	**S/# 19,423**
	CT800	**S/# 15,951**		**CR1000**	**S/# 9,531**
	CR600	**S/# 113,051**			

An Analog Alley Scan.