

JVC

# SERVICE MANUAL

MODEL  
**R-X40/R-X40L**

DIGITAL SYNTHESIZER  
STEREO RECEIVER



No. 2603  
FEB. 1982

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## 1. Specifications

### FM Tuner Section (Figures are based upon IHF Standard)

Tuning Range : 87.5 MHz – 108.0 MHz

Usable Sensitivity (IHF) : 10.3 dBf (1.8 µV/300 Ω)

#### 50 dB Quieting Sensitivity

Mono : 14.8 dBf (3 µV/300 Ω)  
Stereo : 38.3 dBf (45 µV/300 Ω)

#### Distortion

Mono : 0.15 % (1 kHz)  
Stereo : 0.2 % (1 kHz)

#### Signal to Noise Ratio (at 98 MHz, 80.0 dBf)

Mono : 80 dB (IHF A-network weighted)  
(72 dB, DIN)

Stereo : 73 dB (IHF A-network weighted)  
(63 dB, DIN)

#### Selectivity

: 65 dB, ±400 kHz  
(55 dB, 300kHz, DIN)

#### Capture Ratio

: 1.5 dB

#### IF Rejection

: 80 dB at 98 MHz

#### Image Rejection

: 56 dB at 98 MHz

#### Stereo Separation

: 45 dB at 1 kHz

#### AM (MW) Tuner Section

Tuning Range : 520 – 1710 kHz  
(for 10 kHz step)  
(522 – 1611 kHz for 9 kHz step)

Usable Sensitivity : 50 µV (External Antenna)  
250 µV/m at 1000 kHz (999 kHz)

Signal to Noise Ratio : 50 dB at 100 mV/m  
(45 dB with LW)

Selectivity : 40 dB ±10 kHz  
(36 dB ±9 kHz, DIN)

#### LW Tuner Section

Tuning Range : 153 kHz ~ 360 kHz

Usable Sensitivity : 70 µV at 245 kHz

Signal to Noise Ratio : 45 dB at 245 kHz

Selectivity : 40 dB ±9 kHz at 245 kHz

#### Amplifier Section

Output Power and Total : 40 watts per channel, min. RMS,  
Harmonic Distortion both channels driven, into 8 ohms  
from 20 Hz to 20 kHz, with no  
more than total 0.008 % harmonic distortion

50 (42) watts per channel, min.  
RMS, both channels driven, into  
8 ohms at 1 kHz with no more  
than 0.7 % (0.003 %) total harmonic distortion

#### Input Sensitivity/Impedance

Phono	: 2.5 mV/47 kΩ
Tape Play	: 180 mV/50 kΩ (180 mV/50 kΩ, DIN)

#### SEA Control

Center Frequency	: 63 Hz, 250 Hz, 1 kHz, 4 kHz, 16 kHz
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#### Control Range

Signal to Noise Ratio (IHF short-circuited A-network)	: ±12 dB
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Phono 71 dB (IHF A-202 78 dB)	Tape Play 91 dB (IHF A-202 74 dB)
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(Note) \*U.S.A. & CANADA

*Design and specifications subject to change without notice.*

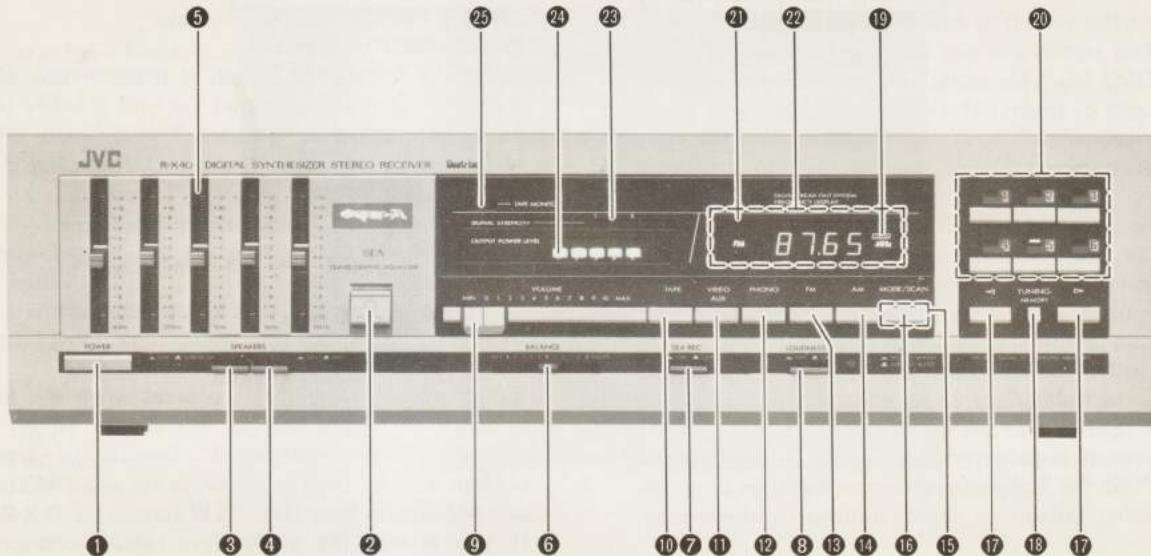
#### Power Specifications

Areas	Line Voltage & Frequency	Power Consumption
U.S.A. & Canada	AC 120 V, 60 Hz	210 W 270 VA
Europe	AC 220 V ~ 50 Hz	400 W
Australia & U.K.	AC 240 V ~ 50 Hz	400 W
Other Areas	AC110/120/220/ 240 V ~ Selectable, 50/60 Hz	400 W

#### Dimensions and Weight

Model	Height	Width	Depth	Weight
R-X40	117 mm (4-19/32")	435 mm (17-1/8")	366 mm (14-3/8")	6.6 kg (14.5 lbs)
R-X40L			375 mm (14-3/4")	7.3 kg (16.0 lbs)

## 2. Names of Controls and Their Functions



### ① POWER switch

**ON:** Press to turn the power on. The power indicator "Super A" lights and the display panel is illuminated. During the first 3 or 4 seconds after the POWER switch is turned on, no sound will be heard until you hear the "click" of the relay operation. This is not due to any defect in the unit. The built-in power protection circuit operates to mute the switching noise for speaker protection.

**STAND BY:** When the power cord is plugged into an AC outlet, the memory circuit is operating and the preset stations are not subject to cancellation or alteration. The preset data are maintained even in the case of a power failure or when the power cord is disconnected, if the period of non-applied power does not exceed a couple of days.

### ② Headphone jack (PHONES)

Plug stereo headphones into this jack for private listening and recording monitoring. If you want to listen to sound from the headphones only, press the SPEAKERS switches ③ ④ to their OFF positions.

### ③ SPEAKERS-1 switch

Press to switch the speakers connected to the SPEAKER SYSTEM 1 terminals on or off.

### ④ SPEAKERS-2 switch

Press to switch the speakers connected to the SPEAKER SYSTEM 2 terminals on or off.

### ⑤ S.E.A. Graphic Equalizer system

These five controls allow you to individually boost or lower five portions of the frequency spectrum by 12 dB. For operation of these controls, which give far more flexible control over tone than the conventional bass/treble controls, The preset patterns add to your listening pleasure with different types of music.

### ⑥ BALANCE control

Use to adjust the balance between the left and right speakers. When slid all the way left, you will hear only the left channel; when slid all the way right, you will hear only the right channel.

### ⑦ S.E.A REC switch

Press to record tapes with the added effect of the S.E.A. Graphic Equalizer.

### ⑧ LOUDNESS switch

At low volumes, the tone of sound appears to change. This is not due to any change in the sound itself, but due to the ear's different sensitivity to sound at low volumes. Press to compensate for this when you are listening at low volumes.

### ⑨ VOLUME control

Slide to the right to increase the sound level.

### ⑩ TAPE MONITOR switch

Press to listen to the tape deck connected to the TAPE terminals. The TAPE MONITOR indicator lights. Release the switch to hear the source selected with the source select switches.

### ⑪ VIDEO/AUX switch

Press to hear sound from the source connected to the VIDEO/AUX terminals on the rear panel.

### ⑫ PHONO switch

Press to hear or record sound from the turntable connected to the PHONO terminals on the rear panel.

### ⑬ FM switch

Press to switch on the FM tuner section.

### ⑭ AM switch (for R-X40)

### MW switch (for R-X40L)

Press to switch on the AM (MW) tuner section.

### ⑮ LW switch (R-X40L only)

Press to switch on the LW tuner section.

#### **⑯ MODE/SCAN switch**

This switch is used to select both FM STEREO/MONO mode and AUTO/MANUAL scanning mode. These functions are related to each other. When stereo reception is possible, set this switch to AUTO/STEREO (■) for auto tuning. When signals are too weak to be received, set to MANU/MONO (—) for manual tuning; in this mode the left and right channel FM signals are mixed and heard from both speakers.

#### **⑰ TUNING buttons**

##### **Auto tuning**

Up-scanning button (►): When this button is pressed, beeps will be heard and the tuned-in frequency changes in the direction of increasing frequencies. Use this button to search the upper frequency broadcast. Scanning (Auto Tuning) stops automatically when the next FM (or AM) station is pulled in. This tuned-in frequency is displayed digitally by the frequency indicator.

When you continue to press this button, scanning does not stop even if broadcasts which could be tuned in are detected. Press the Up-scanning button and then press the Down-scanning button to select stations by down-scanning.

Down-scanning button (◀): Press to tune in the direction of decreasing frequencies. Use this button to search the lower frequency station. Functions are identical with those of the Up-scanning button.

**Note:** Scanning starts when the ▲ or ▼ button is pressed and is stopped by pressing the MODE/SCAN switch.

##### **Manual tuning**

Manual tuning is possible by pressing the MODE/SCAN switch ⑯. Pressing the Up-Down-scanning buttons, the tuned-in frequency changes in 100 kHz steps for FM reception (50 kHz steps for Europe, U.K., and Australia) or 10 kHz steps for AM (MW) (9 kHz steps for Europe, U.K. and Australia), or 1 kHz steps for LW. Tapping this button changes the tuner step by step, continuous pressing (more than 0.5 sec.) changes tuning in a high speed scanning sequence which stop when released.

If one of these buttons is pressed immediately after the AM or FM source select button, the tone of the beep will be different.

#### **⑯ MEMORY switch**

Press this switch and the memory indicator will light to show that this unit is ready to receive a memory setting.

(This switch is a non-lock type.) Pressing the station select button while the MEMORY indicator is lit (for about 10 sec.) makes it possible to memorize the station being received. When the MEMORY indicator is not lit, the memory function does not operate.

#### **⑯ MEMORY indicator**

When the MEMORY switch is pressed, this MEMORY indicator lights to show that the unit is ready to register the preset station to memory. This indicator will go out automatically in about 10 sec. or by pressing the station select button.

#### **⑰ Station select buttons/Station indicators**

These buttons are used to select one of the preset stations or to memorize the station for an individual channel. When one of these buttons is pressed, beeps will be heard and the LED indicator on the corresponding button lights to indicate which channel is in operation.

If one of these buttons is pressed when the MEMORY switch ⑯ is pressed in, the station which is being received will be "Memorized". One of the station select buttons can be used in common for one FM station and one AM station (one MW or LW station for R-X40L).

If you change the mode from radio reception to any other mode including power-off and back to radio reception, the station previously selected with the station select buttons remains tuned in.

If one of these buttons is pressed immediately after the AM or FM source select button, the tone of the beep will be different.

#### **⑱ FM STEREO indicator**

This indicator lights when an FM stereo broadcast is tuned in.

#### **⑲ Frequency indicator**

The tuned-in frequency is displayed digitally. Four digits (kHz) are displayed for AM reception and five digits (MHz) (for Europe, U.K., Australia and other countries) or four digits (MHz) (for U.S.A., and Canada) are displayed for FM reception.

#### **⑳ SIGNAL STRENGTH indicator**

This is used in tuning to both FM and AM (MW/LW) broadcasts. The greater the number of LEDs that light, the stronger the signal being received.

#### **㉑ OUTPUT LEVEL indicator**

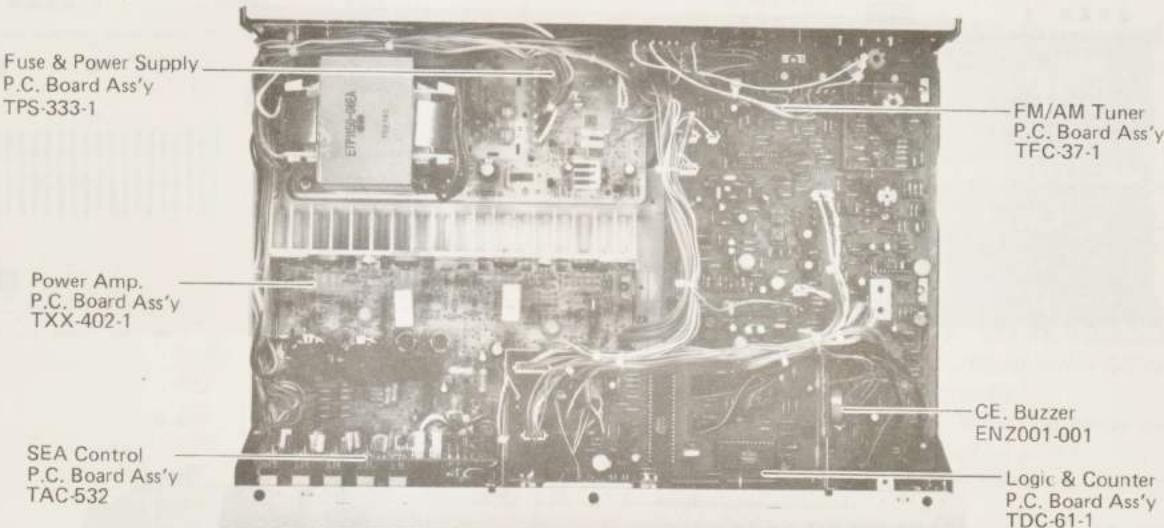
These LEDs indicate the output level.

#### **㉒ TAPE MONITOR indicator**

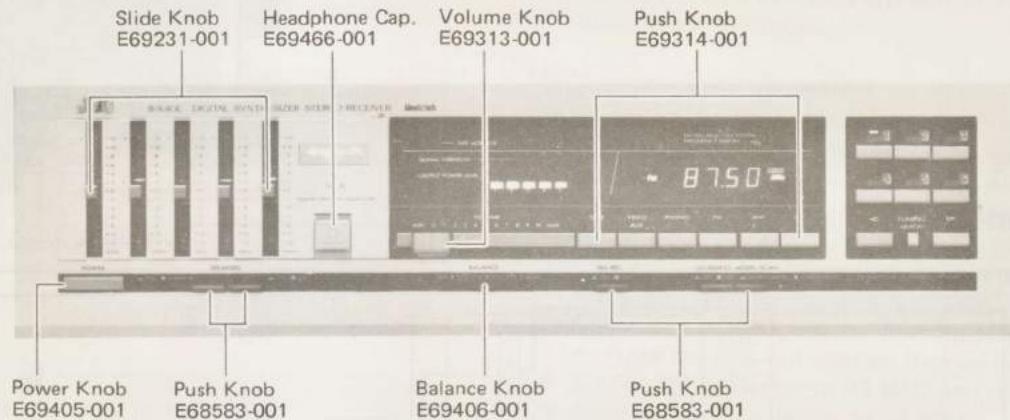
This indicator lights when the TAPE MONITOR switch is pressed for monitoring or listening to the tape recordings.

### 3. Main Parts Locations

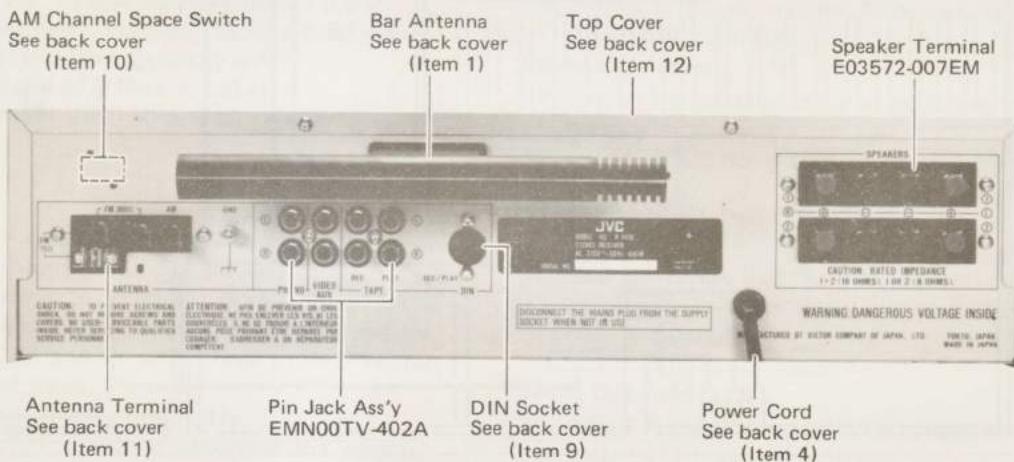
#### 3-(1) Top View



#### 3-(2) Front View



#### 3-(3) Rear View



## 4. Removal Procedures

### 4-(1) Removal Procedures of Bottom Cover

Step (1)

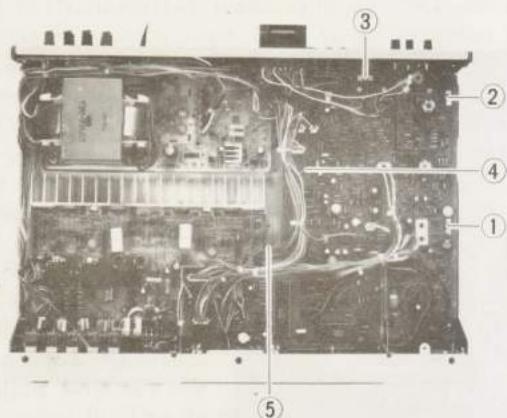


Fig. 4

Step (2)

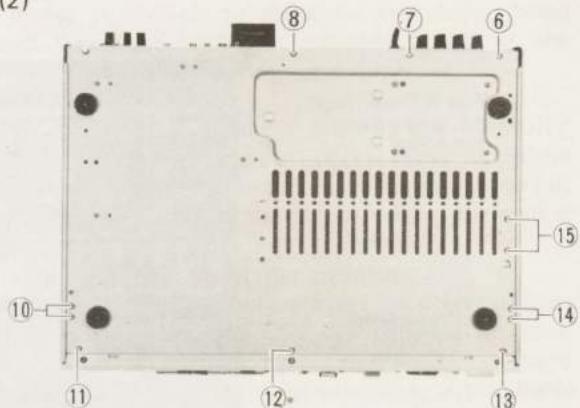


Fig. 5

Step (3)

Step

- (1) Remove screws ① – ⑤ on the P.C. board.
- (2) Remove screws ⑥ – ⑯ on the chassis base.
- (3) Remove the chassis base in this manner shown in Fig. 6.

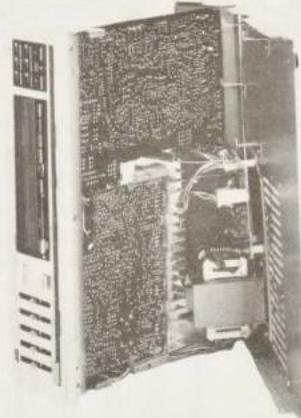


Fig. 6

### 4-(2) Connection Diagram

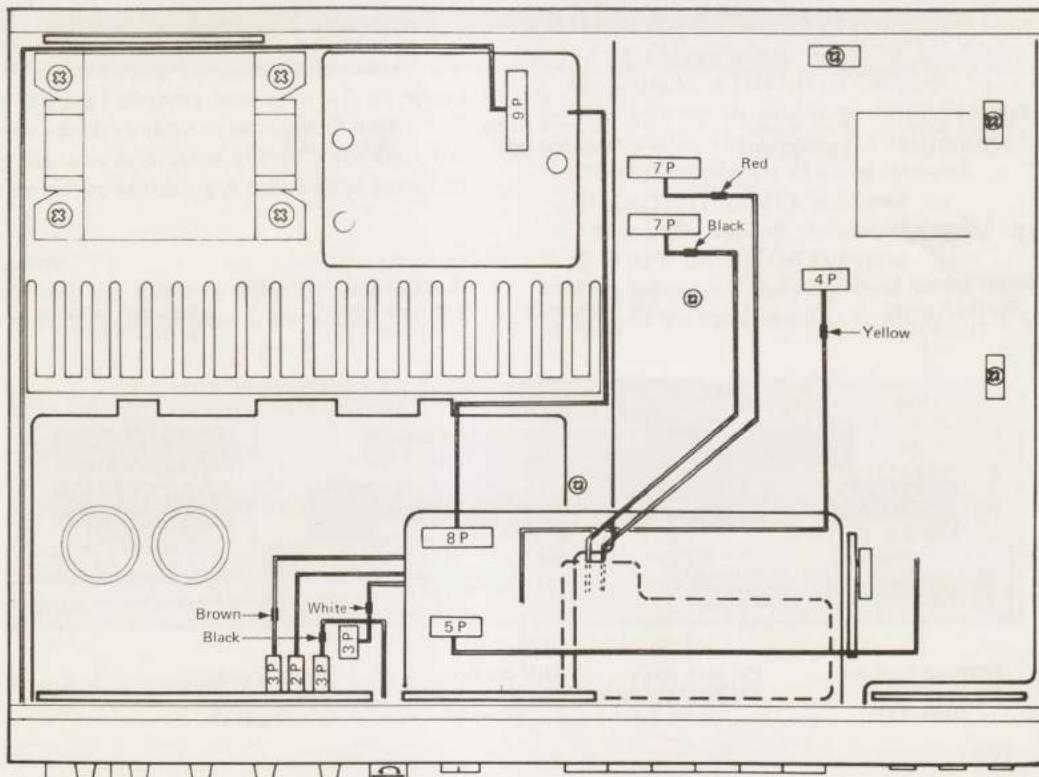


Fig. 7

## 5. Adjustment Procedures

### 5-(1) FM/AM (MW/LW) Tuner Adjustment Procedures

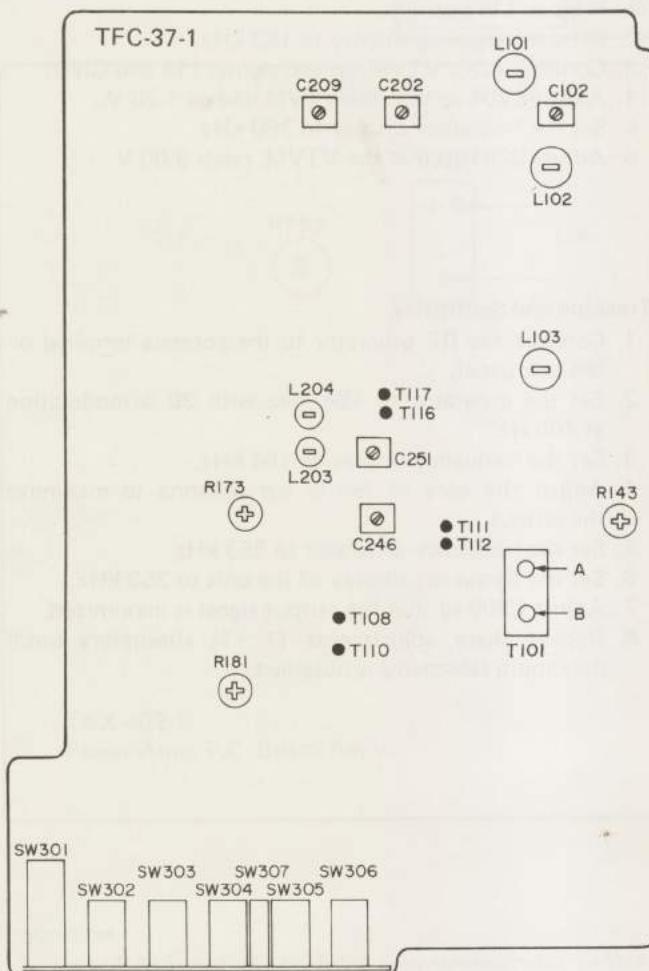


Fig. 8

#### FM Section

##### Band Cover

1. Set the frequency display to 108.0 MHz.
2. Connect a DC. VTVM. to test points 117 and GND.
3. Adjust L103 so that the VTVM. shows 8.00V.
4. And set the frequency display to 87.5 MHz.
5. Check the VTVM. voltage reading  $1.60\text{ V} \pm 0.5\text{ V}$ .

Note: After adjustment, confirm that the band cover is as follows: (for West Germany only)

FM: Low-end 87.5 MHz - 300 kHz  
High-end 108.0 MHz +500 kHz

##### Sensitivity

##### Low Frequency

1. Connect an RF generator to the antenna terminals on the rear panel through a dummy antenna.
2. Set an RF generator to 90 MHz, a modulation of 1 kHz and a deviation of 75 kHz to provide an input of  $2\text{ }\mu\text{V}$ .
3. Connect a VTVM and an oscilloscope to the Rec. out jacks on the rear panel.
4. Set the frequency display to 90 MHz.
5. Adjust coils L101, L102 to maximize the output.

##### High Frequency

6. Set the RF generator to 106 MHz, a modulation of 1 kHz and a deviation of 75 kHz to provide an input of  $2\text{ }\mu\text{V}$ .
7. Set the Frequency Display to 106 MHz.
8. Adjust the FM trimmers C102 to maximize the output.
9. Repeat these high and low frequencies adjustment alternately until maximum sensitivity is obtained.

##### Discriminator, Distortion and Signal Gain

1. Press to FM position.
2. Connect an RF generator, 1 kHz modulation and a 75 kHz deviation to the antenna terminals on the rear panel through a dummy antenna.
3. Connect an oscilloscope, Distortion Meter and VTVM to the Rec. out jacks on the rear panel.
4. Set the RF generator to 98 MHz, generator output to minimize.
5. Set the Frequency Display to a 98 MHz.
6. Connect a DC VTVM between TP111 and 112.
7. Adjust the core indicated arrow A of T101 for DC VTVM reading of 0 (zero) mV.
8. And set the RF generator output to 1 mV.
9. Adjust the core indicated arrow B of T101 so that the distortion is minimized.

##### Multiplex and Stereo Separation

##### Multiplex

1. Set the stereo signal generator as follows: 400 Hz modulation frequency, 7.5 kHz deviation pilot, 67.5 kHz main and sub carriers. Connect its output to the RF generator.
2. Connect an RF generator to the antenna terminals through a dummy antenna.
3. Connect a VTVM, an oscilloscope and a distortion meter to the Rec. out jacks on the rear panel.
4. Set the RF generator to 98 MHz and output of 1 mV.
5. Set the frequency display to 98 MHz.
6. Connect the frequency counter to 19 kHz Test Point TP108.
7. Switch off the pilot signal of stereo modulator.
8. Adjust R181 so that the frequency counter indicates 19 kHz ( $0 \sim -50\text{ Hz}$ ).

##### Stereo Separation

9. Switch the selector of stereo modulator to left channel modulation.
10. Adjust R173 so that the output of right channel is minimized.
11. Switch the selector of the modulator to right channel modulation.
12. Adjust R173 so that the left channel is minimized.
13. Set R173 to a average, if the separation of left and right is different.

##### Stereo threshold

14. Adjust R143 so that STEREO indicator lights at the output of RF generator  $10\text{ }\mu\text{V}$ .

## AM(MW) Section

### Band Cover

1. Press to AM(MW) position.
2. Set the frequency display to 520 kHz (10 kHz channel step), or 522 kHz (9 kHz channel step).
3. Connect DC. VTVM. to test point 117 and GND.
4. Adjust L203 so that the VTVM. shows 0.85 V.
5. And set the frequency display to 1710 kHz (10 kHz channel step), or 1611 kHz (9 kHz channel step).
6. Adjust C246 so that the DC. VTVM. reads 9.00 V for 1710 kHz, or 7.50 V for 1611 kHz.

### Tracking and Sensitivity

1. Connect the RF generator to the antenna terminal on the rear panel.
2. Set the generator to 600 kHz (or 603 kHz) with 30 % modulation at 400 Hz.
3. Set the frequency display to 600 kHz, or 603 kHz.
4. Adjust the core of ferrite bar antenna to maximize the output.
5. Set the generator to 1400 kHz, or 1404 kHz.
6. Set the frequency display of the unit to 1400 kHz, or 1404 kHz.
7. Adjust C202 so that the output signal is maximized.
8. Repeat these adjustments (1 ~ 7) alternately until maximum sensitivity is obtained.

## LW Section

### Band Cover

1. Press to LW position.
2. Set the frequency display to 153 kHz.
3. Connect a DC. VTVM. to test points 116 and GND.
4. Adjust L204 so that the VTVM. shows 1.20 V.
5. Set the frequency display to 360 kHz.
6. Adjust C251 so that the VTVM. reads 8.00 V.

### Tracking and Sensitivity

1. Connect the RF generator to the antenna terminal on the rear panel.
2. Set the generator to 164 kHz with 30 % modulation at 400 Hz.
3. Set the frequency display to 164 kHz.
4. Adjust the core of ferrite bar antenna to maximize the output.
5. Set the frequency generator to 353 kHz.
6. Set the frequency display of the unit to 353 kHz.
7. Adjust C209 so that the output signal is maximized.
8. Repeat these adjustments (1 ~ 7) alternately until maximum selectivity is obtained.

## 5-(2) Power Amplifire Idling Current Adjustment Procedures

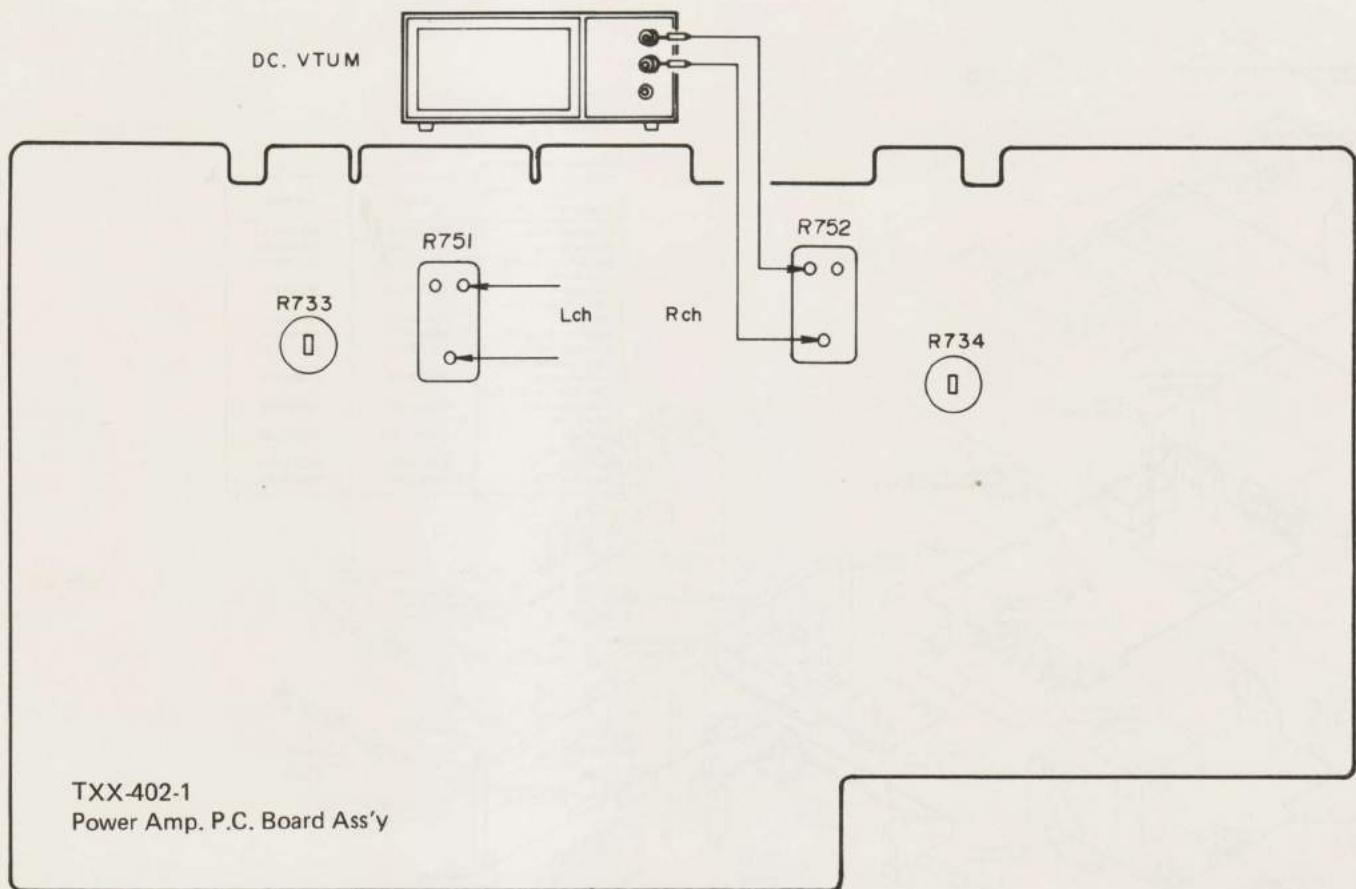


Fig. 9

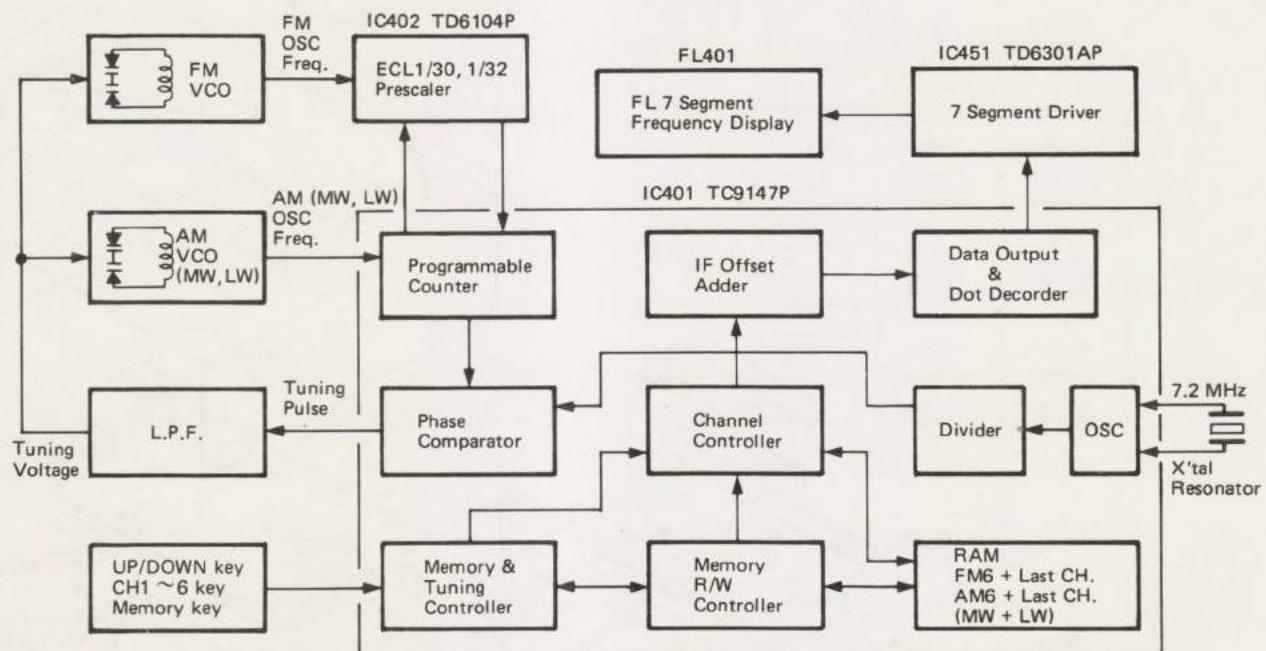
### Precaution

1. Turn R733 and R734 fully counterclockwise before the power switch on.
2. Allow the set warm up at least 5 minutes before adjustment.
3. Must keep the heatsink to prevent overheating before adjustment.
4. Set the volume control to minimum during this adjustment.

### Adjustment

5. Connect a DC. VTVM. to R751 resistor's leads for left channel, or to R752's leads for right channel.
6. Adjust R733 for left channel, or R734 for right channel, so that the DC. VTVM. reads 5 mV.

## 6. Block Diagram



Block Diagram of PLL Synthesizer

Fig. 10

## 7. Exploded Views and Part Numbers

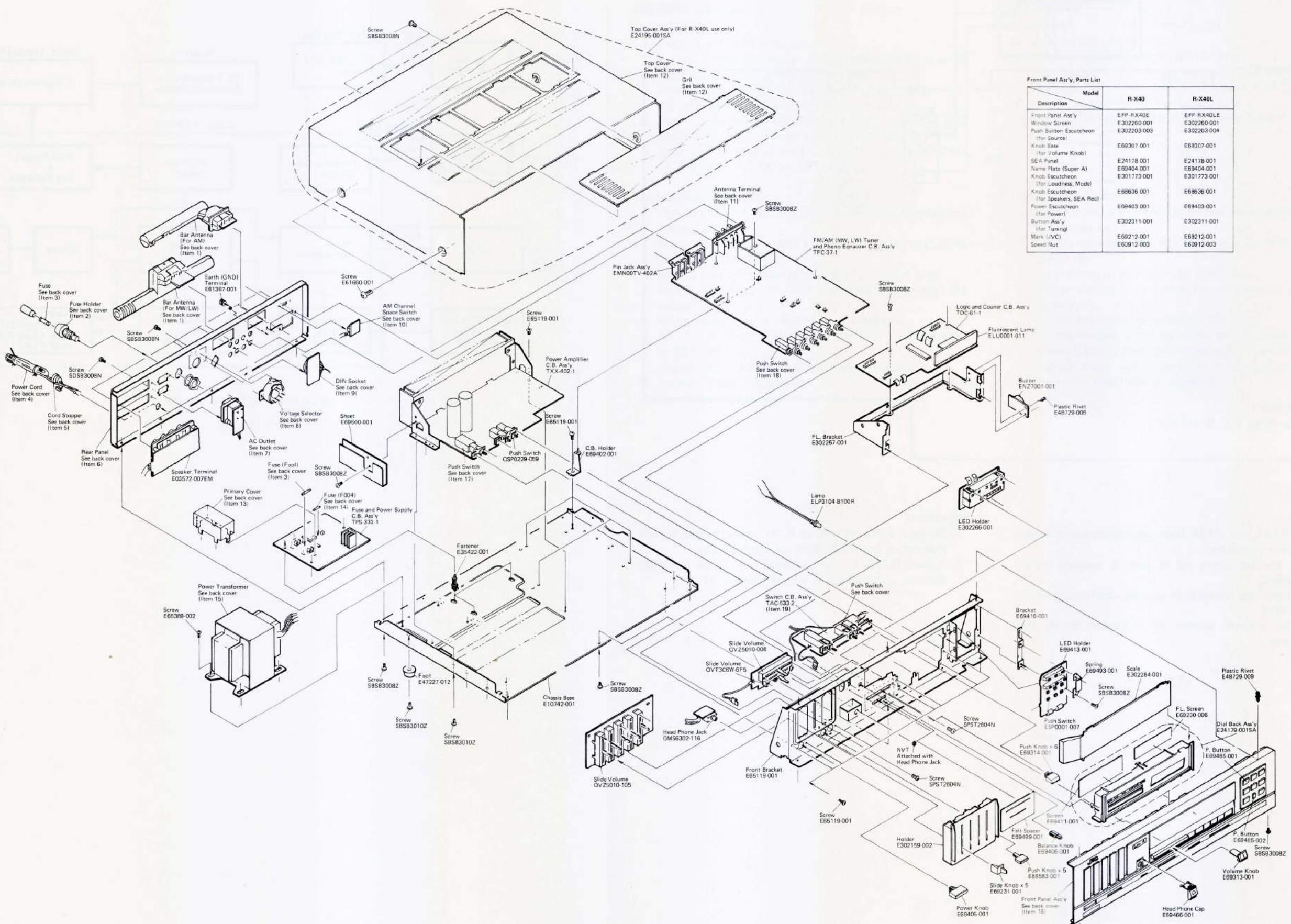


Fig. 11

## 8. Printed Circuit Board Ass'y and Part List

### 8-(1) TFC-37□ FM/AM (MW, LW) Tuner & Phono Equalizer P.C. Board Ass'y

Note: TFC-37□-1 varies according to the areas employed. See note (1)

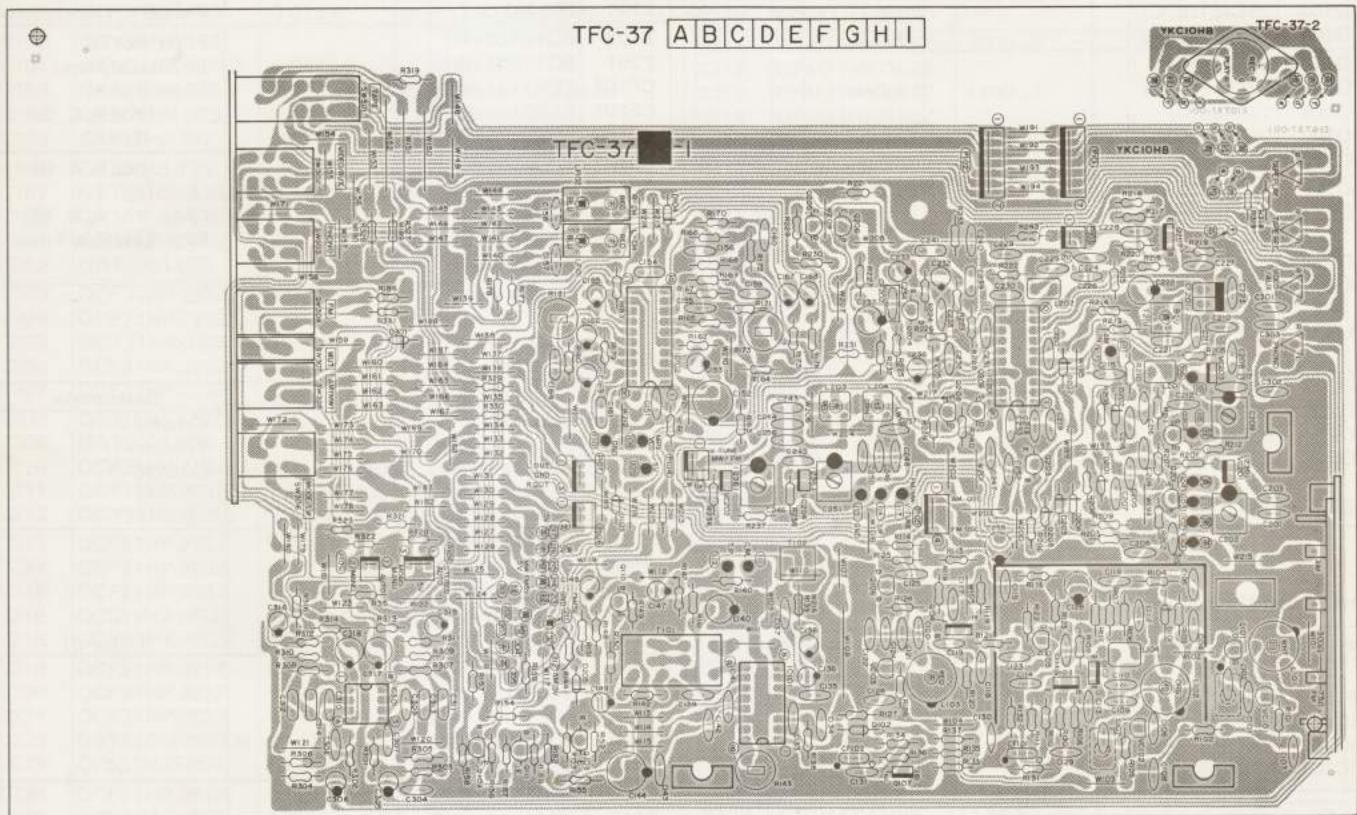


Fig. 12

#### Each Individual P.C. Board Location

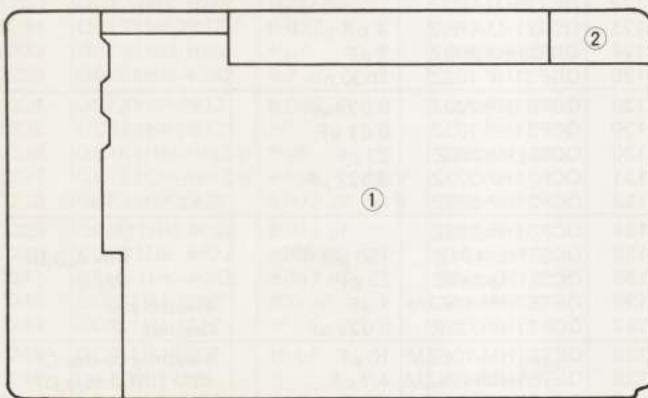


Fig. 13

#### Note (1)

Designated Areas	P.C. Board Ass'y
U.S.A., Canada, U.S. Military Market & Other Countries	TFC-37A-1
Europe & Australia	TFC-37B-1
W. Germany	TFC-37C-1
U.K.	TFC-37D-1

Note (2) The symbols (赤, 黒, 白... etc.) on P.C. Board surface are factory process only.

- ① TFC-37-1 Tuner & Equalizer P.C. Board Ass'y
- ② TFC-37-2 DIN Terminal P.C. Board Ass'y

### Transistors

Item No.	Part Number	Rating	Description	
			F.E.T.	Maker
Q101	2SK168(E, F)		Silicon	Hitach
Q102	2SC535(B, C)		"	"
Q103	2SC461(B, C)		"	"
Q104	2SC461(B, C)		"	"
Q105	2SK168(E, F)		F.E.T.	"
Q106	2SK168(E)		"	"
Q107	2SC535(B, C)		Silicon	"
Q108	2SC458(D)		"	"
Q109	2SC458(C, D)		"	"
Q110	2SC458(C, D)		"	" (for C)
Q111	2SC458(C, D)		"	"
Q201	2SK105(F, H)		F.E.T.	NEC (for D)
Q202	2SK105(F, H)		"	" (for D)
Q203	2SC458(C, D)		Silicon	Hitachi (for D)
Q204	2SK105(F, H)		F.E.T.	NEC (for D)
Q205	2SC458(C, D)		Silicon	Hitachi
Q206	2SC458(C, D)		"	" (for D)
Q207	2SC461(B, C)		"	" (for D)
Q208	2SK105(F, H)		F.E.T.	NEC (for D)
Q209	2SK105(F, H)		"	" (for D)

### Coils

Item No.	Part Number	Rating	Description
L201	EQL3001-101KY		Inductor (for D)
L202	EQL3001-102KY		"
L203	EQR1207-003		"
L204	EQR1307-002		" (for D)
T101	E03793-001		FM DET. Transformer
T102	EQF0102-001		
T201	EQT1021-001		
CF101	ECB2123-002R		Filter (for A)
CF101	ECB2118-001R		" (for B, C, D)
CF102	ECB2123-002R		" (for A)
CF102	ECB2118-001R		" (for B, C, D)
CF201	ECB1545-001		"
CF202	E03613-002		" (for A, B, C)
LF101	E03427-020		MPX Low Pass Filter
LF102	E03427-020		"

### Capacitors

Item No.	Part Number	Rating	Description
C101	QCS31HJ-2R0Z	2 pF	50 V Ceramic
C102	QAT2001-001	2 pF	Trimmer
C102	QCS31HJ-2R0Z	0.01 μF	Ceramic
C103	QCF31HP-103Z	"	"
C104	QCF31HP-103Z	"	"
C105	QCF31HP-103Z	"	"
C106	QCS31HJ-5R0Z	5 pF	"
C108	QCF31HP-103Z	0.01 μF	"
C109	QCS31HJ-4R0Z	4 pF	"
C110	QCS31HJ-100Z	10 pF	" (for C)
C111	QCS31HJ-4R0Z	4 pF	"
C112	QCS31HJ-151Z	150 pF	"
C113	QCF31HP-103Z	0.01 μF	"
C114	QCF31HP-103Z	"	"
C115	QCF31HP-103Z	"	"
C116	QCF31HP-103Z	"	"
C117	QCF31HP-103Z	"	"
C118	QCT25UJ-100Z	10 pF	"
C119	QCT25UJ-220Z	22 pF	"
C120	QCS31HJ-7R0Z	7 pF	"
C121	QCT25UJ-5R0Z	5 pF	"
C122	QCT25UJ-5R0Z	"	"
C123	QCS31HJ-4R0Z	4 pF	"
C124	QCS31HJ-2R0Z	2 pF	"
C125	QCF31HP-102Z	1000 pF	"
C126	QCF31HP-223Z	0.022 μF	"
C129	QCF31HP-103Z	0.01 μF	"
C130	QCS31HJ-220Z	22 pF	"
C131	QCF31HP-223Z	0.022 μF	"
C133	QCF31HP-223Z	"	"
C134	QCF31HP-223Z	"	"
C135	QCS31HJ-151Z	150 pF	" (for A,B,D)
C135	QCS31HJ-330Z	33 pF	" (for C)
C136	QET61HM-105ZM	1 μF	Electrolytic
C137	QCF31HP-223Z	0.022 μF	Ceramic
C138	QET61HM-106ZM	10 μF	Electrolytic (for C)
C138	QET61HM-475ZM	4.7 μF	" (for A,B,D)
C139	QCF31HP-223Z	0.022 μF	Ceramic
C140	QET61CM-476ZM	47 μF	16 V Electrolytic
C141	QCF31HP-223Z	0.022 μF	50 V Ceramic
C142	QCF31HP-223Z	"	"
C143	QCF31HP-223Z	"	"
C144	QET51CM-227	220 μF	16 V Electrolytic
C147	QET61EM-106ZM	10 μF	25 V (for C)
C148	QET61HM-475ZM	4.7 μF	50 V "
C149	QET61HM-475ZM	"	"
C151	QCF31HP-223Z	0.022 μF	Ceramic
C152	QET51CM-227	220 μF	16 V Electrolytic
C153	QET61HM-475ZM	4.7 μF	50 V "
C154	QFM31HK-683Z	0.068 μF	Mylar

### Integrated Circuit

Item No.	Part Number	Rating	Description	
			F.E.T.	Maker
IC101	HA11225		I.C.	Hitachi
IC102	LA3390		"	Sanyo
IC201	LA1245		"	"
IC301	NJM4558D-D		"	Dainichi

### Diodes

Item No.	Part Number	Rating	Description	
			F.E.T.	Maker
D101	1S188FM		Silicon	Sanyo
D102	1S2076-31		"	Hitachi
D104	1S2076-31		"	"
D105	1S2076-31		"	"
D201	1S2076-31		"	" (for D)
D202	1S2076-31		"	" ( " )
D203	1S2076-31		"	" ( " )
D204	1S2076-31		"	" ( " )
D205	1S2076-31		"	"
D206	1S2076-31		"	" (for D)
D207	1S2076-31		"	"
D301	1S2076-31		"	"
VC101	SVC202(AB)		V. Capa. Diode	Sanyo
VC102	SVS202(AB)		"	"
VC103	SVC202(AB)		"	"
VC201	KV1236Z		"	Toko
VC202	KV1236Z		"	"
VC203	KV1236Z		"	" (for D)
VC204	KV1236Z		"	" ( " )

### Coils

Item No.	Part Number	Rating	Description	
L101	EQR2306-014		RF Coil (for A, B, D)	
L101	EQR2306-016		" (for C)	
L102	EQR2306-011		"	
L103	EQR2406-002		"	
L104	EQL3001-1R5KY		Inductor	

### Capacitors

Item No.	Part Number	Rating	Description
C155	QCS31HJ-561Z	560 pF 50 V	Ceramic (for B,C,D)
C155	QCY31HK-821Z	820 pF "	" (for A)
C156	QCS31HJ-561Z	560 pF "	" (for B,C,D)
C156	QCY31HK-821Z	820 pF "	" (for A)
C159	QCY21HK-103	0.01 μF "	"
C160	QCY21HK-103	" "	"
C161	QFM31HK-473Z	0.047 μF "	Mylar
C162	QEB51EM-225	2.2 μF 25 V	Low Leak Current
C163	QEB51EM-335	3.3 μF "	Electrolytic
C164	QFP31HJ-102	1000 pF 50 V	Polypropylene
C165	QEZ0046-105		
C167	QET61HM-475ZM	4.7 μF 50 V	Nonflammable Electrolytic
C168	QET61HM-475ZM	" "	"
C201	QCS31HJ-5R0Z	5 pF "	Ceramic Trimmer
C202	QAT2001-005		
C203	QCF31HP-223Z	0.022 μF 50 V	Ceramic
C204	QCF31HP-223Z	" "	"
C205	QCY31HK-102Z	1000 pF "	" (for D)
C206	QCF31HP-223Z	0.022 μF "	" ( " )
C207	QCF31HP-223Z	" "	" ( " )
C208	QCS31HJ-470Z	47 pF "	" ( " )
C209	QAT2001-005		Trimmer (for D)
C210	QCF31HP-473Z	0.047 μF 50 V	Ceramic (for D)
C211	QCF31HP-223Z	0.022 μF "	" ( " )
C212	QCY31HK-222Z	2200 pF "	" ( " )
C213	QCF31HP-223Z	0.022 μF "	" ( " )
C214	QCF31HP-223Z	" "	" ( " )
C215	QCF31HP-223Z	" "	" ( " )
C216	QCS31HJ-181Z	180 pF "	" ( " )
C218	QCY31HK-102Z	1000 pF "	"
C219	QCF31HP-223Z	0.022 μF "	"
C220	QCF31HP-223Z	" "	"
C221	QCF31HP-223Z	" "	"
C222	QET61CM-226ZM	22 μF 16 V	Electrolytic
C223	QCS31HJ-560Z	56 pF 50 V	Ceramic
C224	QCF31HP-223Z	0.022 μF "	" (for D)
C225	QCS31HJ-121Z	120 pF "	"
C226	QCF31HP-223Z	0.022 μF "	" (for D)
C227	QCF31HP-223Z	" "	" ( " )
C228	QCF31HP-223Z	" "	" ( " )
C229	QCF31HP-223Z	" "	" ( " )
C230	QCY31HK-102Z	1000 pF "	" ( " )
C231	QCF31HP-223Z	0.022 μF "	" ( " )
C232	QET61HM-105Z	1 μF "	Electrolytic
C233	QET61HM-475Z	4.7 μF "	"
C234	QCF31HP-223Z	0.022 μF "	Ceramic (for D)
C235	QCF31HP-223Z	" "	"
C236	QET61HM-105ZM	1 μF "	Electrolytic
C237	QET61CM-476ZM	47 μF 16 V	"
C238	QCF31HP-223Z	0.022 μF 50 V	Ceramic
C239	QFM31HK-473Z	0.047 μF "	Mylar
C240	QCY31HK-472Z	4700 pF "	Ceramic
C241	QFM31HK-473Z	0.047 μF "	Mylar
C243	QCS31HJ-221Z	220 pF "	Ceramic
C244	QCS31HJ-221Z	" "	"
C245	QCS31HJ-180Z	18 pF "	"
C246	QAT2001-005		Trimmer
C247	QCF31HP-223Z	0.022 μF 50 V	Ceramic (for D)
C248	QCS31HJ-101Z	100 pF "	" ( " )
C249	QCS31HJ-820Z	82 pF "	" ( " )
C250	QCS31HJ-820Z	" "	" ( " )
C251	QAT2001-005		Trimmer (for D)
C252	QCY21HK-103	0.01 μF 50 V	Ceramic
C253	QCF31HP-223Z	0.022 μF "	"
C256	QCS31HJ-820Z	82 pF "	"
C301	QCF31HP-223Z	0.022 μF "	"
C302	QCF31HP-223Z	" "	"
C303	QCF31HP-223Z	" "	"
C304	QCF31HP-223Z	" "	" (for C)
C305	QET61HM-475ZM	4.7 μF "	Electrolytic

### Capacitors

Item No.	Part Number	Rating	Description
C306	QET61HM-475ZM	4.7 μF 50 V	Electrolytic
C307	QCS31HJ-331Z	330 pF "	Ceramic (for C)
C308	QCS31HJ-331Z	" "	" ( " )
C309	QCS31HJ-560Z	56 pF "	"
C310	QCS31HJ-560Z	" "	"
C311	QFM31HK-182Z	1800 pF "	Mylar
C312	QFM31HK-182Z	" "	"
C313	QFM31HK-682Z	6800 pF "	"
C314	QFM31HK-682Z	" "	"
C315	QET61HM-105ZM	1 μF "	Electrolytic
C316	QET61HM-105ZM	" "	"
C317	QET61CM-476ZM	47 μF 16 V	"
C318	QET61CM-476ZM	" "	"

### Resistors

Item No.	Part Number	Rating	Description
R101	QRD141J-473S	47 kΩ 1/4 W	Carbon
R102	QRD141J-102S	1 kΩ "	"
R103	QRD141J-270S	27 Ω "	" (for A,B,D)
R104	QRD141J-221S	220 Ω "	"
R105	QRD141J-473S	47 kΩ "	"
R106	QRD141J-302S	3 kΩ "	" (for C)
R106	QRD141J-472S	4.7 kΩ "	" (for A,B,D)
R107	QRD141J-153S	15 kΩ "	"
R108	QRD141J-102S	1 kΩ "	"
R109	QRD141J-102S	" "	"
R110	QRD141J-332S	3.3 kΩ "	"
R111	QRD141J-271S	270 Ω "	"
R114	QRD149J-101S	100 Ω "	U. Carbon
R115	QRD141J-102S	1 kΩ "	Carbon
R116	QRD149J-470S	47 Ω "	U. Carbon
R117	QRD149J-101S	100 Ω "	"
R118	QRD141J-103S	10 kΩ "	Carbon
R119	QRD141J-222S	2.2 kΩ "	"
R120	QRD141J-682S	6.8 kΩ "	"
R121	QRD141J-220S	22 Ω "	"
R122	QRD141J-105S	1 MΩ "	"
R123	QRD141J-391S	390 Ω "	"
R124	QRD141J-105S	1 MΩ "	"
R125	QRD141J-331S	330 Ω "	"
R126	QRD141J-562S	5.6 kΩ "	"
R127	QRD141J-222S	2.2 kΩ "	"
R130	QRD141J-101S	100 Ω "	"
R131	QRD141J-222S	2.2 kΩ "	"
R132	QRD141J-681S	680 Ω "	"
R133	QRD141J-101S	100 Ω "	"
R134	QRD141J-102S	1 kΩ "	"
R135	QRD141J-331S	330 Ω "	"
R136	QRD141J-101S	100 Ω "	"
R137	QRD141J-103S	10 kΩ "	"
R138	QRD141J-331S	330 Ω "	"
R139	QRD141J-472S	4.7 kΩ "	"
R140	QRD141J-561S	560 Ω "	"
R141	QRD141J-243S	24 kΩ "	"
R142	QRD141J-332S	3.3 kΩ "	"
R143	QVP4AOB-223	22 kΩ 0.1 W	Variable
R144	QRD149J-101S	100 Ω 1/4 W	U. Carbon
R147	QRD141J-103S	10 kΩ "	Carbon (for C)
R148	QRD141J-334S	330 kΩ "	" ( " )
R149	QRD141J-823S	82 kΩ "	" ( " )
R150	QRD141J-222S	2.2 kΩ "	" ( " )
R151	QRD141J-472S	4.7 kΩ "	" ( " )
R152	QRD141J-272S	2.7 kΩ "	"
R153	QRD141J-473S	47 kΩ "	"
R154	QRD141J-561S	560 Ω "	"
R155	QRD141J-220S	22 Ω "	"
R156	QRD141J-473S	47 kΩ 1/4 W	Carbon
R157	QRD141J-103S	10 kΩ "	"
R158	QRD141J-472S	4.7 kΩ "	"
R159	QRD141J-473S	47 kΩ "	"
R160	QRD149J-101S	100 kΩ "	U. Carbon

### Resistors

Item No.	Part Number	Rating		Description
R162	QRD141J-474S	470 kΩ	1/4 W	Carbon
R163	QRD141J-184S	180 kΩ	"	"
R164	QRD141J-273S	27 kΩ	"	"
R165	QRD141J-913S	91 kΩ	"	"
R166	QRD141J-913S	"	"	"
R167	QRD141J-274S	270 kΩ	"	"
R168	QRD141J-274S	"	"	"
R169	QRD141J-100S	10 Ω	"	"
R170	QRD141J-100S	"	"	"
R171	QRD141J-102S	1 kΩ	"	"
R172	QRD141J-102S	"	"	"
R173	QVP4A0B-473	47 kΩ	0.1 W	Variable
R175	QRD141J-222S	2.2 kΩ	1/4 W	Carbon
R176	QRD141J-222S	"	"	"
R177	QRD141J-682S	6.8 kΩ	"	"
R178	QRD141J-682S	"	"	"
R179	QRD141J-102S	1 kΩ	"	"
R180	QRD141J-123S	12 kΩ	"	"
R181	QVP4A0B-103	10 kΩ	0.1 W	Variable
R182	QRD141J-563S	56 kΩ	1/4 W	Carbon
R183	QRD141J-473S	47 kΩ	"	"
R187	QRD141J-473S	"	"	"
R188	QRD141J-473S	"	"	"
R189	QRD141J-153S	15 kΩ	"	" (for C)
R201	QRD141J-103S	10 kΩ	"	"
R202	QRD141J-331S	330 Ω	"	" (for D)
R203	QRD141J-561S	560 Ω	"	" ( " )
R204	QRD141J-562S	5.6 kΩ	"	" ( " )
R205	QRD141J-103S	10 kΩ	"	" ( " )
R206	QRD141J-224S	220 kΩ	"	" ( " )
R207	QRD141J-331S	330 Ω	"	" ( " )
R208	QRD141J-562S	5.6 kΩ	"	" ( " )
R209	QRD141J-561S	560 Ω	"	" ( " )
R210	QRD141J-562S	5.6 kΩ	"	" ( " )
R211	QRD141J-102S	1 kΩ	"	" ( " )
R212	QRD141J-104S	100 kΩ	"	" ( " )
R213	QRD141J-152S	1.5 kΩ	"	"
R214	QRD141J-271S	270 Ω	"	"
R215	QRD141J-562S	5.6 kΩ	"	(for D)
R216	QRD141J-101S	100 Ω	"	" ( " )
R217	QRD141J-153S	15 kΩ	"	" ( " )
R218	QRD141J-223S	22 kΩ	"	" ( " )
R219	QRD141J-102S	1 kΩ	"	" ( " )
R220	QRD141J-562S	5.6 kΩ	"	" ( " )
R221	QRD141J-223S	22 kΩ	"	" ( " )
R222	QRD141J-331S	330 Ω	"	"
R223	QRD141J-103S	10 kΩ	"	"
R224	QRD141J-103S	"	"	"
R225	QRD141J-820S	82 Ω	"	(for A,B,C)
R225	QRD141J-221S	220 Ω	"	(for D)
R226	QRD141J-183S	18 kΩ	"	" ( " )
R227	QRD141J-104S	100 kΩ	"	" ( " )
R228	QRD141J-123S	12 kΩ	"	"
R229	QRD141J-562S	5.6 kΩ	"	(for A,B,C)
R229	QRD141J-223S	22 kΩ	"	(for D)
R230	QRD141J-103S	10 kΩ	"	" ( " )
R230	QRD141J-182S	1.8 kΩ	"	(for A,B,C)
R231	QRD141J-223S	22 kΩ	"	(for D)
R232	QRD149J-101S	100 Ω	"	U. Carbon
R233	QRD141J-332S	3.3 kΩ	"	Carbon
R236	QRD141J-104S	100 kΩ	"	" (for D)
R237	QRD141J-562S	5.6 kΩ	"	" ( " )
R238	QRD141J-104S	100 kΩ	"	" ( " )
R239	QRD141J-223S	22 kΩ	"	" ( " )
R240	QRD141J-223S	"	"	" ( " )
R241	QRD141J-103S	10 kΩ	"	"
R301	QRD141J-222S	2.2 kΩ	"	"
R302	QRD141J-222S	"	"	"
R303	QRD141J-563S	56 kΩ	"	"
R304	QRD141J-563S	"	"	"

### Resistors

Item No.	Part Number	Rating		Description
R305	QRD141J-681S	680 Ω	1/4 W	Carbon
R306	QRD141J-681S	"	"	"
R307	QRD141J-393S	39 kΩ	"	"
R308	QRD141J-393S	"	"	"
R309	QRD141J-474S	470 kΩ	"	"
R310	QRD141J-474S	"	"	"
R311	QRD141J-101S	100 Ω	"	"
R312	QRD141J-101S	"	"	"
R313	QRD141J-104S	100 kΩ	"	"
R314	QRD141J-104S	"	"	"
R315	QRD149J-101S	100 Ω	"	U. Carbon
R316	QRD149J-101S	"	"	"
R318	QRD141J-124S	120 kΩ	"	Carbon (for B,C,D)
R319	QRD141J-124S	"	"	" ( " )
R319	QRD141J-821S	820 Ω	"	"
R320	QRD141J-103S	10 kΩ	"	"
R321	QRD141J-103S	"	"	"
R322	QRD141J-472S	4.7 kΩ	"	"
R323	QRD141J-472S	"	"	"
R327	QRD141J-332S	3.3 kΩ	"	"
R328	QRD141J-332S	"	"	"
R329	QRD141J-332S	"	"	"
R330	QRD141J-332S	"	"	"

### Others

Item No.	Part Number	Rating		Description
	E03572-016			Antennm Terminal (for A,B,D)
	EMB91YV-201A	"		" (for C)
	EMN00TV-402A			Pin Jack Ass'y
	E03623-003			DIN Socket (for B,C,D)
SW301	QST1651-E02			Push Switch (for A,B,C)
SW301	QST1651-E01			" (for D)
SW302	QST1651-E02			" (for A,B,C)
SW302	QST1651-E01			" (for D)
SW303	QST1651-E02			" (for A,B,C)
SW303	QST1651-E01			" (for D)
SW304	QST1651-E02			" (for A,B,C)
SW304	QST1651-E01			" (for D)
SW305	QST1651-E02			" (for A,B,C)
SW305	QST1651-E01			" (for D)
SW306	QST1651-E02			" (for A,B,C)
SW306	QST1651-E01			" (for D)
SW307	QST1651-E02			" (for A,B,C)
SW307	QST1651-E01			" (for D)
P101	QMV5005-007			7P Plug Ass'y
P102	QMV5005-007			"
P103	QMV5005-002			2P Plug Ass'y (for D)
P104	QMV5005-003			3P Plug Ass'y (for A)
P105	QMV5005-004			4P Plug Ass'y
P106	QMV5005-002			2P Plug Ass'y
P107	QMV5005-003			3P Plug Ass'y
P108	QMV5005-003			" (for D)
P109	QMV5005-002			2P Plug Ass'y
S401	EWS015-072			Socket Wire Ass'y (for B)
S402	EWS017-043			" (for A)
	E65396-001			Earth Plate
	E69328-001			Shield Cover
	E10737-001			Circuit Board

## 8-(2) TXX-402□ Power Amplifier P.C. Board Ass'y

Note: TXX-402□-1 varies according to the areas employed. See note (1)

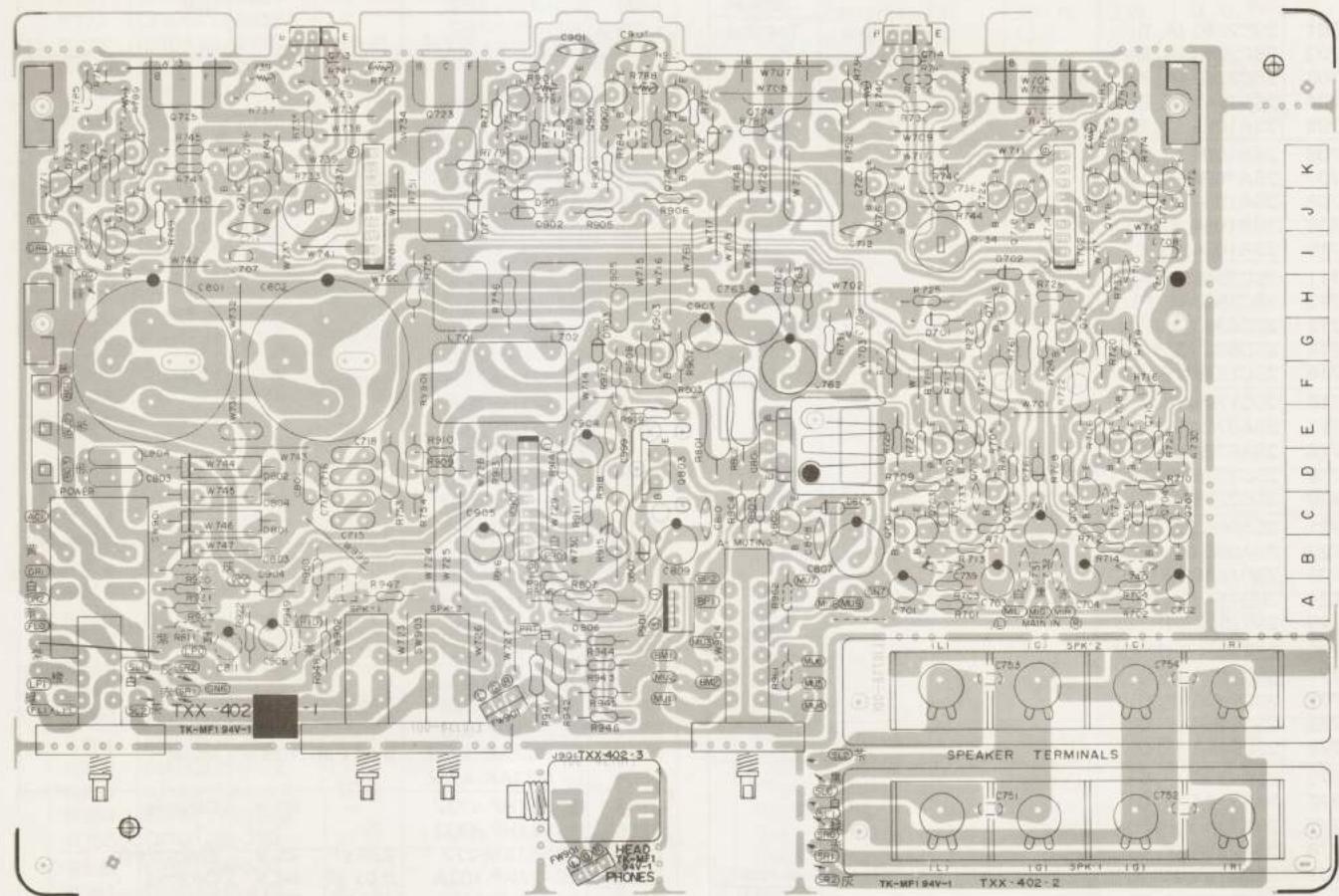


Fig. 14

### Each Individual P.C. Board Location

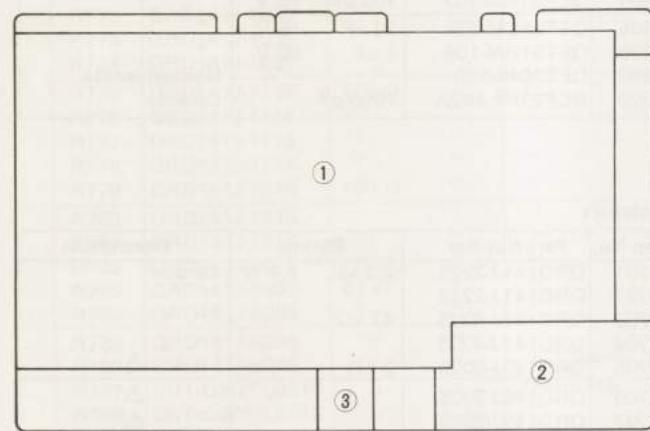


Fig. 15

### Note (1)

Designated Areas	P.C. Board Ass'y
U.S.A., Canada, U.S. Military Market & Other Countries	TXX-402 A-1
U.K., Europe & Australia	TXX-402 B
W. Germany	TXX-402 C

Note (2) The symbols (赤, 黒, 白... etc.) on P.C. Board surface are factory process only.

- ① TXX-402-1 Power Amp. P.C. Board Ass'y
- ② TXX-402-2 Speaker Terminal P.C. Board Ass'y
- ③ TXX-402-3 Headphone Jack P.C. Board Ass'y

### Transistors

Item No.	Part Number	Rating	Description	
			Maker	
Q701	2SC2240 (A, B)		Silicon	Toshiba
Q702	2SC2240 (A, B)		"	"
Q703	2SC2240 (A, B)		"	"
Q704	2SC2240 (A, B)		"	"
Q705	2SA1084 (D, E)		"	Hitachi
Q706	2SA1084 (D, E)		"	"
Q707	2SA1084 (D, E)		"	"
Q708	2SA1084 (D, E)		"	"
Q709	2SA1084 (D, E)		"	"
Q710	2SA1084 (D, E)		"	"
Q711	2SC2546 (E, F)		"	"
Q712	2SC2546 (E, F)		"	"
Q713	2SD636 (O, R)		"	Matsushita
Q714	2SD636 (O, R)		"	"
Q715	2SC1775AV (F)		"	Hitachi
Q716	2SC1775AV (F)		"	"
Q717	2SA872AV (E)		"	"
Q718	2SA872AV (E)		"	"
Q719	2SC2235 (O, Y)		"	Toshiba
Q720	2SC2235 (O, Y)		"	"
Q721	2SA965 (O, Y)		"	"
Q722	2SA965 (O, Y)		"	"
Q723	2SD1148LB (R, O)		"	"
Q724	2SD1148LB (R, O)		"	"
Q725	2SB863LB (R, O)		"	"
Q726	2SB863LB (R, O)		"	"
Q771	2SC945A (P, Q)		"	NEC
Q772	2SC945A (P, Q)		"	"
Q773	2SC945A (P, Q)		"	"
Q774	2SC945A (P, Q)		"	"
Q775	2SA733A (P, Q)		"	"
Q776	2SA733A (P, Q)		"	"
Q777	2SA733A (P, Q)		"	"
Q778	2SA733A (P, Q)		"	"
Q801	2SD313V (D, E)		"	Sanyo
Q802	2SC945A (P, Q)		"	NEC
Q803	2SB507V (D, E)		"	Sanyo
Q901	2SC1775AV (F)		"	Hitachi
Q902	2SC1775AV (F)		"	"
Q903	2SA872AV (E)		"	"

### Integrated Circuit

Item No.	Part Number	Rating	Description	
			Maker	
IC701	VC5022 (X, Y)		Rohm	
IC702	VC5022 (X, Y)		"	
IC901	TA7317P			Toshiba

### Diodes

Item No.	Part Number	Rating	Description	
			Maker	
D701	1S2076-31		Silicon	Hitachi
D702	1S2076-31		"	"
D761	RD9.1EB3		"	NEC
D771	1S2076-31		"	Hitachi
D772	1S2076-31		"	"
D773	1S2076-31		"	"
D774	1S2076-31		"	"
D801	S3V20F		"	Shindengen
D802	S3V20F		"	"
D803	S3V20F		"	"
D804	S3V20F		"	"
D805	RD16EB3		"	NEC
D806	RD16EB3		"	"
D807	1S2076-31		"	Hitachi
D811	1S2076-31		"	"
D901	1S2076-31		"	"
D902	1S2076-31		"	"
D903	1S2076-31		"	"
D904	1S2076-31		"	"
D999	1S2076-31		"	"

### Coils

Item No.	Part Number	Rating	Description
L701	EQL0101-1R2		
L702	EQL0101-1R2		"

### Capacitors

Item No.	Part Number	Rating	Description
C701	QET51HM-475	4.7 $\mu$ F 50 V	Electrolytic
C702	QET51HM-475	" "	"
C703	QET51AM-476	47 $\mu$ F 100 V	"
C704	QET51AM-476	" "	"
C705	QFM81HK-272	2700 pF 50 V	Mylar
C706	QFM81HK-272	" "	"
C707	QFM81HK-332	3300 pF "	"
C708	QFM81HK-332	" "	"
C709	QCS21HJ-7R0A	7 pF "	Ceramic
C710	QCS21HJ-7R0A	" "	"
C711	QCS31HJ-470Z	47 pF "	"
C712	QCS31HJ-470Z	" "	"
C713	QCS31HJ-470Z	" "	"
C714	QCS31HJ-470Z	" "	"
C715	QFM81HK-473	0.047 $\mu$ F "	Mylar
C716	QFM81HK-473	" "	"
C717	QFM81HK-473	" "	"
C718	QFM81HK-473	" "	"
C761	QET51EM-106	10 $\mu$ F 25 V	Electrolytic
C762	QE61HM-107Z	100 $\mu$ F 50 V	"
C763	QE61HM-475Z	" "	"
C801	QE8W1HA-878	8700 $\mu$ F "	"
C802	QE8W1HA-878	" "	"
C803	QFM82AK-473Z	0.047 $\mu$ F 100 V	Mylar
C804	QFM82AK-473Z	" "	"
C805	QCF31HP-473Z	" 50 V	Ceramic
C806	QCF31HP-473Z	" "	"
C807	QE61EM-227	220 $\mu$ F 25 V	Electrolytic
C808	QCF21HP-103A	0.01 $\mu$ F 50 V	Ceramic
C809	QE61EM-107	100 $\mu$ F 25 V	Electrolytic
C810	QCF21HP-103A	0.01 $\mu$ F 50 V	Ceramic
C901	QCF21HP-223A	0.022 $\mu$ F "	"
C902	QCF21HP-223A	" "	"
C903	QE61HM-226	22 $\mu$ F "	Electrolytic
C904	QE61AM-107	100 $\mu$ F 10 V	"
C905	QET51CM-226	22 $\mu$ F 16 V	"
C906	QET51HM-105	1 $\mu$ F 50 V	"
C998	QE0046-105	" "	Nonflammable
C999	QCF21HP-102A	1000 pF "	Ceramic

### Resistors

Item No.	Part Number	Rating	Description
R701	QRD141J-222S	2.2 k $\Omega$ 1/4 W	Carbon
R702	QRD141J-222S	" "	"
R703	QRD141J-473S	47 k $\Omega$ "	"
R704	QRD141J-473S	" "	"
R705	QRD149J-202S	2 k $\Omega$ "	▲
R706	QRD149J-202S	" "	▲
R707	QRD149J-202S	" "	▲
R708	QRD149J-202S	" "	▲
R709	QRD141J-101S	100 $\Omega$ "	"
R710	QRD141J-101S	" "	"
R711	QRD141J-472S	4.7 k $\Omega$ "	"
R712	QRD141J-472S	" "	"
R713	QRD141J-272S	2.7 k $\Omega$ "	"
R714	QRD141J-272S	" "	"
R715	QRD149J-101S	100 $\Omega$ "	▲
R716	QRD149J-101S	" "	▲
R717	QRD149J-390S	39 $\Omega$ "	▲
R718	QRD149J-390S	" "	▲
R719	QRD149J-390S	" "	▲
R720	QRD149J-390S	" "	▲

### Resistors

Item No.	Part Number	Rating		Description
R721	QRG017J-822S	8.2 kΩ	1 W	O. M. Film
R722	QRG017J-822S	"	"	"
R723	QRD149J-271S	270 Ω	1/4 W	Carbon ▲
R724	QRD149J-271S	"	"	▲
R725	QRD149J-271S	"	"	▲
R726	QRD149J-271S	"	"	▲
R727	QRD141J-152S	1.5 kΩ	"	"
R728	QRD141J-152S	"	"	"
R729	QRD141J-333S	33 kΩ	"	"
R730	QRD141J-333S	"	"	"
R731	QRD141J-473S	47 kΩ	"	"
R732	QRD141J-473S	"	"	"
R733	QVP4A0B-471	470 Ω(B) 0.1 W		Variable
R734	QVP4A0B-471	" (" )	"	"
R735	QRD141J-431S	430 Ω	1/4 W	Carbon
R736	QRD141J-431S	"	"	"
R737	QRD141J-561S	560 Ω	"	"
R738	QRD141J-561S	"	"	"
R739	ERT-D2WFL351S			Thermistor
R740	ERT-D2WFL351S			"
R741	QRD141J-431S	430 Ω	1/4 W	Carbon
R742	QRD141J-431S	"	"	"
R743	QRD149J-272S	2.7 kΩ	"	▲
R744	QRD149J-272S	"	"	▲
R745	QRD149J-271S	270 Ω	"	▲
R746	QRD149J-271S	"	"	▲
R747	QRD149J-100S	10 Ω	"	▲
R748	QRD149J-100S	"	"	▲
R749	QRD149J-100S	"	"	▲
R750	QRD149J-100S	"	"	▲
R751	ERF032K-R22	0.22 Ω	3 W	Cement
R752	ERF032K-R22	"	"	"
R753	QRX017J-100S	10 Ω	1 W	O. M. Film
R754	QRX017J-100S	"	"	"
R755	QRD129J-330	33 Ω	1/2 W	Carbon ▲
R756	QRD129J-330	"	"	▲
R761	QRD129J-472	4.7 kΩ	"	▲
R762	QRD149J-220S	22 Ω	1/4 W	▲
R763	QRD149J-220S	"	"	▲
R767	ERT-D2WFL351S			Thermistor (for B, C)
R768	ERT-D2WFL351S			" ( " )
R771	QRD141J-103S	10 kΩ	1/4 W	Carbon
R772	QRD141J-103S	"	"	"
R773	QRD141J-103S	"	"	"
R774	QRD141J-103S	"	"	"
R775	QRD141J-111S	110 Ω	"	"
R776	QRD141J-111S	"	"	"
R777	QRD141J-111S	"	"	"
R778	QRD141J-111S	"	"	"
R779	QRD141J-101S	100 Ω	"	"
R780	QRD141J-101S	"	"	"
R781	QRD141J-101S	"	"	"
R782	QRD141J-101S	"	"	"
R783	QRD141J-820S	82 Ω	"	"
R784	QRD141J-820S	"	"	"
R785	QRD141J-820S	"	"	"
R786	QRD141J-820S	"	"	"
R787	ERT-D2WFL351S			Thermistor
R788	ERT-D2WFL351S			"
R789	ERT-D2WFL351S			"

### Resistors

Item No.	Part Number	Rating		Description
R790	ERT-D2WFL351S	150 Ω	2 W	Thermistor
R801	QRG027J-151	15 Ω	"	O. M. Film
R802	QRG027J-151	100 Ω	1/4 W	"
R804	QRD149J-101S	3.3 kΩ	"	U. Carbon
R805	QRD141J-332S			Carbon
R806	QRG027J-271	270 Ω	2 W	O. M. Film
R807	QRD141J-332S	3.3 kΩ	1/4 W	Carbon
R901	QRD141J-681S	680 Ω	"	"
R902	QRD141J-681S	"	"	"
R903	QRD141J-562S	5.6 kΩ	"	"
R904	QRD141J-562S	"	"	"
R905	QRD141J-123S	12 kΩ	"	"
R906	QRD141J-123S	"	"	"
R907	QRD141J-103S	10 kΩ	"	"
R908	QRD141J-332	3.3 kΩ	"	"
R909	QRD141J-104S	100 kΩ	"	"
R910	QRD141J-104S	"	"	"
R911	QRD141J-104S	"	"	"
R912	QRD141J-563S	56 kΩ	"	"
R913	QRD141J-563S	"	"	"
R914	QRD141J-183S	18 kΩ	"	"
R915	QRD141J-683S	68 kΩ	"	"
R916	QRD141J-153S	15 kΩ	"	"
R917	QRD141J-184S	180 kΩ	"	"
R918	QRG027J-681	680 Ω	2 W	O. M. Film
R921	QRD141J-153S	15 kΩ	1/4 W	Carbon
R922	QRD141J-223S	22 kΩ	"	"
R923	QRD141J-102S	1 kΩ	"	"
R941	QRD129J-221	220 Ω	1/2 W	U. Carbon
R942	QRD129J-221	"	"	"
R943	QRD141J-332S	3.3 kΩ	1/4 W	Carbon
R944	QRD141J-332S	"	"	"
R945	QRD141J-681S	680 Ω	"	"
R946	QRD141J-681S	"	"	"
R947	QRD141J-222S	2.2 kΩ	"	"
R948	QRD141J-222S	"	"	"
Others				
Item No.	Part Number	Rating		Description
	E03572-007EM			Speaker Terminal
	E67764-103			W. Terminal
	E43727-002			Tab
	E302267-001			Heat Sink (Main)
	E33754-003			TIE. Band
J901	SBSB3008Z SBSE3012Z E61537-001 E65396-001 OSM6302-116			Tapping Screw Screw Heat Sink Earth Plate Head Phone Jack
P901	QMV5005-003 E302256-001 E302256-002			3P Plug Ass'y Heat Sink Bracket (L) (R)
RY901	ESK6D24-213			Relay
SW901	QSP0020-003			Push Switch (for A)
SW901	QSP0020-004			" (for B,C)
SW902	QSP0229-059			"
SW903	QSP0229-059			"
FW901	EWR33A-10NN			Flat Wire Ass'y (for A)
S106	EWS012-062			Socket Wire Ass'y
S801	EWS019-016			"
	E10738-001			Circuit Board

### 8-(3) TDC-61 Logic, Counter, Switch & Indicator P.C. Board Ass'y

Note: TDC-61-1 varies according to the areas employed. See note (1)

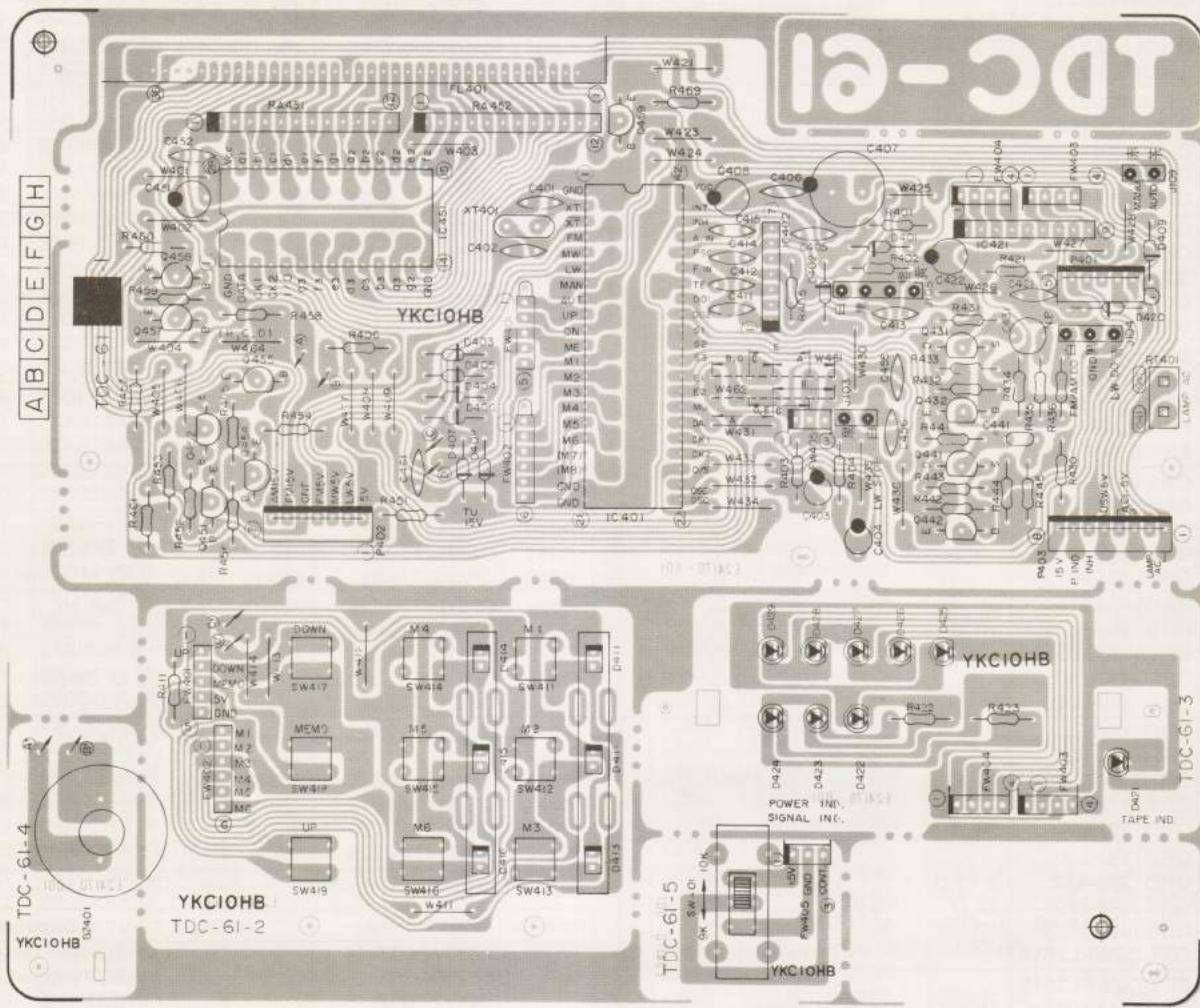


Fig. 16

#### Each Individual P.C. Board Location

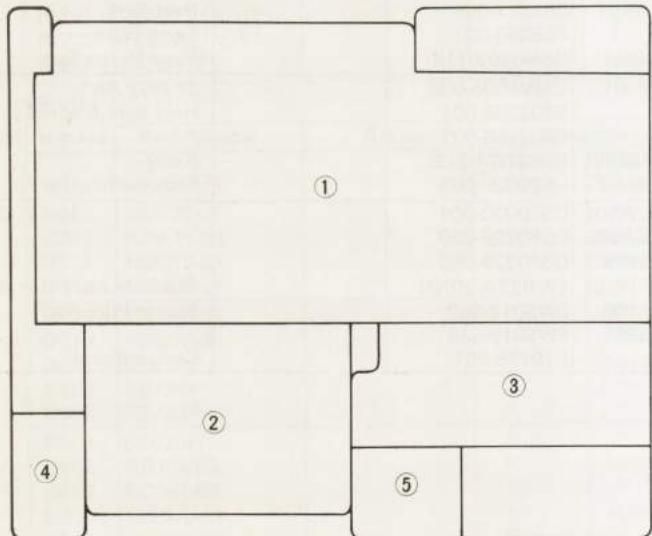


Fig. 17

#### Note (1)

Designated Areas	P.C. Board Ass'y
U.S.A. & Canada	TDC-61A-1
U.S. Military Market & Other Countries	TDC-61B-1
Europe, Australia & W. Germany	TDC-61C-1
U.K.	TDC-61D-1

Note (2) The symbols (赤, 黒, 白 ... etc.) on P.C. Board surface are factory process only.

- ① TDC-61-1 Logic & Counter P.C. Board Ass'y
- ② TDC-61-2 Preset Switch P.C. Board Ass'y
- ③ TDC-61-3 Indicator P.C. Board Ass'y
- ④ TDC-61-4 Buzzer P.C. Board Ass'y
- ⑤ TDC-61-5 AM Channel Step Select Switch P.C. Board Ass'y

### Transistors

Item No.	Part Number	Rating	Description	
			Maker	
Q431	2SK246(Y)		F.E.T.	Toshiba
Q432	2SC458(D)		Silicon	Hitachi
Q441	2SK246(Y)		F.E.T.	Toshiba (for D)
Q442	2SC458(D)		Silicon	Hitachi (for D)
Q451	2SC458(C, D)		"	"
Q452	2SA1029(C, D)		"	"
Q454	2SC458(C, D)		"	"
Q455	2SA1029(C, D)		"	"
Q457	2SC458(C, D)		"	"
Q458	2SC458(C, D)		"	(for B,C,D) Hitachi (for B,C,D)
Q459	2SA1029(C, D)		"	Hitachi

### Capacitors

Item No.	Part Number	Rating	Description
C431	QEZO046-225	2.2 $\mu$ F 50 V	Nonflam
C441	QFM31HK-473Z	0.047 $\mu$ F "	Mylar
C451	QET51AM-107	100 $\mu$ F 10 V	Electrolytic
C455	QCF31HP-103Z	0.01 $\mu$ F 50 V	Ceramic (for A,B,C)
C456	QCF31HP-103Z	" "	" (for D)
C461	QCF31HP-102Z	0.001 $\mu$ F "	"

### Resistors

Item No.	Part Number	Rating	Description
R401	QRD141J-102S	1 k $\Omega$ 1/4 W	Carbon
R402	QRD141J-561S	560 $\Omega$ "	"
R403	QRD141J-683S	68 k $\Omega$ "	"
R404	QRD141J-683S	" "	"
R405	QRD141J-823S	82 k $\Omega$ "	"
R406	QRD141J-103S	10 k $\Omega$ "	"
R411	QRD141J-271S	270 $\Omega$ "	"
R421	QRD141J-302S	3 k $\Omega$ "	"
R422	QRD141J-681S	680 $\Omega$ "	"
R423	QRD141J-331S	330 $\Omega$ "	"
R431	QRD141J-102S	3.9 k $\Omega$ "	Carbon
R432	QRD141J-331S	330 $\Omega$ "	"
R433	QRD141J-222S	2.2 k $\Omega$ "	"
R434	QRD141J-103S	10 k $\Omega$ "	"
R435	QRD141J-152S	1.5 k $\Omega$ "	"
R436	QRD141J-222S	2.2 k $\Omega$ "	"
R441	QRZ141J-122S	1.2 k $\Omega$ "	" (for D)
R442	QRZ141J-331S	330 $\Omega$ "	" ( " )
R443	QRZ141J-222S	2.2 k $\Omega$ "	" ( " )
R444	QRZ141J-103S	10 k $\Omega$ "	" ( " )
R445	QRZ141J-563S	56 k $\Omega$ "	" ( " )
R451	QRD141J-563S	" "	"
R452	QRD141J-103S	10 k $\Omega$ "	"
R454	QRD141J-563S	56 k $\Omega$ "	"
R455	QRD141J-563S	" "	"
R457	QRD141J-563S	" "	(for B,C,D)
R458	QRD141J-222S	2.2 k $\Omega$ "	" ( " )
R459	QRD141J-563S	56 k $\Omega$ "	" ( " )
R460	QRD141J-472S	4.7 k $\Omega$ "	" ( " )
R461	QRD141J-104S	100 k $\Omega$ "	" ( " )
R469	QRD141J-104S	" "	"
RA451	ERGSBXK-472	4.7 k $\Omega$ "	Resistor Array
RA452	ERGSBXK-472	" "	"

### Others

Item No.	Part Number	Rating	Description
P401	E67764-002 E302266-001 E69413-001 E67910-001 QMVF5005-005		Terminal Ass'y LED Holder " Spacer 5P Plug Ass'y
P402	QMVF5005-007		7P Plug Ass'y
P403	QMVF5005-008		8P Plug Ass'y
BZ401	ENZ7001-001		CE, Buzzer
SW401	QSS2201-004		Slide Switch (for A,B)
SW411	ESP0001-007		Push Switch
SW412	ESP0001-007		"
SW413	ESP0001-007		"
SW414	ESP0001-007		"
SW415	ESP0001-007		"
SW416	ESP0001-007		"
SW417	ESP0001-007		"
SW418	ESP0001-007		"
SW419	ESP0001-007		"
XT401	ECX0007-200KA		Resonator
FL401	ELU0001-011 E24170-001		Fluorescent Lamp Circuit Board

### Capacitors

Item No.	Part Number	Rating	Description
C401	QCS21HJ-8R0Z	8 pF 50 V	Ceramic
C402	QCS21HJ-100A	10 pF "	"
C403	QET51HM-105	0.1 $\mu$ F "	Electrolytic
C404	QET51HM-105	" "	"
C405	QCF21HP-103	0.022 $\mu$ F "	Ceramic
C406	QCF21HP-223A	" "	"
C407	QET50JM-228	2200 $\mu$ F 6.3 V	Electrolytic
C408	QET51AM-107	100 $\mu$ F 10 V	"
C411	QCF21HP-103A	0.01 $\mu$ F 50 V	Ceramic
C412	QCF21HP-103A	" "	"
C413	QCS21HJ-221A	220 pF "	"
C414	QCF21HP-103A	0.01 $\mu$ F "	"
C415	QCF21HP-103A	" "	"
C421	QCF21HP-103	0.022 $\mu$ F "	"
C422	QET51CM-107	100 $\mu$ F 16 V	Electrolytic

## 8-(4) TAC-532B SEA Control P.C. Board Ass'y

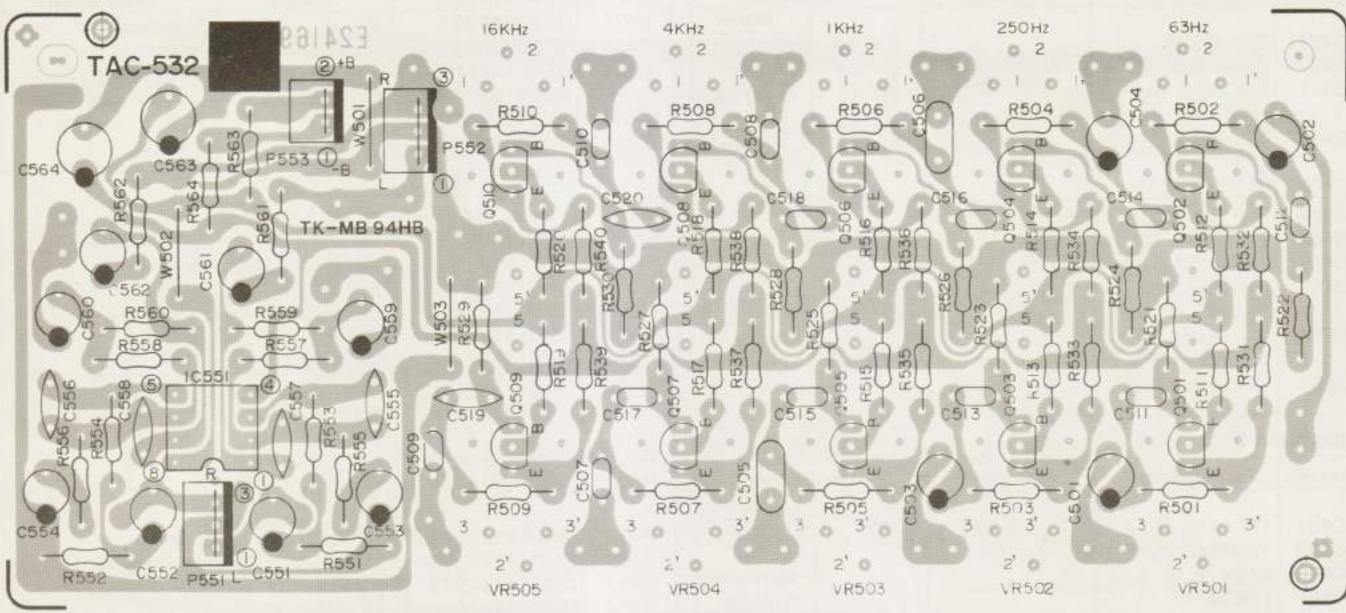


Fig. 18

### Transistors

Item No.	Part Number	Rating	Description	
			Silicon	Maker
Q501	2SC1775AV(F)		"	Hitachi
Q502	2SC1775AV(F)		"	"
Q503	2SC1775AV(F)		"	"
Q504	2SC1775AV(F)		"	"
Q505	2SC1775AV(F)		"	"
Q506	2SC1775AV(F)		"	"
Q507	2SC1775AV(F)		"	"
Q508	2SC1775AV(F)		"	"
Q509	2SC1775AV(F)		"	"
Q510	2SC1775AV(F)		"	"

### Integrated Circuit

Item No.	Part Number	Rating	Description	
			Maker	
IC551	NJM4560D-X		Dainichi	

### Capacitors

Item No.	Part Number	Rating	Description
C516	QFM81HK-332	3300 pF	50 V Mylar
C517	QFM81HK-122	1200 pF	" "
C518	QFM81HK-122	"	" "
C519	QCS21HJ-561A	560 pF	" Ceramic
C520	QCS21HJ-561A	"	"
C551	QET51HM-475	4.7 $\mu$ F	" Electrolytic
C552	QET51HM-475	"	"
C553	QET51AM-476	47 $\mu$ F	10 V "
C554	QET51AM-476	"	"
C555	QCS21HJ-101	100 pF	50 V Ceramic
C556	QCS21HJ-101	"	"
C557	QCS31HJ-330Z	33 pF	" "
C558	QCS31HJ-330Z	"	"
C559	QET51AM-476	47 $\mu$ F	10 V Electrolytic
C560	QET51AM-476	"	"
C561	QET51HM-475	4.7 $\mu$ F	50 V "
C562	QET51HM-475	"	"
C563	QET51EM-476	47 $\mu$ F	25 V "
C564	QET51EM-476	"	"

### Capacitors

Item No.	Part Number	Rating	Description
C501	QET51HM-225	2.2 $\mu$ F 50 V	Electrolytic
C502	QET51HM-225	" "	"
C503	QET51HM-474	0.47 $\mu$ F "	"
C504	QET51HM-474	" "	"
C505	QFM81HK-124	0.12 $\mu$ F "	Mylar
C506	QFM81HK-124	" "	"
C507	QFM81HK-273	0.027 $\mu$ F "	"
C508	QFM81HK-273	" "	"
C509	QFM81HK-682	6800 pF "	"
C510	QFM81HK-682	" "	"
C511	QFM81HK-223	0.022 $\mu$ F "	"
C512	QFM81HK-223	" "	"
C513	QFM81HK-822	8200 pF "	"
C514	QFM81HK-822	" "	"
C515	QFM81HK-332	3300 pF "	"

### Resistors

Item No.	Part Number	Rating	Description
R501	QRD141J-122S	1.2 k $\Omega$ 1/4 W	Carbon
R502	QRD141J-122S	" "	"
R503	QRD141J-122S	" "	"
R504	QRD141J-122S	" "	"
R505	QRD141J-122S	" "	"
R506	QRD141J-122S	" "	"
R507	QRD141J-122S	" "	"
R508	QRD141J-122S	" "	"
R509	QRD141J-122S	" "	"
R510	QRD141J-122S	" "	"
R511	QRD141J-391S	390 $\Omega$	"
R512	QRD141J-391S	" "	"
R513	QRD141J-391S	" "	"
R514	QRD141J-391S	" "	"
R515	QRD141J-391S	" "	"

### Resistors

Item No.	Part Number	Rating	Description
R516	QRD141J-391S	390 $\Omega$	1/4 W Carbon
R517	QRD141J-391S	" "	"
R518	QRD141J-391S	" "	"
R519	QRD141J-391S	" "	"
R520	QRD141J-391S	" "	"
R521	QRD141J-124S	120 k $\Omega$	"
R522	QRD141J-124S	" "	"
R523	QRD141J-913S	91 k $\Omega$	"
R524	QRD141J-913S	" "	"
R525	QRD141J-513S	51 k $\Omega$	"
R526	QRD141J-513S	" "	"
R527	QRD141J-393S	39 k $\Omega$	"
R528	QRD141J-393S	" "	"
R529	QRD141J-223S	22 k $\Omega$	"
R530	QRD141J-223S	" "	"
R531	QRD141J-472S	4.7 k $\Omega$	"
R532	QRD141J-472S	" "	"
R533	QRD141J-472S	" "	"
R534	QRD141J-472S	" "	"
R535	QRD141J-472S	" "	"
R536	QRD141J-472S	" "	"
R537	QRD141J-472S	" "	"
R538	QRD141J-472S	" "	"
R539	QRD141J-472S	" "	"
R540	QRD141J-472S	" "	"

### Resistors

Item No.	Part Number	Rating	Description
R551	QRD141J-184S	180 k $\Omega$	1/4 W Carbon
R552	QRD141J-184S	" "	"
R553	QRD141J-102S	1 k $\Omega$	"
R554	QRD141J-102S	" "	"
R555	QRD141J-472S	4.7 k $\Omega$	"
R556	QRD141J-472S	" "	"
R557	QRD141J-273S	27 k $\Omega$	"
R558	QRD141J-273S	" "	"
R559	QRD141J-562S	5.6 k $\Omega$	"
R560	QRD141J-562S	" "	"
R561	QRD141J-562S	" "	"
R562	QRD141J-562S	" "	"
R563	QRD149J-100S	10 $\Omega$	"
R564	QRD149J-100S	" "	"
VR501	QVZ5010-105		Slide Volume
VR502	QVZ5010-105		"
VR503	QVZ5010-105		"
VR504	QVZ5010-105		"
VR505	QVZ5010-105		"

### Others

Item No.	Part Number	Rating	Description
	QMV5005-002		2P Plug Ass'y
	QMV5005-003		3P Plug Ass'y
	E24169-002		Circuit Board

## 8-(5) TAC-533□ Volume & Switch P.C. Board Ass'y

Note: TAC-533□-1 varies according to the areas employed. See note (1)

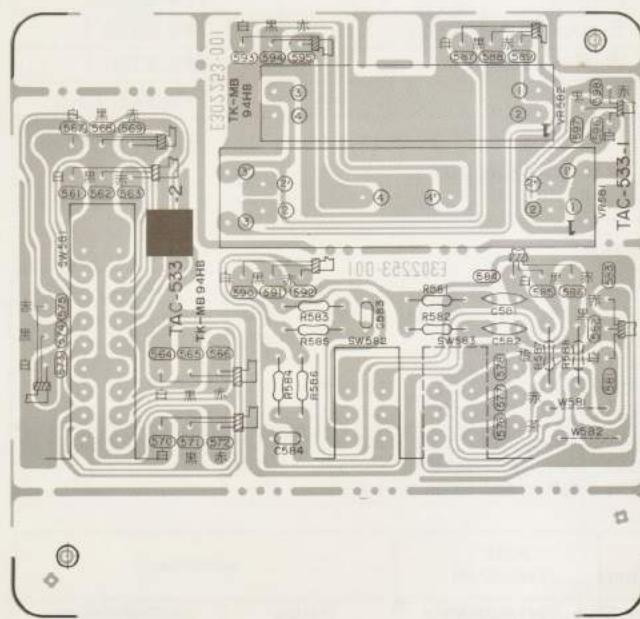


Fig. 19

Note (1)

Designated Areas	P.C. Board Ass'y
U.S.A., Canada, Europe	
W. Germany, Australia, & U.S. Military Market & Other Countries	TAC-533A
U.K. & Europe (R-X40L)	TAC-533B

### Each Individual P.C. Board Location

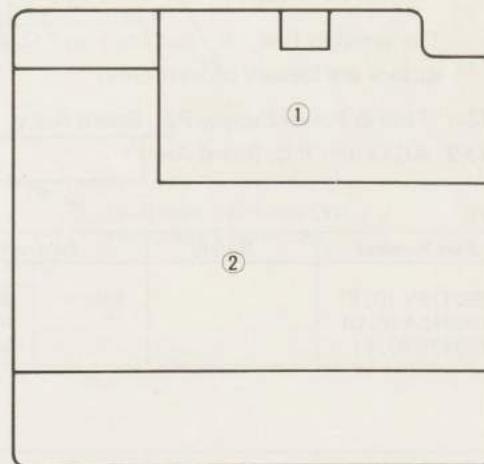


Fig. 20

Note (2) The symbols (赤, 黒, 白... etc.) on P.C. Board surface are factory process only.

- (1) TAC-533-1 Volume P.C. Board Ass'y
- (2) TAC-533-2 Switch P.C. Board Ass'y

### Capacitors

Item No.	Part Number	Rating	Description
C581	QCS21HJ-181A	180 pF	50 V Ceramic
C582	QCS21HJ-181A	" "	"
C583	QFM81HK-183	0.018 $\mu$ F	Mylar
C584	QFM81HK-183	" "	"

### Resistors

Item No.	Part Number	Rating		Description
R581	QRD148J-564S	560 kΩ	1/4 W	Carbon
VR581	QVZ5010-008	250 kΩ	(B)	Slide Volume
R582	QRD148J-683S	68 kΩ	1/4 W	Carbon
VR582	QVT3C6W-6F5	250 kΩ	(W)	Slide Volume
R583	QRD148J-683S	68 kΩ	1/4 W	Carbon
R584	QRD148J-683S	68 kΩ	"	"
R585	QRD148J-223S	22 kΩ	"	"
R586	QRD148J-223S	"	"	"

### Others

Item No.	Part Number	Rating	Description
SW581	QST4641-E02		Push Switch
SW581	QST4641-E03		"
SW582	QST4641-E02		"
SW582	QST4641-E03		"
SW583	QST4641-E03		"
	E302253-001		Circuit Board

## 8-(6) TPS-333□ Fuse, Power Supply & AC Outlet P.C. Board Ass'y

Note: TPS-333□-1 varies according to the areas employed. See note(1)

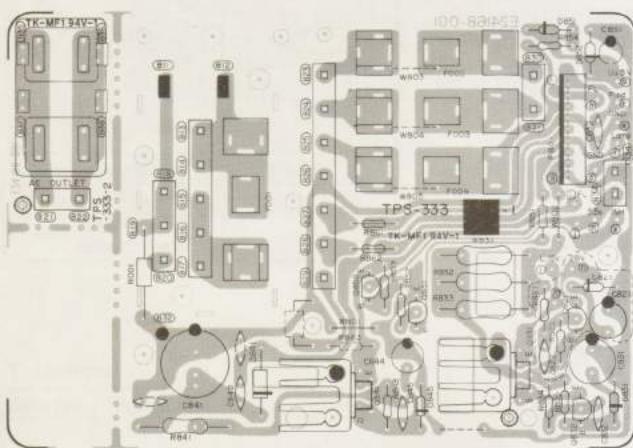


Fig. 21

Note (2) The symbols (赤, 黒, 白... etc.) on P.C. Board surface are factory process only.

- ① TPS-333-1 Fuse & Power Supply P.C. Board Ass'y
- ② TPS-333-2 AC Outlet P.C. Board Ass'y

### Each Individual P.C. Board Location

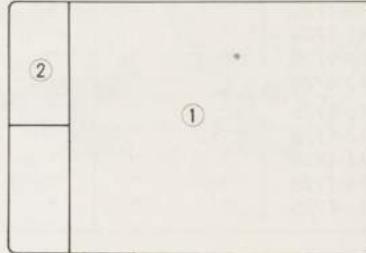


Fig. 22

### Note (1)

Designated Areas	P.C. Board Ass'y
U.S.A	TPS-333A-1
Canada	TPS-333B-1
Europe & Australia	TPS-333D-1
W. Germany	TPS-333E-1
U.K.	TPS-333FBS-1
U.S. Military Market & Other Countries	TPS-333C-1

### Transistors

Item No.	Part Number	Rating	Description	
			Maker	
Q831	2SD313V (D, E)		Silicon	Sanyo
Q832	2SC945A (P, Q)		"	NEC
Q841	2SD438 (D, E)		"	Sanyo

### Diodes

Item No.	Part Number	Rating	Description	
			Maker	
D831	RD16EB3		Silicon	NEC
D841	ERB12-02RKL1		"	Fujidenki
D845	RD6.2EB3		"	NEC
D851	1S2076-31		"	Hitachi
D852	RD5.1EB2		"	NEC

### Capacitors

Item No.	Part Number	Rating	Description	
C831	QET51EM-107	100 μF 25 V	Electrolytic	
C832	QCF21HP-103A	0.01 μF 50 V	Ceramic	
C841	QET51EM-477	470 μF 25 V	Electrolytic	
C842	QCF21HP-103A	0.01 μF 50 V	Ceramic	
C844	QET51AM-107	100 μF 10 V	Electrolytic	
C845	QCF21HP-103A	0.01 μF 50 V	Ceramic	
C851	QET51HM-475	4.7 μF "	Electrolytic	
C852	QFM81HK-223	0.022 μF "	Mylar	

### Resistors

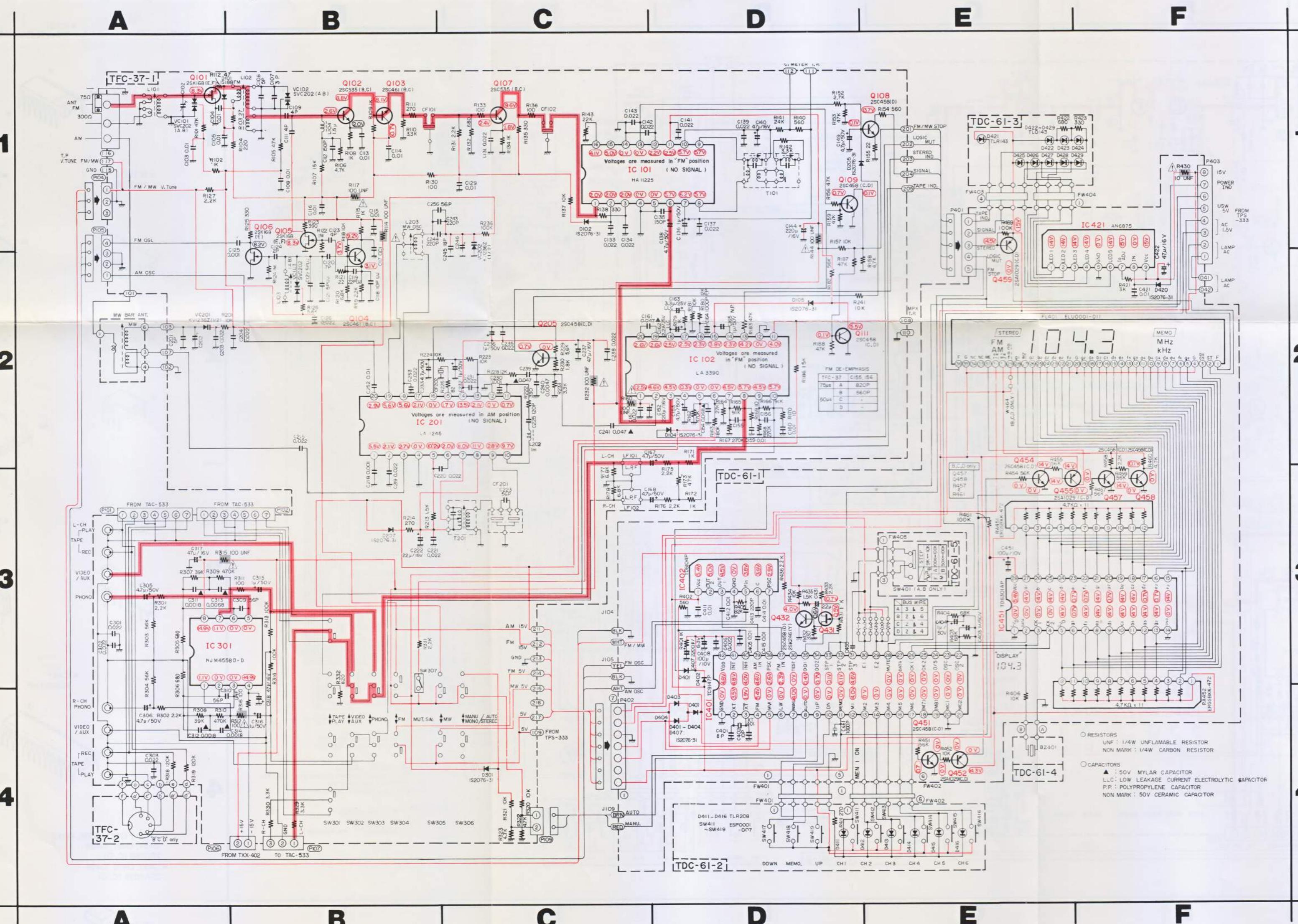
Item No.	Part Number	Rating	Description
R001	QRC121K-275EM	2.7 MΩ 1/2 W	Composi (for A, B)
R831	QRG027J-151	150 Ω 2 W	O. M. Film
R832	QRG027J-151	" "	"
R834	ORD149J-101S	100 Ω 1/4 W	U. Carbon
R835	QRD148J-472S	4.7 kΩ "	Carbon
R841	QRD129J-121	120 Ω 1/2 W	" ▲
R843	QRD148J-681S	680 Ω 1/4 W	"
R854	QRD148J-102S	1 kΩ "	"

### Others

Item No.	Part Number	Rating	Description
	QMV5005-009		9P Plug Ass'y
	QMC0437-002		AC Socket (for A, B, C)
	E45524-002		Fuse Clip (for A, B)
	EMG7331-001		" (for D, E, FBS)
	E67764-002		Terminal Ass'y
PCORD	E67764-102		"
	E67764-103		W. Terminal
	E67764-107		Terminal Ass'y
	SBSB3008Z		Tapping Screw
	E61537-006		Heat Sink
	E65508-002		Tab
	E24168-002		Circuit Board (for A, B, C, D, E)
	E24168-002BS		" (for FBS)

# 9. R-X40/R-X40L Schematic Diagram

## 9-(1) R-X40 Tuner Schematic Diagram (For Power Amp. Schematic Diagram, refer to page 25)



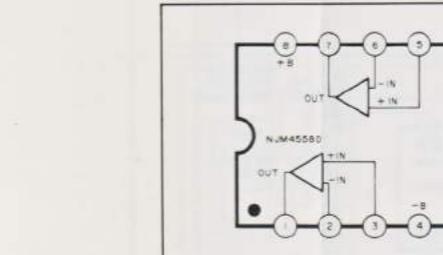
Printed Circuit Board Ass'y Locations

P.C. Board Ass'y	Description	Page
TFC-37	Tuner & Phono Equalizer P.C. Board Ass'y	11
TDC-61	Logic, Counter, Switch & Indicator P.C. Board Ass'y	18

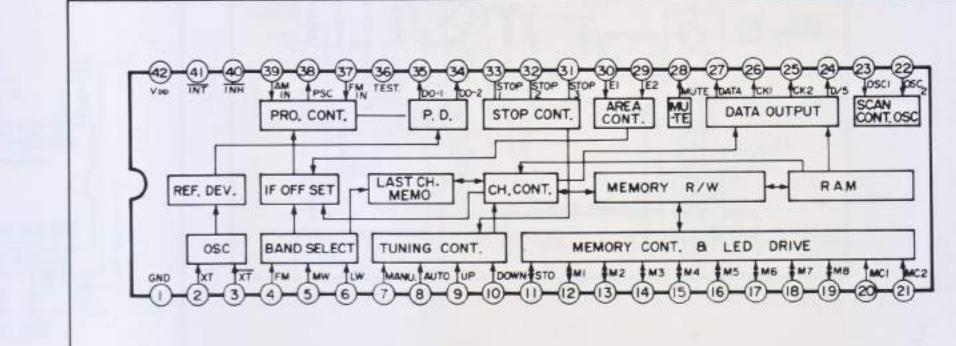
Notes:

- Red box shows DC voltage to the chassis with no signal input.
- Red line indicates positive B power supply.
- Red line indicates signal path.
- When replacing the parts in the darkened area (■) and those marked with △, be sure to use the designated parts to ensure safety.
- Parts in red indicate transistors or ICs.
- This is the standard circuit diagram. The design and contents are subject to change without notice.

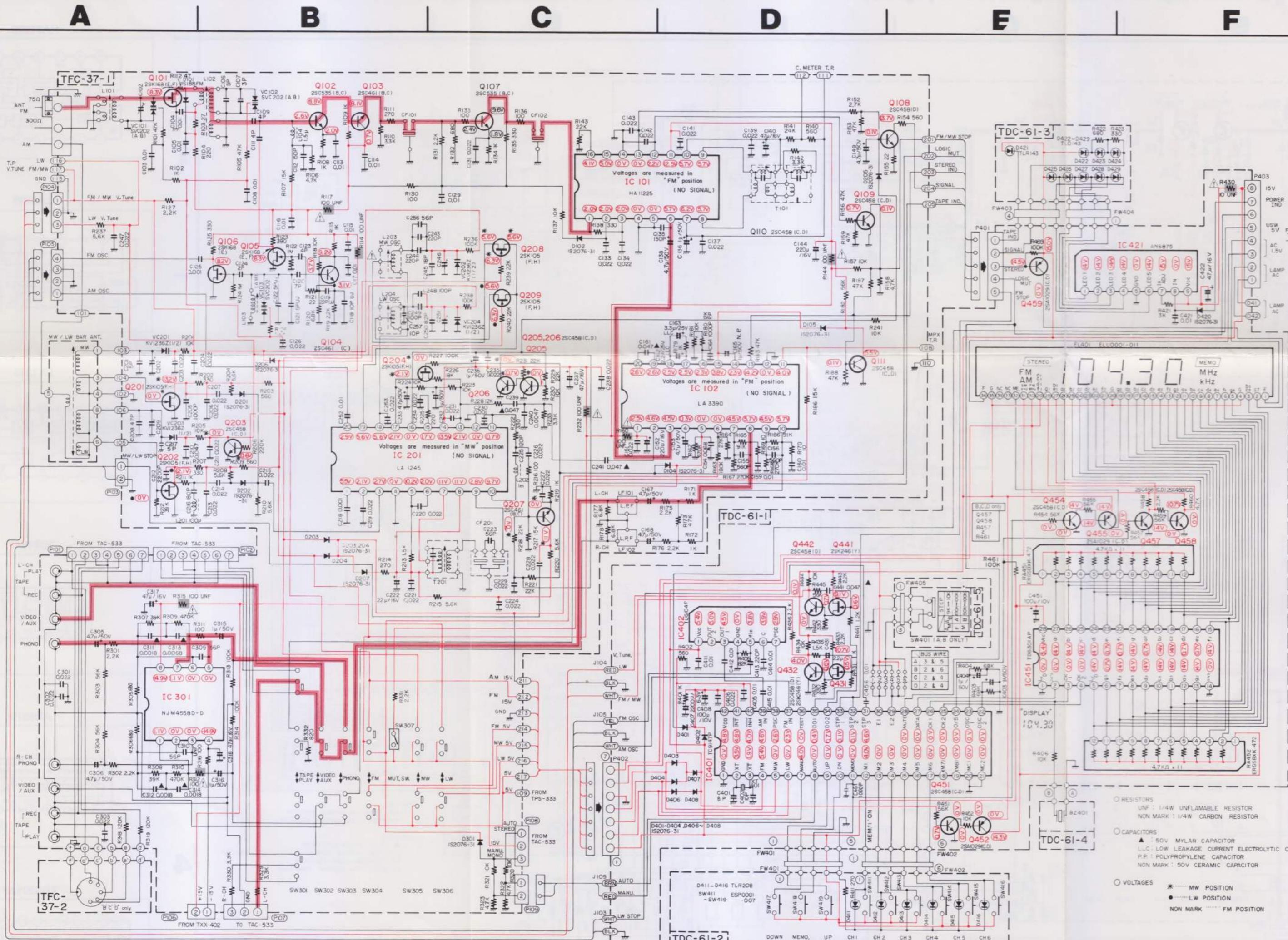
NJM4558D-D



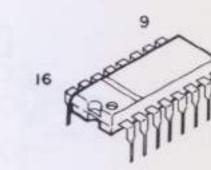
TC9147P



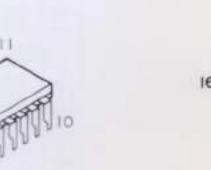
# 9-(2) R-X40L Tuner Schematic Diagram (For Power Amp. Schematic Diagram, refer to page 25)



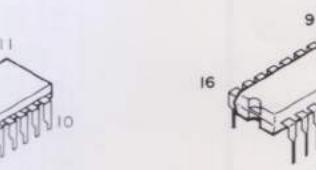
• IC101  
HA11225



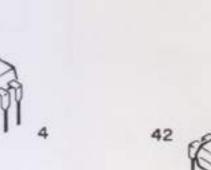
• IC102  
LA3390



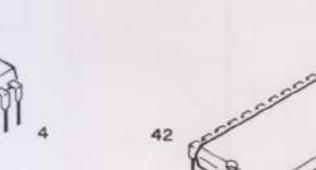
• IC201  
LA1245



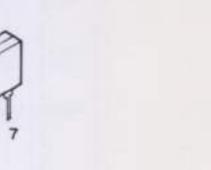
• IC301  
NJM4558D-D



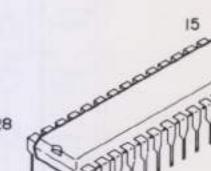
• IC401  
TC9147P



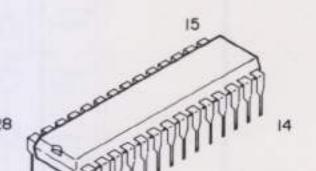
• IC421  
AN6875



• IC422  
TD6104P



• IC423  
TD6301AP



• Q108 ~ Q111, Q205, Q432  
Q454, Q457, Q458  
2SC458 (C, D)

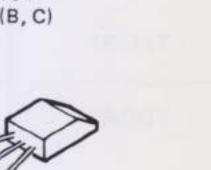
• Q452, Q455, Q459  
2SA1029 (C, D)

• Q451  
2SK246 (Y)

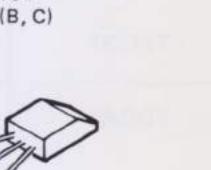
• Q101, Q105, Q106  
2SK168 (E, F)

• Q431, Q441  
2SK246 (Y)

• VC101 ~ VC103  
SVC202 (A, B)



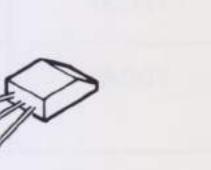
• VC201, VC202  
KV1236Z



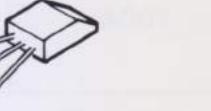
• Q102, Q107  
2SC535 (B, C)

• Q103, Q104  
2SC461 (B, C)

• VC101 ~ VC103  
SVC202 (A, B)

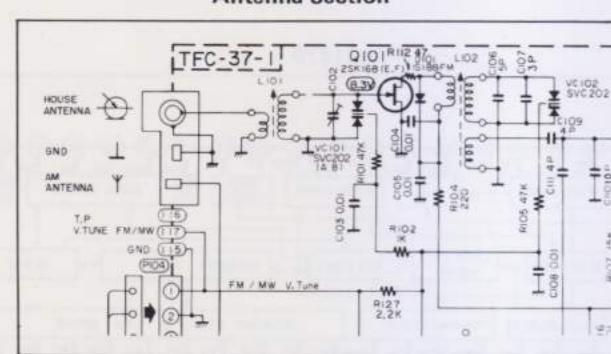


• VC101 ~ VC103  
SVC202 (A, B)



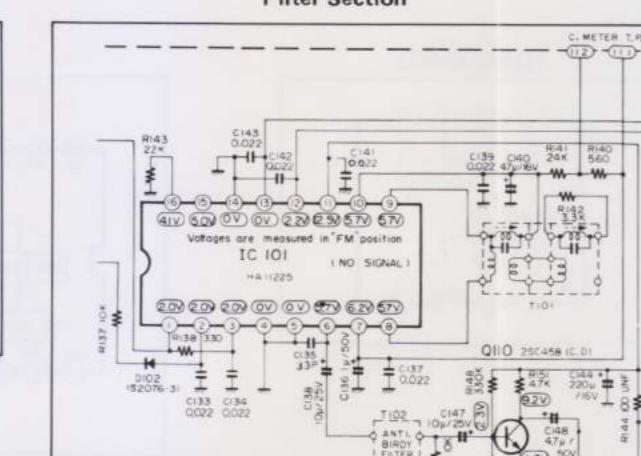
**A**

For West Germany  
Antenna Section



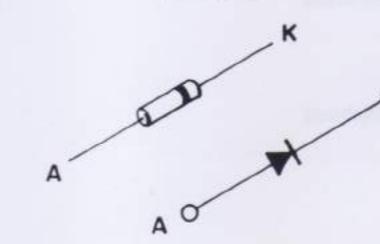
**B**

Filter Section



**C**

• 101  
1S188FM  
• D102, D104, D105  
D207, D401 ~ D404  
1S2076-31Y



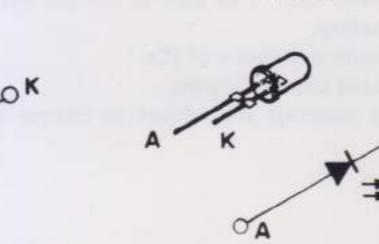
• 101  
1S188FM

• D102, D104, D105

D207, D401 ~ D404

1S2076-31Y

• D421  
TLR143  
• D422 ~ D424  
TLG143  
• D425 ~ D429  
TLO143



• D421  
TLR143

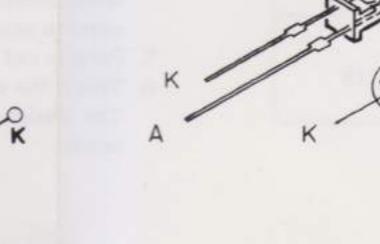
• D422 ~ D424

TLG143

• D425 ~ D429

TLO143

• VC201, VC202  
KV1236Z  
• D411 ~ D416  
TLR208  
• SW411  
ESF001-007



• VC201, VC202

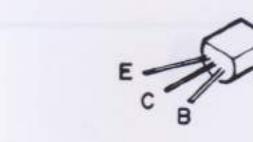
KV1236Z

• D411 ~ D416

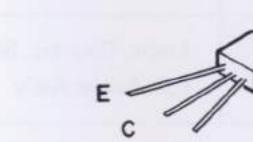
TLR208

• SW411

ESF001-007



• VC101 ~ VC103  
SVC202 (A, B)



• VC101 ~ VC103

SVC202 (A, B)

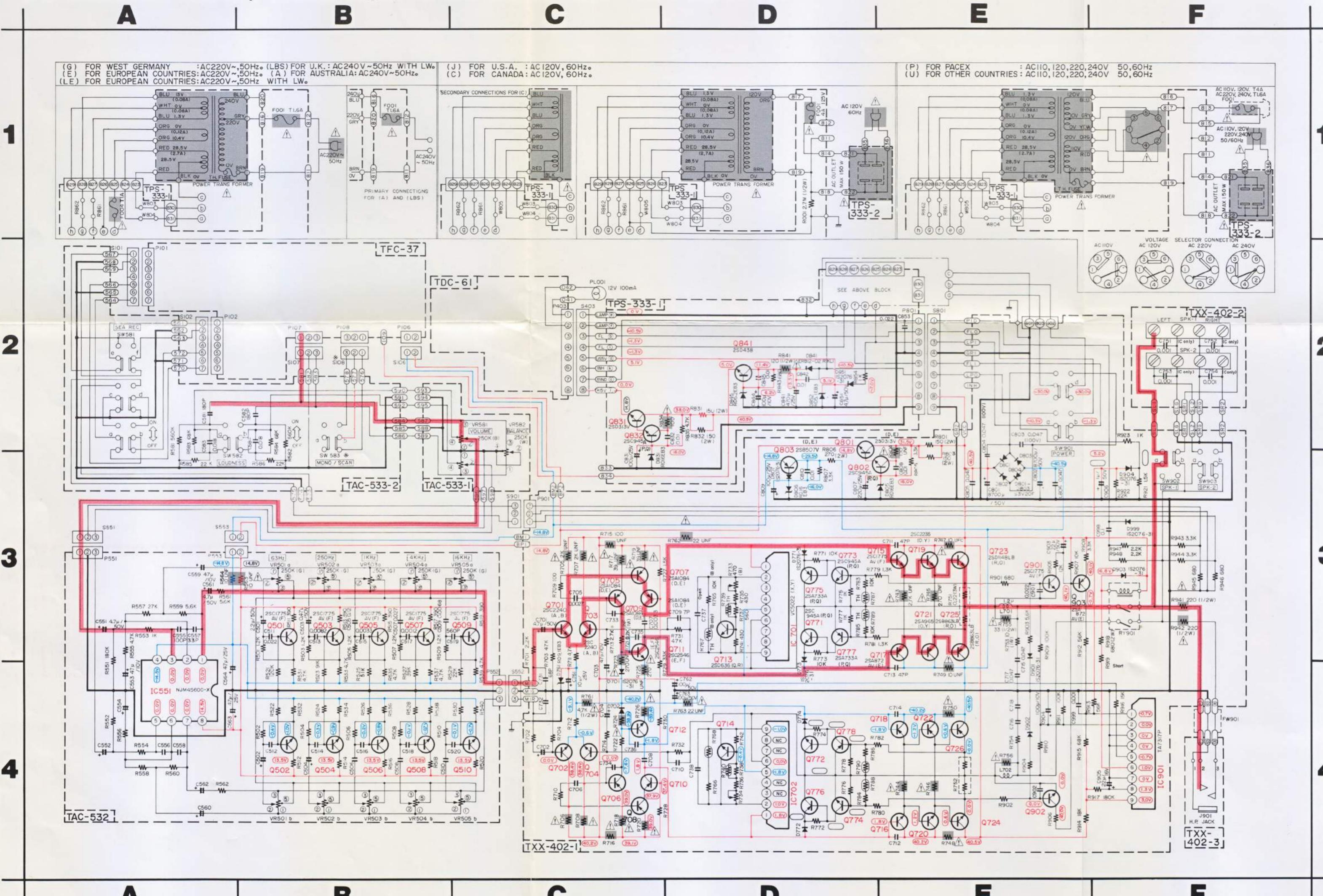
• VC101 ~ VC103

SVC202 (A, B)

• VC101 ~ VC103

SVC202 (A, B)

9-(3) R-X40/R-X40L Power Amp. Schematic Diagram (For Tuner Schematic Diagram, refer to page 23 & 24)



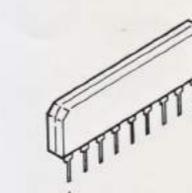
Printed Circuit Board Ass'y Locations

P.C. Board Ass'y	Description	Page
TXX-402	Power Amplifier P.C. Board Ass'y	15
TAC-532	SEA Control P.C. Board Ass'y	20
TAC-533	Volume & Switch P.C. Board Ass'y	21
TPS-333	Fuse, Power Supply & AC Outlet P.C. Board Ass'y	22

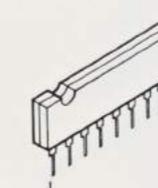
Notes:

- Red box shows DC voltage to the chassis with no signal input.
  - Red line indicates positive B power supply.
  - Blue line indicates negative B power supply.
  - Red dot indicates signal path.
  - When replacing the parts in the darkened area (■) and those marked with △, be sure to use the designated parts to ensure safety.
  - Parts in red indicate transistors or ICs.
  - This is the standard circuit diagram.
- The design and contents are subject to change without notice.

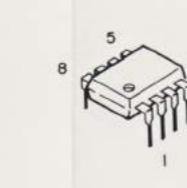
• IC901  
TA7317P



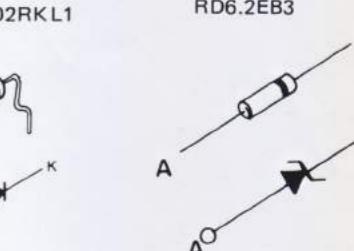
• IC701, 702  
VC5022 (X, Y)



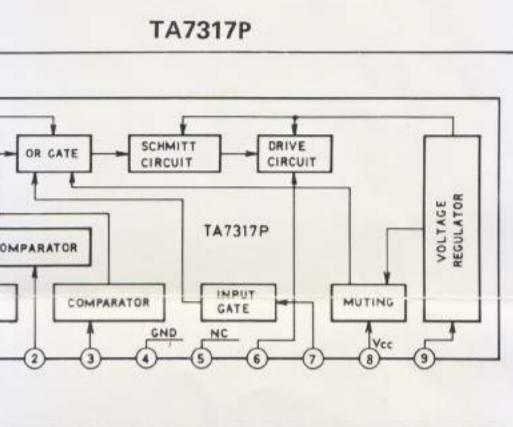
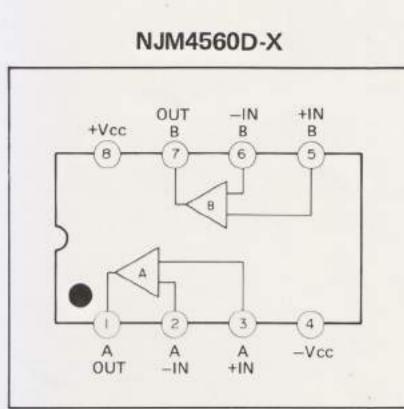
• IC501  
NJM4560D-X



• D801 ~ D804  
S3V20F  
• D841  
ERB12-02RK L1



• Q713, Q714  
2SD636 (Q, R)



- Q701 ~ Q704
- Q705 ~ Q710
- Q711, Q712
- Q717, Q718
- Q903
- Q719, Q720
- Q721, Q722
- Q771 ~ Q774
- Q802, Q832
- Q725, Q726
- Q775 ~ Q777
- Q841
- Q841
- Q841

2SC2240 (A, B)  
2SA1084 (D, E)  
2SC2546 (E, F)  
2SA872AV (E)

2SC2235 (O, Y)  
2SA965 (O, Y)

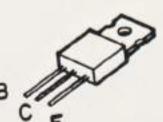
2SC945A (P, Q)

2SB863LB (R, O)  
2SA733A (P, Q)

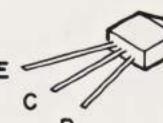
2SD438



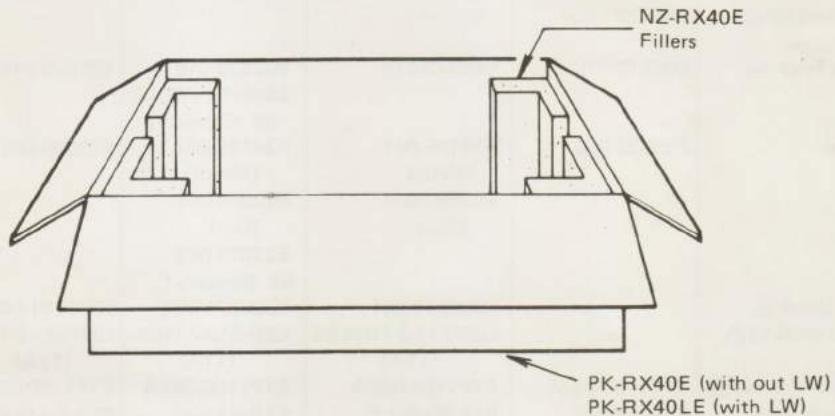
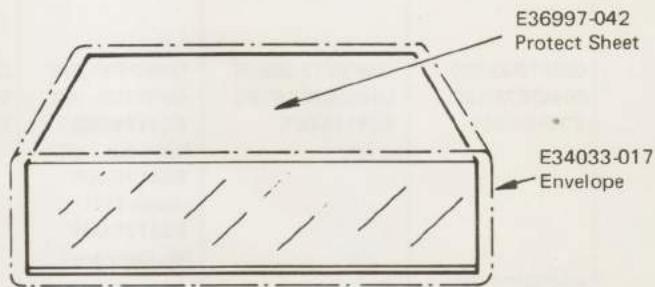
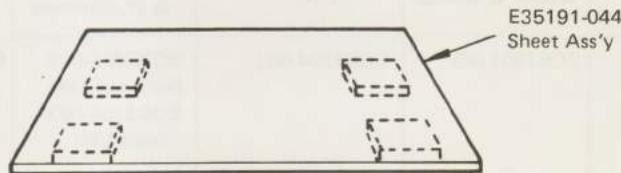
• Q801, Q831  
2SD313V  
• Q803  
2SB507V



• Q713, Q714  
2SD636 (Q, R)



## 10. Packing Materials and Part Numbers



## 11. Accessories List

Description	USA (& Canada)	U.K.	Europe (& W. Germany)	Australia	U.S. Military Market (& Other Countries)
Instruction Book	E30580-1016A ( " )	E30580-1016ABS	E30580-1016A ( " )	E30580-1016A	E30580-1016A ( " )
Warranty Card	BT20048 (BT20025E)	BT20013C	— (BT20057)	BT20029C	BT20048
Service Information Card	BT20046A ( — )	—	—	—	BT20046A ( — )
Safety Instruction	BT20044B ( — )	—	—	—	—
Siemens Plug	—	—	—	—	E04056 ( " )
Envelope (for Inst.)	E41202-2 ( " )	E41202-2	E41202-2	E41202-2	E41202-2 ( " )
B. in Antenna	E03614-004 ( " )	E03614-004	E03614-004 (E03614-005)	E03614-004	E03614-004 ( " )

## 12. Parts List with Specified Numbers for Designated Areas

Item No.	Description	U.S.A. & Canada	U.K.	Europe & W. Germany	Australia	U.S. Military Market & Other Countries
1	Bar Antenna	EQB3001-002	EQB3204-003	EQB3001-002 (with out LW) EQB3204-003 (with LW)	EQB3001-002	EQB3001-002
2	Fuse Holder △	—	—	—	—	QMG0301-003
3	Fuse (Primary) △	QMF61U1-4R0 (4A-125V)	QMF51A2-1R6LBS (T1.6A)	QMF51A2-1R6L (T1.6A)	QMF51A2-1R6L (T1.6A)	QMF51A2-4R0 (T4A) or QMF51A2-1R6L (T1.6A)
4	Power Cord △	QMP1200-200	QMP9017-008BS	QMP3900-200	QMP2560-244	QMP7600-250
5	Cord Stopper △	QHS3876-162	QHS3876-162BS	QHS3876-162	QHS3876-162	QHS3876-162
6	Rear Panel	E24175-001	E24175-005	E24175-003 (with out LW) E24175-005 (with LW) E24175-004 (W. Germany)	E24175-003	E24175-001
7	AC Outlet △	QMC0437-002	—	—	—	QMC0437-002
8	Voltage Selector △	—	—	—	—	QSR0085-001U
9	DIN Socket	—	E03623-003	E03623-003	E03623-003	—
10	AM Channel Space Switch	QSS2201-004	—	—	—	QSS2201-004
11	Antenna Terminal	E03572-016	E03572-016	E03572-016 EMB91YV-201A (W. Germany)	E03572-016	E03572-016
12	Top Cover	E23923-002	E24195-001 (Metal) E23862-003 (Gril)	E24195-001 (Metal) E23862-003 (Gril) E23923-002 (W. Germany)	E23923-002	E23923-002
13	Primary Cover △	—	E302271-001	E302271-001	E302271-001	—
14	Fuse (Secondary) △	—	QMF51A2-1R0LBS (T1A)	QMF51A2-1R0L (T1A)	QMF51A2-1R0L (T1A)	—
15	Power Transformer △	ETP1150-08JA	ETP1150-08EA	ETP1150-08EA	ETP1150-08EA	ETP1150-08FA
16	Front Panel Ass'y	EFP-RX40E	EFP-RX40LE	EFP-RX40E (with out LW) EFP-RX40LE (with LW)	EFP-RX40E	EFP-RX40E
17	Push Switch	QSP0020-003	QSP0020-004	QSP0020-004	QSP0020-004	QSP-0020-003
18	Push Switch	QST1651-E02	QST1651-E01	QST1651-E02 (with out LW) QST1651-E01 (with LW)	QST1651-E02	QST1651-E02
19	Push Switch	QST4641-E02	QST4641-E03	QST4641-E02 (with out LW) QST4641-E03 (with LW)	QST4641-E02	QST4641-E02

△ : Safety Parts

# JVC

VICTOR COMPANY OF JAPAN, LIMITED, TOKYO, JAPAN