

AM/FM STEREO TUNER TX-497

SERVICE MANUAL

IMPORTANT NOTICE

This manual has been provided for the use of authorized YAMAHA Retailers and their service personnel. It has been assumed that basic service procedures inherent to the industry, and more specifically YAMAHA Products, are already known and understood by the users, and have therefore not been restated.

WARNING: Failure to follow appropriate service and safety procedures when servicing this product may result in personal injury, destruction of expensive components, and failure of the product to perform as specified. For these reasons, we advise all YAMAHA product owners that any service required should be performed by an authorized YAMAHA Retailer or the appointed service representative.

IMPORTANT: The presentation or sale of this manual to any individual or firm does not constitute authorization, certification or recognition of any applicable technical capabilities, or establish a principle-agent relationship of any form.

The data provided is believed to be accurate and applicable to the unit(s) indicated on the cover. The research, engineering, and service departments of YAMAHA are continually striving to improve YAMAHA products. Modifications are, therefore, inevitable and specifications are subject to change without notice or obligation to retrofit. Should any discrepancy appear to exist, please contact the distributor's Service Division.

WARNING: Static discharges can destroy expensive components. Discharge any static electricity your body may have accumulated by grounding yourself to the ground buss in the unit (heavy gauge black wires connect to this buss).

IMPORTANT: Turn the unit OFF during disassembly and part replacement. Recheck all work before you apply power to the unit.

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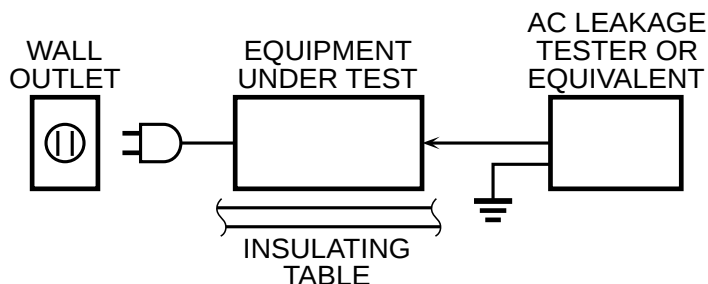
このサービスマニュアルは、エコマーク認定の再生紙を使用しています。
This Service Manual uses recycled paper.



■ TO SERVICE PERSONNEL

Critical Components Information.

Components having special characteristics are marked and must be replaced with parts having specifications equal to those originally installed.



WARNING: CHEMICAL CONTENT NOTICE!

The solder used in the production of this product contains LEAD. In addition, other electrical/electronic and /or plastic (where applicable) components may also contain traces of chemicals found by the California Health and Welfare Agency (and possibly other entities) to cause cancer and/or birth defects or other reproductive harm.

DO NOT PLACE SOLDER, ELECTRICAL/ELECTRONIC OR PLASTIC COMPONENTS IN YOUR MOUTH FOR ANY REASON WHATSOEVER!

Avoid prolonged, unprotected contact between solder and your skin! When soldering, do not inhale solder fumes or expose eyes to solder/flux vapor!

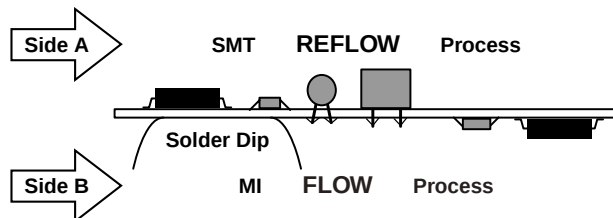
If you come in contact with solder or components located inside the enclosure of this product, wash your hands before handling food.

About leadfree solder / 無鉛ハンダについて

The P.C.B.s installed in this unit are soldered using the following solder.

本機に搭載されている基板のハンダ付けに使用されているハンダは下記の通りです。

	Side A / A 面	Side B / B 面
TUNER P.C.B.	—	Lead Free Solder / 無鉛ハンダ
OPERATION P.C.B.	—	Lead Free Solder / 無鉛ハンダ



Among some types of lead free solder currently available, it is recommended to use one of the following types for the repair work.

- Sn + Ag + Cu (tin + silver + copper)
- Sn + Cu (tin + copper)
- Sn + Zn + Bi (tin + zinc + bismuth)

無鉛ハンダにはいくつかの種類がありますが、修理時には下記のような無鉛ハンダの使用を推奨します。

- Sn+Ag+Cu (錫+銀+銅)
- Sn+Cu (錫+銅)
- Sn+Zn+Bi (錫+亜鉛+ビスマス)

Caution:

1. As the melting point temperature of the lead free solder is about 30°C to 40°C (50°F to 70°F) higher than that of the lead solder, be sure to use a soldering iron suitable to each solder.
2. If lead solder must be used, be sure to remove lead free solder from each terminal section of the parts to be replaced and from the area around it completely before soldering, or make sure that the lead-free solder and lead solder melt together fully.

注意：

無鉛ハンダの融点温度は通常の鉛入りハンダに比べ30～40 程度高くなっていますので、それぞれのハンダに合ったハンダごてをご使用ください。

鉛入りハンダを使わざるを得ない場合は、あらかじめ交換する部品端子部やその周辺部の無鉛ハンダをすべて取り除くか、あるいは無鉛ハンダと鉛入りハンダが十分に溶けた状態となるようにハンダ付けしてください。

■ SPECIFICATIONS / 参考仕様

■ FM SECTION / FM部

Tuning Range / 受信周波数範囲

U, C models	87.5 to 107.9 MHz
R, T, A, B, G, E, L models	87.50 to 108.00 MHz
J model	76.0 to 90.0 MHz

50dB Quieting Sensitivity / 50dB SN感度 (IHF)

U, C, R, T, A, L, J models	
Mono	1.55 μ V(15.1 dBf)
Stereo (1 kHz 100% MOD)	21 μ V(37.7 dBf)

Usable Sensitivity / 実用感度 (DIN)

B, G, E models	
Mono (S/N 26 dB)	0.9 μ V
Stereo (S/N 46 dB)	24 μ V

Image Response Ratio / イメージ妨害比

U, C, R, T, J models	40 dB
A, B, G, E, L models	80 dB

IF Response Ratio / IF妨害比

	70 dB
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Spurious Response Ratio / スプリアス妨害比

U, C, R, T, J models	60 dB
A, B, G, E, L models	70 dB

Alternate Channel Selectivity / 実行選択度

U, C, R, T, J models	85 dB
A, B, G, E, L models	
Selectivity (two signals) 40 kHz Dev. $\pm$ 300 kHz	70 dB

Signal to Noise Ratio / 信号対雑音比 (DIN-Weighted 40 kHz)

U, C, R, T, J models	
Mono	82 dB
Stereo	76 dB
A, B, G, E, L models	
Mono	75 dB
Stereo	70 dB

Harmonic Distortion / 歪率 (1 kHz)

Mono	0.1 %
Stereo (B, G: 40 kHz Dev.)	0.2 %

Stereo Separation / ステレオセパレーション (1 kHz)

B, G: 40 kHz Dev.	50 dB
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Frequency Response / 周波数特性

30 Hz to 13 kHz	0 $\pm$ 0.5 dB
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■ MW SECTION / AM部

Tuning Range / 受信周波数範囲

U, C, R models	530 to 1710 kHz
T, A, B, G, E, L, J models	531 to 1611 kHz

Usable Sensitivity / 実用感度

	200 μ V/m
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Selectivity / 選択度

	32 dB
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Signal to Noise Ratio / 信号対雑音比

	50 dB
--	-------

Image Response Ratio / イメージ妨害比

	40 dB
--	-------

Spurious Response Ratio / スプリアス妨害比

	50 dB
--	-------

Harmonic Distortion / 歪率

	0.3 %
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■ LW SECTION

Tuning Range

B, G, E models	153 to 288 kHz
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Usable Sensitivity

B, G, E models	400 μ V/m
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Selectivity

B, G, E models	32 dB
----------------	-------

Signal to Noise Ratio

B, G, E models	50 dB
----------------	-------

Image Response Ratio

B, G, E models	40 dB
----------------	-------

Spurious Response Ratio

B, G, E models	50 dB
----------------	-------

Harmanic Distortion

B, G, E models	0.3 %
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■ AUDIO SECTION / オーディオ部

Output Level / Impedance

(出力電圧 / インピーダンス) (Fixed)

U, C, R, T, A, L, J models	
FM 100 % MOD 1 kHz	900 mV/2.2 k-ohms
MW/AM/LW 30 % MOD 1 kHz	150 mV/2.2 k-ohms
B, G, E models	
FM 100 % MOD 1 kHz	500 mV/2.2 k-ohms
MW/LW 30 % MOD 1 kHz	200 mV/2.2 k-ohms

■ GENERAL / 総合

Power Supply / 電源電圧

U, C models	AC120V, 60Hz
R, L models	AC110 to 120V, 220 to 240V, 50/60Hz
T model	AC220V, 50Hz
A model	AC240V, 50Hz
B, G, E models	AC230V, 50Hz
J model	AC100V, 50/60Hz

Power Consumption / 消費電力

	7 W
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Dimensions / 寸法 (W x H x D)

	435 x 86 x 271mm
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Weight / 質量

	3.2 kg
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Finish / 仕上げ

Gold color	T, L, J models
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Black color	U, C, R, A, B, G, L, E models
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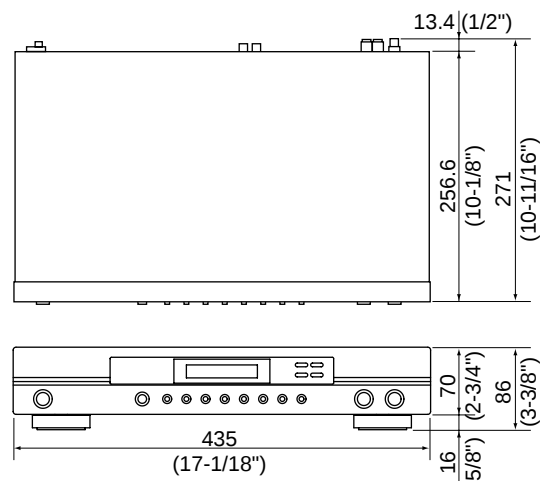
Titanium color	R, B, G, L, E models
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Accessories / 付属品

Indoor FM Antenna x 1	
AM Loop Antenna x 1	
Antenna Adapter x 1 (U, C models)	
75-ohm/300-ohm antenna adapter x 1 (B model)	
Audio Pin Cable	

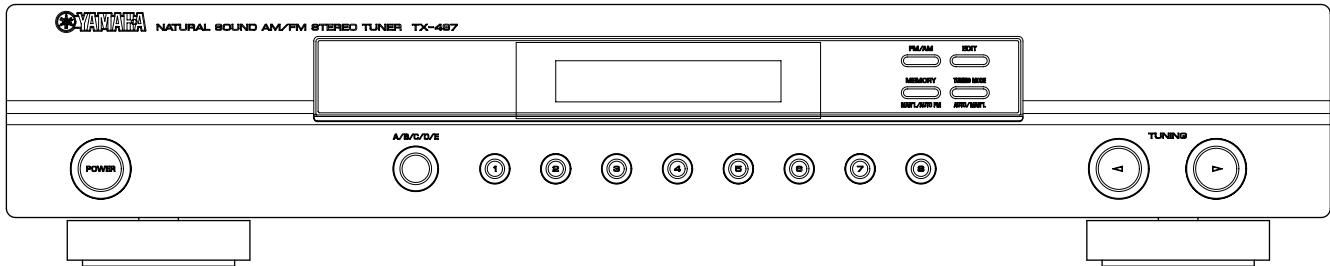
* Specifications subject to change without notice.

• DIMENSIONS

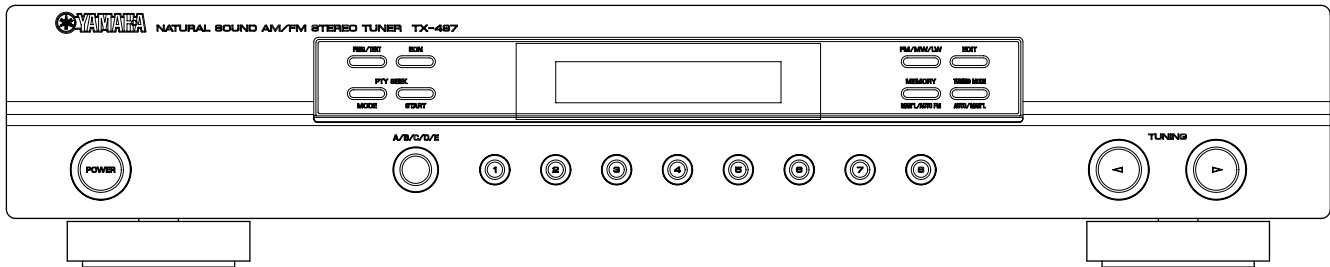


■ FRONT PANELS

U, C, R, T, A, L, J models

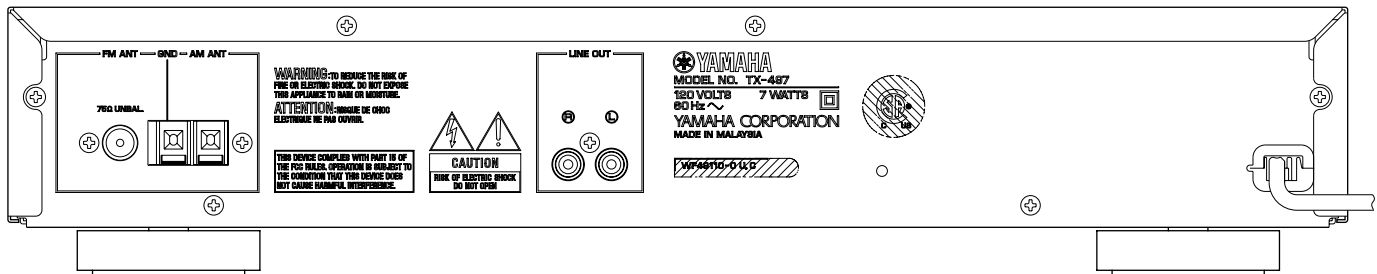


B, G, E models

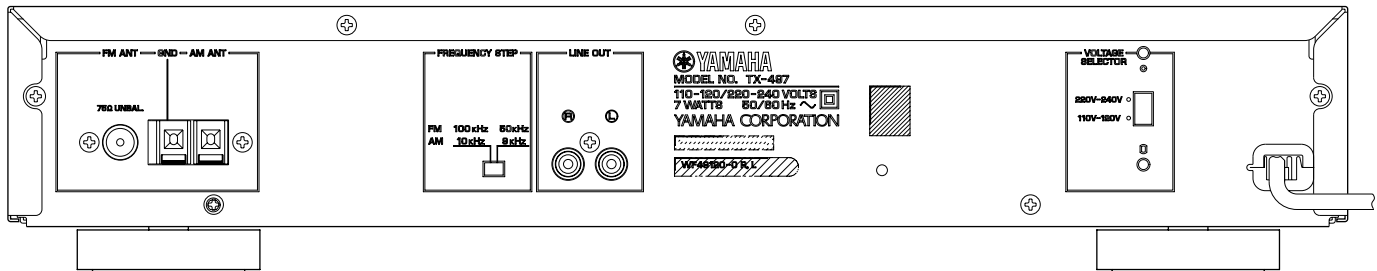


REAR PANELS

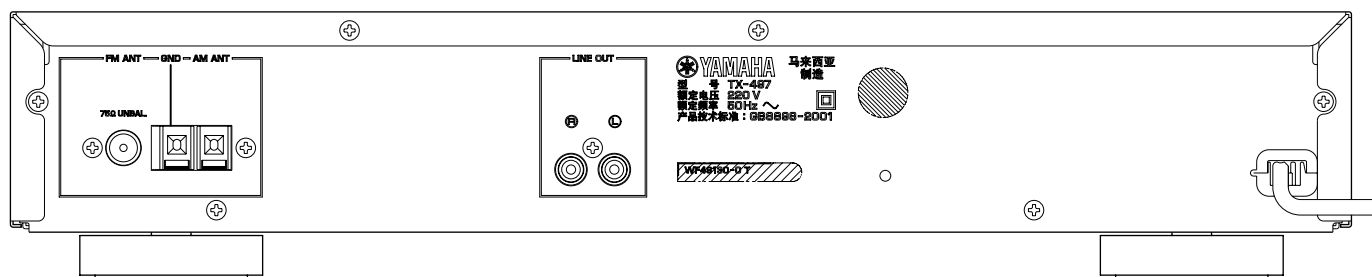
U, C models



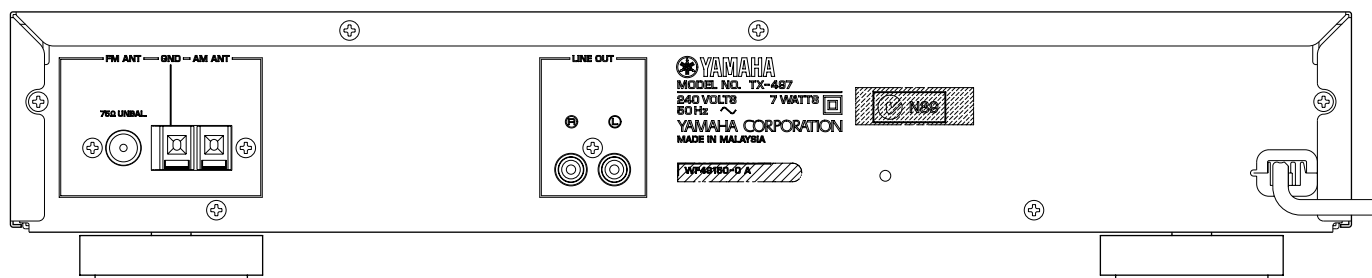
R, L models



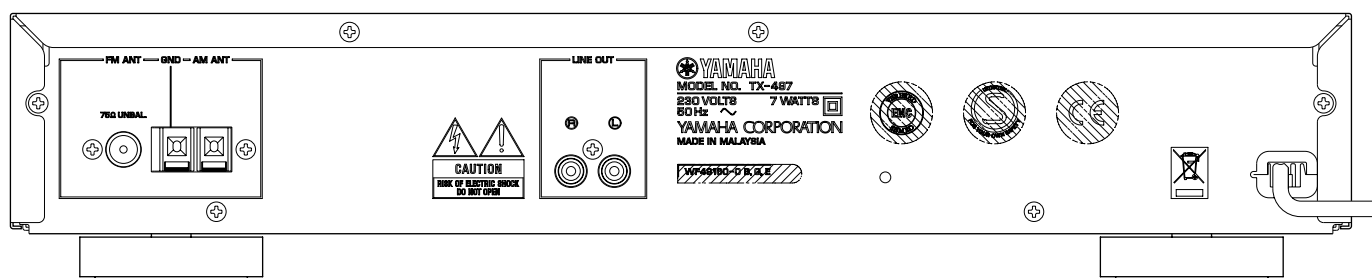
T model



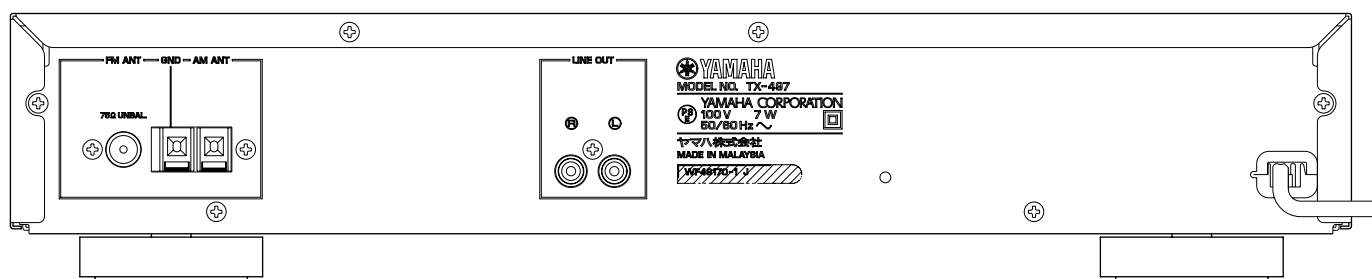
A model



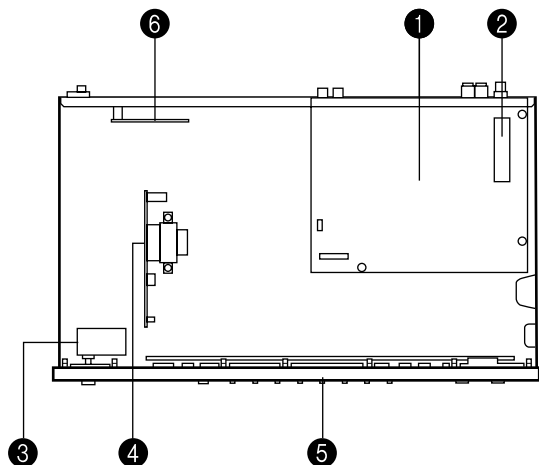
B, G, E models



J model



INTERNAL VIEW



- ① Tuner P. C. B
- ② Front-end pack
- ③ Operation P. C. B. (2)
- ④ Operation P. C. B. (3)
- ⑤ Operation P. C. B. (1)
- ⑥ Operation P. C. B. (4) (R, L models)

DISASSEMBLY PROCEDURES / 分解手順

(Remove parts in the order as numbered.)

1. Removal of Top Cover

- a. Remove 4 screws (①) and 2 screws (②). (Fig. 1.)
- b. Slide the Top Cover rearward to remove it. (Fig. 1.)

2. Removal of Front Panel Unit

- a. Disconnect the connectors (CB3 and CB4). (Fig. 1.)
- b. Remove 3 screws (③). (Fig. 1.)
 - Screws (③) are identified with arrow marks (⇐).
- c. Remove 2 screws (④). (Fig. 1.)
- d. Unhook at 2 place (⑤). (Fig. 1.)
- e. Remove the Front Panel Unit. (Fig. 1.)

(番号順に部品を取り外してください。)

1. トップカバーの外しかた

- a. ①のネジ4本、②のネジ2本を外します。 (Fig. 1.)
- b. トップカバーを後方へスライドさせ取り外します。 (Fig. 1.)

2. フロントパネルユニットの外しかた

- a. CB3とCB4をコネクタから抜きます。 (Fig. 1.)
- b. ③のネジを3本外します。 (Fig. 1.)
 - ③のネジには矢印マーク (⇐) が刻印されています。
- c. ④のネジ2本を外します。 (Fig. 1.)
- d. ⑤のフックを2カ所外します。 (Fig. 1.)
- e. フロントパネルユニットを外します。 (Fig. 1.)

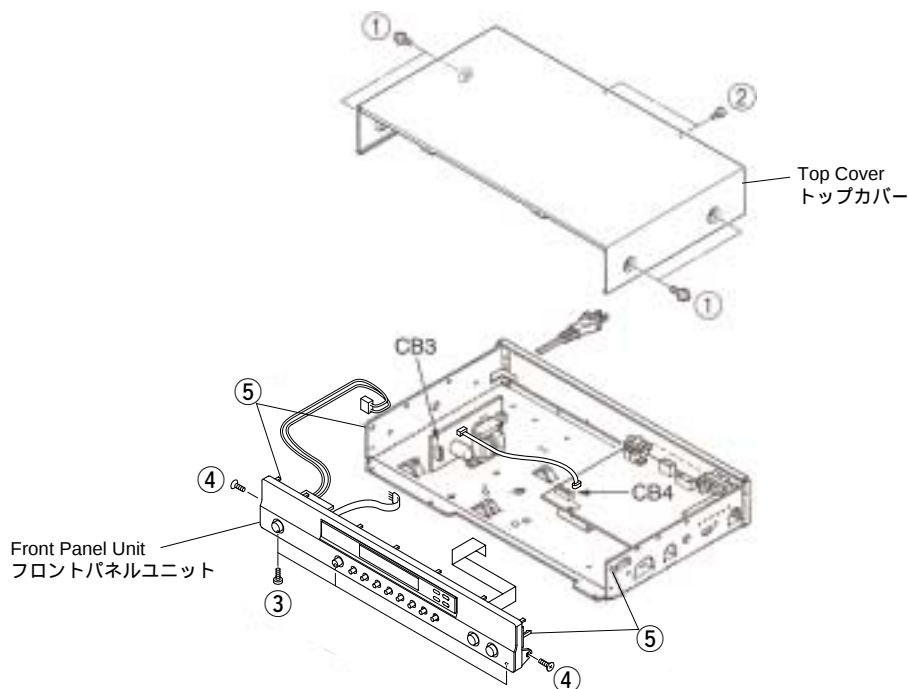


Fig. 1

■ ADJUSTMENTS

1. Before Adjustment

- (1) With the power turned on, wait for 5 minutes before starting adjustment so that operation becomes stable.
- (2) Adjust the OSC coil and IFT with insulated screwdriver.
- (3) Set the TUNING MODE to AUTO.
- (4) Decibel abbreviations
dB μ : Decibels above or below 1 μ V

Example :

0dB μ = 1 μ V, 60dB μ = 1 mV

X dB μ = (X + 11.2) dBf

When substituting 60 for X,

60 dB μ = 72.2 dBf

2. Measuring instrument abbreviations

FM SG : FM signal generator
SSG : Stereo signal generator
AM SG : AM signal generator
DIST. M : Distortion meter
FC : Frequency counter
ACVM : AC voltage meter
DCVM : DC voltage meter
RDS SG : RDS signal generator

<POWER SUPPLY CHECK>

Check that the voltage obtained across each test point and ground on the tuner circuit is as follows.

Test points	Rating or Standard
+5 V terminal	+5.6 $\pm$ 0.5 V
-VP terminal	-23.0 $\pm$ 1.0 V

CAUTION :

Before setting to the TEST mode, write down the user preset memory content in the table as shown below. (This is because setting to the TEST mode will cause the memory content to be the factory preset memory content, i.e. all the user preset memory content will be erased.)

<User preset memory content>

Preset keys	P1	P2	P3	P4	P5	P6	P7	P8
A								
B								
C								
D								
E								

<TEST mode>

- Turn on the POWER switch while pressing the A/B/C/D/E and FM/AM(FM/MW/LW) keys simultaneously, and the unit enters the TEST mode for the display check. After this, repeat (1) to (4).

- (1) All the segments on the display light up.
- (2) The model name, TX-497 is displayed.
- (3) The place of destination is displayed.
- (4) The μ COM-version is displayed.

Pressing the P1 key will cause operation to start from (1). Pressing any other key will cause the mode to return to the NORMAL mode.

<Factory preset memory content>

U, C models

Preset	P1	P2	P3	P4	P5	P6	P7	P8
A, C, E	87.5	90.1	95.1	98.1	107.9	88.1	106.1	107.9
B, D	630	1080	1440	530	1710	900	1350	1400

A, L, R models

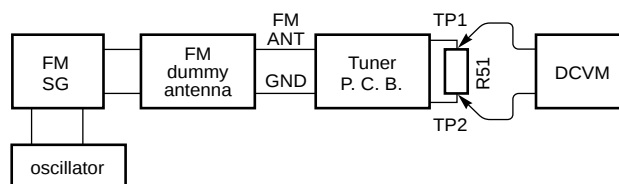
Preset	P1	P2	P3	P4	P5	P6	P7	P8
A, C, E	87.50	90.10	95.10	98.10	108.00	88.10	106.10	108.00
B, D	630	1080	1440	531	1611	900	1350	1404

B, G, E models

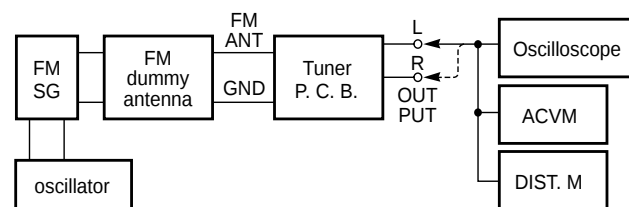
Preset	P1	P2	P3	P4	P5	P6	P7	P8
A, E	87.50	90.10	95.10	98.10	108.00	88.10	106.10	108.00
B, D	630	1080	1440	531	1711	900	1350	1400
C	153	171	225	270	288	180	207	252

<Connection Diagram (Measuring Instruments)>

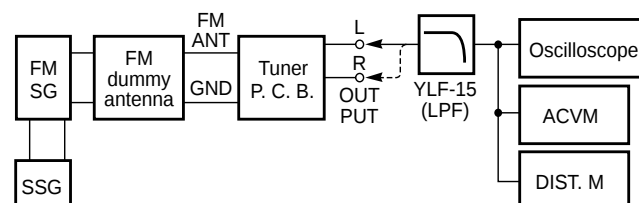
1) Discriminator balance adjustment



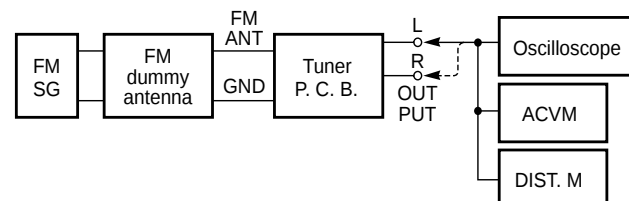
2) Monaural distortion adjustment



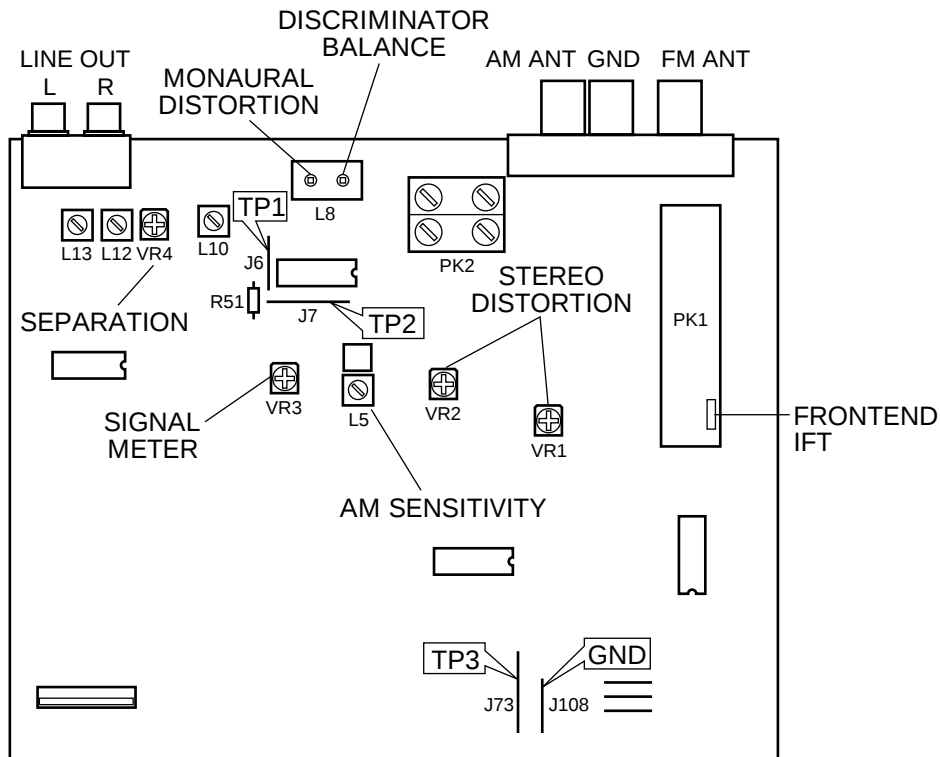
3) Stereo distortion adjustment



4) Sensitivity verification



● TEST POINTS



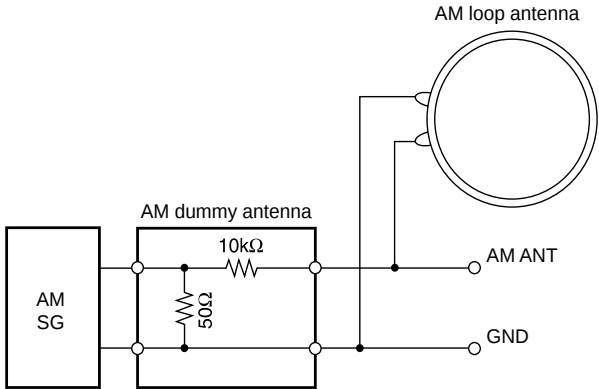
<FM TUNER SECTION>

Step	Adjustment item	Signal (ANT IN)	Reception frequency	Adjusted point	Test point	Rating
1	Rough adjustment of discriminator balance.	FM SG: 98.1 MHz 70 dB μ Modulation : 100 % Monaural : 1 kHz	Preset A-4: 98.1 MHz	L8 (right side)	TP1, TP2 (both end of R51)	DC 0 V $\pm$ 100mV at tuning point.
2	Rough adjustment of monaural distortion.	Same as Step 1.	Same as Step 1.	L8 (left side)	OUTPUT	Minimize distortion.
3	Fine adjustment of discriminator balance.	Same as Step 1.	Same as Step 1.	L8 (right side)	TP1, TP2	DC 0 V $\pm$ 50mV
4	Fine adjustment of monaural distortion.	Same as Step 1.	Same as Step 1.	L8 (left side)	OUTPUT	Minimize distortion. (to less than 0.7%)
5	Verification of discriminator balance.	Same as Step 1.	Same as Step 1.		TP1, TP2	DC 0 V $\pm$ 50mV
6	Adjustment of frontend IFT.	FM SG: 98.1 MHz 30 dB μ Modulation : 100 % Monaural : 1 kHz	Same as Step 1.	Frontend IFT	TP3, GND	Adjust so that the DC voltage is maximum. CAUTION: If IFT core is turned excessively, the sensitivity reduces. (Maximum $\pm$ 90°)
7	Adjustment of stereo distortion.	FM SG: 98.1 MHz 70 dB μ Modulation : 100 % Stereo L or R : 1 kHz	Same as Step 1.	VR1, VR2	OUTPUT	Minimize distortion. Tuning mode is AUTO.

Ste	Adjustment item	Signal (ANT IN)	Reception frequency	Adjusted point	Test point	Rating
8	Verification of monaural distortion.	FM SG: 98.1 MHz 70 dBμ Modulation : 100 % Monaural : 1 kHz	Same as Step 1.		OUTPUT	Minimize distortion. (to less than 0.7%)
9	Verification of stereo distortion.	FM SG: 98.1 MHz 70 dBμ Modulation : 100 % Stereo L or R : 1 kHz	Same as Step 1.		OUTPUT	Minimize distortion. (to less than 1.4%) Tuning mode is AUTO.
10	Verification of sensitivity.	FM SG: 88.1/98.1/106.1 MHz Modulation : 100 % Monaural : 1 kHz	A-6: 88.1 MHz A-4: 98.1 MHz A-7: 106.1 MHz			S/N should be 30 dB at each frequency of 88.1 MHz, 98.1 MHz and 106.1 MHz. Make sure that the voltage at the ANT terminal is 3 dBμ (7 dBμ at A, B, G, E models) or less.
11	Adjustment of separation.	FM SG: 98.1 MHz 70 dBμ Modulation : 100 % Stereo L or R : 1 kHz	Preset A-4: 98.1 MHz	VR4	OUTPUT	To more than 35 dB. Tuning mode is AUTO.
12	Adjustment of the signal meter.	FM SG: 98.1 MHz 45 dBμ Modulation : 30 % Monaural : 1 kHz	Preset A-4: 98.1 MHz	VR3	Signal meter	Adjust so that the signal meter is maximum at rating level.
13	Verification of the signal meter to turn off.	ANT input minimum.				Make sure that the signal meter is turned off.
14	Verification of AUTO TUNING.	FM SG: 98.1 MHz 23 dBμ Modulation : 30 % Stereo L or R : 1 kHz	Preset A-4: 98.1 MHz	Tuning buttons		Automatic reception should be available when the tuning UP or DOWN key is pressed. Stereo indicator is turned on. Audio muting should be applied during tuning.
15	Verification of AUTO PS (program service name) [B, G, E models only]	RDS SG: Modulation : 1.6 % (1.2 kHz) FM SG: 98.1 MHz 40 dBμ Modulation : 100 % Monaural : 1 kHz	Preset A-4: 98.1 MHz			Make sure that the display automatically turns to the PS mode and PS indicator turns on when the signal is tuned again.

<MW TUNER SECTION>

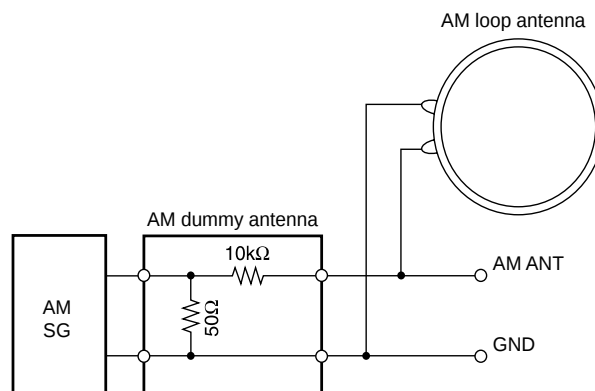
- To be adjusted after FM section adjustment.
- Use the specified dummy anetenna for loop antenna.



Step	Adjustment item	Signal (ANT IN)	Reception frequency	Adjusted point	Test point	Rating
1	Adjustment of sensitivity.	AM SG: 630 kHz 50 dBμ, 1 kHz, 30% modulation	Preset B-1: 630 kHz	L5	OUTPUT	Maximize detected signal output.
2	Verification of sensitivity.	AM SG: 630 kHz/1080 kHz/ 1440 kHz 50 dBμ, 1 kHz, 30% modulation	Preset B-1: 630 kHz B-2: 1080 kHz B-3: 1440 kHz			To be less than 54 dBμ.
3	Verification of the signal meter.	AM SG: 1080 kHz 90 dBμ, ANT input 90 dBμ	Preset B-2: 1080 kHz			Make sure that the signal meter is turned on.
		ANT input -10 dBμ or less				Make sure that the signal meter is turned off.
4	Verification of auto tuning.	AM SG: 1080 kHz 60 dBμ, 1 kHz, 30% modulation	Preset B-2: 1080 kHz	Tuning button		Automatic reception should be available when the tuning UP or DOWN key is pressed. Audio muting should be applied during tuning.

<LW TUNER SECTION>

- To be adjusted after MW section adjustment.
- Use the specified dummy antenna for loop antenna.



Step	Adjustment item	Signal (ANT IN)	Reception frequency	Adjusted point	Test point	Rating
1	Verification of sensitivity.	AM SG: 171 kHz/225 kHz/270 kHz 90 dBμ, 1 kHz, 30% modulation	Preset C-2: 171 kHz C-3: 225 kHz C-4: 270 kHz		OUTPUT	To be less than 66 dBμ.
2	Verification of the signal meter.	AM SG: 225 kHz 90 dBμ, ANT input 90 dBμ	Preset B-2: 225 kHz			Make sure that the signal meter is turned on.
		ANT input -10 dBμ or less				Make sure that the signal meter is turned off.
3	Verification of auto tuning.	AM SG: 225 kHz 60 dBμ, 1 kHz, 30% modulation	Preset B-2: 225 kHz	Tuning button		Automatic reception should be available when the tuning UP or DOWN key is pressed. Audio muting should be applied during tuning.

■ 調整

1. 調整の前に

- 1) 調整時の動作を安定させるため、電源投入後、約5分間待つてから調整を始めてください。
- 2) OSCコイルおよびIFTの調整には絶縁ドライバを使用してください。
- 3) TUNING MODEスイッチはAUTOにセットします。
- 4) dB μ は、1 μ V=0dB μ です。

例：

0db μ = 1 μ V、60db μ = 1mV

X dB μ = (X+11.2) dBf

Xが60の場合、60 dB μ = 72.2dBf

2. 測定器

FM SG : FM信号発生器
 SSG : ステレオ信号発生器
 AM SG : AM信号発生器
 DIST. M : 歪率計
 FC : 周波数カウンタ
 ACVM : 交流電圧計
 DCVM : 直流電圧計

3. 電圧確認

チューナーシートのそれぞれのテストポイントとGND間の電圧が次のようになっているか確認します。

テストポイント	標準値
+5V	+5.6V $\pm$ 0.5V
-VP	-23.0V $\pm$ 1.0V

注意：

テストモードに入る前にユーザーが記録したプリセットメモリを下の表に書き移しておき、調整終了後、再セットします。テストモードに入るとプリセットメモリは工場出荷時の状態になり、ユーザーの記録したプリセットメモリは消去されます。

プリセット	P1	P2	P3	P4	P5	P6	P7	P8
A								
B								
C								
D								
E								

テストモード

- A/B/C/D/EキーとFM/AMキーを押しながらPOWERスイッチを押すと、テストモードになります。
 テストモードになるとディスプレイに次の1)から4)の表示がくり返し表示されます。

- 1) ディスプレイの全セグメントが点灯。
- 2) TX-497と表示。
- 3) J AM STと表示。
- 4) μ COMのバージョンを表示。

※ P1キーを押すと、1)から表示されます。

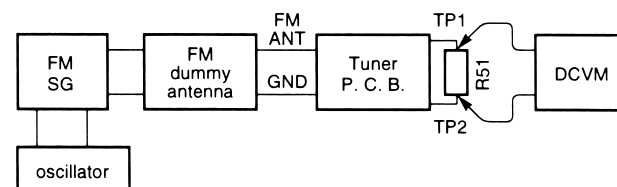
P1キー以外のキーを押すと、テストモードから抜け、通常モードに戻ります。

工場出荷時のプリセットメモリ

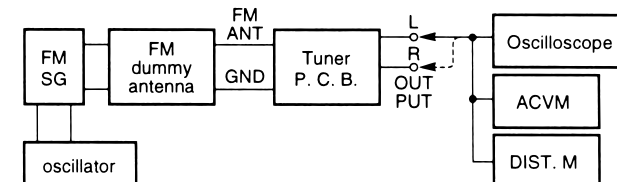
プリセット	P1	P2	P3	P4	P5	P6	P7	P8
A	76.0	83.0	84.0	86.0	90.0	78.0	88.0	82.1
B	630	1080	1440	531	1611	900	1350	1404
C	76.0	83.0	84.0	86.0	90.0	78.0	88.0	82.1
D	630	1080	1440	531	1611	900	1350	1404
E	76.0	83.0	84.0	86.0	90.0	78.0	88.0	82.1

測定器の接続図

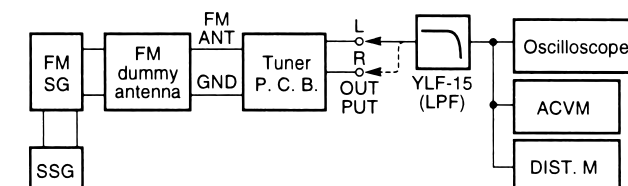
1) ディスクリバランス調整



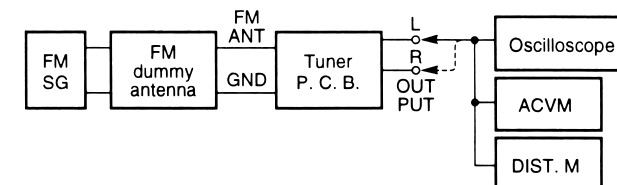
2) モノラル歪調整



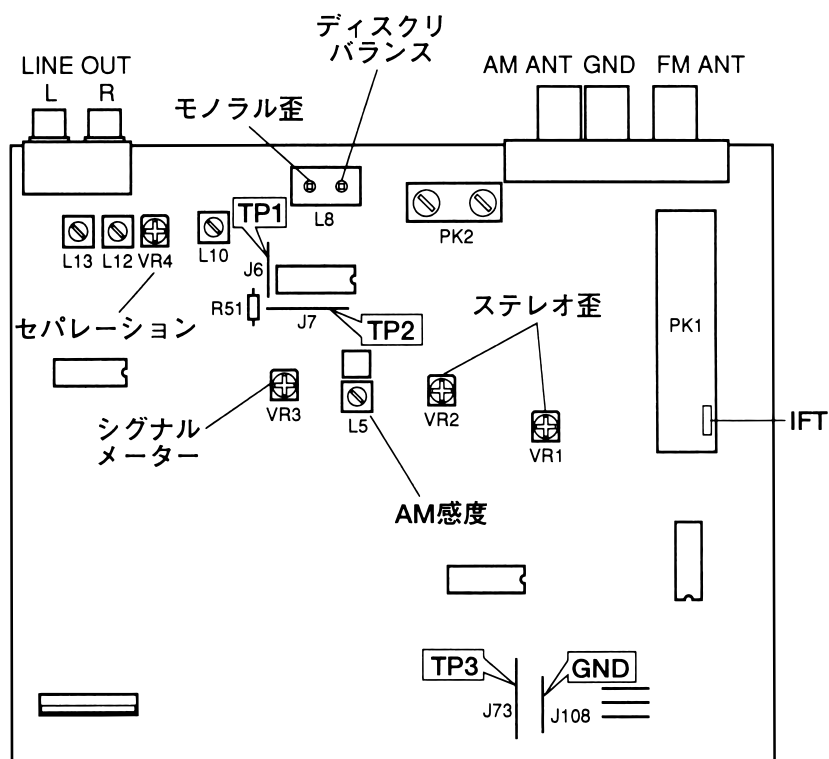
3) ステレオ歪調整



4) 感度確認



● テストポイント



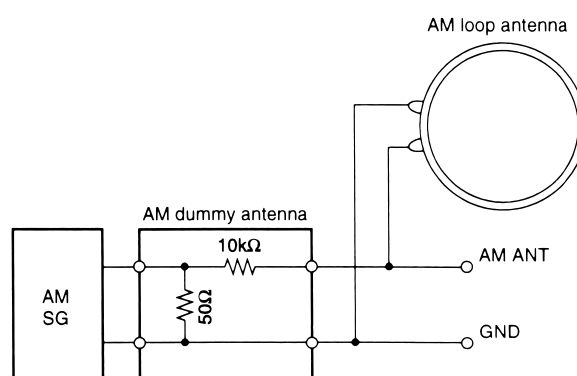
〈FM 調整〉

ステップ	調整項目	信号 (ANT IN)	受信周波数	調整箇所	テストポイント	規 格
1	ディスクリバランス	FM SG: 83.0 MHz 70 dB μ Modulation : 100 % Monaural : 100 Hz	Preset A-2: 83.0 MHz	L8 (右側)	TP1, TP2 (R51両端)	DC 0 V $\pm$ 100mV
2	モノラル歪	Same as Step 1.	ステップ1同様	L8 (左側)	OUTPUT	歪率を最小にする。
3	ディスクリバランス 再調整	Same as Step 1.	ステップ1同様	L8 (右側)	TP1, TP2	DC 0 V $\pm$ 50mV
4	モノラル歪 再調整	Same as Step 1.	ステップ1同様	L8 (左側)	OUTPUT	歪率を最小にする。 (0.7%未満)
5	ディスクリバランス 再確認	Same as Step 1.	ステップ1同様		TP1, TP2	DC 0 V $\pm$ 50mV
6	フロントエンドIFT	FM SG: 83.0 MHz 30 dB μ Modulation : 100 % Monaural : 1 kHz	ステップ1同様	Frontend IFT	TP3, GND	電圧を最大にする。 注意: IFTを回しすぎると感 度が低下するので注 意すること。 (最大 $\pm$ 90°)
7	ステレオ歪	FM SG: 83.0 MHz 70 dB μ Modulation : 100 % Stereo L or R : 1 kHz	ステップ1同様	VR1, VR2	OUTPUT	歪率を最小にする。 チューニングモードは AUTO。
8	モノラル歪確認	FM SG: 83.0 MHz 70 dB μ Modulation : 100 % Monaural : 1 kHz	ステップ1同様		OUTPUT	歪率を最小にする。 (0.7%未満)
9	ステレオ歪確認	FM SG: 83.0 MHz 70 dB μ Modulation : 100 % Stereo L or R : 1 kHz	ステップ1同様		OUTPUT	歪率を最小にする。 (1.4%未満) チューニングモードは AUTO。
10	感度確認	FM SG: 78.0/83.0/88.0 MHz Modulation : 100 % Monaural : 1 kHz	A-6: 78.0 MHz A-2: 83.0 MHz A-7: 88.0 MHz			各周波数でS/N 30dB であることを確認す る。 ANT端子電圧が3dB μ 以下であることを確 認する。
11	セパレーション	FM SG: 83.0 MHz 70 dB μ Modulation : 100 % Stereo L or R : 1 kHz	ステップ1同様	VR4	OUTPUT	セパレーションを最大 にする。 (35dB以上) チューニングモードは AUTO。
12	シグナルメーター	FM SG: 83.0 MHz 45 dB μ Modulation : 30 % Monaural : 1 kHz	ステップ1同様	VR3	シグナル メーター	規定入力でシグナル メーターが全灯するよ うに調整。

ステップ	調整項目	信号 (ANT IN)	受信周波数	調整箇所	テストポイント	規 格
13	シグナルメーター 消灯の確認	FM SG: アンテナ入力最小				シグナルメーターが消 灯していることを確 認。
14	オートチューニング確認	FM SG: 83.0 MHz 23 dB μ Modulation : 30 % Stereo L or R : 1 kHz	ステップ1同様	TUNING UP/DOWN		TUNING UPまたは DOWNキーを押して オート受信すること。 ステレオインジケータ が点灯すること。 チューニング中音声 ミュートがかかること。

＜AM調整＞

- AM調整は、FM調整終了後に行うこと。
- 右図のようにループアンテナにダミーアンテナを接続する。

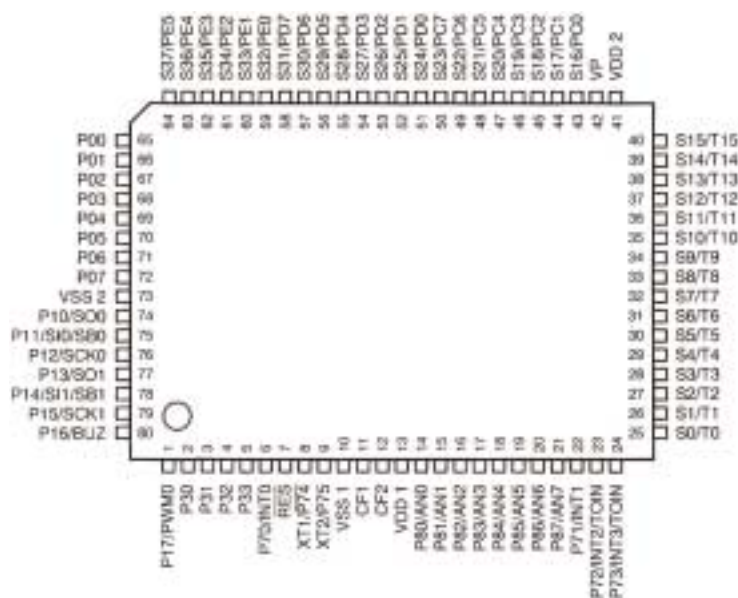


ステップ	調整項目	信号 (ANT IN)	受信周波数	調整箇所	テストポイント	規 格
1	AM感度	AM SG: 630 kHz 50 dB μ 、 1 kHz、 Modulation : 30 %	Preset B-1:630 kHz	L5	OUTPUT	検波出力最大。
2	AM感度確認	AM SG: 630/1080/1440 kHz 50 dB μ 、 1 kHz、 Modulation : 30 %	Preset B-1:630 kHz B-2:1080 kHz B-3:1440 kHz			54dB μ 以下。
3	セパレーション確認	AM SG: アンテナ入力80dB μ STEREO 15%、 PILOT 5% Modulation	ステップ1同様	L5		規格内であることを確 認する。 規格外のときはL5で セパレーションを最大 にする。
4	シグナルメーター確認	AM SG: 1080 kHz 90 dB μ アンテナ入力90dB μ アンテナ入力を -10dB μ 以下にする	Preset B-2:1080 kHz		シグナル メーター	シグナルメーター全 灯。 シグナルメーター消 灯。
5	オートチューニング確認	AM SG: 1080 kHz 60 dB μ 、 1 kHz、 Modulation : 30 %	ステップ4同様			TUNING UPまたは DOWNキーを押して オート受信すること。 チューニング中音声 ミュートがかかること。

IC DATA

IC501 : LC866420A

8-bit Microprocessor

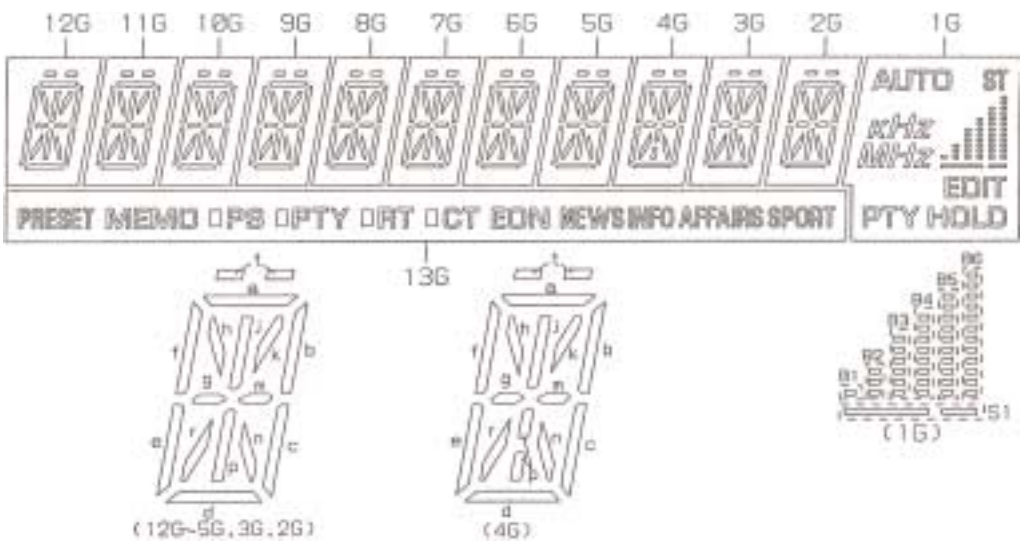


No.	Port	I/O	Name	Function	No.	Port	I/O	Name	Function
1	P17/PWM0	O	/MMUTE	Main mute	41	VDD2	I	VDD	+5V
2	P30	I	ROT1	Rotary encoder input	42	VP	I	VDDVPP	—24V
3	P31	I	ROT0	This input available for ROTSW=H	43	S16/PC0	O	P1	FL segment
4	P32	I	MODEL	Model 0	44	S17/PC1	O	P2	FL segment
5	P33	I	ROTSW	Rotary encoder yes(H) or no(L)	45	S18/PC2	O	P3	FL segment
6	P70/INT0	I			46	S19/PC3	O	P4	FL segment
7	/RES	I	/RESET	Reset	47	S20/PC4	O	P5	FL segment
8	/P74/XT1	I			48	S21/PC5	O	P6	FL segment
9	P75/XT2	I			49	S22/PC6	O	P7	FL segment
10	VSS1	I	GND	GND	50	S23/PC7	O	P8	FL segment
11	CF1		CF	6MHz	51	S24/PD0	O	P9	FL segment
12	CF2		CF	6MHz	52	S25/PD1	O	P10	FL segment
13	VDD1	I	VDD	+5V	53	S26/PD2	O	P11	FL segment
14	P80/AN0	ADI	KEYIN1	AD key input	54	S27/PD3	O	P12	FL segment
15	P81/AN1	ADI	KEYIN2	AD key input	55	S28/PD4	O	P13	FL segment
16	P82/AN3	ADI	KEYIN3	AD key input	56	S29/PD5	O	P14	FL segment
17	P83/AN3	ADI	METER	Signal level input	57	S30/PD6	O	P15	FL segment
18	P84/AN4	I			58	S31/PD7	O		
19	P85/AN5	I			59	S32/PE0	I/O		
20	P86/AN6	I			60	S33/PE1	I/O		
21	P87/AN7	ADI	VER	Version input	61	S34/PE2	I/O		
22	P71/INT1	I			62	S35/PE3	I/O		
23	P72/INT2	I	/POWERDOWN	Power down detect	63	S36/PE4	I/O		
24	P73/INT3	I	REM	REM input	64	S37/PE5	I/O		
25	S0/T0	O	13G	FL segment	65	P00	O		
26	S1/T1	O	12G	FL segment	66	P01	O		
27	S2/T2	O	11G	FL segment	67	P02	O		
28	S3/T3	O	10G	FL segment	68	P03	O		
29	S4/T4	O	9G	FL segment	69	P04	O	/TMUTE	Tuner mute
30	S5/T5	O	8G	FL segment	70	P05	O		
31	S6/T6	O	7G	FL segment	71	P06	O	RSYN	Block Synchronous Detect Output
32	S7/T7	O	6G	FL segment	72	P07	O	RCE	Chip Enable
33	S8/T8	O	5G	FL segment	73	VSS2	I	GND	GND
34	S9/T9	O	4G	FL segment	74	P10/SO0	O	RDI	Data Input
35	S10/T10	O	3G	FL segment	75	P11/SIO	SIN	RDO	Data Output
36	S11/T11	O	2G	FL segment	76	P12/SCK0	SCL	RCL	Clock Input
37	S12/T12	O	1G	FL segment	77	P13/SO1	I	PLLDAT-i n	Data input from PLL
38	S13/T13				78	P14/SI1	O	PLLDAT-ou t	Data output for PLL
39	S14/T14				79	P15/SCK1	O	PLL-CLK	PLL clock
40	S15/T15				80	P16/BUZ	O	PLLCE	PLLCE

KEY INPUT

Key Input		1	2	3	4	5	6	7
Resistance (Ω)		0k	1.8k	2.7k	3.9k	6.8k	13k	39k
Extent of AD		00H~15H	16H~3DH	3EH~64H	65H~8AH	8BH~B0H	B1H~D3H	D4H~F0H
Extent of Voltage (V)		0.00~0.41	0.41~1.19	1.19~1.95	1.95~2.70	2.70~3.44	3.44~4.12	4.12~4.69
Pin No.14	KEYIN1	P3	P4	P5	P6	P7	P8	
Pin No.15	KEYIN2	MODE	EDIT (KMODE)	MEMORY	PAGE	P1	P2	
Pin No.16	KEYIN3	FREQ/TEXT	PTY SEEK MODE	PTY SEEK START	EON	FM/AM (MW/LW)	TUNING DOWN	TUNING UP

■ DISPLAY DATA (13-BT-152GK)



PIN CONNECTION

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
CONNECTION	F1	NP	NP	P15	P14	P13	P12	P11	P10	P9	P8	P7	P6	P5	P4	P3	P2	P1

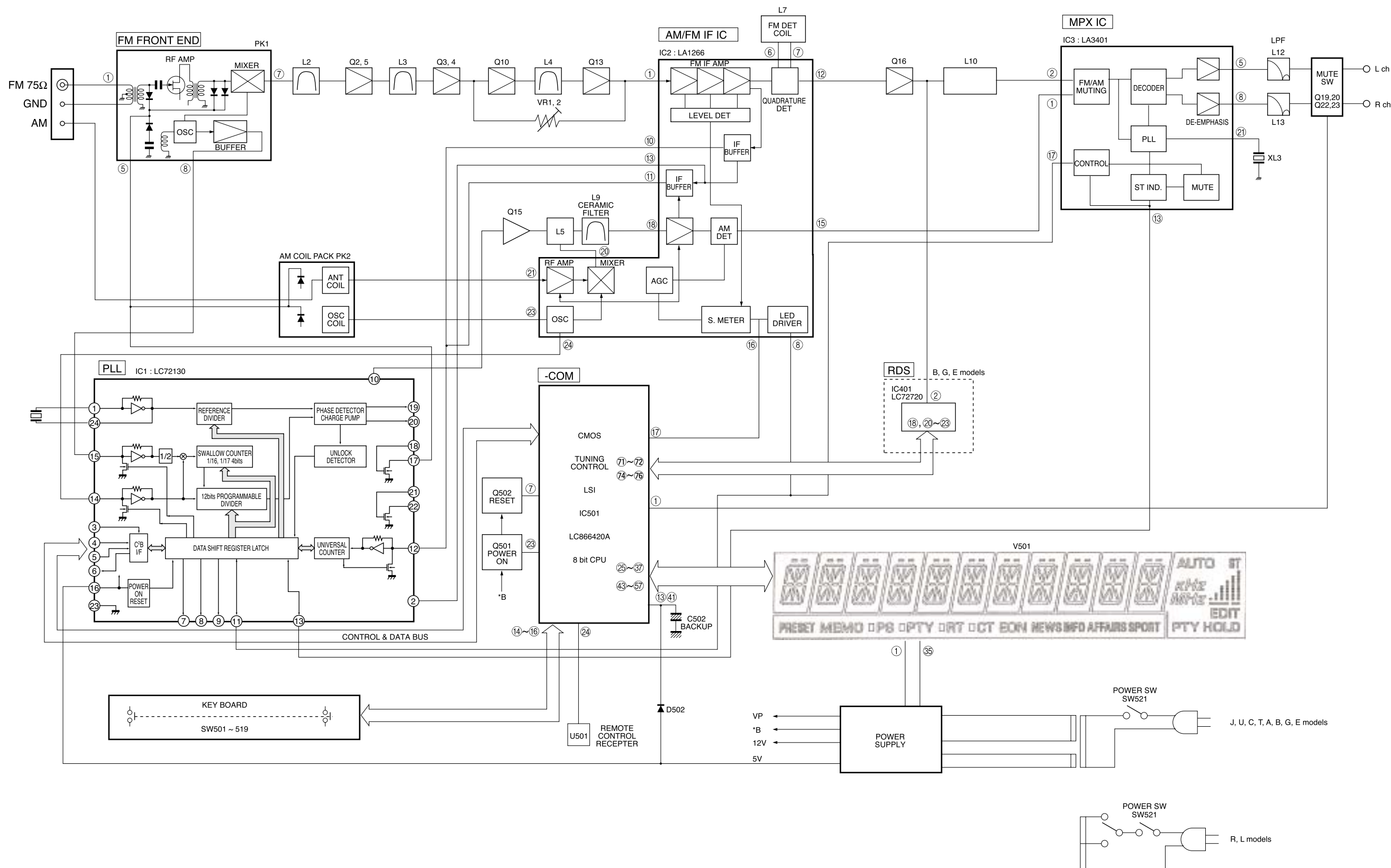
PIN NO.	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
CONNECTION	NC	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G	11G	12G	13G	NP	NP	F2

- NOTE:
- 1) F1, F2 Filament
 - 2) NP No pin
 - 3) NC No connection
 - 4) DL Datum line
 - 5) 1G~13G Grid

ANODE CONNECTION

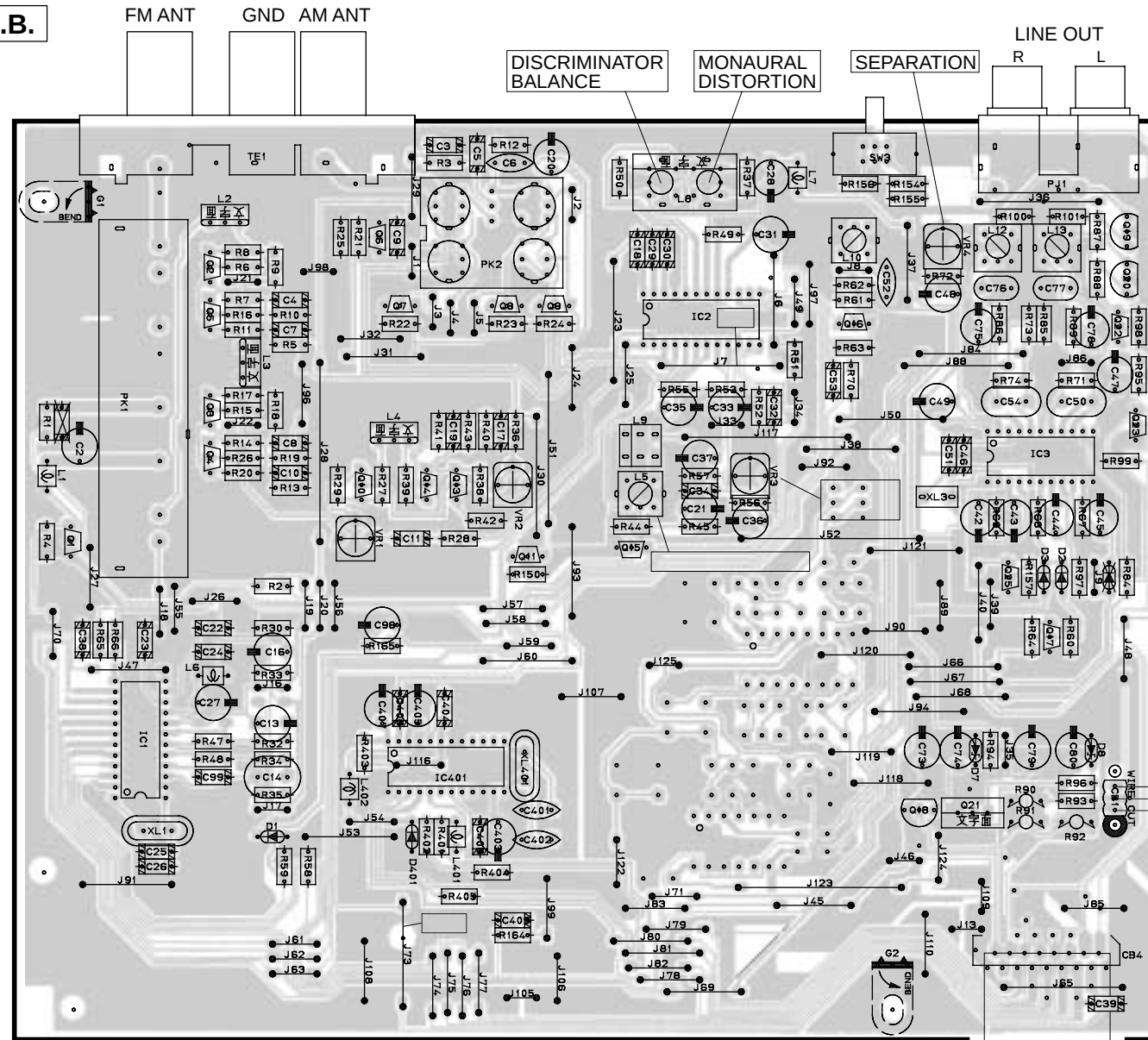
	13G	12G	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	PRESET	a	a	a	a	a	a	a	a	a	a	a	AUTO
P2	MEMO	b	b	b	b	b	b	b	b	b	b	b	kHz
P3	□ (PS)	c	c	c	c	c	c	c	c	c	c	c	MHz
P4	PS	d	d	d	d	d	d	d	d	d	d	d	ST
P5	□ (PTY)	e	e	e	e	e	e	e	e	e	e	e	B1
P6	PTY	f	f	f	f	f	f	f	f	f	f	f	B2
P7	□ (RT)	g	g	g	g	g	g	g	g	g	g	g	B3
P8	RT	h	h	h	h	h	h	h	h	h	h	h	B4
P9	□ (CT)	j	j	j	j	j	j	j	j	j	j	j	B5
P10	CT	k	k	k	k	k	k	k	k	k	k	k	B6
P11	EON	m	m	m	m	m	m	m	m	m	m	m	S1
P12	NEWS	n	n	n	n	n	n	n	n	n	n	n	EDIT
P13	INFO	p	p	p	p	p	p	p	p	p	p	p	PTY HOLD
P14	AFFAIRS	r	r	r	r	r	r	r	r	r	r	r	-
P15	SPORT	t	t	t	t	t	t	t	t	t	t	t	-

■ BLOCK DIAGRAM

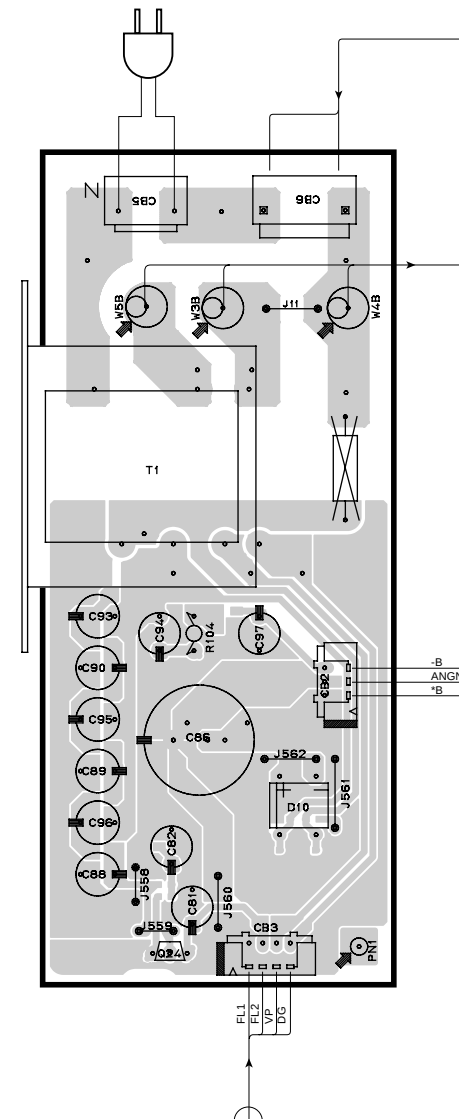


■ PRINTED CIRCUIT BOARD (Foil side) Lead Free Solder Used

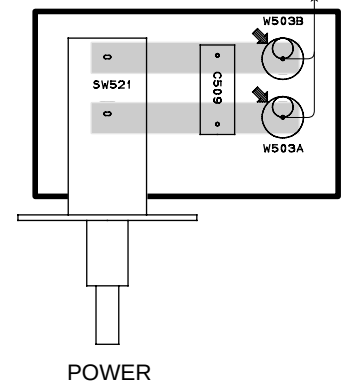
TUNER P.C.B.
(Side A)



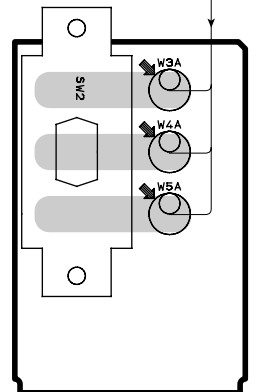
OPE P.C.B. (3) (Side A)



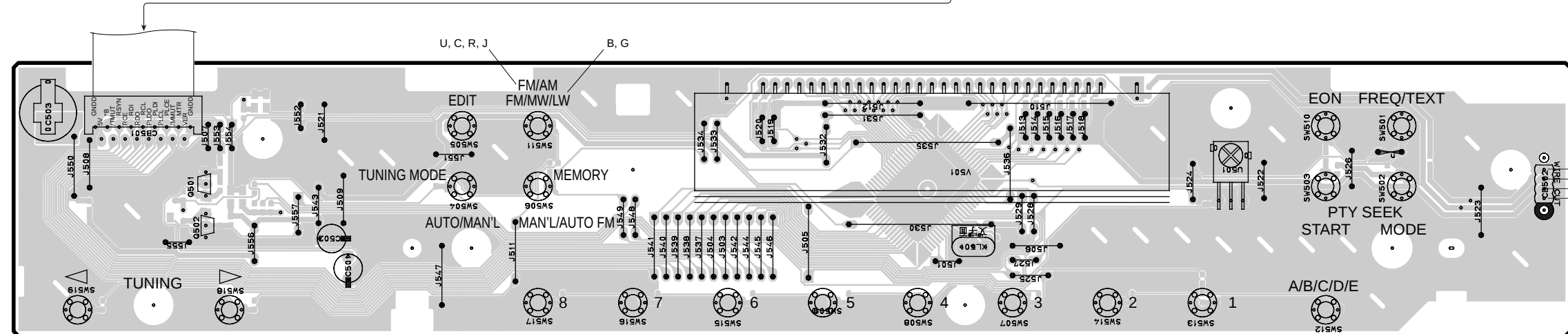
OPE P.C.B. (2) (Side A)



OPE P.C.B. (4) (Side A)
R, L Models

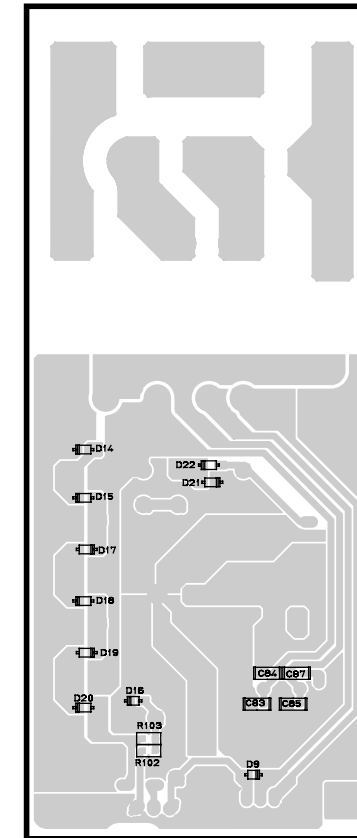


OPE P.C.B. (1) (Side A)

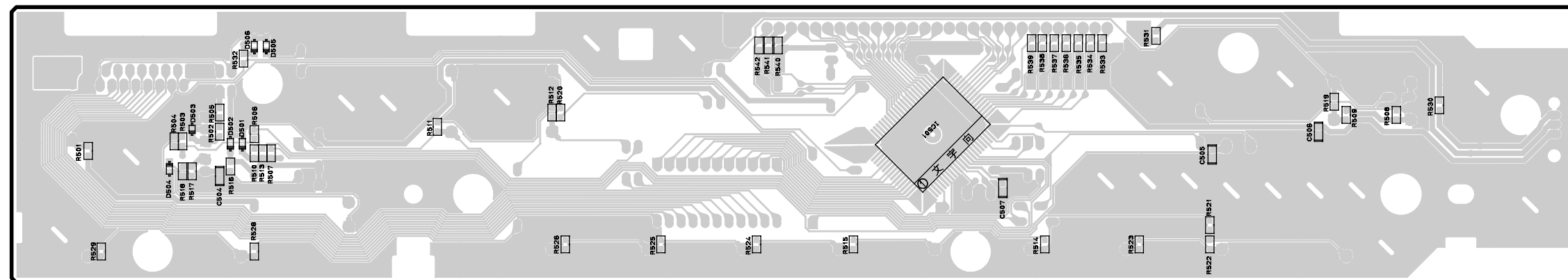


■ PRINTED CIRCUIT BOARD (Foil side) Lead Free Solder Used

OPE P.C.B. (3) (Side B)



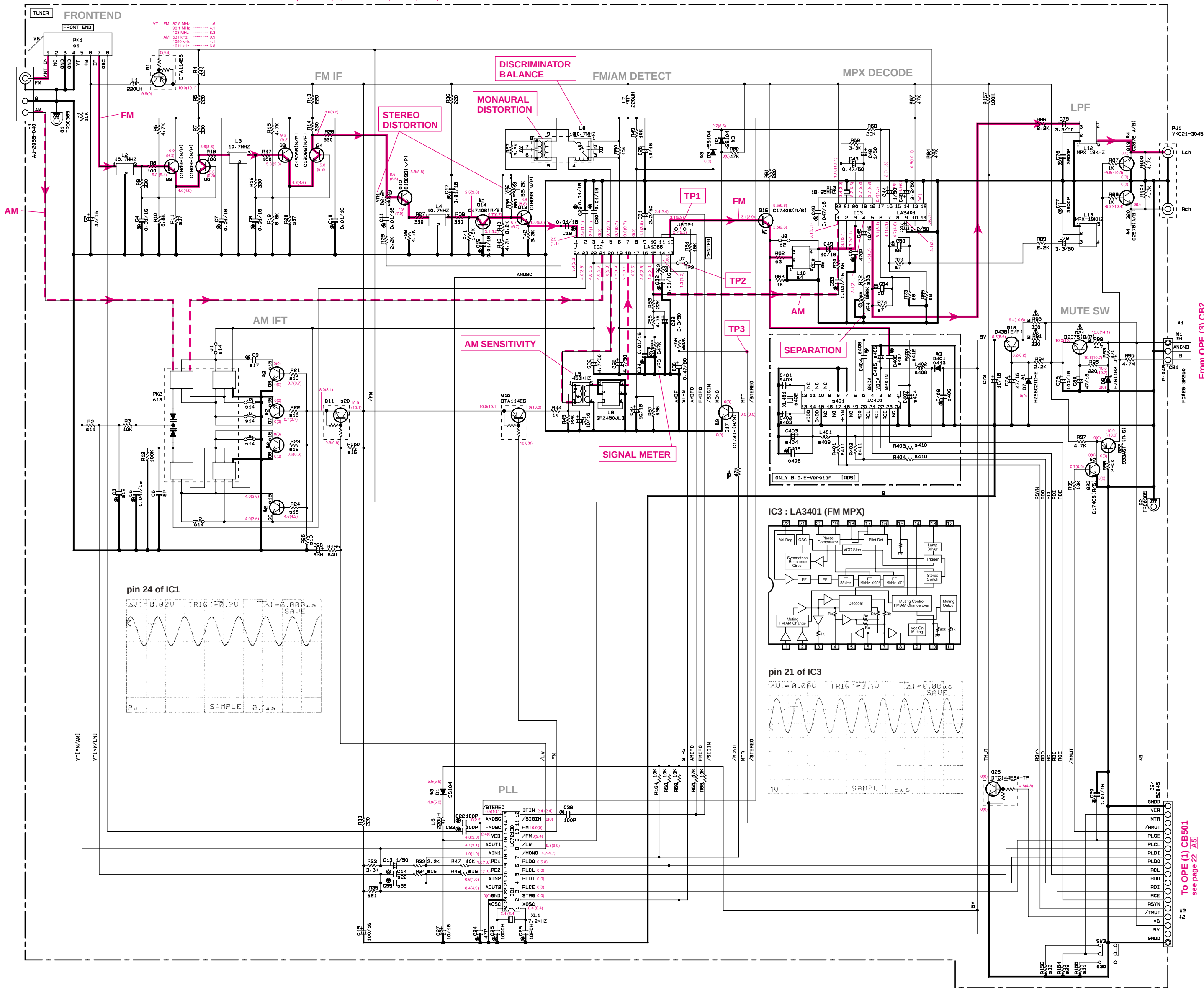
OPE P.C.B. (1) (Side B)



SCHEMATIC DIAGRAM (TUNER)

TX-497

Each voltage given here represents that in the FM (98.1 MHz, STEREO) reception mode but the one in the parentheses () is that in the AM (1080 kHz, MANL) reception mode.



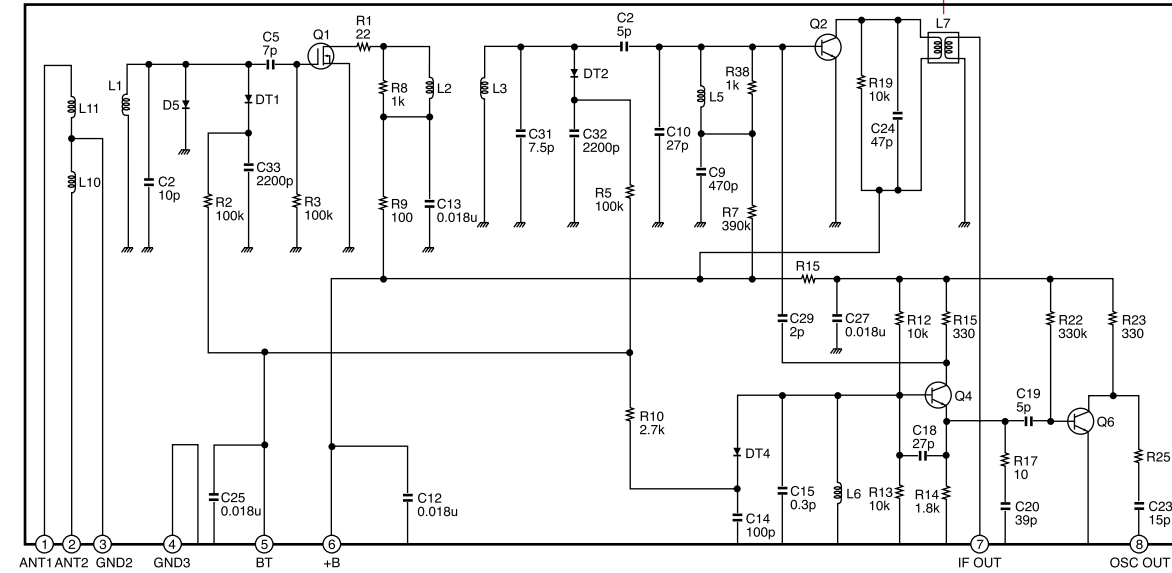
REMARKS	PARTS NAME	REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR	NO MARK	CARBON FILM RESISTOR (P=5)
⊗	TANTALUM CAPACITOR	⊗	CARBON FILM RESISTOR (P=10)
NO MARK	CERAMIC CAPACITOR	⊗	METAL OXIDE FILM RESISTOR
⊙	CERAMIC TUBULAR CAPACITOR	⊗	METAL FILM RESISTOR
⊙	POLYESTER FILM CAPACITOR	⊗	METAL PLATE RESISTOR
⊙	POLYSTYRENE FILM CAPACITOR	⊗	FIRE PROOF CARBON FILM RESISTOR
⊙	MICA CAPACITOR	⊗	CEMENT MOLDED RESISTOR
⊙	POLYPROPYLENE FILM CAPACITOR	⊗	SEMI-VARIABLE RESISTOR
⊙	SEMICONDUCTIVE CERAMIC CAPACITOR	⊗	CHIP RESISTOR

LOC	J	UC	R	TA	BGE	L
#1	PK1	ENV17297G1	ENV17297G1	ENV17297G1	ENV17297G1	ENV17297G1
#2	UB	VNB0000	VNB0000	VNB0000	VNB0000	VNB0000
#3	RE6	X	X	X	HF49847	HF49847
#4	L10	X	X	X	VF49880	VF49880
#5	CB8	X	X	X	VF49880	VF49880
#6	R70	HF49710	HF49710	HF49710	HF49710	HF49710
#7	R71	HF49710	HF49710	HF49710	HF49710	HF49710
#8	R72	HF49710	HF49710	HF49710	HF49710	HF49710
#9	R73	HF49710	HF49710	HF49710	HF49710	HF49710
#10	R74	HF49710	HF49710	HF49710	HF49710	HF49710
#11	R75	HF49710	HF49710	HF49710	HF49710	HF49710
#12	R76	HF49710	HF49710	HF49710	HF49710	HF49710
#13	R77	HF49710	HF49710	HF49710	HF49710	HF49710
#14	R78	HF49710	HF49710	HF49710	HF49710	HF49710
#15	R79	HF49710	HF49710	HF49710	HF49710	HF49710
#16	R80	HF49710	HF49710	HF49710	HF49710	HF49710
#17	R81	HF49710	HF49710	HF49710	HF49710	HF49710
#18	R82	HF49710	HF49710	HF49710	HF49710	HF49710
#19	R83	HF49710	HF49710	HF49710	HF49710	HF49710
#20	R84	HF49710	HF49710	HF49710	HF49710	HF49710
#21	R85	HF49710	HF49710	HF49710	HF49710	HF49710
#22	R86	HF49710	HF49710	HF49710	HF49710	HF49710
#23	R87	HF49710	HF49710	HF49710	HF49710	HF49710
#24	R88	HF49710	HF49710	HF49710	HF49710	HF49710
#25	R89	HF49710	HF49710	HF49710	HF49710	HF49710
#26	R90	HF49710	HF49710	HF49710	HF49710	HF49710
#27	R91	HF49710	HF49710	HF49710	HF49710	HF49710
#28	R92	HF49710	HF49710	HF49710	HF49710	HF49710
#29	R93	HF49710	HF49710	HF49710	HF49710	HF49710
#30	R94	HF49710	HF49710	HF49710	HF49710	HF49710
#31	R95	HF49710	HF49710	HF49710	HF49710	HF49710
#32	R96	HF49710	HF49710	HF49710	HF49710	HF49710
#33	R97	HF49710	HF49710	HF49710	HF49710	HF49710
#34	R98	HF49710	HF49710	HF49710	HF49710	HF49710
#35	R99	HF49710	HF49710	HF49710	HF49710	HF49710
#36	R100	HF49710	HF49710	HF49710	HF49710	HF49710
#37	R101	HF49710	HF49710	HF49710	HF49710	HF49710
#38	R102	HF49710	HF49710	HF49710	HF49710	HF49710
#39	R103	HF49710	HF49710	HF49710	HF49710	HF49710
#40	R104	HF49710	HF49710	HF49710	HF49710	HF49710
#41	R105	HF49710	HF49710	HF49710	HF49710	HF49710
#42	R106	HF49710	HF49710	HF49710	HF49710	HF49710
#43	R107	HF49710	HF49710	HF49710	HF49710	HF49710
#44	R108	HF49710	HF49710	HF49710	HF49710	HF49710
#45	R109	HF49710	HF49710	HF49710	HF49710	HF49710
#46	R110	HF49710	HF49710	HF49710	HF49710	HF49710
#47	R111	HF49710	HF49710	HF49710	HF49710	HF49710
#48	R112	HF49710	HF49710	HF49710	HF49710	HF49710
#49	R113	HF49710	HF49710	HF49710	HF49710	HF49710
#50	R114	HF49710	HF49710	HF49710	HF49710	HF49710
#51	R115	HF49710	HF49710	HF49710	HF49710	HF49710
#52	R116	HF49710	HF49710	HF49710	HF49710	HF49710
#53	R117	HF49710	HF49710	HF49710	HF49710	HF49710
#54	R118	HF49710	HF49710	HF49710	HF49710	HF49710
#55	R119	HF49710	HF49710	HF49710	HF49710	HF49710
#56	R120	HF49710	HF49710	HF49710	HF49710	HF49710
#57	R121	HF49710	HF49710	HF49710	HF49710	HF49710
#58	R122	HF49710	HF49710	HF49710	HF49710	HF49710
#59	R123	HF49710	HF49710	HF49710	HF49710	HF49710
#60	R124	HF49710	HF49710	HF49710	HF49710	HF49710
#61	R125	HF49710	HF49710	HF49710	HF49710	HF49710
#62	R126	HF49710	HF49710	HF49710	HF49710	HF49710
#63	R127	HF49710	HF49710	HF49710	HF49710	HF49710
#64	R128	HF49710	HF49710	HF49710	HF49710	HF49710
#65	R129	HF49710	HF49710	HF49710	HF49710	HF49710
#66	R130	HF49710	HF49710	HF49710	HF49710	HF49710
#67	R131	HF49710	HF49710	HF49710	HF49710	HF49710
#68	R132	HF49710	HF49710	HF49710	HF49710	HF49710
#69	R133	HF49710	HF49710	HF49710	HF49710	HF49710
#70	R134	HF49710	HF49710	HF49710	HF49710	HF49710
#71	R135	HF49710	HF49710	HF49710	HF49710	HF49710
#72	R136	HF49710	HF49710	HF49710	HF49710	HF49710
#73	R137	HF49710	HF49710	HF49710	HF49710	HF49710
#74	R138	HF49710	HF49710	HF49710	HF49710	HF49710
#75	R139	HF49710	HF49710	HF49710	HF49710	HF49710
#76	R140	HF49710	HF49710	HF49710	HF49710	HF49710
#77	R141	HF49710	HF49710	HF49710	HF49710	HF49710
#78	R142	HF49710	HF49710	HF49710	HF49710	HF49710
#79	R143	HF49710	HF49710	HF49710	HF49710	HF49710
#80	R144	HF49710	HF49710	HF49710	HF49710	HF49710
#81	R145	HF49710	HF49710	HF49710	HF49710	HF49710
#82	R146	HF49710	HF49710	HF49710	HF49710	HF49710
#83	R147	HF49710	HF49710	HF49710	HF49710	HF49710
#84	R148	HF49710	HF49710	HF49710	HF49710	HF49710
#85	R149	HF49710	HF49710	HF49710	HF49710	HF49710
#86	R150	HF49710	HF49710	HF49710	HF49710	HF49710
#87	R151	HF49710	HF49710	HF49710	HF49710	HF49710
#88	R152	HF49710	HF49710	HF49710	HF49710	HF49710
#89	R153	HF49710	HF49710	HF49710	HF49710	HF49710
#90	R154	HF49710	HF49710	HF49710	HF49710	HF49710
#91	R155	HF49710	HF49710	HF49710	HF49710	HF49710
#92	R156	HF49710	HF49710	HF49710	HF49710	HF49710
#93	R157	HF49710	HF49710	HF49710	HF49710	HF49710
#94	R158	HF49710	HF49710	HF49710	HF49710	HF49710
#95	R159	HF49710	HF49710	HF49710	HF49710	HF49710
#96	R160	HF49710	HF49710	HF49710	HF49710	HF49710
#97	R161	HF49710	HF49710	HF49710	HF49710	HF49710
#98	R162	HF49710	HF49710	HF49710	HF49710	HF49710
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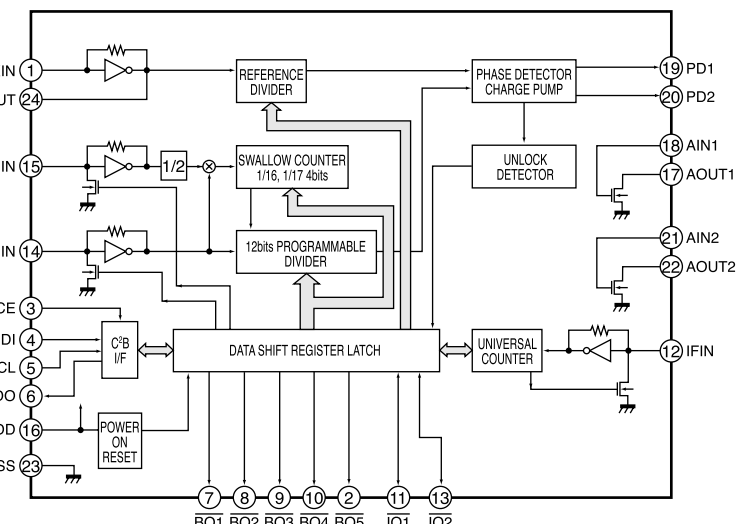
From OPE (3) CB2 see page 22 (F2)

To OPE (1) CB501 see page 22 (A5)

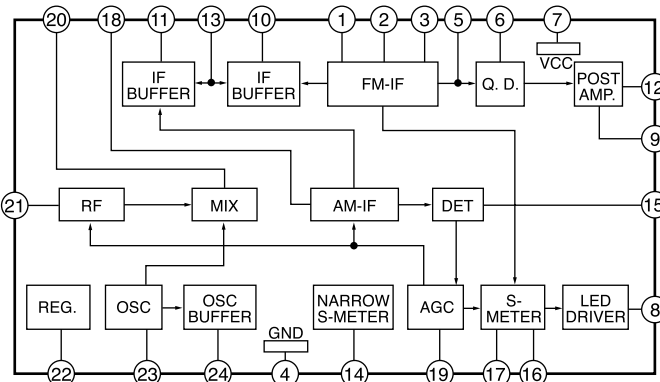
PK1 : ENV-17297G1 (VQ98760)



IC1 : LC72130 (PLL)



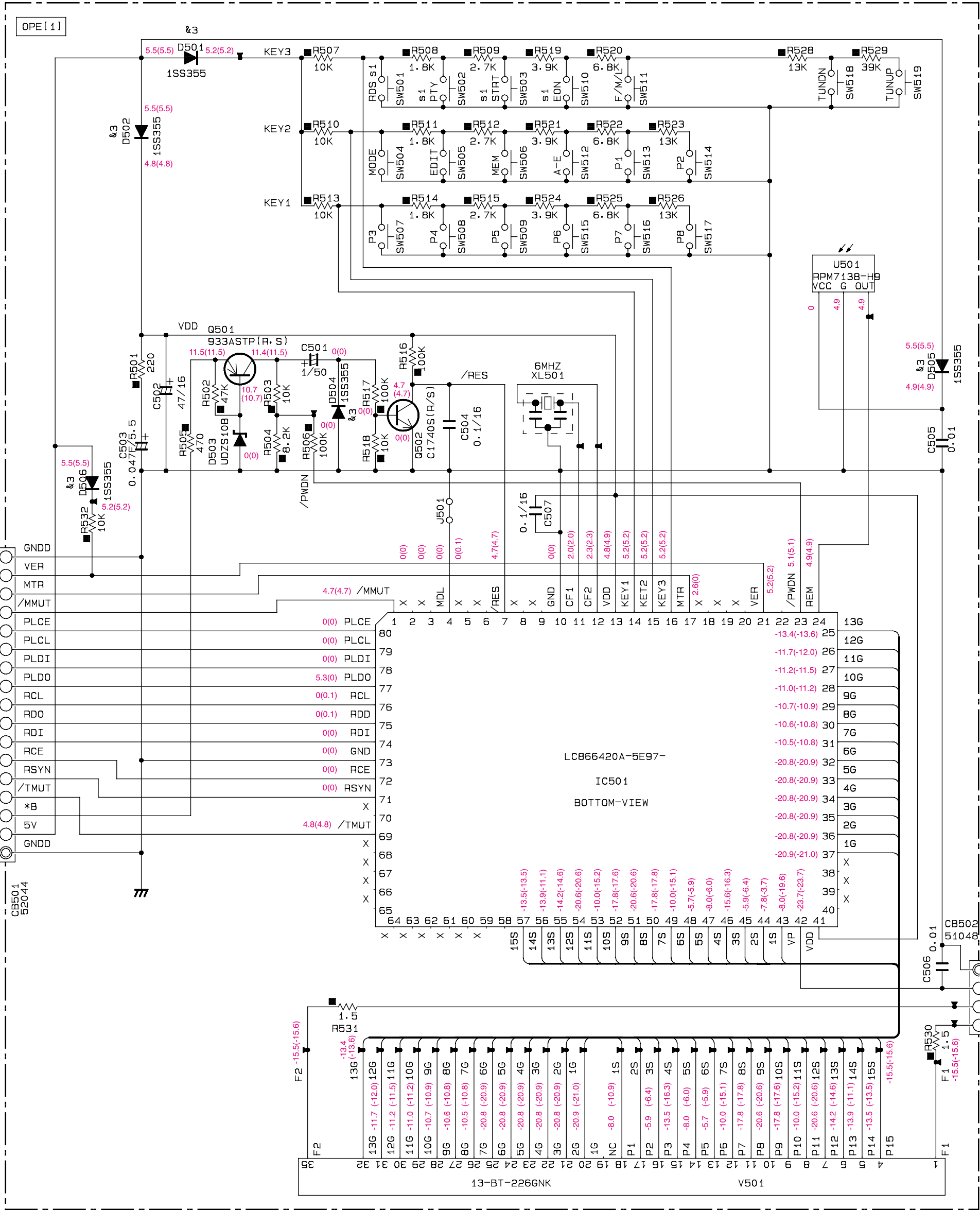
IC2 : LA1266 (AM/FM IF)



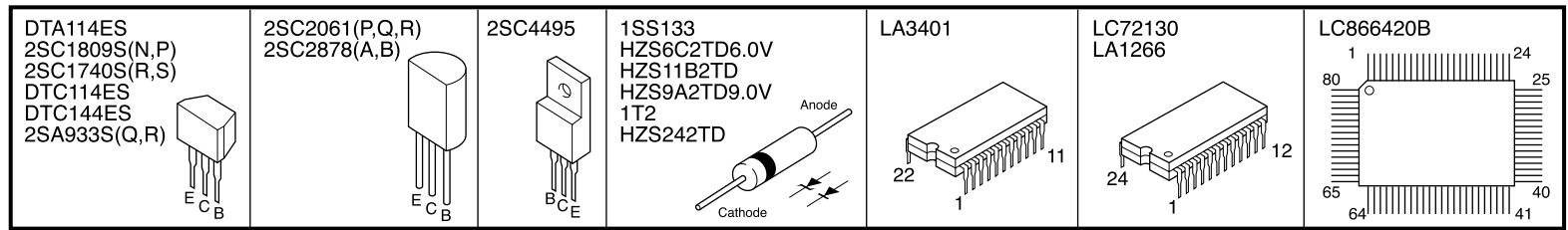
Mark	Reference Parts Number	Parts Name
#1	D7	HZS9A2TD9.0V
#2	D8	HZS9A2TD9.0V
#3	D9	HZS9A2TD9.0V
#4	D10	HZS9A2TD9.0V
#5	D11	HZS9A2TD9.0V
#6	D12	HZS9A2TD9.0V
#7	D13	HZS9A2TD9.0V
#8	D14	HZS9A2TD9.0V
#9	D15	HZS9A2TD9.0V
#10	D16	HZS9A2TD9.0V
#11	D17	HZS9A2TD9.0V
#12	D18	HZS9A2TD9.0V
#13	D19	HZS9A2TD9.0V
#14	D20	HZS9A2TD9.0V
#15	D21	HZS9A2TD9.0V
#16	D22	HZS9A2TD9.0V
#17	D23	HZS9A2TD9.0V
#18	D24	HZS9A2TD9.0V
#19	D25	HZS9A2TD9.0V
#20	D26	HZS9A2TD9.0V
#21	D27	HZS9A2TD9.0V
#22	D28	HZS9A2TD9.0V
#23	D29	HZS9A2TD9.0V
#24	D30	HZS9A2TD9.0V
#25	D31	HZS9A2TD9.0V
#26	D32	HZS9A2TD9.0V
#27	D33	HZS9A2TD9.0V
#28	D34	HZS9A2TD9.0V
#29	D35	HZS9A2TD9.0V
#30	D36	HZS9A2TD9.0V
#31	D37	HZS9A2TD9.0V
#32	D38	HZS9A2TD9.0V
#33	D39	HZS9A2TD9.0V
#34	D40	HZS9A2TD9.0V
#35	D41	HZS9A2TD9.0V
#36	D42	HZS9A2TD9.0V
#37	D43	HZS9A2TD9.0V
#38	D44	HZS9A2TD9.0V
#39	D45	HZS9A2TD9.0V
#40	D46	HZS9A2TD9.0V
#41	D47	HZS9A2TD9.0V
#42	D48	HZS9A2TD9.0V
#43	D49	HZS9A2TD9.0V
#44	D50	HZS9A2TD9.0V
#45	D51	HZS9A2TD9.0V
#46	D52	HZS9A2TD9.0V
#47	D53	HZS9A2TD9.0V
#48	D54	HZS9A2TD9.0V
#49	D55	HZS9A2TD9.0V
#50	D56	HZS9A2TD9.0V
#51	D57	HZS9A2TD9.0V
#52	D58	HZS9A2TD9.0V
#53	D59	HZS9A2TD9.0V
#54	D60	HZS9A2TD9.0V
#55	D61	HZS9A2TD9.0V
#56	D62	HZS9A2TD9.0V
#57	D63	HZS9A2TD9.0V
#58	D64	HZS9A2TD9.0V
#59	D65	HZS9A2TD9.0V
#60	D66	HZS9A2TD9.0V
#61	D67	HZS9A2TD9.0V
#62	D68	HZS9A2TD9.0V
#63	D69	HZS9A2TD9.0V
#64	D70	HZS9A2TD9.0V
#65	D71	HZS9A2TD9.0V
#66	D72	HZS9A2TD9.0V
#67	D73	HZS9A2TD9.0V
#68	D74	HZS9A2TD9.0V
#69	D75	HZS9A2TD9.0V
#70	D76	HZS9A2TD9.0V
#71	D77	HZS9A2TD9.0V
#72	D78	HZS9A2TD9.0V
#73	D79	HZS9A2TD9.0V
#74	D80	HZS9A2TD9.0V
#75	D81	HZS9A2TD9.0V
#76	D82	HZS9A2TD9.0V
#77	D83	HZS9A2TD9.0V
#78	D84	HZS9A2TD9.0V
#79	D85	HZS9A2TD9.0V
#80	D86	HZS9A2TD9.0V
#81	D87	HZS9A2TD9.0V
#82	D88	HZS9A2TD9.0V
#83	D89	HZS9A2TD9.0V
#84	D90	HZS9A2TD9.0V
#85	D91	HZS9A2TD9.0V
#86	D92	HZS9A2TD9.0V
#87	D93	HZS9A2TD9.0V
#88	D94	HZS9A2TD9.0V
#89	D95	HZS9A2TD9.0V
#90	D96	HZS9A2TD9.0V
#91	D97	HZS9A2TD9.0V
#92	D98	HZS9A2TD9.0V
#93	D99	HZS9A2TD9.0V
#94	D100	HZS9A2TD9.0V
#95	D101	HZS9A2TD9.0

SCHEMATIC DIAGRAM (OPERATION)

TOTUNER
CB4
see page 21



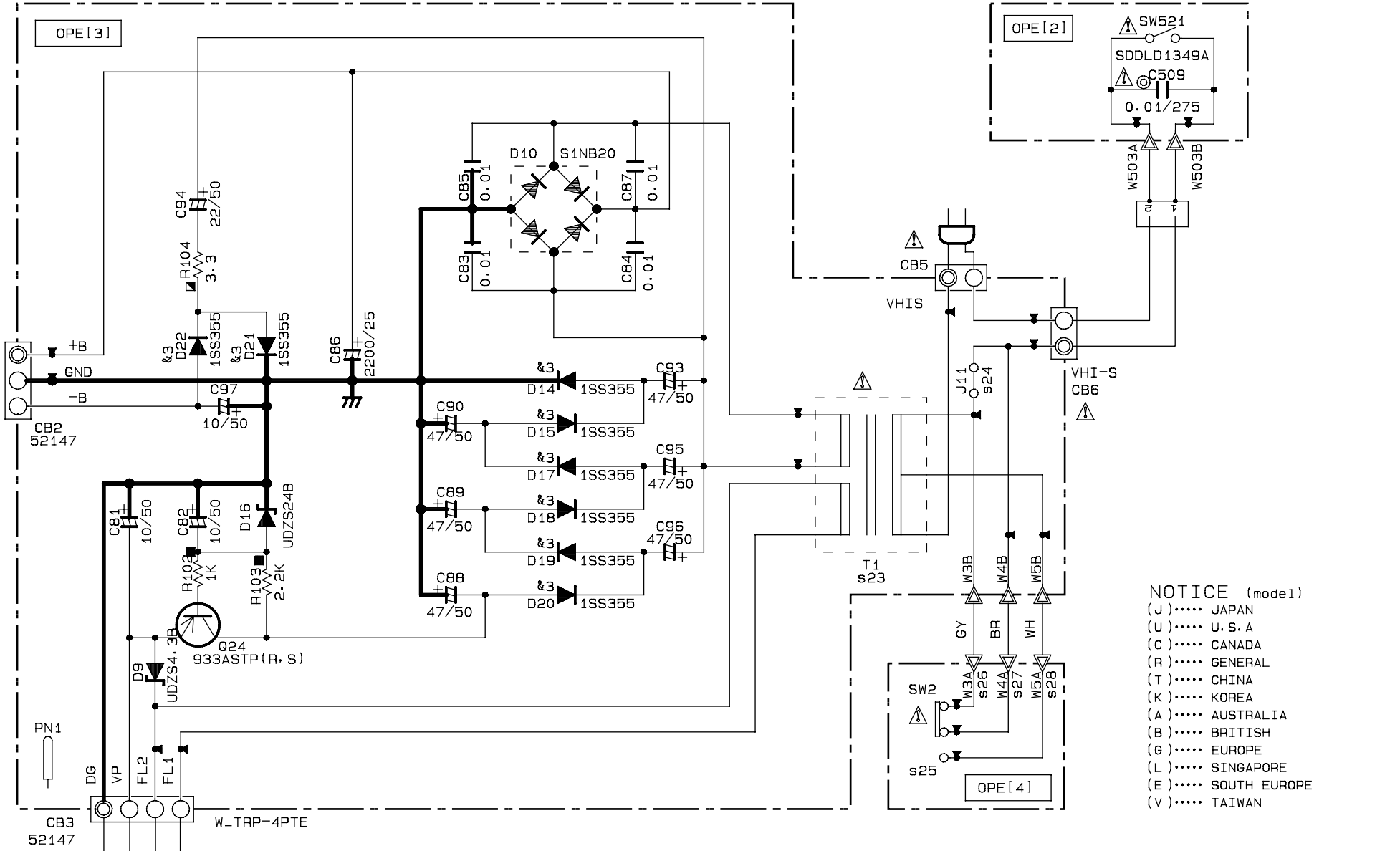
PIN CONNECTION DIAGRAM OF TRANSISTORS, DIODES AND ICs.



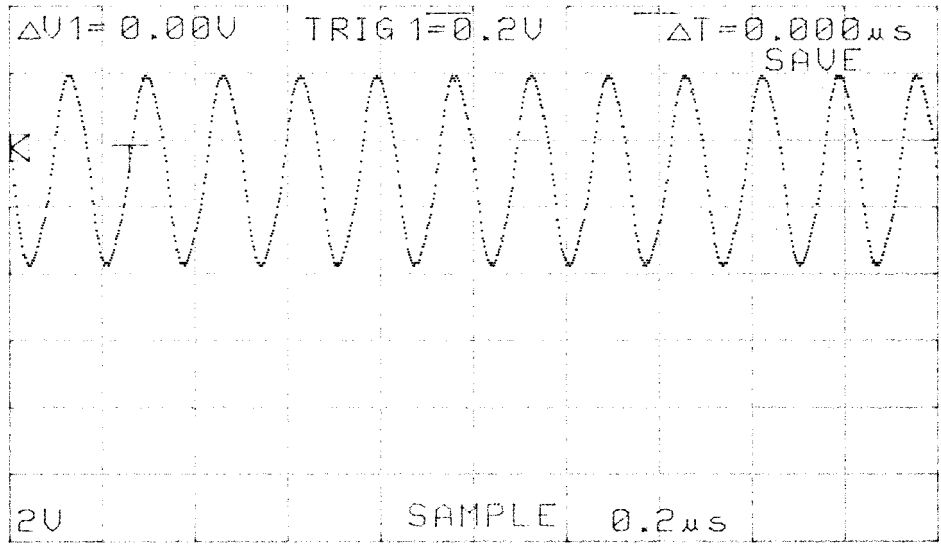
- ★ All voltage are measured with a 10MΩ/V DC electric volt meter.
- ★ Components having special characteristics are marked and must be replaced with parts having specifications equal to those originally installed.
- ★ Schematic diagram is subject to change without notice.

- 電圧は、内部抵抗10MΩの電圧計で測定したものです。
- 印のある部品は、安全性確保部品を示しています。部品の交換が必要な場合、パーツリストに記載されている部品を使用してください。
- 本回路図は標準回路図です。改良のため予告なく変更することがございます。

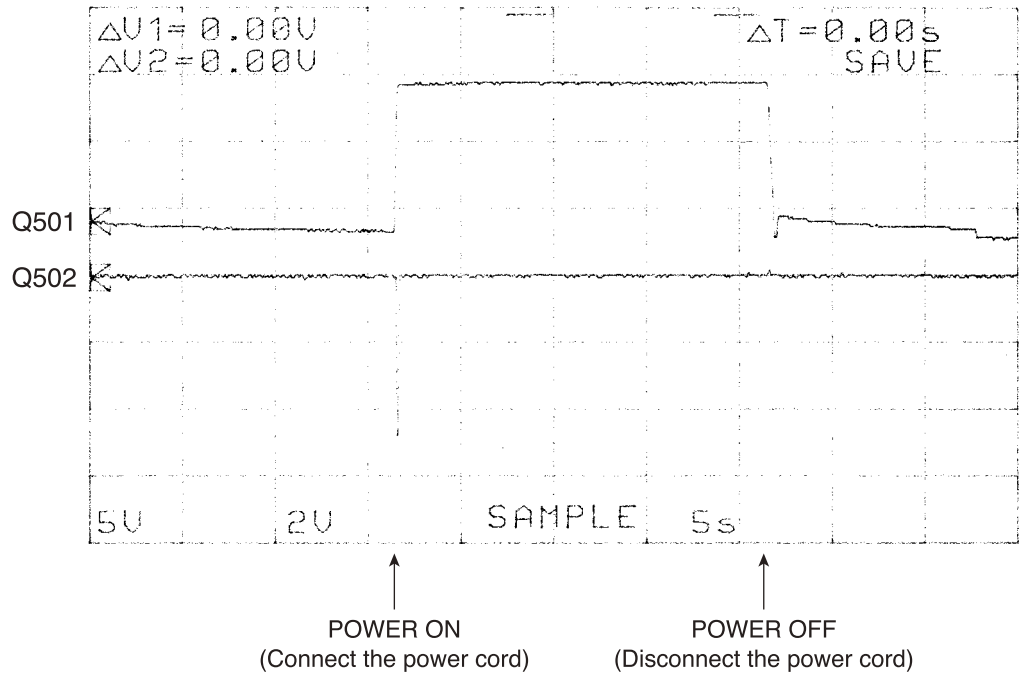
TOTUNER
CB1
see page 21



pin 12 of IC501



emitter of Q501 and collector of Q502



NOTICE (model)
(J)..... JAPAN
(U)..... U.S.A
(C)..... CANADA
(R)..... GENERAL
(T)..... CHINA
(K)..... KOREA
(A)..... AUSTRALIA
(B)..... BRITISH
(G)..... EUROPE
(L)..... SINGAPORE
(E)..... SOUTH EUROPE
(V)..... TAIWAN

RESISTOR

REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
	CARBON FILM RESISTOR (P=10)
	METAL OXIDE FILM RESISTOR
	METAL FILM RESISTOR
	METAL PLATE RESISTOR
	FIRE PROOF CARBON FILM RESISTOR
	CEMENT MOLDED RESISTOR
	SEMI VARIABLE RESISTOR
	CHIP RESISTOR

CAPACITOR

REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
	TANTALUM CAPACITOR
NO MARK	CERAMIC CAPACITOR
	CERAMIC TUBULAR CAPACITOR
	POLYESTER FILM CAPACITOR
	POLYSTYRENE FILM CAPACITOR
	MICA CAPACITOR
	POLYPROPYLENE FILM CAPACITOR
	SEMICONDUCTIVE CERAMIC CAPACITOR

Interchangeable Parts at Manufacture-Stage

Mark	Reference Parts Number	Parts Name
&1		
&2		
&3	D501.502.504-506 D14.15.17-22	1SS355 MA111 KDS160-RTK/P

Destination	Part List
sXX	LOC J UC RL TA BGE
s1	SW501 X X X X WD48310
SW510	
SW502	
SW503	
s23	T1 XN909A0 XN910A0 X7302A0 X7302A0 X7302A0
s24	J11 VN50000 VN50000 X VN50000 VN50000
s25	SW2 X X VE96260 X X
s26	W3B X X MH08025 X X
W3A	
s27	W4A X X MH01025 X X
W4B	
s28	W5A X X MH09025 X X
W5B	

PARTS LIST

■ ELECTRICAL PARTS

■ WARNING

● Components having special characteristics are marked $\triangle$ and must be replaced with parts having specifications equal to those originally installed.

● $\triangle$ 印のある部品は、安全性確保部品を示しています。部品の交換が必要な場合、パーツリストに記載されている部品を使用してください。

ABBREVIATIONS IN THIS LIST ARE AS FOLLOWS :

C.A.EL.CHP	: CHIP ALUMI. ELECTROLYTIC CAP	L.DTCT	: LIGHT DETECTING MODULE
C.CE	: CERAMIC CAP	L.EMIT	: LIGHT EMITTING MODULE
C.CE.ARRAY	: CERAMIC CAP ARRAY	LED.DSPLY	: LED DISPLAY
C.CE.CHP	: CHIP CERAMIC CAP	LED.INFRD	: LED, INFRARED
C.CE.ML	: MULTILAYER CERAMIC CAP	MODUL.RF	: MODULATOR, RF
C.CE.M.CHP	: CHIP MULTILAYER CERAMIC CAP	PHOT.CPL	: PHOTO COUPLER
C.CE.SAFTY	: RECOGNIZED CERAMIC CAP	PHOT.INTR	: PHOTO INTERRUPTER
C.CE.TUBLR	: CERAMIC TUBULAR CAP	PHOT.RFLCT	: PHOTO REFLECTOR
C.CE.SMI	: SEMI CONDUCTIVE CERAMIC CAP	PIN.TEST	: PIN, TEST POINT
C.EL	: ELECTROLYTIC CAP	PLST.RIVET	: PLASTIC RIVET
C.MICA	: MICA CAP	R.ARRAY	: RESISTOR ARRAY
C.ML.FLM	: MULTILAYER FILM CAP	R.CAR	: CARBON RESISTOR
C.MP	: METALLIZED PAPER CAP	R.CAR.CHP	: CHIP RESISTOR
C.MYLAR	: MYLAR FILM CAP	R.CAR.FP	: FLAME PROOF CARBON RESISTOR
C.MYLAR.ML	: MULTILAYER MYLAR FILM CAP	R.FUS	: FUSABLE RESISTOR
C.PAPER	: PAPER CAPACITOR	R.MTL.CHP	: CHIP METAL FILM RESISTOR
C.PLS	: POLYSTYRENE FILM CAP	R.MTL.FLM	: METAL FILM RESISTOR
C.POL	: POLYESTER FILM CAP	R.MTL.OXD	: METAL OXIDE FILM RESISTOR
C.POLY	: POLYETHYLENE FILM CAP	R.MTL.PLAT	: METAL PLATE RESISTOR
C.PP	: POLYPROPYLENE FILM CAP	RSNR.CE	: CERAMIC RESONATOR
C.TNTL	: TANTALUM CAP	RSNR.CRYS	: CRYSTAL RESONATOR
C.TNTL.CHP	: CHIP TANTALUM CAP	R.TW.CEM	: TWIN CEMENT FIXED RESISTOR
C.TRIM	: TRIMMER CAP	R.WW	: WIRE WOUND RESISTOR
CN	: CONNECTOR	SCR.BND.HD	: BIND HEAD B-TITE SCREW
CN.BS.PIN	: CONNECTOR, BASE PIN	SCR.BW.HD	: BW HEAD TAPPING SCREW
CN.CANNON	: CONNECTOR, CANNON	SCR.CUP	: CUP TITE SCREW
CN.DIN	: CONNECTOR, DIN	SCR.TERM	: SCREW TERMINAL
CN.FLAT	: CONNECTOR, FLAT CABLE	SCR.TR	: SCREW, TRANSISTOR
CN.POST	: CONNECTOR, BASE POST	SUPRT.PCB	: SUPPORT, P.C.B.
COIL.MX.AM	: COIL, AM MIX	SURG.PRTCT	: SURGE PROTECTOR
COIL.AT.FM	: COIL, FM ANTENNA	SW.TACT	: TACT SWITCH
COIL.DT.FM	: COIL, FM DETECT	SW.LEAF	: LEAF SWITCH
COIL.MX.FM	: COIL, FM MIX	SW.LEVER	: LEVER SWITCH
COIL.OUTPT	: OUTPUT COIL	SW.MICRO	: MICRO SWITCH
DIOD.ARRAY	: DIODE ARRAY	SW.PUSH	: PUSH SWITCH
DIODE.BRG	: DIODE BRIDGE	SW.RT.ENC	: ROTARY ENCODER
DIODE.CHP	: CHIP DIODE	SW.RT.MTR	: ROTARY SWITCH WITH MOTOR
DIODE.SHOT	: SCHOTTKY BARRIER DIODE	SW.RT	: ROTARY SWITCH
DIODE.VAR	: VARACTOR DIODE	SW.SLIDE	: SLIDE SWITCH
DIOD.Z.CHP	: CHIP ZENER DIODE	TERM.SP	: SPEAKER TERMINAL
DIODE.ZENR	: ZENER DIODE	TERM.WRAP	: WRAPPING TERMINAL
DSCR.CE	: CERAMIC DISCRIMINATOR	THRMST.CHP	: CHIP THERMISTOR
FER.BEAD	: FERRITE BEADS	TR.CHP	: CHIP TRANSISTOR
FER.CORE	: FERRITE CORE	TR.DGT	: DIGITAL TRANSISTOR
FET.CHP	: CHIP FET	TR.DGT.CHP	: CHIP DIGITAL TRANSISTOR
FL.DSPLY	: FLUORESCENT DISPLAY	TRANS	: TRANSFORMER
FLTR.CE	: CERAMIC FILTER	TRANS.PULS	: PULSE TRANSFORMER
FLTR.COMB	: COMB FILTER MODULE	TRANS.PWR	: POWER TRANSFORMER ASS'y
FLTR.LC.RF	: LC FILTER ,EMI	TUNER.AM	: TUNER PACK, AM
GND.MTL	: GROUND PLATE	TUNER.FM	: TUNER PACK, FM
GND.TERM	: GROUND TERMINAL	TUNER.PK	: FRONT-END TUNER PACK
HOLDER.FUS	: FUSE HOLDER	VR	: ROTARY POTENTIOMETER
IC.PRTCT	: IC PROTECTOR	VR.MTR	: POTENTIOMETER WITH MOTOR
JUMPER.CN	: JUMPER CONNECTOR	VR.SW	: POTENTIOMETER WITH ROTARY SW
JUMPER.TST	: JUMPER, TEST POINT	VR.SLIDE	: SLIDE POTENTIOMETER
		VR.TRIM	: TRIMMER POTENTIOMETER

P.C.B. TUNER

	Ref. No.	Part No.	Description			Remarks	Markets	部品名	Rank
*		WG010800	P.C.B.	TUNER			J	P C B チューナー	
*		WG010900	P.C.B.	TUNER			UC	P C B チューナー	
*		WG011000	P.C.B.	TUNER			R	P C B チューナー	
*		WG011100	P.C.B.	TUNER			TA	P C B チューナー	
*		WG011200	P.C.B.	TUNER			BGE	P C B チューナー	
*		WG011300	P.C.B.	TUNER			L	P C B チューナー	
	CB4	VM973500	CN.BS.PIN	17P				F F C コネクター	01
	C2	UR837470	C.EL	47uF	16V		JUCRTAL	ケミコン	01
	C3	VF467300	C.CE.TUBLR	0.01uF	16V			円筒セラコン	01
	C4	VF467300	C.CE.TUBLR	0.01uF	16V			円筒セラコン	01
	C5	VJ599000	C.CE.TUBLR	0.047uF	16V			円筒セラコン	01
*	C6	FG650800	C.CE	8pF	50V			セラコン	
	C7	VF467300	C.CE.TUBLR	0.01uF	16V			円筒セラコン	01
	C8	VF467300	C.CE.TUBLR	0.01uF	16V			円筒セラコン	01
	C9	VJ599000	C.CE.TUBLR	0.047uF	16V		BGE	円筒セラコン	01
	C10-11	VF467300	C.CE.TUBLR	0.01uF	16V			円筒セラコン	01
	C13	UR866100	C.EL	1uF	50V			ケミコン01	
	C14	UA656100	C.MYLAR	1uF	50V J		BGE	マイラーコン	02
	C16	UR838100	C.EL	100uF	16V			ケミコン	01
	C17-19	VF467300	C.CE.TUBLR	0.01uF	16V			円筒セラコン	01
	C20	UR866470	C.EL	4.7uF	50V			ケミコン	01
	C21	UR837100	C.EL	10uF	16V			ケミコン	01
	C22-23	VF466800	C.CE.TUBLR	100pF	50V			円筒セラコン	01
	C24	VF466700	C.CE.TUBLR	47pF	50V			円筒セラコン	01
*	C25-26	VG273300	C.CE.TUBLR	10pF	50V			円筒セラコン	
	C27-28	UR837100	C.EL	10uF	16V			ケミコン	01
	C29	VF467300	C.CE.TUBLR	0.01uF	16V			円筒セラコン	01
	C30	VF467300	C.CE.TUBLR	0.01uF	16V			円筒セラコン	01
	C31	UR866220	C.EL	2.2uF	50V			ケミコン	01
	C32	VF467300	C.CE.TUBLR	0.01uF	16V			円筒セラコン	01
	C33	UR866330	C.EL	3.3uF	50V			ケミコン	01
	C34	VF467300	C.CE.TUBLR	0.01uF	16V			円筒セラコン	01
	C35	UR866470	C.EL	4.7uF	50V			ケミコン	01
	C36	UR865470	C.EL	0.47uF	50V			ケミコン	01
	C37	UR837100	C.EL	10uF	16V			ケミコン	01
	C38	VF466800	C.CE.TUBLR	100pF	50V			円筒セラコン	01
	C39	VF467300	C.CE.TUBLR	0.01uF	16V			円筒セラコン	01
	C42	UR866100	C.EL	1uF	50V			ケミコン	01
	C43	UR865470	C.EL	0.47uF	50V			ケミコン	01
	C44	UR866100	C.EL	1uF	50V			ケミコン	01
	C45	UR866220	C.EL	2.2uF	50V			ケミコン	01
	C46	VJ599000	C.CE.TUBLR	0.047uF	16V			円筒セラコン	01
	C47	UR866220	C.EL	2.2uF	50V			ケミコン	01
	C48-49	UR837100	C.EL	10uF	16V			ケミコン	01
	C50	UA652270	C.MYLAR	270pF	50V J		BGE	マイラーコン	
	C50	UA652510	C.MYLAR	510pF	50V J		TAL	マイラーコン	01
	C50	UA652560	C.MYLAR	560pF	50V J		J	マイラーコン	02
	C50	UA652820	C.MYLAR	820pF	50V J		UCR	マイラーコン	01
	C51	VF466900	C.CE.TUBLR	470pF	50V			円筒セラコン	01
	C52	VA777400	C.CE	120pF	50V		TABGE	セラコン	01
	C53	VJ599000	C.CE.TUBLR	0.047uF	16V			円筒セラコン	01
	C54	UA652270	C.MYLAR	270pF	50V J		BGE	マイラーコン	
	C54	UA652510	C.MYLAR	510pF	50V J		TAL	マイラーコン	01

* New Parts (新規部品)

P.C.B. TUNER

Ref. No.	Part No.	Description	Remarks	Markets	部品名	Rank
C54	UA652560	C.MYLAR	560pF 50V J	J	マイラーコン	02
C54	UA652820	C.MYLAR	820pF 50V J	UCR	マイラーコン	01
C73	UR837100	C.EL	10uF 16V		ケミコン	01
C74	UR837470	C.EL	47uF 16V		ケミコン	01
C75	UR866330	C.EL	3.3uF 50V		ケミコン	01
C76-77	UA653390	C.MYLAR	3900pF 50V J		マイラーコン	01
C78	UR866330	C.EL	3.3uF 50V		ケミコン	01
C79	UR838100	C.EL	100uF 16V		ケミコン	01
C80	UR837470	C.EL	47uF 16V		ケミコン	01
C98	UR866220	C.EL	2.2uF 50V	BGE	ケミコン	01
C99	VF467100	C.CE.TUBLR	4700pF 16V	BGE	円筒セラコン	01
C401-402	VA761100	C.CE	27pF 50V	BGE	セラコン	01
C403	UR837100	C.EL	10uF 16V	BGE	ケミコン	01
C404	VG278800	C.CE.TUBLR	560pF 50V	BGE	円筒セラコン	01
C405	UR837470	C.EL	47uF 16V	BGE	ケミコン	01
C406	VG278600	C.CE.TUBLR	330pF 50V	BGE	円筒セラコン	01
C407	UR837100	C.EL	10uF 16V	BGE	ケミコン	01
C408-409	VF467300	C.CE.TUBLR	0.01uF 16V	BGE	円筒セラコン	01
D1	VD631600	DIODE	1SS133,176		ダイオード	01
D2	VD631600	DIODE	1SS133,176		ダイオード	01
D3	VD631600	DIODE	1SS133,176		ダイオード	01
D7	VM974500	DIODE.ZENR	HZS6C2TD 6.0V		ツェナーダイオード	01
D8	VM975300	DIODE.ZENR	HZS11B2TD 11V		ツェナーダイオード	01
D401	VD631600	DIODE	1SS133,176	BGE	ダイオード	01
IC1	XQ360A00	IC	LC72130		I C	
IC2	XB760A00	IC	LA1266		I C	05
IC3	iG158100	IC	LA3401		I C	05
IC401	XT152A00	IC	LC72720	BGE	I C	11
L1	Vi546100	COIL	220uH		コイル	01
* L2	WG083800	FLTR.CE	10.7MHz		セラミックフィルター	
* L3	WG083800	FLTR.CE	10.7MHz		セラミックフィルター	
* L4	WG083800	FLTR.CE	10.7MHz		セラミックフィルター	
L5	VR895700	COIL.IF	450KHz		I F T	01
L6	Vi546100	COIL	220uH		コイル	01
L7	Vi546100	COIL	220uH		コイル	01
L8	VC218600	COIL.DT.FM	10.7MHz		F M検波コイル	03
L9	VC219000	FLTR.CE	SFZ450JL3		セラミックフィルター	02
L10	VT486800	COIL	XYA2	TABGEL	アンチバーデーフィルタ	02
L12-13	VQ138200	FLTR.LC	19KHz		M P X フィルター	02
L401-402	Vi546100	COIL	220uH	BGE	コイル	01
PJ1	VM725600	JACK.PIN	2P		ピンジャック	02
PK1	VQ987600	TUNER.PK	ENV-17297G1	TABGEL	フロントエンドパック	08
PK1	VY738700	TUNER.PK	ENV-172C2G1	J	フロントエンドパック	09
PK1	VY738800	TUNER.PK	ENV-172C8G1	UCR	フロントエンドパック	09
PK2	VU333600	COIL.RF.AM	940536046B	BGE	A M R F コイルパック	
PK2	VU333700	COIL.RF.AM	940536051A	JUCRTAL	A M R F コイルパック	05
Q1	VD678500	TR.DGT	DTA114ES		デジタルトランジスタ	01
Q2	VR497000	TR	2SC1809S N,P		トランジスタ	01
Q3	VR497000	TR	2SC1809S N,P		トランジスタ	01
Q4	VR497000	TR	2SC1809S N,P		トランジスタ	01
Q5	VR497000	TR	2SC1809S N,P		トランジスタ	01
Q6	iC174020	TR	2SC1740S QRS	BGE	トランジスタ	01
Q7	iC174020	TR	2SC1740S QRS	BGE	トランジスタ	01

* New Parts (新規部品)

P.C.B. TUNER & OPERATION

Ref. No.	Part No.	Description	Remarks	Markets	部品名	Rank
Q8	iC174020	TR	2SC1740S QRS	BGE	トランジスタ	01
Q9	iC174020	TR	2SC1740S QRS	BGE	トランジスタ	01
Q10	VR497000	TR	2SC1809S N,P		トランジスタ	01
Q11	VV912300	TR.DGT	DTC144ESA-TP	BGE	デジタルトランジスタ	
Q13	VR497000	TR	2SC1809S N,P		トランジスタ	01
Q14	iC174020	TR	2SC1740S QRS		トランジスタ	01
Q15	VD678500	TR.DGT	DTA114ES		デジタルトランジスタ	01
Q16-17	iC174020	TR	2SC1740S QRS		トランジスタ	01
Q18	iD043820	TR	2SD438 E,F		トランジスタ	01
Q19	iC287820	TR	2SC2878 A,B		トランジスタ	01
Q20	iC287820	TR	2SC2878 A,B		トランジスタ	01
△ * Q21	VS826900	TR	2SD2375 Q,P		トランジスタ	02
* Q22	VV912400	TR	2SA933ASTP R.S TP		トランジスタ	01
△ Q23	iC174020	TR	2SC1740S QRS		トランジスタ	01
Q25	VV912300	TR.DGT	DTC144ESA-TP		デジタルトランジスタ	
△ R90-91	HV755330	R.CAR.FP	330Ω 1/4W		不燃化カーボン抵抗	01
R92	HV753470	R.CAR.FP	4.7Ω 1/4W		不燃化カーボン抵抗	01
SW3	VS602600	SW.SLIDE	SS070-P022 A	RL	スライドSW	01
TE1	VU477800	TERM.ANT	AJ-2038-040		アンテナ端子	03
VR1-2	VJ693200	VR.TRIM	B2.2KΩ		半固定VR	01
VR3	VJ694000	VR.TRIM	B47KΩ		半固定VR	01
VR4	VJ693800	VR.TRIM	B22KΩ		半固定VR	01
XL1	VY734600	RSNR.CRYS	7.2MHz		水晶振動子	04
XL3	GG000750	RSNR.CE	18.95KHz		セラミック振動子	01
* XL401	V2731100	RSNR.CRYS	4.332M HC-49/U	BGE	水晶振動子	
* * * * *	WG011400	P.C.B.	OPERATION	J	P C B 集成オペレーション	
	WG011500	P.C.B.	OPERATION	UC	P C B 集成オペレーション	
	WG011600	P.C.B.	OPERATION	RL	P C B 集成オペレーション	
	WG011700	P.C.B.	OPERATION	TA	P C B 集成オペレーション	
	WG011800	P.C.B.	OPERATION	BGE	P C B 集成オペレーション	
△ △ CB2	VK024700	CN.BS.PIN	3P		ワイヤートラップ	01
CB3	VK024800	CN.BS.PIN	4P		ワイヤートラップ	01
△ CB5	VG879900	CN.BS.PIN	2P		ベースピン	01
△ CB6	VT807100	CN.BS.PIN	2P		ベースポスト	01
CB501	VF982300	CN.BS.PIN	17P		FFCコネクタ	01
C81-82	UR867100	C.EL	10uF 50V		ケミコン	01
C83-85	US064100	C.CE.CHP	0.01uF 50V B		チップセラコン	01
C86	UR749220	C.EL	2200uF 25V		ケミコン	03
C87	US064100	C.CE.CHP	0.01uF 50V B		チップセラコン	01
C88-89	UR867470	C.EL	47uF 50V		ケミコン	01
C90	UR867470	C.EL	47uF 50V		ケミコン	01
C93	UR867470	C.EL	47uF 50V		ケミコン	01
C94	UR867220	C.EL	22uF 50V		ケミコン	01
C95-96	UR867470	C.EL	47uF 50V		ケミコン	01
C97	UR867100	C.EL	10uF 50V		ケミコン	01
C501	UR866100	C.EL	1uF 50V		ケミコン	01
C502	UR837470	C.EL	47uF 16V		ケミコン	01
C503	WD292000	C.EL	47000uF 5.5V		電気2重層コンデンサ	05
C504	US135100	C.CE.CHP	0.1uF 16V		チップセラコン	01
C505-506	US064100	C.CE.CHP	0.01uF 50V B		チップセラコン	01

* New Parts (新規部品)

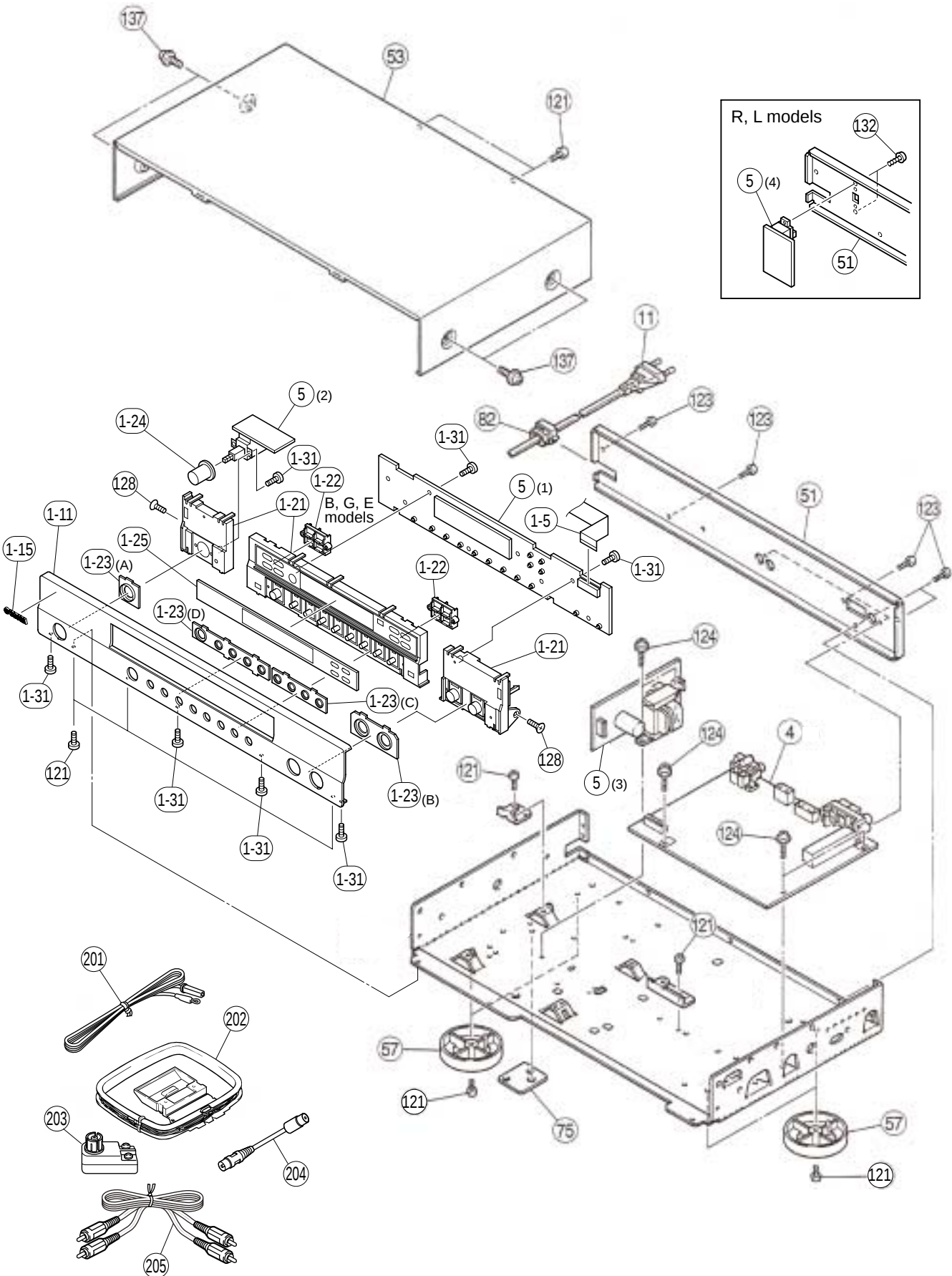
P.C.B. OPERATION

	Ref. No.	Part No.	Description	Remarks	Markets	部品名	Rank	
△	C507	US135100	C.CE.CHP	0.1uF 16V		チップセラコン 規格認定コン ツェナーダイオード D I ブリッジ X 4 ダイオード ツェナーダイオード ダイオード ダイオード ダイオード ツェナーダイオード ダイオード	01	
	C509	V6185300	C.CE.SAFTY	0.01uF 275V			01	
* D9	VU171700	DIODE.ZENR	UDZS4.3BTE-17 4.3V	02				
D10	VR253700	DIODE.BRG	S1NB20 1A 200V	01				
D14-15	VT332900	DIODE	1SS355	01				
* D16	VU173500	DIODE.ZENR	UDZS24B TE-17 24V	01				
D17-19	VT332900	DIODE	1SS355	01				
D20-22	VT332900	DIODE	1SS355	01				
D501-502	VT332900	DIODE	1SS355	01				
D503	VU172600	DIODE.ZENR	UDZS10B 10V	01				
D504-506	VT332900	DIODE	1SS355	01				
IC501	XT287A00	IC	LC866420A-5E97 CPU	C P U / 周辺 I C			08	
PN1	V9637500	PIN	L=70 #18	RL BGE BGE RLTABGE J UC			スタイルピン	
* Q24	VV912400	TR	2SA933ASTP R.S TP				トランジスタ	01
* Q501	VV912400	TR	2SA933ASTP R.S TP				トランジスタ	01
Q502	iC174020	TR	2SC1740S QRS		トランジスタ	01		
R104	HV753330	R.CAR.FP	3.3Ω 1/4W		不燃化カーボン抵抗	01		
△ SW2	VE962600	SW.SLIDE	SDKGA4		スライド S W	03		
SW501-503	WD483100	SW.TACT	SKRGAAD010		タクト S W	01		
SW504-509	WD483100	SW.TACT	SKRGAAD010		タクト S W	01		
SW510	WD483100	SW.TACT	SKRGAAD010		タクト S W	01		
SW511-519	WD483100	SW.TACT	SKRGAAD010		タクト S W	01		
△ SW521	VZ364100	SW.PUSH	SDDL1-A2-F-1		プッシュ S W	03		
△ * T1	X7302A00	TRANS.PWR	RTABGEL TX-497ML		電源トランス			
△ T1	XN909A00	TRANS.PWR			電源トランス	07		
△ T1	XN910A00	TRANS.PWR			電源トランス	07		
U501	WC746300	L.DTCT	RPM7138-H9		リモコン受光ユニット	03		
* V501	WF769200	FL.DSPLY	13-BT-226GNK	蛍光表示管				
* XL501	WG083900	RSNR.CE	6.0MHz	セラミック振動子				
	VS055300	SHEET.FLTR		シート / フィルター	02			
	VR380100	SPACER	FL-T6	スペーサー / F L - T 6	01			
		R.CHP	1.5Ω 1/16W J	816	チップ抵抗			
		R.CHP	220Ω 1/16W J	816	チップ抵抗			
		R.CHP	470Ω 1/16W J	816	チップ抵抗			
		R.CHP	1KΩ 1/16W J	816	チップ抵抗			
		R.CHP	1.8KΩ 1/16W J	816	チップ抵抗			
		R.CHP	2.2KΩ 1/16W J	816	チップ抵抗			
		R.CHP	2.7KΩ 1/16W J	816	チップ抵抗			
		R.CHP	3.9KΩ 1/16W J	816	チップ抵抗			
		R.CHP	6.8KΩ 1/16W J	816	チップ抵抗			
		R.CHP	8.2KΩ 1/16W J	816	チップ抵抗			
		R.CHP	10KΩ 1/16W J	816	チップ抵抗			
		R.CHP	13KΩ 1/16W J	816	チップ抵抗			
		R.CHP	39KΩ 1/16W J	816	チップ抵抗			
		R.CHP	47KΩ 1/16W J	816	チップ抵抗			
		R.CHP	100KΩ 1/16W J	816	チップ抵抗			

* New Parts (新規部品)

TX-497

EXPLODED VIEW



MECHANICAL PARTS

Ref. No.	Part No.	Description	Remarks	Markets	部品名	Rank
1-5	MF117250	FLEXIBLE FLAT CABLE	17P 250mm P=1.25		カード電線 C & C	04
* 1-11	WF480000	FRONT PANEL	GD		フロントパネル	
* 1-11	WF479900	FRONT PANEL	BL		フロントパネル	
* 1-11	WF480100	FRONT PANEL	TI		フロントパネル	
1-15	V6034200	EMBLEM	GD		エンブレム	03
1-15	V6034100	EMBLEM	BL, TI		エンブレム	03
* 1-21	WF484800	SUBPANEL CASE T	GD		サブパネルケース T	
* 1-21	WF484700	SUBPANEL CASE T	BL		サブパネルケース T	
* 1-21	WF484900	SUBPANEL CASE T	TI		サブパネルケース T	
* 1-22	WF485200	BUTTON 4P			ボタン 4P	
* 1-23	WF487200	ESCUTCHEON T	GD		エスカッション T	
* 1-23	WF487100	ESCUTCHEON T	BL		エスカッション T	
* 1-23	WF487300	ESCUTCHEON T	TI		エスカッション T	
* 1-24	WG246700	BUTTON/D12	GD		ボタン / D 1 2	
* 1-24	WG246600	BUTTON/D12	BL		ボタン / D 1 2	
* 1-24	WG246800	BUTTON/D12	TI		ボタン / D 1 2	
* 1-25	WF488400	SHEET WINDOW		JUCRTAL	シートウィンドウ	
* 1-25	WF488600	SHEET WINDOW		BGE	シートウィンドウ	
1-31	WE774800	BIND HEAD P-TIGHT SCREW	3x8 MFZN2W3		バインド P タイトネジ	01
* 4	WG010800	P.C.B. ASS'Y	TUNER	J	P C B チューナー	
* 4	WG010900	P.C.B. ASS'Y	TUNER	UC	P C B チューナー	
* 4	WG011000	P.C.B. ASS'Y	TUNER	R	P C B チューナー	
* 4	WG011100	P.C.B. ASS'Y	TUNER	TA	P C B チューナー	
* 4	WG011200	P.C.B. ASS'Y	TUNER	BGE	P C B チューナー	
* 4	WG011300	P.C.B. ASS'Y	TUNER	L	P C B チューナー	
* 5	WG011400	P.C.B. ASS'Y	OPERATION	J	P C B オペレーション	
* 5	WG011500	P.C.B. ASS'Y	OPERATION	UC	P C B オペレーション	
* 5	WG011600	P.C.B. ASS'Y	OPERATION	RL	P C B オペレーション	
* 5	WG011700	P.C.B. ASS'Y	OPERATION	TA	P C B オペレーション	
* 5	WG011800	P.C.B. ASS'Y	OPERATION	BGE	P C B オペレーション	
△* 11	WF884600	POWER CABLE	2m	J	電源コード	
△* 11	V2727500	POWER CABLE	2m	UC	電源コード	
△* 11	WC992700	POWER CABLE	2m	R	電源コード	
△* 11	WB120600	POWER CABLE	2m	T	電源コード	
△* 11	WC743700	POWER CABLE	2m	A	電源コード	
△* 11	WF723100	POWER CABLE	2m	B	電源コード	
△* 11	VN363600	POWER CABLE	2m	GEL	電源コード	
* 51	WF491700	REAR PANEL		J	リヤパネル	
* 51	WF491100	REAR PANEL		UC	リヤパネル	
* 51	WF491200	REAR PANEL		RL	リヤパネル	
* 51	WF491300	REAR PANEL		T	リヤパネル	
* 51	WF491500	REAR PANEL		A	リヤパネル	
* 51	WF491600	REAR PANEL		BGE	リヤパネル	
* 53	WF481200	TOP COVER	GD		トップカバー	
* 53	WF481100	TOP COVER	BL		トップカバー	
* 53	WF481300	TOP COVER	TI		トップカバー	
57	V0049900	LEG	D60xH16	GD	レッグ	03
57	VQ780300	LEG	D60xH16	BL, TI	レッグ	01
75	VY735100	SPACER			スペーサ	01
82	V2438700	CORD STOPPER	10P1		コードストッパー	02
121	WE774300	BIND HEAD B-TIGHT SCREW	3x8 MFZN2W3		バインド B タイトネジ	01
123	WE774100	BIND HEAD BONDING B-T. SCREW	3x8 MFZN2B3		ボンディング B タイトネ	01

* New Parts (新規部品)

Ref. No.	PART NO.	Description	Remarks	Markets	部品名	Rank
124	VT669300	PW HEAD B-TIGHT SCREW	3x8-8 MFC2		PWヘッドBタイトネジ	01
* 128	WF821200	FLAT HEAD S-TIGHT SCREW	3x6 MFZN2W3		皿Sタイトネジ	
* 132	WF821100	PAN HEAD P-TIGHT SCREW	2.6x8 MFZN2W3	RL	ナベPタイトネジ	
137	VD069600	PW HEAD S-TIGHT SCREW	4x8-10 MFNI33	GD,TI	PWヘッドSタイトネジ	01
137	VH313200	PW HEAD S-TIGHT SCREW	4x8-10 MFNI3BL	BL	PWヘッドSタイトネジ	01
		ACCESSORIES			付属品	
201	VQ147100	INDOOR FM ANTENNA	1.4m 1pc		F M簡易アンテナ	02
202	VQ307400	AM LOOP ANTENNA	81-653-645-110		A Mループアンテナ	06
203	VE364900	ANTENNA ADAPTER	PAL 75-300Ω	B	整合器	03
204	VT948000	ANTENNA ADAPTER		UC	アンテナアダプター	03
205	VS381600	AUDIO PIN CABLE	2P 1.0m		ステレオピンケーブル	05

* New Parts (新規部品)

Parts List for Carbon Resistors

Value	1/4W Type Part No.	1/6W Type Part No.	Value	1/4W Type Part No.	1/6W Type Part No.
1.0 Ω	HJ35 3100	HF85 3100	10 k Ω	HF45 7100	HF45 7100
1.8 Ω	HJ35 3180	*	11 k Ω	HF45 7110	HF45 7110
2.2 Ω	HJ35 3220	HF85 3220	12 k Ω	HJ35 7120	HF85 7120
3.3 Ω	HJ35 3330	HF85 3330	13 k Ω	HF45 7130	HF45 7130
4.7 Ω	HJ35 3470	HF85 3470	15 k Ω	HF45 7150	HF45 7150
5.6 Ω	HJ35 3560	HF85 3560	18 k Ω	HF45 7180	HF45 7180
10 Ω	HF45 4100	HF45 4100	22 k Ω	HF45 7220	HF45 7220
15 Ω	HJ35 4150	HF85 4150	24 k Ω	HF45 7240	HF45 7240
22 Ω	HF45 4220	HF45 4220	27 k Ω	HJ35 7270	HF85 7270
27 Ω	HJ35 4270	HF85 4270	30 k Ω	HF45 7300	HF45 7300
33 Ω	HF45 4330	HF45 4330	33 k Ω	HF45 7330	HF45 7330
39 Ω	HJ35 4470	HF85 4390	36 k Ω	HF45 7360	HF45 7360
47 Ω	HF45 4470	HF45 4470	39 k Ω	HF45 7390	HF45 7390
56 Ω	HF45 4560	HF45 4560	47 k Ω	HF45 7470	HF45 7470
68 Ω	HF45 4680	HF45 4680	51 k Ω	HF45 7510	HF45 7510
75 Ω	HF45 4750	HF45 4750	56 k Ω	HF45 7560	HF45 7560
82 Ω	HF45 4820	HF45 4820	62 k Ω	HF45 7620	HF45 7620
91 Ω	HF45 4910	HF45 4910	68 k Ω	HF45 7680	HF45 7680
100 Ω	HF45 5100	HF45 5100	82 k Ω	HF45 7820	HF45 7820
110 Ω	HJ35 5110	HF85 5110	91 k Ω	HF45 7910	HF45 7910
120 Ω	HF45 5120	HF45 5120	100 k Ω	HF45 8100	HF45 8100
150 Ω	HF45 5150	HF45 5150	110 k Ω	HF45 8110	HF45 8110
160 Ω	HJ35 5160	*	120 k Ω	HF45 8120	HF45 8120
180 Ω	HF45 5180	HF45 5180	150 k Ω	HF45 8150	HF45 8150
200 Ω	HF45 5200	HF45 5200	180 k Ω	HF45 8180	HF45 8180
220 Ω	HF45 5220	HF45 5220	220 k Ω	HJ35 8220	HF85 8220
270 Ω	HF45 5270	HF45 5270	270 k Ω	HF45 8270	HF45 8270
330 Ω	HF45 5330	HF45 5330	300 k Ω	HF45 8300	HF45 8300
390 Ω	HF45 5390	HF45 5390	330 k Ω	HF45 8330	HF45 8330
430 Ω	HF45 5430	HF45 5430	390 k Ω	HJ35 8390	HF85 8390
470 Ω	HF45 5470	HF45 5470	470 k Ω	HF45 8470	HF45 8470
510 Ω	HF45 5510	HF45 5510	560 k Ω	HJ35 8560	HF85 8560
560 Ω	HF45 5560	HF45 5560	680 k Ω	HJ35 8680	HF85 8680
680 Ω	HF45 5680	HF45 5680	820 k Ω	HJ35 8820	HF85 8820
820 Ω	HF45 5820	HF45 5820	1.0 M Ω	HF45 9100	HF45 9100
910 Ω	HF45 5910	HF45 5910	1.2 M Ω	HJ35 9120	*
1.0 k Ω	HF45 6100	HF45 6100	1.5 M Ω	HJ35 9150	HF85 9150
1.2 k Ω	HF45 6120	HF45 6120	1.8 M Ω	HJ35 9180	HF85 9180
1.5 k Ω	HF45 6150	HF45 6150	2.2 M Ω	HJ35 9220	HF85 9220
1.8 k Ω	HF45 6180	HF45 6180	3.3 M Ω	HJ35 9330	HF85 9330
2.0 k Ω	HJ35 6200	HF85 6200	3.9 M Ω	HJ35 9390	*
2.2 k Ω	HF45 6220	HF45 6220	4.7 M Ω	HJ35 9470	HF85 9470
2.4 k Ω	HJ35 6240	HF85 6240			
2.7 k Ω	HF45 6270	HF45 6270			
3.0 k Ω	HF45 6300	HF45 6300			
3.3 k Ω	HF45 6330	HF45 6330			
3.6 k Ω	HJ35 6360	HF85 6360			
3.9 k Ω	HF45 6390	HF45 6390			
4.7 k Ω	HF45 6470	HF45 6470			
5.1 k Ω	HF45 6510	HF45 6510			
5.6 k Ω	HF45 6560	HF45 6560			
6.8 k Ω	HF45 6680	HF45 6680			
8.2 k Ω	HF45 6820	HF45 6820			
9.1 k Ω	HF45 6910	HF45 6910			

1/4W Type

HJ35

10mm

1/4W Type

HF45

5mm

* : Not available

TX-497

YAMAHA