351

JVC

SERVICE MANUAL

MODEL

RX-111BK
RX-111LBK

RX-111BK

RX-111LBK

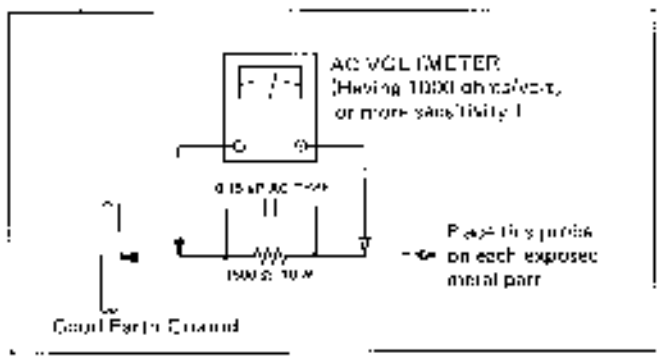
Contents

This manual combines two single volumes; Service manual and Parts list.

No. 2871
Nov. 1985

Safety Precautions

1. The design of this product contains special hardware, many circuits and components specially for safety purposes.
   For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the product have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have those special safety characteristics are identified in the parts list of Service manual. Electrical components having such features are identified by shading on the schematics and by (⚠) on the parts list in Service manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the parts list in Service manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and/or the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard.
   When service is required, the original lead routing and dress should be observed, and they should be confirmed to be returned to normal, after re-assembling.
5. To confirm the polarity of the power cord and AC outlet (Canada only).
   When replacing the power cord or the AC outlet, make sure that the power switch or the protection device (the primary fuse etc.) is NOT connected to the ground power side of the plug and AC outlet (wider blade of plug or wider hole of the AC outlet).
6. Leakage current check
   (Safety for electrical shock hazard)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the Products (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5 mA AC (r.m.s.).
   - Alternate check method.
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1500 Ω 10 W resistor paralleled by a 0.15 μF AC-type capacitor between an exposed metal part and a known good earth ground.
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).



CHECKING YOUR LINE VOLTAGE (Except for U.S.A., Canada, Australia, U.K. and Continental Europe.)
Before inserting the power plug, please check this setting to see that it corresponds with the line voltage in your area. If it doesn't, be sure to adjust the voltage selector switch to the proper setting before operating this equipment. The voltage selector switch is located on the rear panel.

CAUTION Before selecting the "Voltage selector switch" to proper voltage disconnect the power plug.

1. Specifications

AMPLIFIER SECTION

'78 IHF

RMS Power : **25 watts per channel, min. RMS, both channels driven, into 8 ohms from 40 Hz 40 Hz to 20 kHz, with no more than 0.5 % total harmonic distortion.**

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

Total Harmonic Distortion : 0.1 % at 2½ watts (1 kHz, 8 ohms)

Input Sensitivity/Impedance

PHONO	:	2.5 mV/47 kohms
TAPE PLAY/CD/ VIDEO SOUND	:	150 mV/40 kohms
Recording Output Level	:	140 mV
Frequency Response		20 Hz — 20 kHz, −1 dB, −1 dB (8 ohms)

Tone control

TREBLE	:	± 6 dB (10 kHz)
BASS	:	± 8 dB (100 Hz)

Signal to Noise Ratio

PHONO	:	70 dB (78 IHF)	59 dB (DIN)
		78 dB (78 IHF, Rec out)	
TAPE PLAY/CD/ VIDEO SOUND	:	91 dB (78 IHF)	64 dB (DIN)
		74 dB (78 IHF)	

FM TUNER SECTION

		'78 IHF	DIN (for Europe)
Tuning Range	:	87.5 MHz—108.0 MHz	87.5 MHz—108.0 MHz
Usable Sensitivity	:	Mono 10.8 dBf (0.85 µV/75 ohms 1.9 µV/300 ohms	(S/N 26 dB) 1.5 µV/75 ohms —
50 dB Quieting Sensitivity	:	Mono 16.3 dBf (1.8 µV/75 ohms) (3.6 µV/75 ohms) Stereo 38.3 dBf (22.5 µV/75 ohms) (45 µV/300 ohms)	— —
S/N 46 dB Stereo Sensitivity	:	—	Stereo 23 µV/75 ohms —
Signal to Noise Ratio (at 98 MHz, 80 dBf)	:	Mono 80 dB Stereo 73 dB (A-weighted)	Mono 72 dB Stereo 64 dB (weighted)
Total Harmonic Distortion 1 kHz	:	Mono 0.15 % Stereo 0.20 %	Mono 0.1 % Stereo 0.3 %
Frequency Response	:	30 Hz — 15 kHz, +0.5 dB, −3 dB	
Capture Ratio	:	1.5 dB	1.0 dB
Alternate Channel Selectivity		60 dB, ±400 kHz	55 dB, ±300 kHz
Image Response Ratio	:	55 dB at 98 MHz	
IF Response Ratio	:	85 dB at 98 MHz	
Stereo Separation	:	40 dB at 1 kHz	

AM TUNER SECTION

		'78 IHF	DIN (for Europe)
MW			
Tuning Range			
Channel space 9 kHz	:	522 kHz—1611 kHz	522 kHz—1611 kHz
Channel space 10 kHz	:	520 kHz—1710 kHz	
Sensitivity	:	350µV/m at 1000 kHz 30 µV at 1000 kHz	300µV/m at 999 kHz 30 µV at 999 kHz
Signal to Noise Ratio (30mV/m)	:	50 dB at 1000 kHz	50 dB at 999 kHz 40 dB for RX-1101/LB
Selectivity	:	38 dB, ±10 kHz at 1000 kHz	35 dB, +9 kHz at 999 kHz

LW (RX-111LBK only)

Tuning Range	:	153 Hz — 360 kHz
Sensitivity	:	600 µV/m at 245 kHz 100 µV at 245 kHz
Signal to Noise Ratio (100 mV/m)	:	45 dB at 245 kHz
Selectivity	:	45 dB ±9 kHz at 245 kHz

Design and specifications subject to change without notice.

Power Specifications

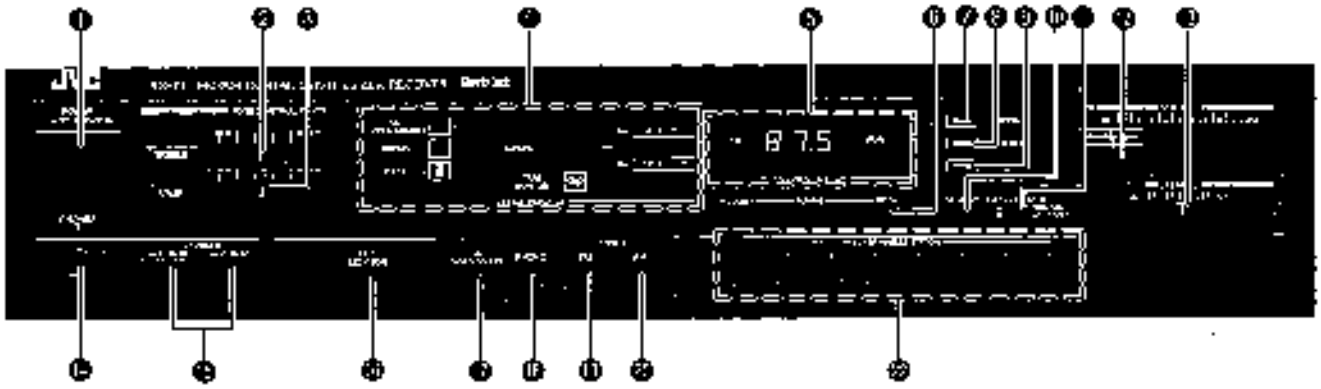
Areas	Line Voltage & Frequency	Power Consumption
U.S.A., Canada	AC 120 V, 60 Hz	100 W, 190 VA
Europe	AC 220 V~, 50 Hz	90 watts
U.K., Australia	AC 240 V~, 50 Hz	90 watts
Other Areas	AC 110/120/220/240 V~, Selectable, 50/60 Hz	90 watts

Dimensions and Weight

Dimensions			Weight
Height	Width	Depth	Net
92 mm (3 5/8")	435 mm (17-1/8")	265 mm (10 7/16")	3.9 kg (8.4 lbs)

2. Names of Controls and Their Functions

RX-111BK



❶ POWER

ON [—]: Press to set to this position to turn the power on.

STAND BY [■]: When the power cord is plugged into an AC outlet, the memory circuit, necessary for the preset stations and the source selection are not subject to cancellation or any partial alteration. The preset data and the source select will be maintained even in the case of a power failure or when the power cord is disconnected, if the period is not prolonged beyond approximately a couple of days.

NOTE:

- **Even when the POWER button is set to STAND BY, this receiver consumes a small amount of electricity (5 watts). To shut the power completely off, disconnect the power cord.**
- **An electronic source selector is used in this unit. When the POWER button is first switched on, two or more sources or no source may be selected. Make sure to input the source select data by pressing one of the source selectors.**

❷ TREBLE

Slide to the right to boost treble response, to the left to decrease it.

❸ BASS

Slide to the right to boost bass response, to the left to decrease it.

❹ Source indicators

The indicator corresponding to the source select button pressed lights.

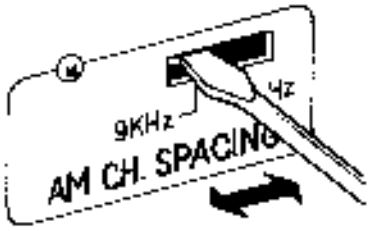
❺ Frequency display

The tuned in frequency is displayed digitally as follows:

For AM reception: Four digits (kHz) are displayed.

For FM reception: Three digits (kHz) are displayed.
(RX-111LBK only)

For FM reception: Five digits (MHz) are displayed.
(for operational Europe, the U.K., Australia and other areas)
Four digits (MHz) are displayed
(for the U.S.A. and Canada)



Switch over using the tip of a screwdriver as shown in Fig. above.

❻ TUNING UP/DOWN

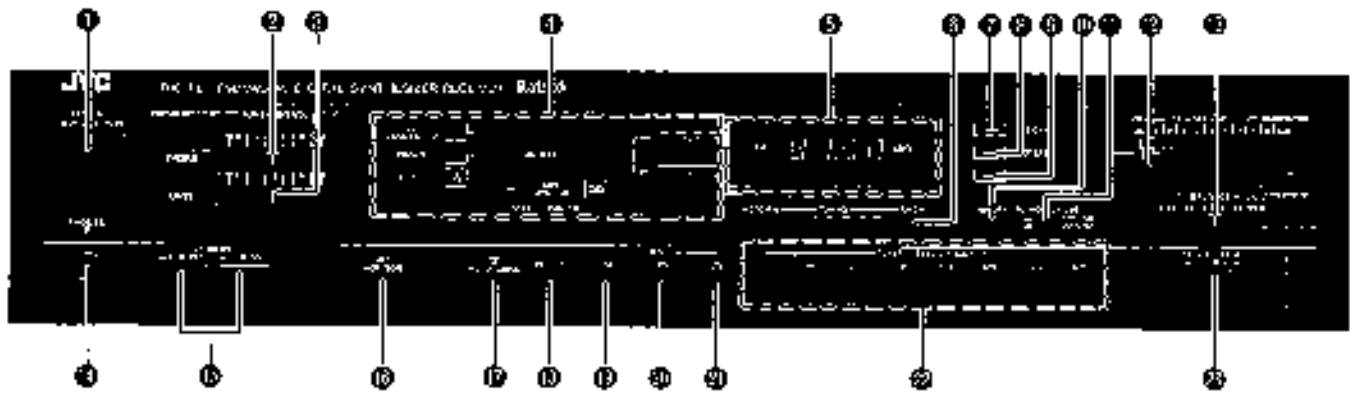
When the UP/DOWN scanning button is pressed, the frequency changes in predetermined steps (see table below). Tapping the button changes the tuner step by step; pressing continuously (more than 0.5 sec.) changes tuning by high speed scanning which stops when the button is released. After choosing the frequency you want to listen to, hold the button pressed to scan rapidly until the display approaches the desired frequency, then tap the button lightly to tune precisely.

Channel spacing

AM channel spacing knob (RX-111BK only) is provided on the rear panel for selecting 9 kHz or 10 kHz steps according to your area.

Band / Area	FM	AM (MW)	AM (LW)
U.S.A., Canada	100 kHz	10 kHz	1 kHz
Europe, Australia	50 kHz	9 kHz*	
Other areas	*50 kHz	10 kHz	—
	100 kHz	10 kHz*	

Note: *Preset at the factory.



❷ **SIGNAL indicator**
This LED lights when FM signal is input. Tune in the required frequency while watching the frequency display ❶.

❸ **FM STEREO indicator**
This LED lights when tuned to an FM stereo broadcasts.

❹ **MEMORY indicator**
When the MEMORY button is pressed, this MEMORY indicator lights to show that the unit is ready to store a preset frequency in memory. This indicator will go out automatically in about 10 sec. or when the station preset button is not pressed.

❿ **MEMORY**
Press this button and the MEMORY indicator will light to show that memory is ready to receive a frequency. (This button is non-locking type.)
Pressing the station select button while the MEMORY indicator is lit for about 10 sec. stores the frequency being received in memory.
When the MEMORY indicator is not lit, the memory function does not operate.

⓫ **FM MODE (MUTE)**
This button is used to select FM AUTO (MUTE ON)/MONO (MUTE OFF) mode. When stereo reception is possible, set the button to AUTO (MUTE ON) (▬). This also eliminates interstation noise during FM tuning.
When signals are too weak to be received as a stereo broadcast, automatically, set to MONO (MUTE OFF) (■). Stereo will be changed to mono, but signal quality will be improved. This is convenient to bring in distant FM stations without noise.

⓬ **VOLUME**
This knob has an auto loudness effect. When the knob is lowered, the low and high frequencies can be emphasized.

⓭ **BALANCE**
Use to adjust the balance between the left and right speakers.

⓮ **Headphone jack (PHONES)**
Plug stereo headphones into this jack for private listening and to monitor recording. For private listening, set the SPEAKERS button to OFF.

⓯ **SPEAKERS-1/SPEAKERS-2**
Press to switch the speakers connected to the SPEAKERS 1 and/or 2 terminals on and off.

Note:
- When speakers are connected to only one system of the SPEAKERS terminals, press only the SPEAKERS button of the system connected; if both buttons are pressed, sound will not be heard from either speaker system. When two pairs of speakers are connected and either or both SPEAKERS buttons is/are pressed, sound will be heard from either or both speaker system(s).

⓰ **TAPE MONITOR**
Press to listen to the sound of a unit connected to the TAPE jacks. Press it again to hear the source selected with the source select buttons.

⓱ **CD/VIDEO SOUND**
Press to hear a record player, compact disc player, or other equipment connected to the CD/VIDEO SOUND jacks on the rear panel.

⓲ **PHONO**
Press to hear or record sound from the turntable connected to the PHONO jacks on the rear panel.

⓳ **FM**
Press to switch on the FM tuner section.

⓴ **AM (for RX-111BK); MW (for RX-111LBK)**
Press to switch on the AM (MW) tuner section.

㉑ **LW (RX-111LBK only)**
Press to switch on the LW tuner section.

㉒ **Station select buttons**
These buttons are used to store (set) or the preset stations or to store the station frequency in memory. If one of these buttons is pressed when the MEMORY button is pressed in, the frequency being received will be stored in memory.
Up to 16 FM and AM stations can be stored in memory, 8 for each position of the PRESET SELECT button. (Continental Europe, U.K. and Australia).
8 FM and AM stations can be preset in memory (U.S.A., Canada and other countries).

When you switch from radio reception to any other mode or set the power button to STAND BY, then switch back to the radio or switch the power on again, you will hear the station previously selected.

㉓ **PRESET SELECT**
Press to set to channels 1 - 8 (▬) or channels 9 - 16 (■).
(only for Continental Europe, U.K. and Australia.)

Connection Diagram

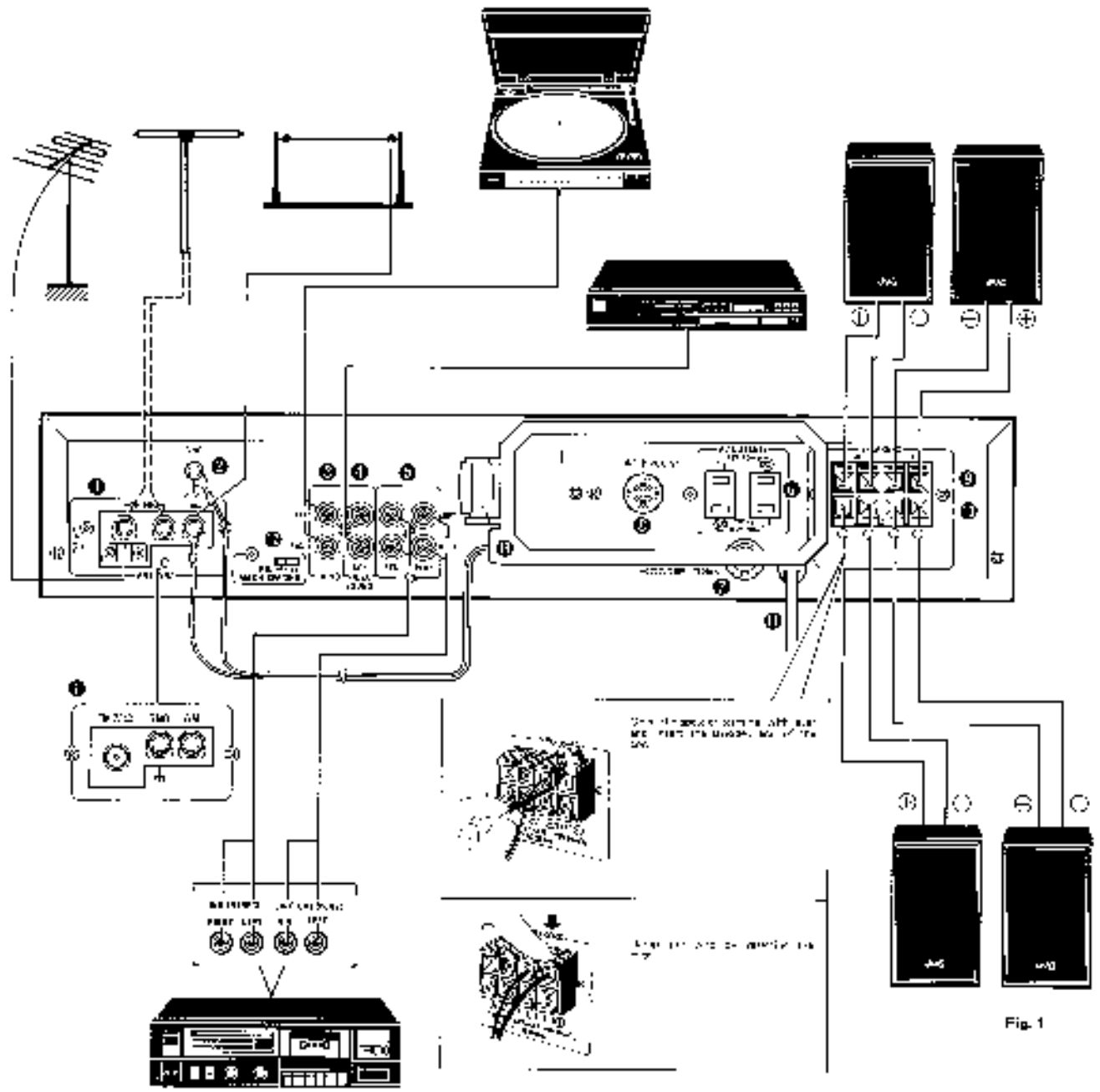


Fig. 1

❶ External ANTENNA terminals
❷ External ANTENNA terminals (for W. Germany only)
❸ GND terminal
This terminal is used for the connection of an AM loop antenna (unit).
❹ PHONO terminals
❺ CD/VIDEO SOUND terminals
❻ TAPE terminals
❼ AC OUTLETS*
❽ Fuse holder**
❾ Voltage selector**
When this equipment is used in an area where the supply voltage is different from the rear panel setting, use a screwdriver to set to the correct position.
❿ SPEAKERS system-1 terminals
⓫ SPEAKERS system-2 terminals
⓬ Power cord
⓭ AM loop antenna
* Not provided on units for Continental Europe, U.K. (the Kingdom) and Australia.
** Not provided on units for U.S.A., Canada, Continental Europe, U.K. (the Kingdom) and Australia.

Notes:
1. Switch the power off when connecting any components.
2. Connect source components correctly. Reversed channels will degrade the stereo effect.
3. Connect speakers with correct polarity; (+) to (+) and (–) to (–). Reversed polarity will degrade the stereo effect. Be careful to prevent contact between different speaker wires.
4. Use speakers with the correct impedance. This receiver is for use with speakers with an impedance of from 8 to 16 ohms.
5. The AC outlet provides power even when the front panel POWER switch is set to STAND BY. Do not connect equipment requiring more than 150 watts.

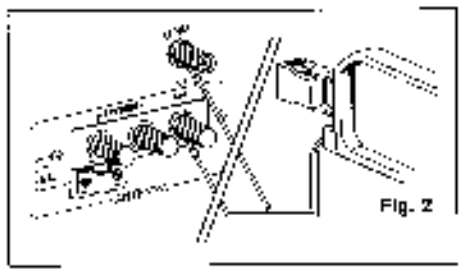


Fig. 2

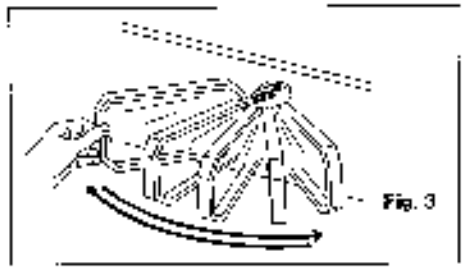


Fig. 3

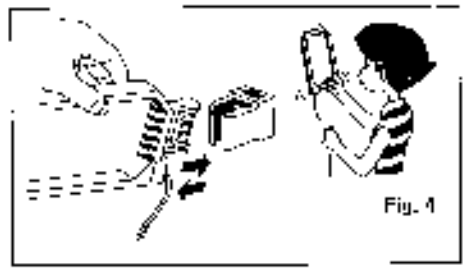


Fig. 4

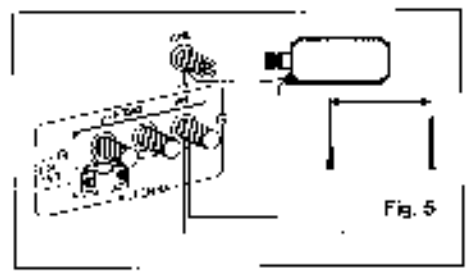


Fig. 5

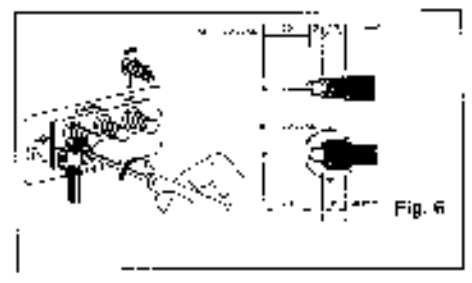


Fig. 6

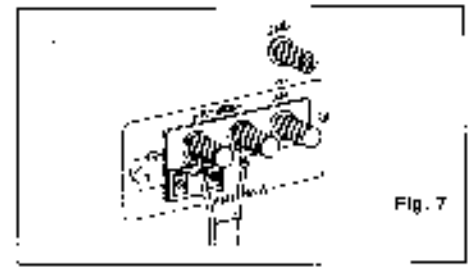


Fig. 7

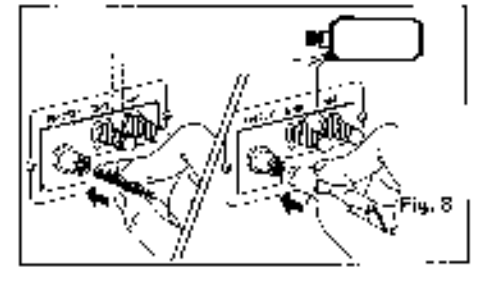


Fig. 8

ANTENNAS

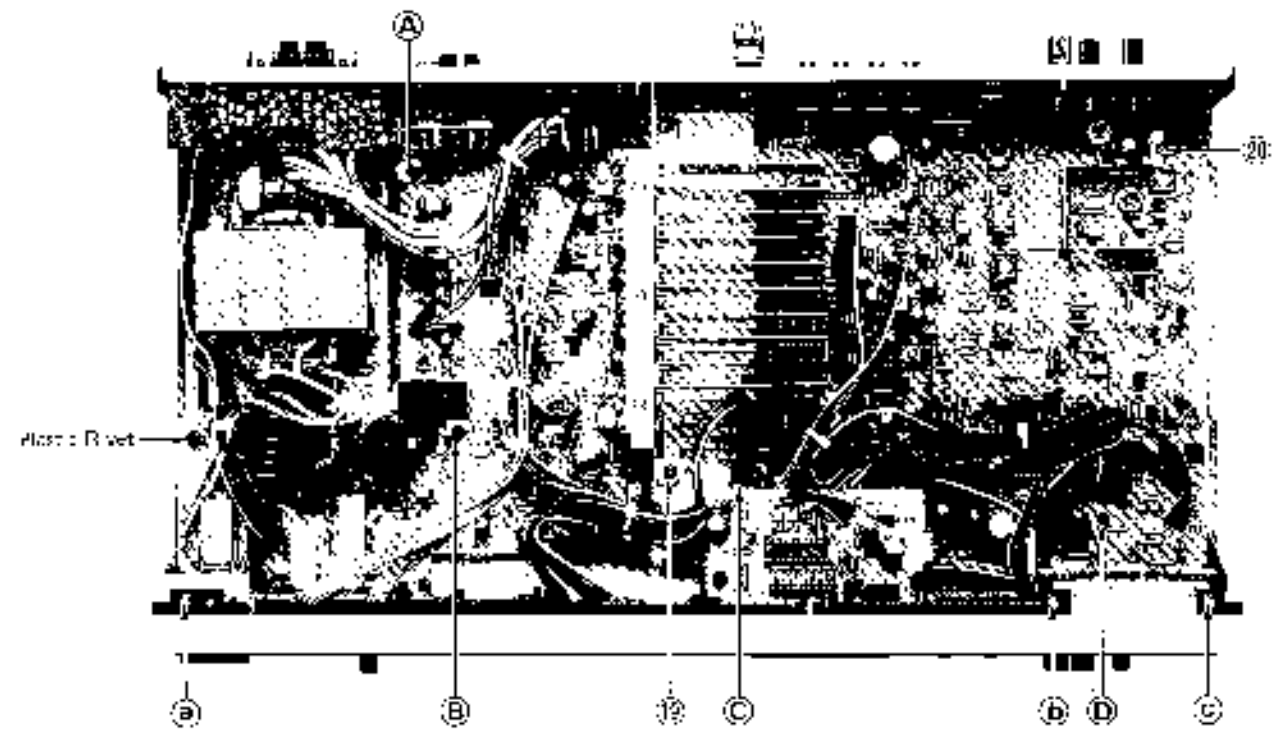
AM (MW/LW) loop antenna (Fig. 2, 3)
This antenna is for the reception of local AM broadcasts. If it is too close to the rear panel, pull it away from the panel and adjust it for best reception by rotating. This loop antenna can be tilted outward by 180°. Make sure to connect the ground wire to the GND terminal.
When too much noise occurs (Fig. 4)
Change the direction of the loop antenna (or remove it and relocate it) in a position that gives best reception. The loop antenna can be removed easily by pulling it towards you.
AM (MW/LW) external antenna (Fig. 5)
If AM reception is not good, connect an external AM antenna (single wire antenna) to the AM ANTENNA terminal.

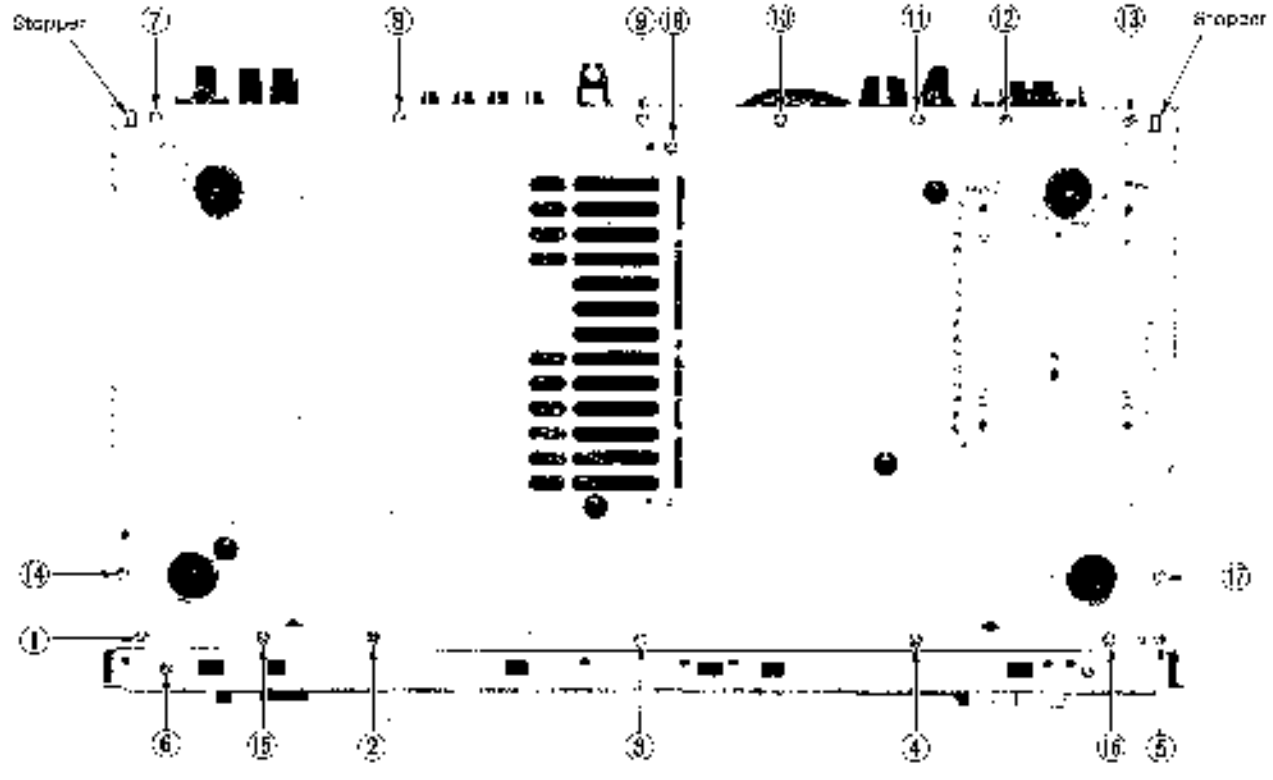
Notes:
- **If the provided loop antenna is not installed or the antenna cord touches to the rear panel, it will be impossible to receive AM broadcasts.**
- **When installing an AM external antenna, leave the AM loop antenna connected.**

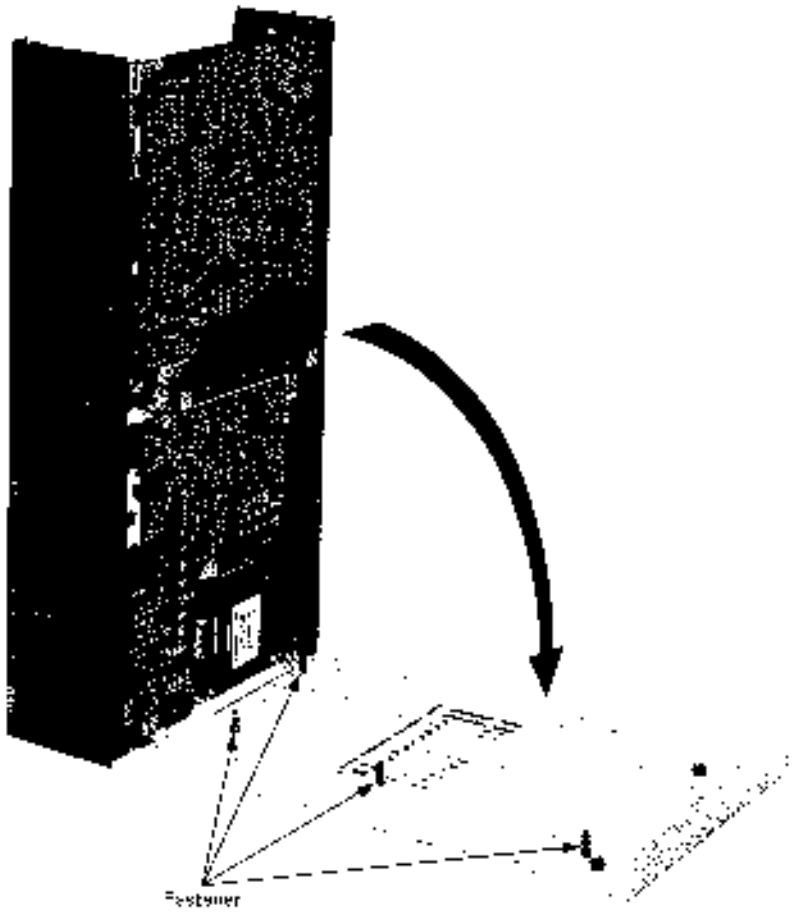
FM antenna
- 75 ohm antenna (Unbalanced) (Fig. 6)
  Loosen the screws on the bracket and insert the cable into the opening below. Loosen and twist the stripped core to the upper terminal. The loosened ring works as the ground terminal.
- Indoor antenna (Fig. 7)
  Connect to the FM ANTENNA terminal.
  Take care that the wires of the indoor antenna do not touch any other terminal.
- 75-ohm antenna with coaxial type connector (D-N45 302) for W. Germany (Fig. 8)
  Connect to the 75 ohm terminal.

RX-111BK
RX-111LBK

3. Removal Procedures







3-(1) Metal Cover Section

1. Remove the screws securing the metal cover — two screws from its two sides and three from its rear side.
2. Extract the metal cover while lifting its rear side.

3-(2) Front Panel Section

1. Demount the metal cover (refer to item 3-(1) above).
2. Remove three screws (a), (b) and (c).
3. Remove five screws (1) through (5) — namely, three screws that jointly secure the front panel and the chassis base through the panel bottom side.
4. Remove screw (6) — the one that secures the front panel through its lower side.

3-(3) Chassis Base Section

1. Demount the metal cover (refer to item 3-(1) above).
2. Remove 16 screws (1) through (b) and (7) through (17) — those screws that secure the chassis base through its bottom side.
3. Remove two screws (18) and (19) securing the heat sink.
4. Remove screw (20) securing the tuner PC board.
5. Extract the plastic rivet securing the amplifier PC board.
6. Remove four fasteners (A), (B), (C), and (D) securing the tuner PC board and the amplifier PC board. (Push in the fasteners while using radio-repair pliers or a similar tool to grip the fastener head.)
7. Open the chassis base while loosening the stopper engaged with the rear panel.

4. FM/AM (MW/LW) Tuner Alignment Procedures

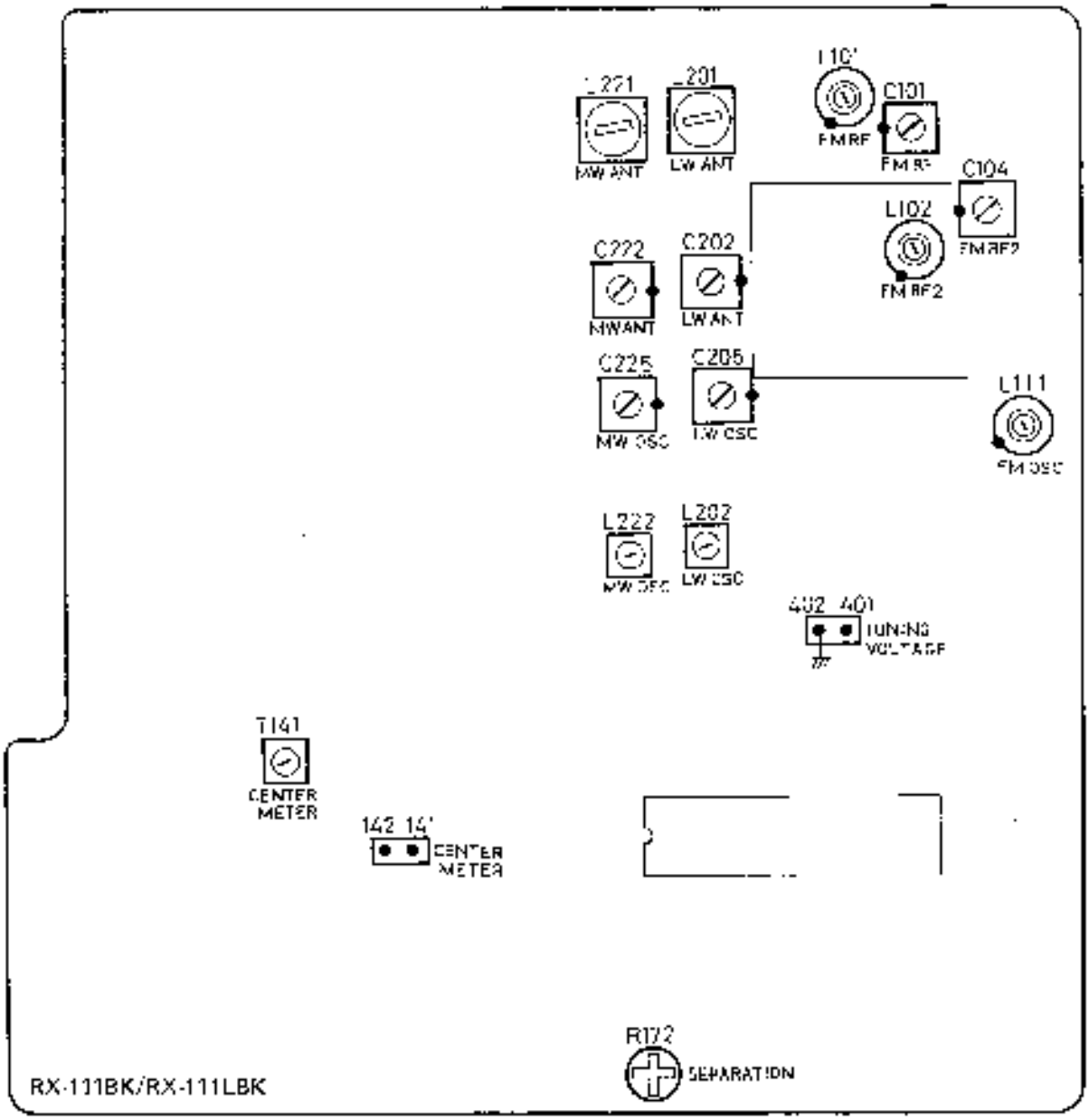


Fig. 6

FM Section

Band Cover

1. Set the frequency display to 108.0 MHz.
2. Connect a DC. VTVM. to **TP401** and **TP402 (GND)**.
3. Adjust L111 so that the VTVM. shows 9.00 V.
4. And set the frequency display to 87.5 MHz.
5. Check the VTVM. voltage reading 1.60 V ± 0.5 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 75 Ω antenna terminals on the rear panel through a dummy antenna. (FM 75 Ω :
2. Set an HF generator to 90 MHz, a modulation of 1 kHz and a deviation of 75 kHz to provide an input of **1** μV.
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 108 MHz, a modulation of 1 kHz and a deviation of 75 kHz to provide an input of 1 μV.
7. Set the Frequency Display to 108 MHz.
8. Adjust the FM trimmers C101, C104 to maximize the output.
9. Repeat these high and low frequencies adjustment alternately until maximum sensitivity is obtained.

Descriminator, 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 TP141 and TP142.
7. And set the RF generator output to 0,5 mV,
8. Adjust the core of T141 for DC VTVM reading of 0 (zero) mV.

Stereo Separation (for Europe, U.K. and Australia only)

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. Switch the selector of stereo modulator to left channel modulation.
4. Adjust R172 so that the output of right channel is minimized.
5. Switch the selector of the modulator to right channel modulation.
6. Adjust R172 so that the left channel is minimized.
7. Set R172 to an average, if the separation of left and right is different,

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. TP401 and TP402 (GND).
4. Adjust L222 so that the VTVM. shows 0.95 V.
5. And set the frequency display to 1710 kHz (10 kHz channel step), or 1611 kHz (9 kHz channel step).
6. Adjust C225 so that the DC. VTVM. reads 9.00 V for 1710 kHz, or 7.60 V for 1611 kHz,

Tracking and Sensitivity

Note: Be sure to perform this adjustment posterior to the LW tracking adjustment.

1. Connect the loop antenna, Also 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 L221 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 C222 so that the output signal is maximized.
8. Repeat these adjustments (1 ~ 7) alternately untill maximum sensitivity is obtained.

LW Section

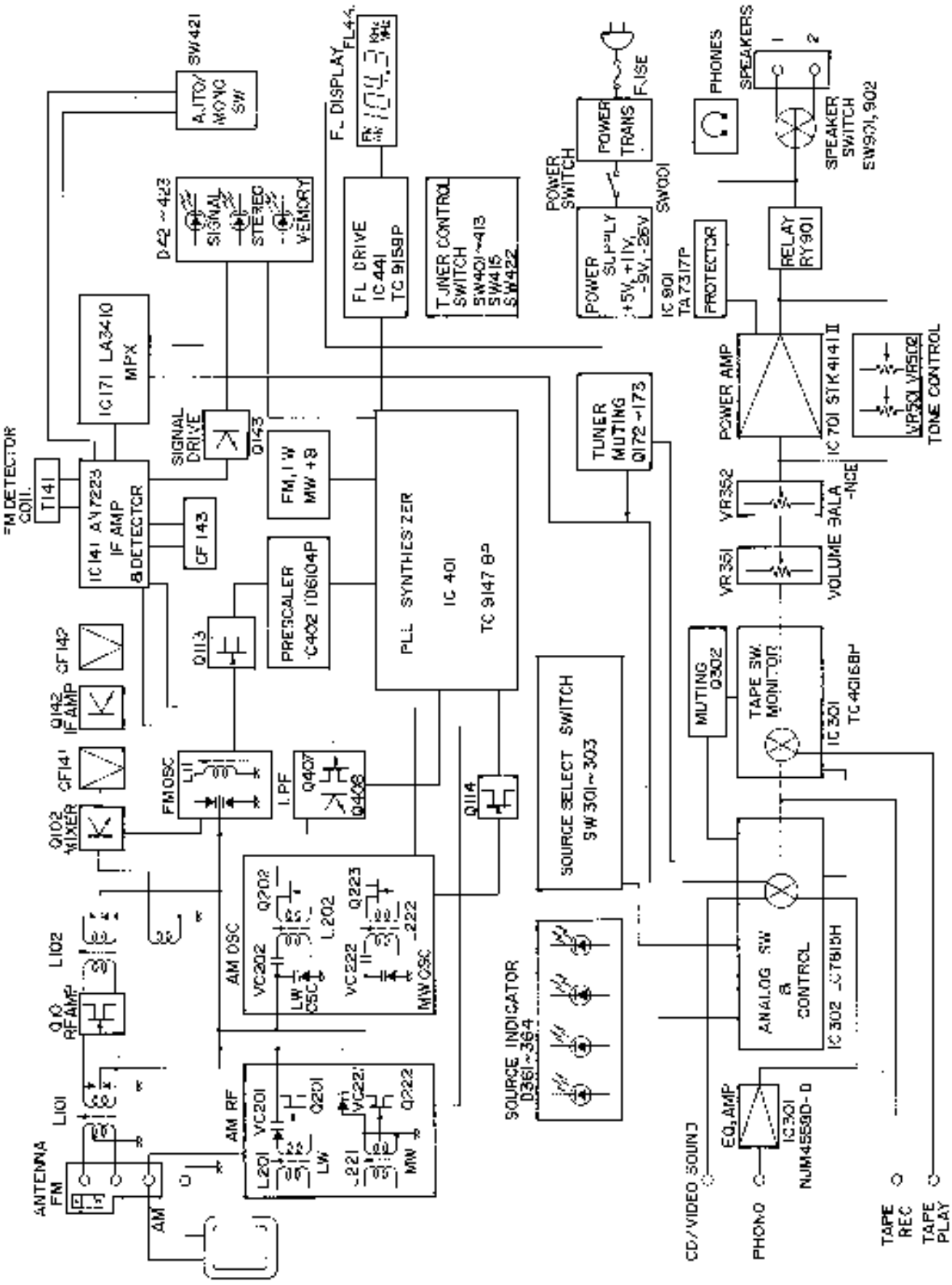
Band Cover

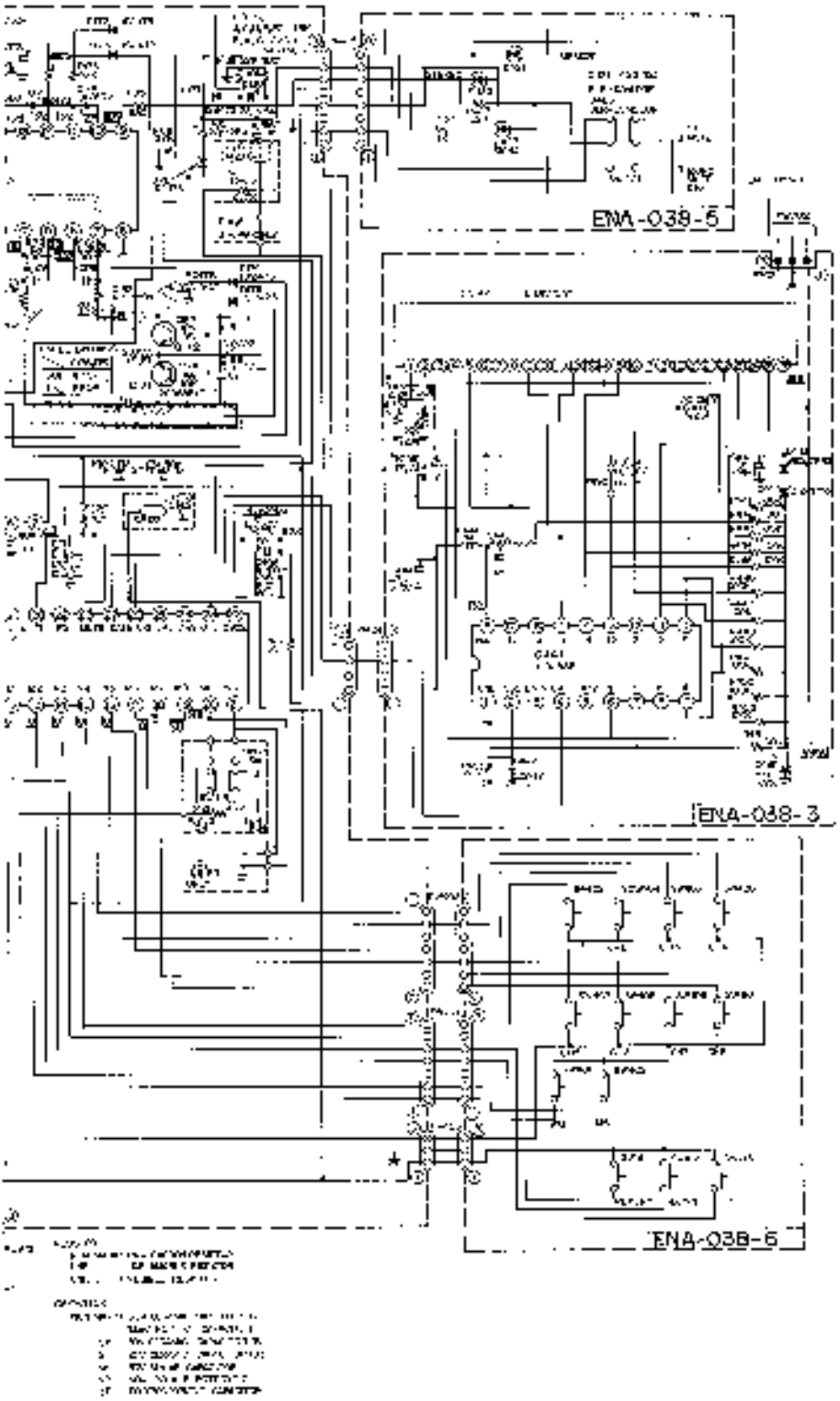
1. Press to LW position.
2. Set the frequency display to 153 kHz.
3. Connect a DC. VTVM. to TP401 and TP402 (GND).
4. Adjust L202 so that the VTVM. shows 1.10 V.
5. Set the frequency display to 360 kHz.
6. Adjust C205 so that the VTVM. reads 8.00 V.

Tracking and Sensitivity

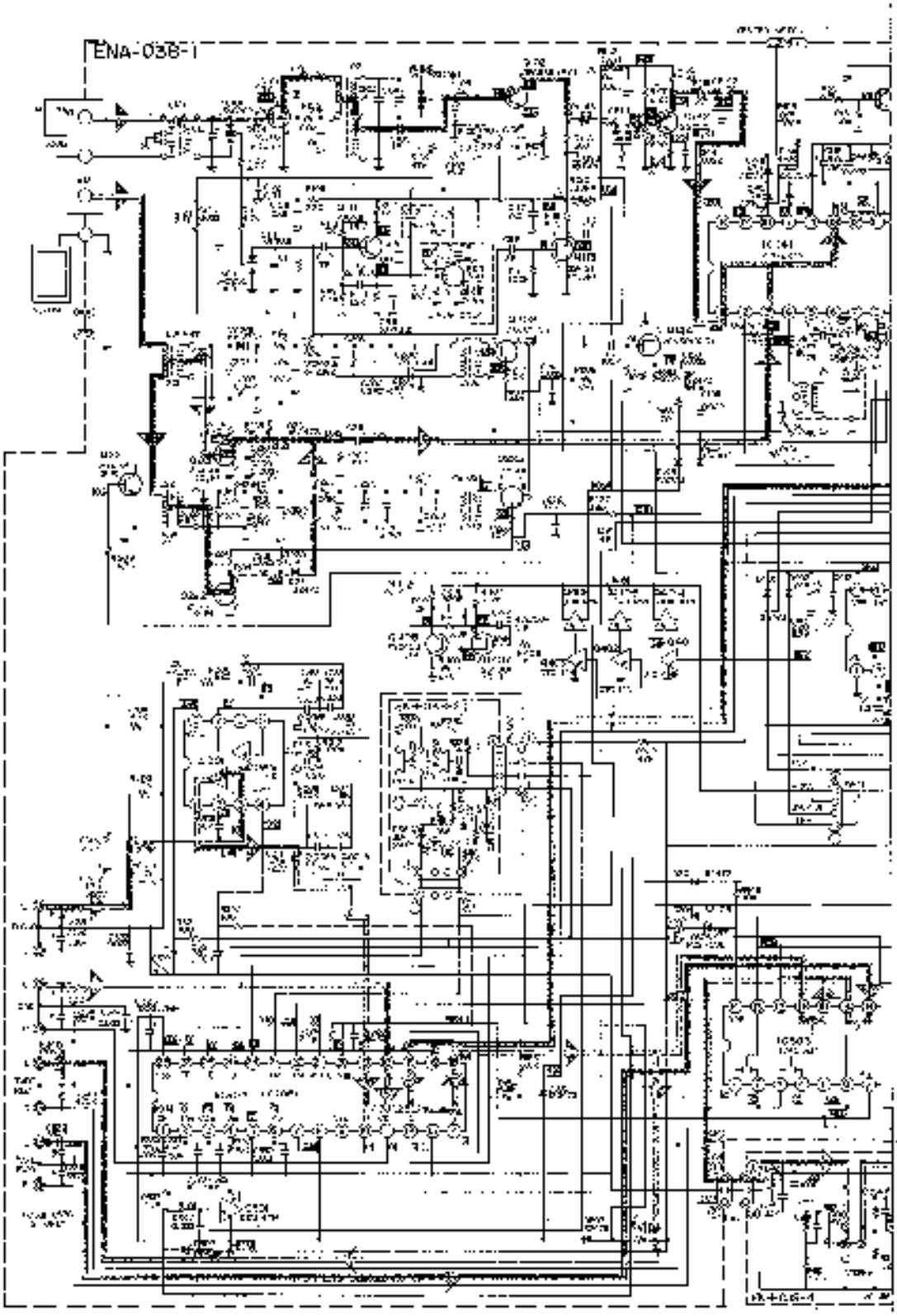
1. Connect the loop antenna. Also connect the RF generator to the antenna terminal on the rear panel,
2. Set the generator to 164 kHz with 30 % modulation at 400 kHz.
3. Set the frequency display to 164 kHz,
4. Adjsut the core of L201 to maximize the output.
5. Set the frequency generator to 353 kHz,
6. Set the frequency display of the unit to 353 kHz.
7. Adjust C202 so that the output signal is maximized,
8. Repeat these adjustments (1 ~ 7) alternately untill maximum sensitivity is obtained,

5. Block Diagram




ENA-038-5
ENA-038-3
ENA-038-6

6-(2) RX-111LBK Tuner Section

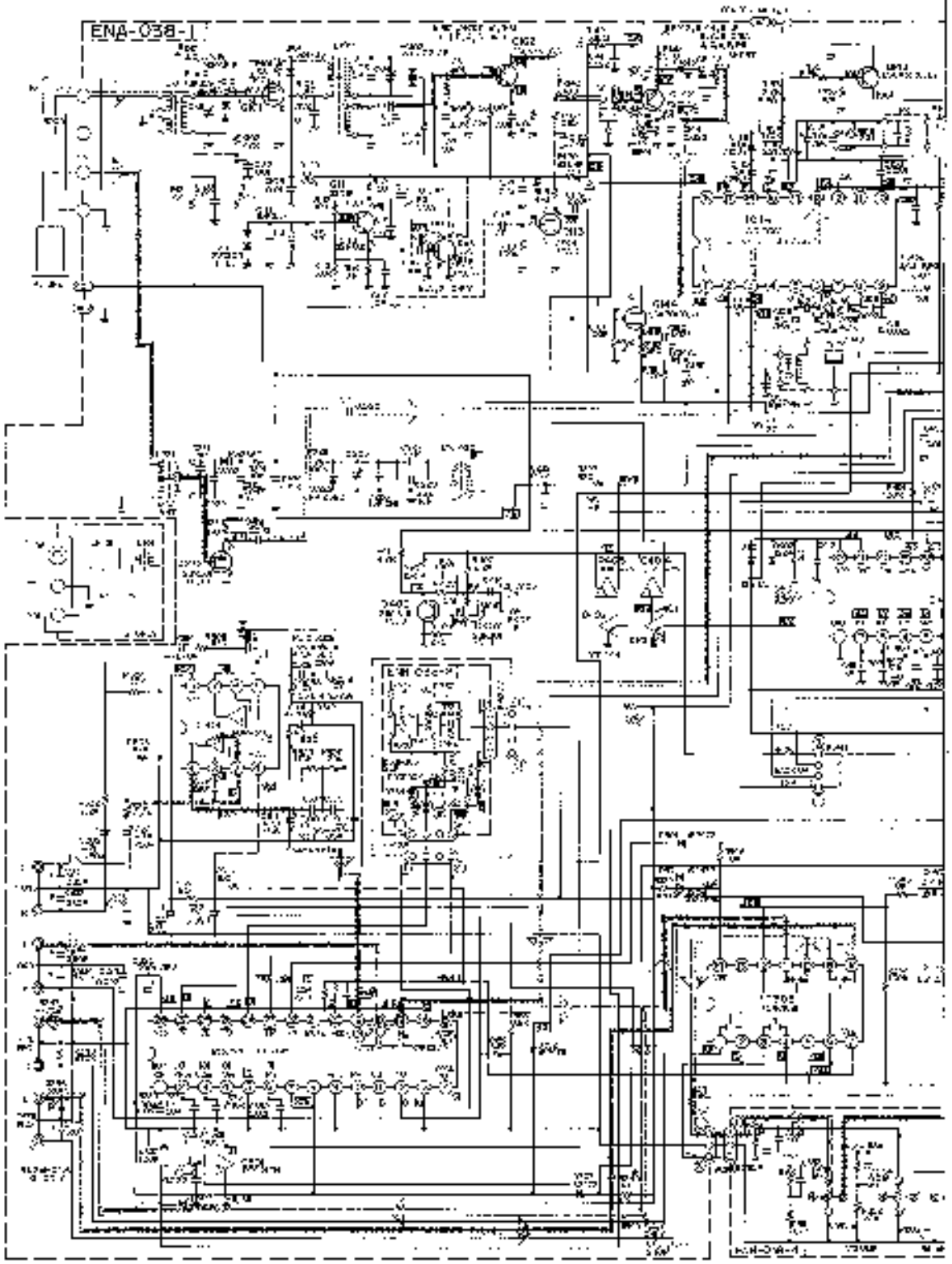


Notes:

1. [redacted] shows DC voltage to the chassis with no signal input.
2. —— Indicates positive B power supply.
3. - - - Indicates negative B power supply.
4. [redacted] Indicates signal path.
5. When replacing the parts in the darkened area (PCB), those marked with ⚠, be sure to use the designated parts to ensure safety.
6. This is the standard circuit diagram.
   The design and contents are subject to change without notice.

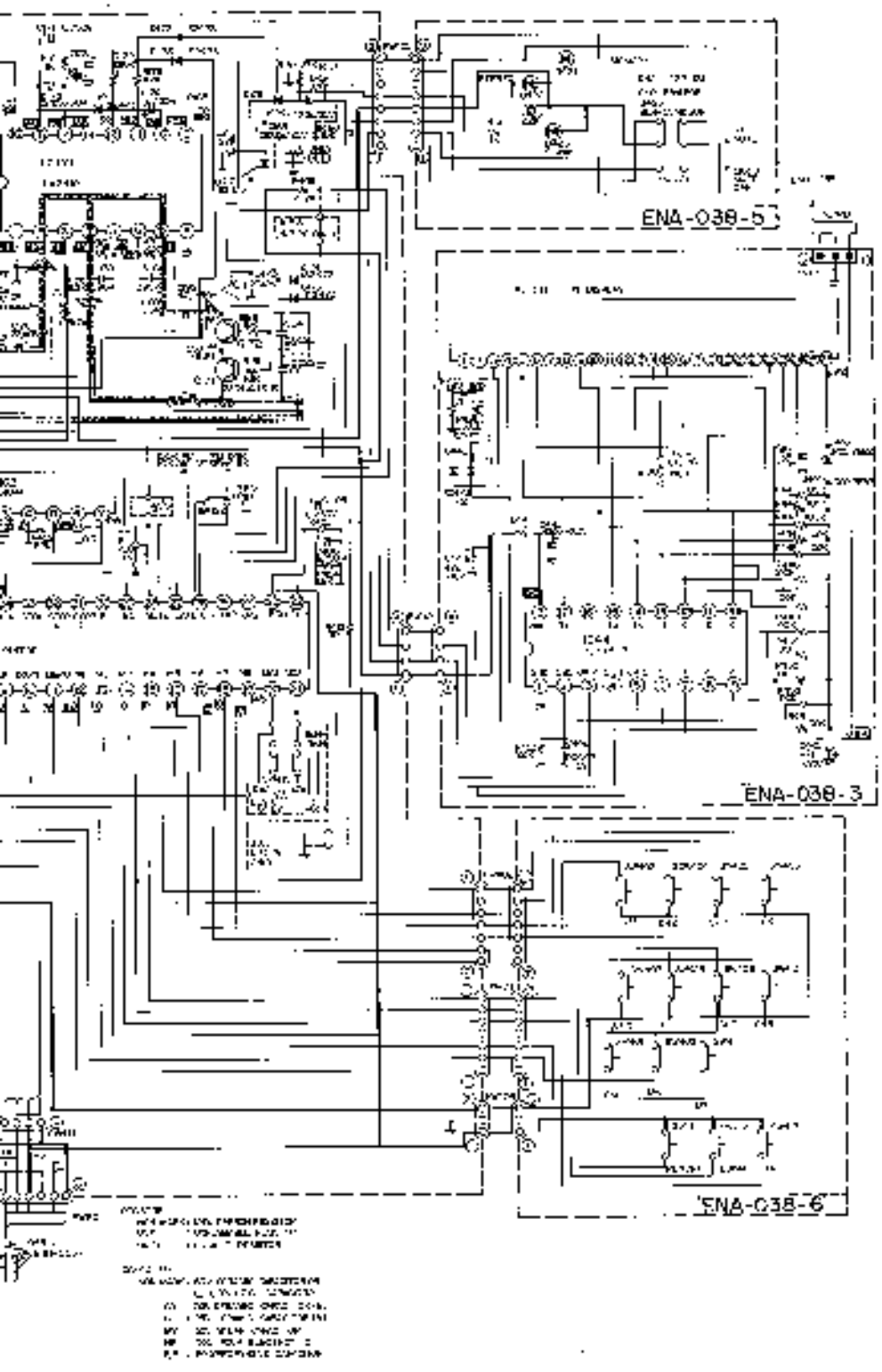
6,RX-111BK/RX-111LBK Schematic Diagram

6-(1) RX-111BK Tuner Section

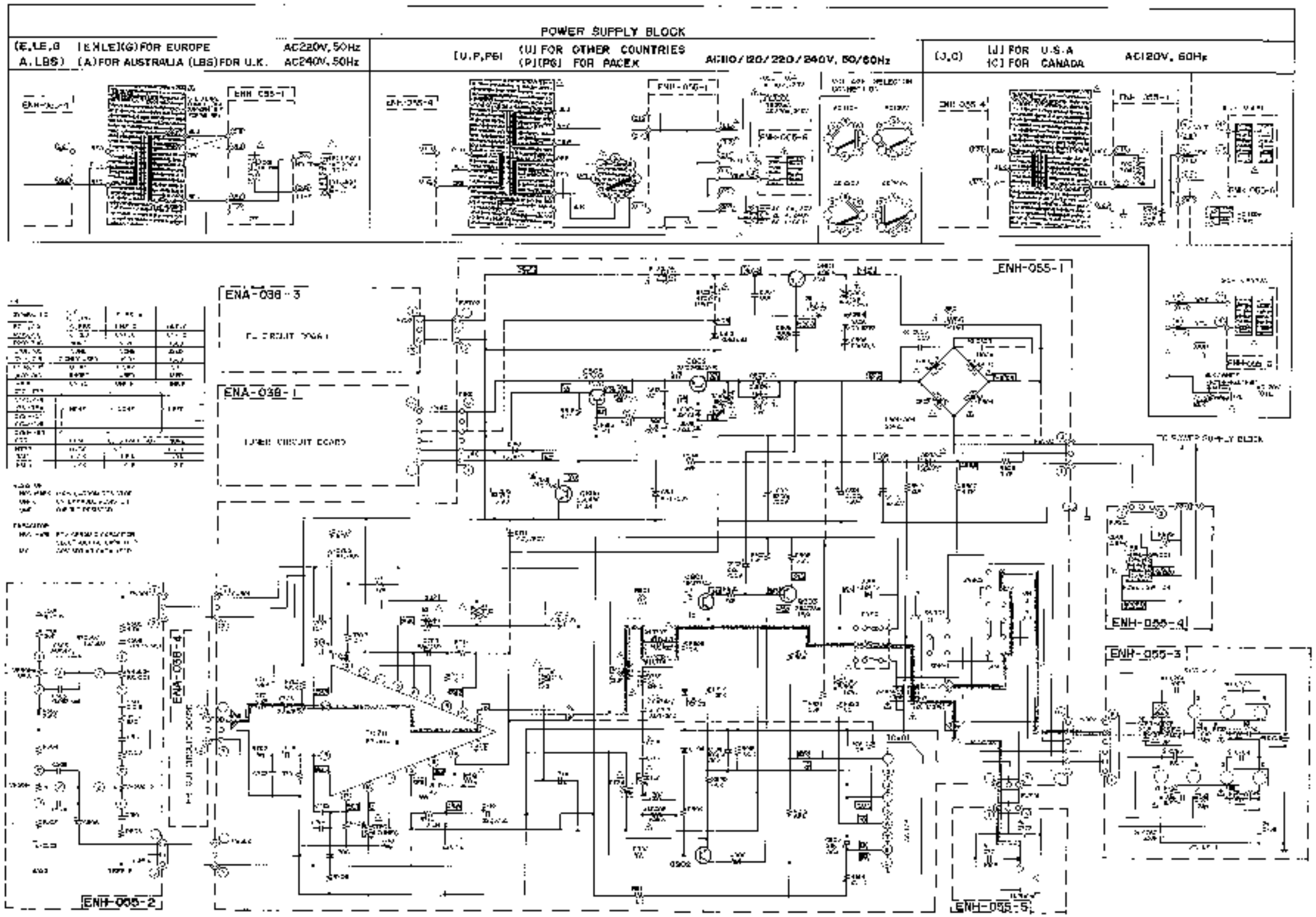


Notes:

1. [illegible] shows DC voltage to the chassis with no signal input.
2. ——— indicates positive B power supply.
3. – – – indicates negative B power supply.
4. [illegible] indicates signal path.
5. When replacing the parts in the darkned area ([illegible]) and those marked with △, be sure to use the designated parts to ensure safety.
6. This is the standard circuit diagram.
   The design and contents are subject to change without notice.


ENA-038-5
ENA-038-3
ENA-038-6

6-(3) RX-111BK/RX-111LBK Amplifier Section

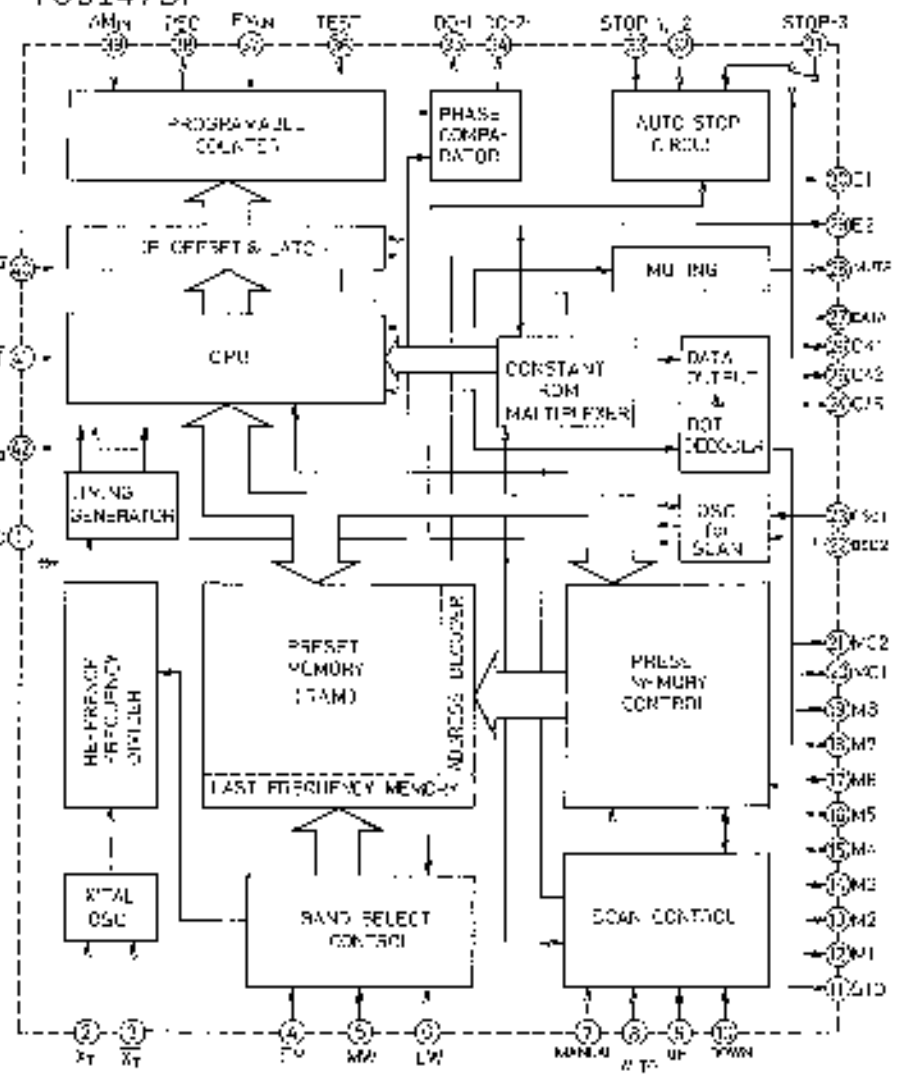


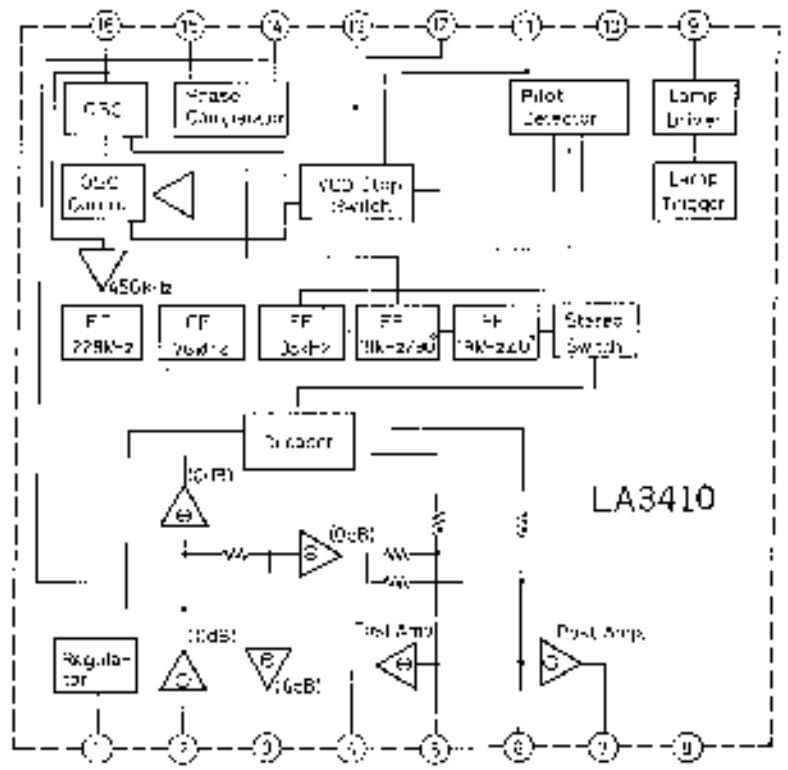
Notes:

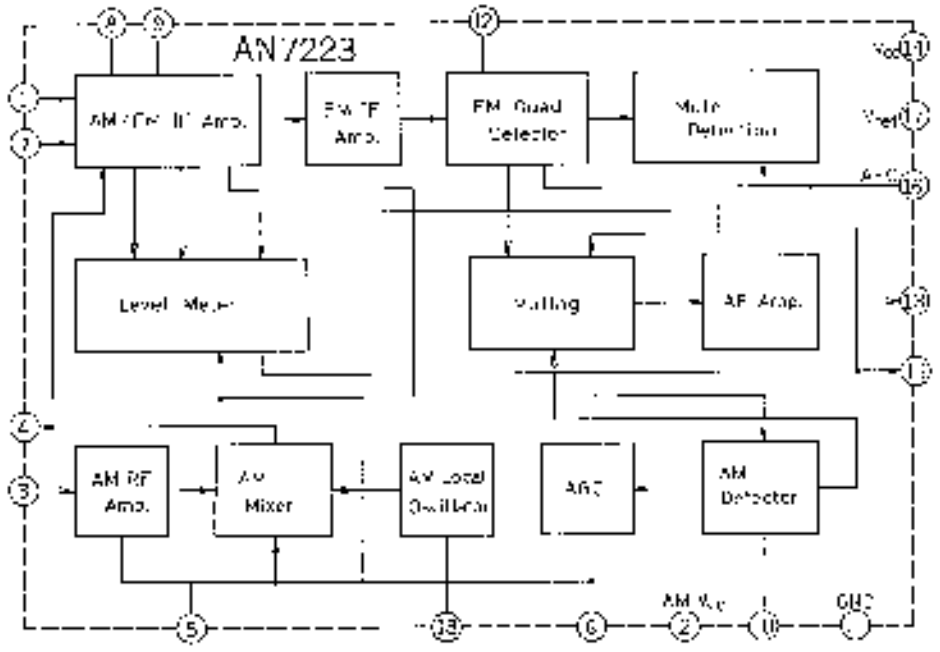
1. ▩▩ shows DC voltage to the chassis with no signal input.
2. —— indicates positive B power supply.
3. - - - indicates negative B power supply.
4. ▩▩ indicates signal path.
5. When replacing the parts in the darkened area (▩▩) and those marked with ⚠, be sure to use the designated parts to ensure safety.
6. This is the standard circuit diagram.
   The design and contents are subject to change without notice.

6-(4) Internal Block Diagram of Major LSI ICs

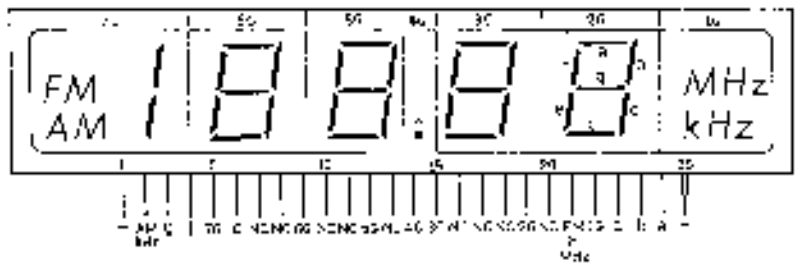
TC9147BF



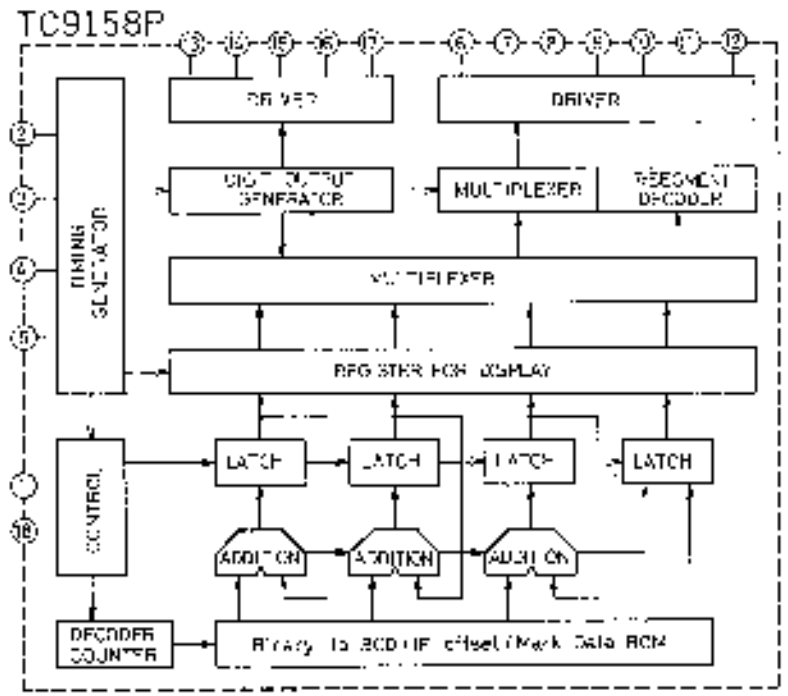




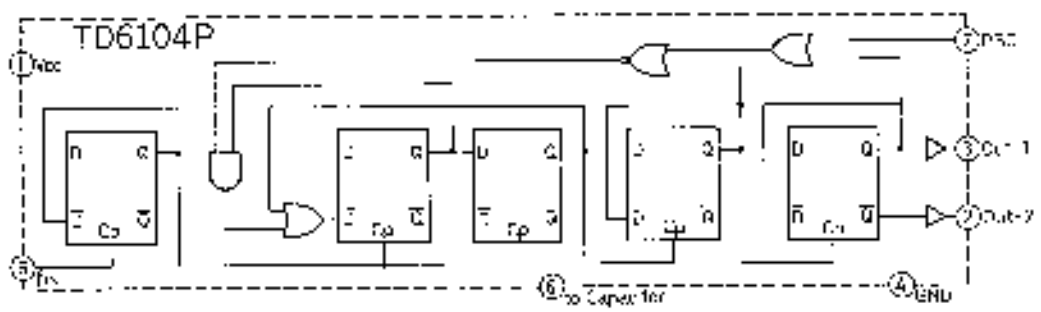
ELU0001-016



TC9158P



TD6104P



Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C158	QETS1EM-106	10MF	25V	ELECTRO	
	C159	QCF21HP-223	0.022MF	50V	CERAMIC	
	C160	QCF21HP-223	0.022MF	50V	CERAMIC	
	C171	QCS21HJ-101	100PF	50V	CERAMIC	
	C172	QETS1HM-105	1MF	50V	ELECTRO	
	C173	QETS1AM-474	0.47MF	10V	ELECTRO	
	C173	QETS1EM-106	10MF	25V	ELECTRO	
	C174	QETS1HM-105	1MF	50V	ELECTRO	
	C175	QCS21HJ-391	390PF	50V	CERAMIC	D
	C175	QCS21HJ-471	470PF	50V	CERAMIC	C
	C175	QCS21HJ-471	470PF	50V	CERAMIC	-
	C175	QCS21HJ-681	680PF	50V	CERAMIC	A
	C175	QCS21HJ-681	680PF	50V	CERAMIC	B
	C176	QCS21HJ-391	390PF	50V	CERAMIC	D
	C176	QCS21HJ-471	470PF	50V	CERAMIC	C
	C176	QCS21HJ-471	470PF	50V	CERAMIC	E
	C176	QCS21HJ-681	680PF	50V	CERAMIC	A
	C177	QCS21HJ-681	680PF	50V	CERAMIC	B
	C177	QETS1CM-107	100MF	16V	ELECTRO	
	C178	QETS1CM-226	22MF	16V	ELECTRO	-
	C179	QCF21HP-473	0.047MF	50V	CERAMIC	
	C181	QETS1HM-475	4.7MF	50V	ELECTRO	
	C182	QETS1HM-475	4.7MF	50V	ELECTRO	
	C183	QCY21HK-222	2200PF	50V	CERAMIC	
	C184	QCY21HK-222	2200PF	50V	CERAMIC	
	C185	QETS1EM-226	22MF	25V	ELECTRO	
	C186	QETS1EM-226	22MF	25V	ELECTRO	
	C201	QCS21HJ-470	47PF	50V	CERAMIC	C
	C202	QAT2001-005		50V	TRIMMER	D
	C203	QCF21HP-473	0.047MF	50V	CERAMIC	E
	C204	QCF21HP-223	0.022MF	50V	CERAMIC	C
	C205	QAT2001-005		50V	TRIMMER	C
	C206	QCT26CH-820	82PF	50V	CERAMIC	D
	C207	QCT26CH-101	100PF	50V	CERAMIC	C
	C208	QCT26CH-101	100PF	50V	CERAMIC	C
	C209	QCY21HK-272	2700PF	50V	CERAMIC	D
	C210	QCF21HP-223	0.022MF	50V	CERAMIC	E
	C211	QCF21HP-223	0.022MF	50V	CERAMIC	
	C212	QCF21HP-223	0.022MF	50V	CERAMIC	E
	C221	QCS21HJ-560	[illegible]	50V	CERAMIC	
	C222	QAT2001-005		50V	TRIMMER	
	C223	QCF21HP-473	0.047MF	25V	CERAMIC	
	C224	QCF21HP-223	0.022MF	50V	CERAMIC	
	C225	QAT2001-005		50V	TRIMMER	
	C226	QCT26CH-150	15PF	50V	CERAMIC	
	C227	QCS21HJ-270	27PF	50V	CERAMIC	
	C228	QFM41HJ-471	470PF	50V	POLY	
	C231	QCF21HP-223	0.022MF	50V	CERAMIC	
	C232	QCF21HP-223	0.022MF	50V	CERAMIC	
	C301	QETS1HM-475	4.7MF	50V	ELECTRO	
	C302	QETS1HM-475	4.7MF	50V	ELECTRO	
	C305	QCY21HK-182	1800PF	50V	CERAMIC	
	C306	QCY21HK-182	1800PF	50V	CERAMIC	
	C307	QCY21HK-682	6800PF	50V	CERAMIC	
	C308	QCY21HK-682	6800PF	50V	CERAMIC	
	C309	QCS21HJ-331	330PF	50V	CERAMIC	E
	C309	QCS21HJ-560	56PF	50V	CERAMIC	A
	C309	QCS21HJ-560	56PF	50V	CERAMIC	B
	C309	QCS21HJ-560	56PF	50V	CERAMIC	C
	C309	QCS21HJ-560	56PF	50V	CERAMIC	D
	C310	QCS21HJ-331	330PF	50V	CERAMIC	
	C310	QCS21HJ-560	56PF	50V	CERAMIC	A
	C310	QCS21HJ-560	56PF	50V	CERAMIC	B
	C310	QCS21HJ-560	56PF	50V	CERAMIC	C
	C310	QCS21HJ-560	56PF	50V	CERAMIC	D
	C311	QETS1HM-475	4.7MF	50V	ELECTRO	
	C312	QETS1HM-475	4.7MF	50V	ELECTRO	
	C313	QETS1AM-476	47MF	10V	ELECTRO	
	C314	QETS1AM-476	47MF	10V	ELECTRO	
	C315	QCS21HJ-221	220PF	50V	CERAMIC	E
	C316	QCS21HJ-221	220PF	50V	CERAMIC	F
	C321	QETS1CM-226	22MF	16V	ELECTRO	
	C322	QETS1CM-226	22MF	16V	ELECTRO	
	C324	QCF21HP-223	0.022MF	50V	CERAMIC	
	C324	QCF21HP-223	0.022MF	50V	CERAMIC	
	C325	QETS1CM-108	1000MF	16V	ELECTRO	
	C326	QCF21HP-224	0.022MF	50V	CERAMIC	
	C327	QETS1HM-105	1MF	50V	ELECTRO	
	C328	QCS21HJ-101	100PF	50V	CERAMIC	
	C329	QCS21HJ-101	100PF	50V	CERAMIC	
	C330	QCF21HP-102	1000PF	50V	CERAMIC	
	C331	QCS21HJ-331	330PF	50V	CERAMIC	-
	C332	QCS21HJ-331	330PF	50V	CERAMIC	-
	C333	QCS21HJ-561	560PF	50V	CERAMIC	-
	C334	QCS21HJ-561	560PF	50V	CERAMIC	E

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C335	QCS21HJ-561	560PF	50V	CERAMIC	E
	C336	QCS21HJ-561	560PF	50V	CERAMIC	E
	C340	QCF21HP-223	0.022MF	50V	CERAMIC	
	C351	QCS21HJ-181	180PF	50V	CERAMIC	
	C352	QCS21HJ-181	180PF	50V	CERAMIC	
	C353	QFN31HK-183	0.018MF	50V	MYLAR	
	C354	QFN31HK-183	0.018MF	50V	MYLAR	
	C401	QCF21HP-103	0.01MF	50V	CERAMIC	
	C402	QCF21HP-103	0.01MF	50V	CERAMIC	
	C403	QCF21HP-103	0.01MF	50V	CERAMIC	
	C404	QCF21HP-103	0.01MF	50V	CERAMIC	
	C405	QETS1HM-105	1MF	50V	ELECTRO	
	C406	QETS1HM-105	1MF	50V	ELECTRO	
	C407	QCF21HP-102	1000PF	50V	CERAMIC	D
	C408	QCF21HP-102	1000PF	50V	CERAMIC	
	C409	QCF21HP-102	1000PF	50V	CERAMIC	
	C410	QCS21HJ-100	10PF	50V	CERAMIC	
	C411	QCS21HJ-100	10PF	50V	CERAMIC	
	C412	QCF21HP-103	0.01MF	50V	CERAMIC	
	C413	QETS0JM-228	2200MF	6.3V	ELECTRO	
	C414	QEN51HM-225	2.2MF	50V	NON POLE	A
	C414	QEN51HM-225	2.2MF	50V	NON POLE	B
	C414	QEN51HM-225	2.2MF	50V	NON POLE	C
	C414	QEN51HM-225	2.2MF	50V	NON POLE	E
	C414	QEN51HM-474	0.47MF	50V	NON POLE	D
	C415	QCS21HJ-101	100PF	50V	CERAMIC	A
	C415	QCS21HJ-101	100PF	50V	CERAMIC	B
	C415	QCS21HJ-101	100PF	50V	CERAMIC	C
	C415	QCS21HJ-101	100PF	50V	CERAMIC	E
	C415	QCS21HJ-821	820PF	50V	CERAMIC	D
	C441	QETS1EM-106	10MF	25V	ELECTRO	
	C442	QCF21HP-472	4700PF	50V	CERAMIC	
	C443	QETS0JM-477	470MF	6.3V	ELECTRO	
	C444	QETS1AM-476	47MF	10V	ELECTRO	
	C445	QETS1HM-476	47MF	50V	ELECTRO	

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R101	QRD146J-330S	33	1/4W	CARBON	A
	R101	QRD146J-330S	33	1/4W	CARBON	B
	R101	QRD146J-470S	47	1/4W	CARBON	C
	R101	QRD146J-470S	47	1/4W	CARBON	D
	R101	QRD146J-470S	47	1/4W	CARBON	E
	R102	QRD146J-220S	22	1/4W	CARBON	A
	R102	QRD146J-220S	22	1/4W	CARBON	B
	R102	QRD146J-220S	22	1/4W	CARBON	C
	R102	QRD146J-220S	22	1/4W	CARBON	D
	R102	QRD146J-5R6S	5.6	1/4W	CARBON	-
	R103	QRD146J-473S	47K	1/4W	CARBON	
	R103	QRD146J-473S	47K	1/4W	CARBON	
	R105	QRD146J-392S	3.9K	1/4W	CARBON	A
	R105	QRD146J-392S	3.9K	1/4W	CARBON	B
	R105	QRD146J-392S	3.9K	1/4W	CARBON	C
	R105	QRD146J-392S	3.9K	1/4W	CARBON	D
	R105	QRD146J-472S	4.7K	1/4W	CARBON	E
	R106	QRD146J-223S	22K	1/4W	CARBON	A
	R106	QRD146J-223S	22K	1/4W	CARBON	B
	R106	QRD146J-223S	22K	1/4W	CARBON	C
	R106	QRD146J-223S	22K	1/4W	CARBON	D
	R106	QRD146J-473S	47K	1/4W	CARBON	-
	R107	QRD146J-102S	1K	1/4W	CARBON	
	R108	QRD146J-102S	1K	1/4W	CARBON	E
	R108	QRD146J-561S	560	1/4W	CARBON	A
	R108	QRD146J-561S	560	1/4W	CARBON	B
	R108	QRD146J-561S	560	1/4W	CARBON	C
	R108	QRD146J-561S	560	1/4W	CARBON	D
	R109	QRD146J-221S	220	1/4W	CARBON	
	R111	QRD146J-472S	4.7K	1/4W	CARBON	
	R112	QRD146J-682S	6.8K	1/4W	CARBON	A
	R112	QRD146J-682S	6.8K	1/4W	CARBON	B
	R112	QRD146J-682S	6.8K	1/4W	CARBON	C
	R112	QRD146J-682S	6.8K	1/4W	CARBON	D
	R112	QRD146J-822S	8.2K	1/4W	CARBON	-
	R113	QRD146J-103S	10K	1/4W	CARBON	
	R114	QRD146J-122S	1.2K	1/4W	CARBON	
	R115	QRD146J-331S	330	1/4W	CARBON	C
	R115	QRD146J-331S	330	1/4W	CARBON	D
	R115	QRD146J-331S	330	1/4W	CARBON	E

Resistors

△	ITEM	PART NUMBER	DESCRIPTION			AREA
	R116	RRD148.-1048	100K	1/4W	CARBON	C
	R116	RRD148.-1048	100K	1/4W	CARBON	D
	R116	RRD148.-1048	100K	1/4W	CARBON	E
	R117	RRD148J-1015	150	1/4W	CARBON	
	R118	RRD148J-1045	680K	1/4W	CARBON	
	R119	RRD148J-4725	470	1/4W	CARBON	
△	R120	RRD148J-2205	33	1/4W	UNF.CARBON	
△	R121	RRD148J-2225	2.2K	1/4W	CARBON	
△	R122	RRD148J-2225	2.2K	1/4W	CARBON	
△	R123	RRD148J-2225	2.2K	1/4W	CARBON	
△	R142	RRD148J-1015	150	1/4W	UNF.CARBON	
	R143	RRD148J-1015	150	1/4W	CARBON	C
	R143	RRD148J-1015	150	1/4W	CARBON	D
	R143	RRD148J-1015	150	1/4W	CARBON	E
	R144	RRD148J-1015	150	1/4W	CARBON	C
	R144	RRD148J-1015	150	1/4W	CARBON	D
	R145	RRD148.-1025	1K	1/4W	CARBON	C
	R145	RRD148.-1025	1K	1/4W	CARBON	D
	R145	RRD148.-1025	1K	1/4W	CARBON	E
	R146	RRD148.-1025	1K	1/4W	CARBON	C
	R146	RRD148.-1025	1K	1/4W	CARBON	D
	R146	RRD148.-1025	1K	1/4W	CARBON	E
	R147	RRD148.-1035	10K	1/4W	CARBON	C
	R147	RRD148.-1035	10K	1/4W	CARBON	D
	R147	RRD148.-1035	10K	1/4W	CARBON	E
	R148	RRD148.-6035	5.6K	1/4W	CARBON	C
	R148	RRD148.-6035	5.6K	1/4W	CARBON	D
	R149	RRD148.-6035	5.6K	1/4W	CARBON	E
	R150	RRD148.-3615	360	1/4W	CARBON	
	R151	RRD148.-1035	1K	1/4W	CARBON	D
	R151	RRD148.-1035	1K	1/4W	CARBON	E
	R151	RRD148.-6015	680	1/4W	CARBON	C
	R151	RRD148.-6015	680	1/4W	CARBON	D
	R151	RRD148.-6815	680	1/4W	CARBON	E
	R154	RRD148.-2725	2.7K	1/4W	CARBON	
	R155	RRD148.-4725	4.7K	1/4W	CARBON	
	R156	RRD148.-6825	6.8K	1/4W	CARBON	
	R156	RRD148.-1035	10K	1/4W	CARBON	
	R157	RRD148.-1035	1K	1/4W	CARBON	
	R158	RRD148.-2235	2.2K	1/4W	CARBON	
	R160	RRD148.-3315	330	1/4W	CARBON	
	R161	RRD148.-2725	2.7K	1/4W	CARBON	
	R164	RRD148.-1045	100K	1/4W	CARBON	
	R165	RRD148.-5615	560	1/4W	CARBON	
	R166	RRD148.-4725	4.7K	1/4W	CARBON	
	R170	RRD148.-1035	1K	1/4W	CARBON	
	R171	RRD148.-1035	1K	1/4W	CARBON	A
	R172	RRD148.-4335	43K	1/4W	CARBON	A
	R172	RRD148.-4335	43K	1/4W	CARBON	B
	R173	RVZ3519-224			VARIABLE	C
	R173	RVZ3519-224			VARIABLE	D
	R173	RVZ3519-224			VARIABLE	E
	R174	RRD148.-4705	4.7K	1/4W	CARBON	
△	R174	RRD148.-6805	68	1/4W	UNF.CARBON	A
△	R174	RRD148.-6805	68	1/4W	UNF.CARBON	D
△	R174	RRZD0292-680	68	1/4W	FUSIBLE	C
△	R174	RRZD0292-680	68	1/4W	FUSIBLE	D
△	R174	RRZD0292-680	68	1/4W	FUSIBLE	E
	R175	RRD148.-1345	130K	1/4W	CARBON	A
	R175	RRD148.-1345	130K	1/4W	CARBON	B
	R175	RRD148.-1345	130K	1/4W	CARBON	C
	R175	RRD148.-1345	130K	1/4W	CARBON	D
	R175	RRD148.-1345	130K	1/4W	CARBON	E
	R176	RRD148.-1345	130K	1/4W	CARBON	
	R176	RRD148.-1345	130K	1/4W	CARBON	
	R176	RRD148.-1345	130K	1/4W	CARBON	
	R177	RRD148J-1345	130K	1/4W	CARBON	
	R178	RRD148J-3335	3.3K	1/4W	CARBON	
	R180	RRD148J-3325	3.2K	1/4W	CARBON	
	R181	RRD148J-1035	10K	1/4W	CARBON	
	R182	RRD148J-1035	10K	1/4W	CARBON	
	R183	RRD148J-4725	4.7K	1/4W	CARBON	
	R184	RRD148J-4725	4.7K	1/4W	CARBON	
	R185	RRD148J-6415	680	1/4W	CARBON	
	R186	RRD148J-1035	10K	1/4W	CARBON	
	R187	RRD148J-1035	10K	1/4W	CARBON	
	R188	RRD148.-2735	27K	1/4W	CARBON	
	R189	RRD148.-2735	27K	1/4W	CARBON	
	A201	RRD148.-1035	10K	1/4W	CARBON	A
	R201	RRD148.-1045	100K	1/4W	CARBON	A
	R201	RRD148.-4715	470	1/4W	CARBON	A
	R201	RRD148.-1035	10K	1/4W	CARBON	A
	R201	RRD148.-1035	10K	1/4W	CARBON	A

△ Safety Parts

Resistors

△	ITEM	PART NUMBER	DESCRIPTION			AREA
	R207	RRD148.-1035	10K	1/4W	CARBON	A
	R208	RRD148J-3315	330	1/4W	CARBON	A
	R209	RRD148J-4725	4.7K	1/4W	CARBON	A
	R221	RRD148J-1015	150	1/4W	CARBON	
	R223	RRD148J-1015	150	1/4W	CARBON	
	R227	RRD148J-4715	470	1/4W	CARBON	
	R235	RRD148.-1035	10K	1/4W	CARBON	D
	R236	RRD148.-1035	10K	1/4W	CARBON	A
	R237	RRD148.-3315	330	1/4W	CARBON	
	R238	RRD148.-4725	4.7K	1/4W	CARBON	
	R301	RRD148.-8225	8.2K	1/4W	CARBON	
	R302	RRD148.-8225	8.2K	1/4W	CARBON	
	R303	RRD148J-4715	470	1/4W	CARBON	
	R304	RRD148.-4715	470	1/4W	CARBON	
	R305	RRD148.-6815	680	1/4W	CARBON	
	R306	RRD148.-3935	39K	1/4W	CARBON	
	R307	RRD148.-3935	39K	1/4W	CARBON	
	R308	RRD148.-4725	4.7K	1/4W	CARBON	
	R309	RRD148.-4725	4.7K	1/4W	CARBON	
	R310	RRD148J-4725	4.7K	1/4W	CARBON	
	R311	RRD14BJ-1045	100K	1/4W	CARBON	
	R312	RRD14BJ-1045	100K	1/4W	CARBON	
	R313	RRD148J-1815	180	1/4W	CARBON	
	R314	RRD148J-1015	150	1/4W	CARBON	
	R323	RRD148J-4735	47K	1/4W	CARBON	
	R324	RRD148J-2255	2.2M	1/4W	CARBON	
	R325	RRD148J-1045	100K	1/4W	CARBON	
	R326	RRD14BJ-1045	100K	1/4W	CARBON	
	R327	RRD14BJ-1045	100K	1/4W	CARBON	
	R328	RRD14BJ-1035	10K	1/4W	CARBON	
	R329	RRD14BJ-1035	10K	1/4W	CARBON	
	R331	RRD148J-1035	10K	1/4W	CARBON	
△	R332	RRD14CJ-4705	47	1/4W	UNF.CARBON	C
△	R333	RRD14CJ-4705	47	1/4W	UNF.CARBON	D
△	R333	RRD14CJ-4705	47	1/4W	UNF.CARBON	E
	R341	RRD14BJ-3925	3.3K	1/4W	CARBON	
	R342	RRD14BJ-3925	3.3K	1/4W	CARBON	
	R343	RRD14BJ-1035	10K	1/4W	CARBON	
	R344	RRD14BJ-1045	100K	1/4W	CARBON	
	R345	RRD148J-1035	10K	1/4W	CARBON	
	R347	RRD148J-4745	470K	1/4W	CARBON	
	R348	RRD148J-4745	470K	1/4W	CARBON	
△	R349	RRD14CJ-4705	47	1/4W	UNF.CARBON	C
△	R349	RRD14CJ-4705	47	1/4W	UNF.CARBON	D
△	R349	RRD14CJ-4705	47	1/4W	UNF.CARBON	E
	R351	RRD14BJ-1045	1M	1/4W	CARBON	
	R352	RRD14BJ-1045	1M	1/4W	CARBON	
	R353	RRD148J-6835	68K	1/4W	CARBON	
	R354	RRD148J-6835	68K	1/4W	CARBON	
	R391	RRD148J-2235	2.2K	1/4W	CARBON	
	R392	RRD148J-1525	1.5K	1/4W	CARBON	
	R393	RRD14CJ-1.25	1.5M	1/4W	CARBON	
	R401	RRD14BJ-1045	100K	1/4W	CARBON	
	R402	RRD14BJ-5635	56K	1/4W	CARBON	
	R403	RRD14BJ-4835	48K	1/4W	CARBON	
	R404	RRD14BJ-6835	68K	1/4W	CARBON	
	R405	RRD148J-4725	4.7K	1/4W	CARBON	A
	R406	RRD148J-1025	1K	1/4W	CARBON	
	R407	RRD148J-2225	2.2K	1/4W	CARBON	
	R408	RRD148J-1525	1.5K	1/4W	CARBON	A
	R408	RRD148J-1525	1.5K	1/4W	CARBON	B
	R408	RRD148J-1525	1.5K	1/4W	CARBON	C
	R408	RRD148J-1525	1.5K	1/4W	CARBON	E
	R408	RRD148.-4825	4.8K	1/4W	CARBON	D
	R409	RRD148.-2715	270	1/4W	CARBON	
	R410	RRD148.-1035	10K	1/4W	CARBON	
	R411	RRD148.-4725	4.7K	1/4W	CARBON	
	R412	RRD148.-6515	560	1/4W	CARBON	
	R421	RRD148.-4725	4.7K	1/4W	CARBON	D
	R421	RRD148.-4725	4.7K	1/4W	CARBON	E
	R422	RRD148.-4725	4.7K	1/4W	CARBON	E
	R422	RRD148.-2225	2.2K	1/4W	CARBON	
	R423	RRD148.-2225	2.2K	1/4W	CARBON	
	R441	RRD148.-1045	100K	1/4W	CARBON	
	R442	RRD148.-1045	100K	1/4W	CARBON	
	R443	RRD148.-1045	100K	1/4W	CARBON	
	R444	RRD148J-1045	100K	1/4W	CARBON	
	R445	RRD148J-1045	100K	1/4W	CARBON	
	R446	RRD148J-1045	100K	1/4W	CARBON	
	R447	RRD148J-1045	100K	1/4W	CARBON	
	R448	RRD148J-1045	100K	1/4W	CARBON	
	R449	RRD148J-1045	100K	1/4W	CARBON	
	R450	RRD148J-1045	100K	1/4W	CARBON	
	R451	RRD148J-1045	100K	1/4W	CARBON	
	R452	RRD148J-1045	100K	1/4W	CARBON	

△ Safety Parts

Transistors

⚠	ITEM	PART NUMBER	DESCRIPTION	MAKER	AREA
	Q101	2SK168(F)	F.E.T	HITACHI	A
	Q101	2SK168(F)	F.E.T	HITACHI	B
	Q101	2SK339(E,F)	F.E.T	HITACHI	C
	Q101	2SK339(E,F)	F.E.T	HITACHI	D
	Q101	2SK339(E,F)	F.E.T	HITACHI	E
	Q102	2SC535(B,C)	SILICON	HITACHI	
	Q103	2SC461(C,D)	SILICON	HITACHI	E
	Q111	2SC461(C,D)	SILICON	HITACHI	
	Q112	2SK161(GR)	F.E.T	TOSHIBA	C
	Q112	2SK161(GR)	F.E.T	TOSHIBA	D
	Q113	2SK161(GR)	F.E.T	TOSHIBA	E
	Q113	2SK161(GR)	F.E.T	TOSHIBA	
	Q142	2SC535(B,C)	SILICON	HITACHI	
	Q143	2SC460(C,D)	SILICON	HITACHI	
	Q144	2SK301(Q,R)	F.E.T	MATSUSHITA	
	Q171	[illegible]	SILICON	HITACHI	
	Q174	[illegible]	SILICON	HITACHI	
	Q175	DTA114YS	SILICON	ROHM	
	Q201	2SK301(Q,R)	F.E.T	MATSUSHITA	D
	Q202	2SK301(Q,R)	F.E.T	MATSUSHITA	D
	Q221	2SD635(E,F)	SILICON	HITACHI	D
	Q222	2SK301(Q,R)	F.E.T	MATSUSHITA	
	Q223	2SK301(Q,R)	F.E.T	MATSUSHITA	D
	Q301	DTA114YS	SILICON	ROHM	
	Q302	DTA114YS	SILICON	ROHM	
	Q401	DTC144ES	SILICON	ROHM	
	Q402	DTC144ES	SILICON	ROHM	
	Q403	DTC144ES	SILICON	ROHM	D
	Q404	DTA114YS	SILICON	ROHM	
	Q405	DTA114YS	SILICON	ROHM	
	Q406	DTA114YS	SILICON	ROHM	D
	Q407	2SK301(Q)	F.E.T	MATSUSHITA	
	Q408	2SC458(C,D)	SILICON	HITACHI	

ICs

⚠	ITEM	PART NUMBER	DESCRIPTION	MAKER	AREA
	IC141	AN7223	I.C.	MATSUSHITA	
	IC171	LA3410	I.C.	SANYO	
	IC301	[illegible]MA5550-5	I.C.		
	IC351	LC7815F	I.C.	SANYO	
	IC391	[illegible]	I.C.	TOSHIBA	
	IC401	TC9147BP	I.C.	TOSHIBA	
	IC402	TD6104P	I.C.	TOSHIBA	
	IC441	TC9159P	I.C.	TOSHIBA	

Diodes

⚠	ITEM	PART NUMBER	DESCRIPTION	MAKER	AREA
	D101	1SS108	SILICON	HITACHI	F
	D101	1S2473	SILICON	ROHM	A
	D101	1S2473	SILICON	ROHM	B
	D101	1S2473	SILICON	ROHM	C
	D101	1S2473	SILICON	ROHM	D
	D141	1S2473	SILICON	ROHM	
	D142	1S2473	SILICON	ROHM	C
	D143	1S2473	SILICON	ROHM	C
	D171	1S2473	SILICON	ROHM	
	D172	1S2473	SILICON	ROHM	
	D173	1S2473	SILICON	ROHM	
	D174	1S2473	SILICON	ROHM	
	D175	1S2473	SILICON	ROHM	
	D176	1S2473	SILICON	ROHM	
	D177	1S2473	SILICON	ROHM	
	D301	1S2473	SILICON	ROHM	C
	D321	1S2473	SILICON	ROHM	C
	D401	1S2473	SILICON	ROHM	
	D402	1S2473	SILICON	ROHM	
	D403	1S2473	SILICON	ROHM	
	D404	1S2473	SILICON	ROHM	
	D306	RD5.[illegible]	ZENER	NEC	
	D307	RD6.2EB	ZENER	NEC	
	D351	1S2473	SILICON	ROHM	
	D361	SLR-55DC50F	L.E.D.	ROHM	

Diodes

⚠	ITEM	PART NUMBER	DESCRIPTION	MAKER	AREA
	D362	SLR-55DC50F	L.E.D.	ROHM	
	D363	SLR-55DC50F	L.E.D.	ROHM	
	D364	SLR-55DC50F	L.E.D.	ROHM	
	D401	1S2473	SILICON	ROHM	
	D402	1S2473	SILICON	ROHM	
	D421	SLR-55VC50F	L.E.D.	ROHM	
	D422	SLR-55VC50F	L.E.D.	ROHM	
	D423	SLR-55VC50F	L.E.D.	ROHM	
	D441	1S2473	SILICON	ROHM	D
	D442	1S2473	SILICON	ROHM	D
	D443	RD[illegible]	ZENER	NEC	
	D444	RD[illegible]	ZENER	NEC	
	VC101	SVC202(AB)	VARICAP	SANYO	
	VC102	SVC202(AB)	VARICAP	SANYO	
	VC111	SVC202(AB)	VARICAP	SANYO	
	VC201	KV1236Z	VARICAP	TOKO	D
	VC202	KV1236Z	VARICAP	TOKO	D
	VC221	KV1236Z	VARICAP	TOKO	
	VC222	KV1236Z	VARICAP	TOKO	

Capacitors

⚠	ITEM	PART NUMBER	VALUE	VOLTAGE	DESCRIPTION	AREA
	C103	QCS21HJ-3R0	3.0PF	50V	CERAMIC	C
	C103	QCS21HJ-3R0	3.0PF	50V	CERAMIC	D
	C103	QCS21HJ-3R0	3.0PF	50V	CERAMIC	E
	C104	QAT5051-001			TRIMMER	
	C102	QCF21HP-103	0.01MF	50V	CERAMIC	
	C105	QCS21HJ-5R0	5.0PF	50V	CERAMIC	
	C107	QAT5051-001			TRIMMER	
	C105	QCS21HJ-2R0	2.0PF	50V	CERAMIC	E
	C105	QCS21HJ-4R0	4.0PF	50V	CERAMIC	C
	C105	QCS21HJ-4R0	4.0PF	50V	CERAMIC	D
	C105	QCS21HJ-4R0	4.0PF	50V	CERAMIC	C
	C105	QCS21HJ-4R0	4.0PF	50V	CERAMIC	D
	C107	QCS21HJ-151	150PF	50V	CERAMIC	
	C108	QCF21HP-103	0.01MF	50V	CERAMIC	
	C109	QCF21HP-103	0.01MF	50V	CERAMIC	
	C110	QCS21HJ-7R0	7.0PF	50V	CERAMIC	C
	C110	QCS21HJ-7R0	7.0PF	50V	CERAMIC	D
	C110	QCS21HJ-7R0	7.0PF	50V	CERAMIC	E
	C111	QCT26CJ-100	10PF	50V	CERAMIC	
	C112	QCS21HJ-7R0	7.0PF	50V	CERAMIC	
	C113	QCT26CJ-220	22PF	50V	CERAMIC	
	C114	QCS21HJ-4R0	4.0PF	50V	CERAMIC	C
	C114	QCS21HJ-4R0	4.0PF	50V	CERAMIC	D
	C114	QCS21HJ-4R0	4.0PF	50V	CERAMIC	E
	C115	QCF21HP-103	0.01MF	50V	CERAMIC	
	C116	QCT26CJ-100	10PF	50V	CERAMIC	
	C117	QCF21HP-103	0.01MF	50V	CERAMIC	
	C118	QCS21HJ-2R0	2.0PF	50V	CERAMIC	
	C119	QCS21HJ-221	220PF	50V	CERAMIC	
	C120	QCF21HP-223	0.022MF	50V	CERAMIC	
	C121	QCS21HJ-3R0	3.0PF	50V	CERAMIC	A
	C121	QCS21HJ-2R0	2.0PF	50V	CERAMIC	B
	C122	QCF21HP-103	0.01MF	50V	CERAMIC	
	C123	QCF21HP-103	0.01MF	50V	CERAMIC	
	C124	QETD1EM-106	10MF	25V	ELECTRO	
	C131	QETD1EM-106	10MF	25V	ELECTRO	F
	C141	QCF21HP-223	0.022MF	50V	CERAMIC	
	C144	QCF21HP-223	0.022MF	50V	CERAMIC	
	C145	QETS1EM-106	10MF	25V	ELECTRO	
	C146	QETS1AM-476	47MF	10V	ELECTRO	
	C147	QETS1HM-229	2.2MF	50V	ELECTRO	
	C148	QETS1CM-476	47MF	16V	ELECTRO	
	C149	QCF21HP-223	0.022MF	50V	CERAMIC	
	C150	QCF21HP-223	0.022MF	50V	CERAMIC	
	C151	QETS1EM-106	10MF	25V	ELECTRO	
	C152	QCS21HJ-151	150PF	50V	CERAMIC	C
	C152	QCS21HJ-131	130PF	50V	CERAMIC	D
	C152	QCS21HJ-[illegible]	[illegible]	50V	CERAMIC	E
	C152	QCS21HJ-[illegible]	[illegible]	50V	CERAMIC	[illegible]
	C152	QCS21HJ-[illegible]	[illegible]	50V	CERAMIC	
	C153	QCF21HP-223	0.022MF	50V	CERAMIC	
	C154	QCF21HP-223	0.022MF	50V	CERAMIC	
	C155	QETS1CM-476	47MF	16V	ELECTRO	
	C156	QETS1CM-476	47MF	16V	ELECTRO	
	C157	QEN61HM-475	4.7MF	50V	NON POLE	

3. Printed Circuit Board Ass'y and Parts List

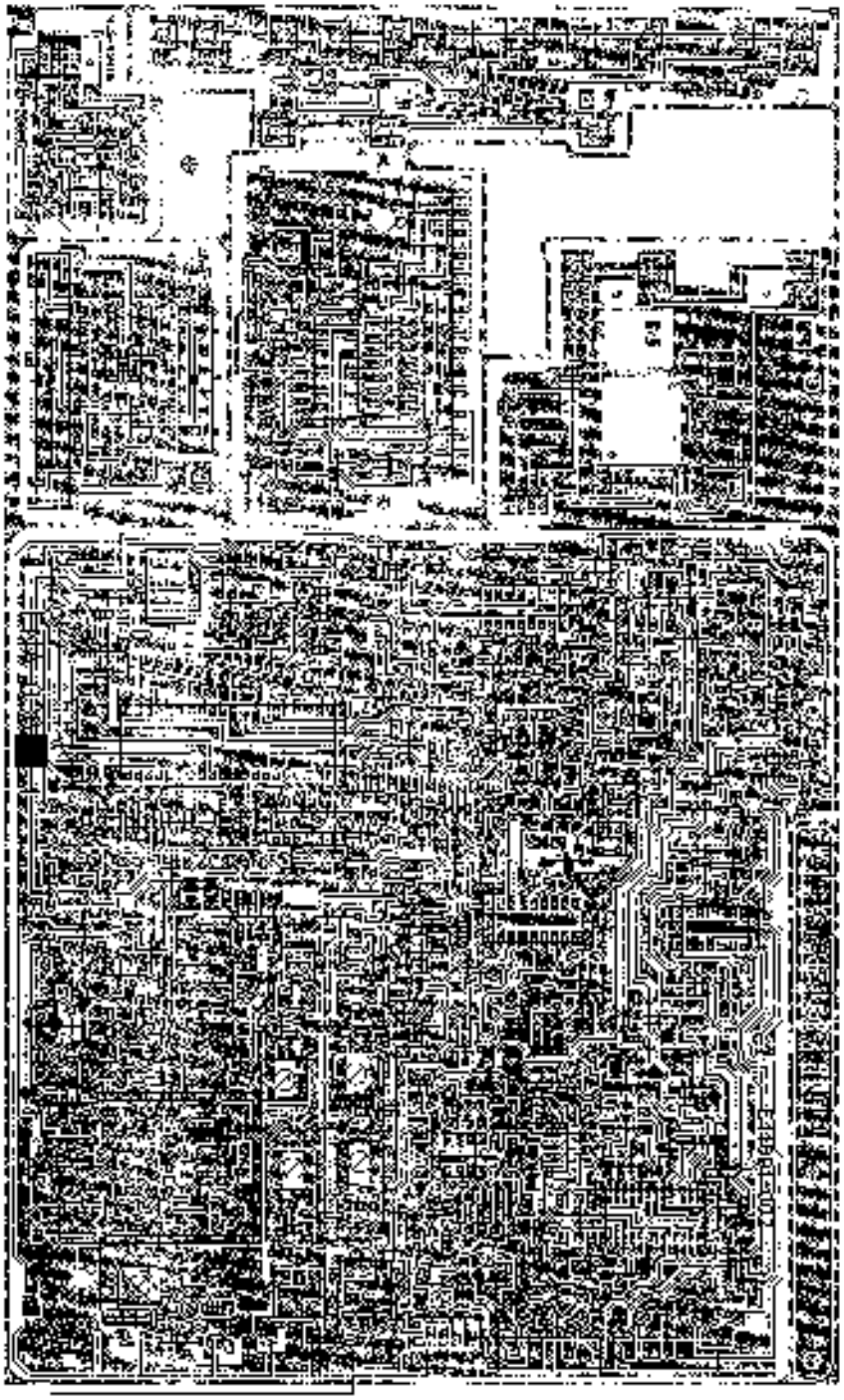
3-(1) ENA-038☐ Tuner P. C. Board Ass'y

Note: ENA-038☐ varies according to the areas employed. See note (1) when placing an order.

Note (1)

P.C. Board Ass'y	Designated Areas
ENA-038 A	U.S.A. & Canada
ENA-038 B	U.S. Military & Other Countries
ENA-038 C	Europe & Australia
ENA-038 D	Europe & U.K. with LW
ENA-038 E	West Germany

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



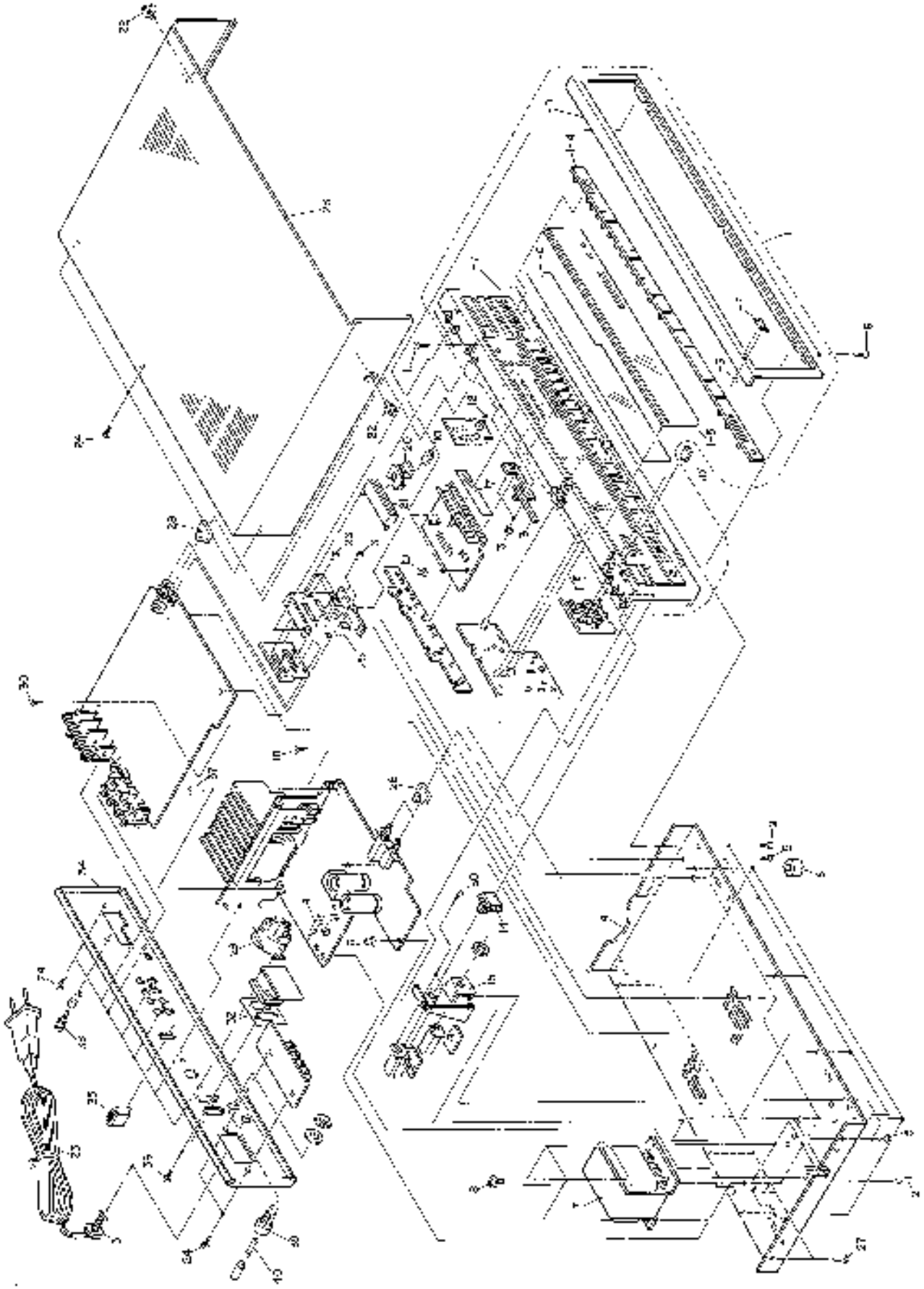
	Item	Part Number	Part Name	Q'ty	Description	Areas
	1	EFP-RX111BK	Front Panel Ass'y	1		Except LE, LBS
		EFP-RX111LBK	Front Panel Ass'y	1		LE, LBS
	1-2	E72056-001	JVC Mark	1		
	1-3	LE0912-003	Speed Nut	1		
	1-4	E24942-014	Front Plate	1		E, G, A
		E24942-015	Front Plate	1		LE, LBS
		E24942-016	Front Plate	1		J, C, U, P, PG
	1-5	E303678-005	Window Screen	1		
	1-6	E303675-005	Indicator Sheet	1		
	1-7	E11083-003	Front Base	1		Except LE, LBS
		E11083-004	Front Base	1		LE, LBS
	1-8	E24940-011	Front Panel	1		Except LE, LBS
		E24940-012	Front Panel	1		LE, LBS
	2	E303216-003	Fastener	4		
	3	E60312-003	Sealed Nut	2		
	4	E10048-005	Chassis Base	1		
	5	SDSB3006N	Screw	4		
	6	E301256-002	Foot	4		
△	7	ETP1078-10JA	Power Transformer	1		J
△		ETP1078-10CA	Power Transformer	1		C
△		ETP1078-6EA	Power Transformer	1		U, P, PG
△		ETP1078-6EA	Power Transformer	1		E, G, A, LE
△		ETP1078-10LABS	Power Transformer	1		LBS
	8	E66393-002	Ass'y Screw	4		
	9	SBSF3008M	Screw	7		
	10	E72113-001	Slide Knob	3		
	11	SDSB3008N	Screw	3		
	12	E72039-001	Push Knob	1		
	13	E72030-001	Push Knob	1		
	14	E72355-001	Push Knob	1		
	15	E72091-003	Bracket	1		
	16	E48725-008	Plastic Rivet	1		
	17	E70581-004	FL Screen	1		
	18	SDST3006Z	Screw	1		
	19	E48729-007	Plastic Rivet	2		
	20	E303660-001	Slide Knob	1		
	21	E303861-002	Volume Escutcheon	1		
	22	E61860-001	Screw	4		
	23	E24582-033	Metal Cover	1		
	24	SBSB3006M	Screw	12		
	25	E72087-001	Bracket	1		
	26	E70050-001	Screw	4		
	27	SBSB3006M	Screw	7		
	28	E71268-002	Push Knob	2		
△	29	QSR0055-008U	Voltage Selector	1		U, P, PG
	30	SBST3006Z	Screw	5		
△	31	QHS3076-182	Cord Stopper	1		Except LBS
△		QHS3076-182BS	Cord Stopper	1		LBS
	32	E69385-005	Spacer	1		J
△	33	QMP1340-200	Power Cord	1		J, C
△		QMP3080-200	Power Cord	1		E, LE, G
△		QMP2580-244	Power Cord	1		A
△		QMP7600-200	Power Cord	1		U, P, PG
△		QMP9017-008BS	Power Cord	1		LBS
	34	E24944-010	Rear Panel	1		J, C
		E24944-011	Rear Panel	1		U, P, PG
		E24944-012	Rear Panel	1		E, LE, A, LBS
		E24944-013	Rear Panel	1		G
	35	E302334-001	Antenna Holder	1		
	36	SDSJ3008M	Screw	2		J, C, U, P, PG
	37	SDSB3008M	Screw	2		
	38	E70378-001	GND. Terminal	1		
	39	QMG0301-003	Fuse Holder	1		U, P, PG
△	40	QMF51A2-T1RBS	Fuse	1		P
△		QMF51A2-R5BS	Fuse	1		U, PG
△	41	QMF61U1-2R0	Fuse	1		J, C
△		QMF51A2-R5BS	Fuse	1		E, LE, A, G
△		QMF51E2-R50BS	Fuse	1		LBS

△ Safety parts

The Marks for Designated Areas

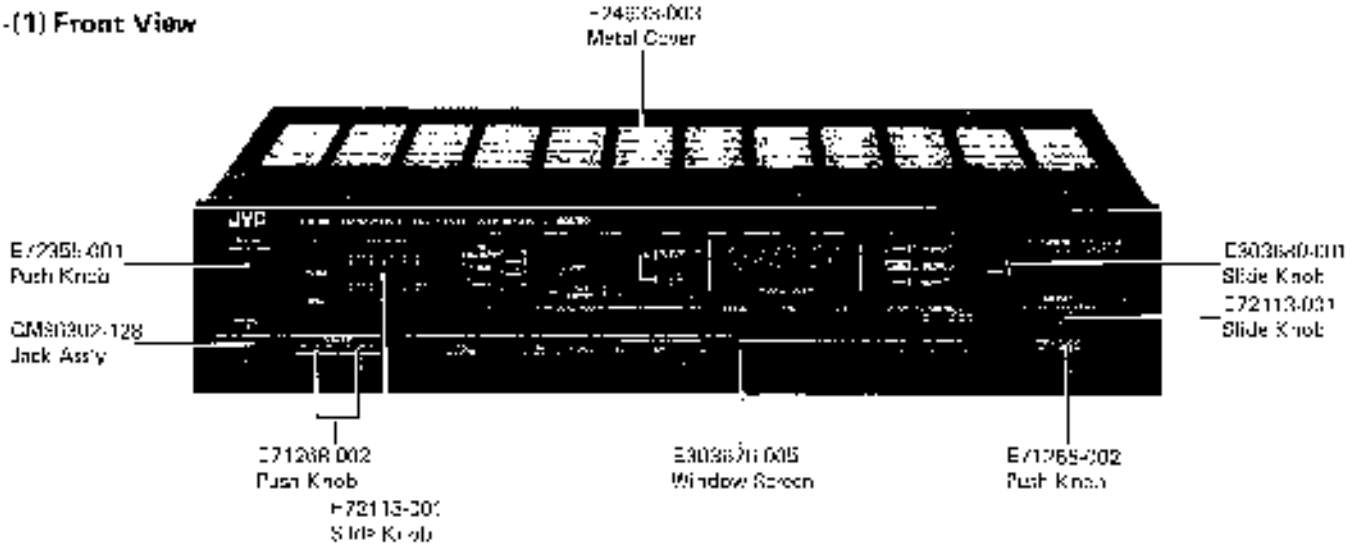
J . . . . U.S.A.
C . . . . Canada
A . . . . Australia
E, LE . . . . Europe
G . . . . West Germany
P, PG . . . . U.S. Military Market
LBS . . . . U.K.
U . . . . Other Countries

2. Exploded Views and Part Numbers

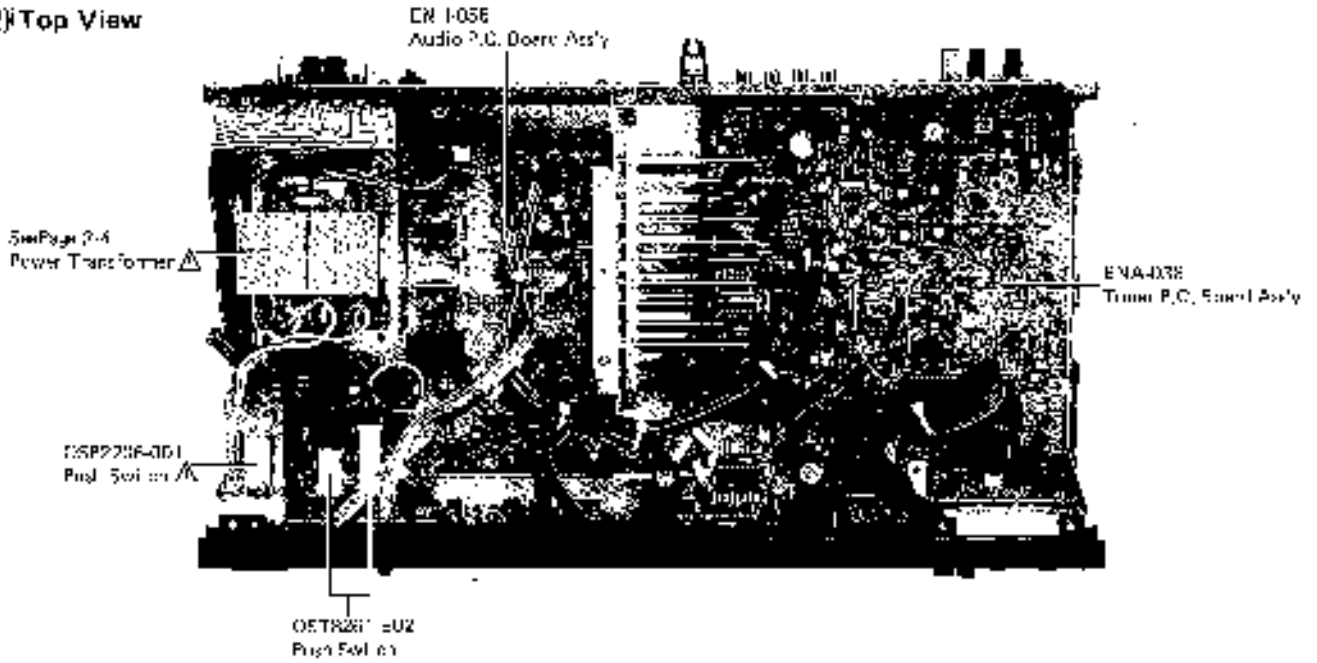


1. Main Parts Loca

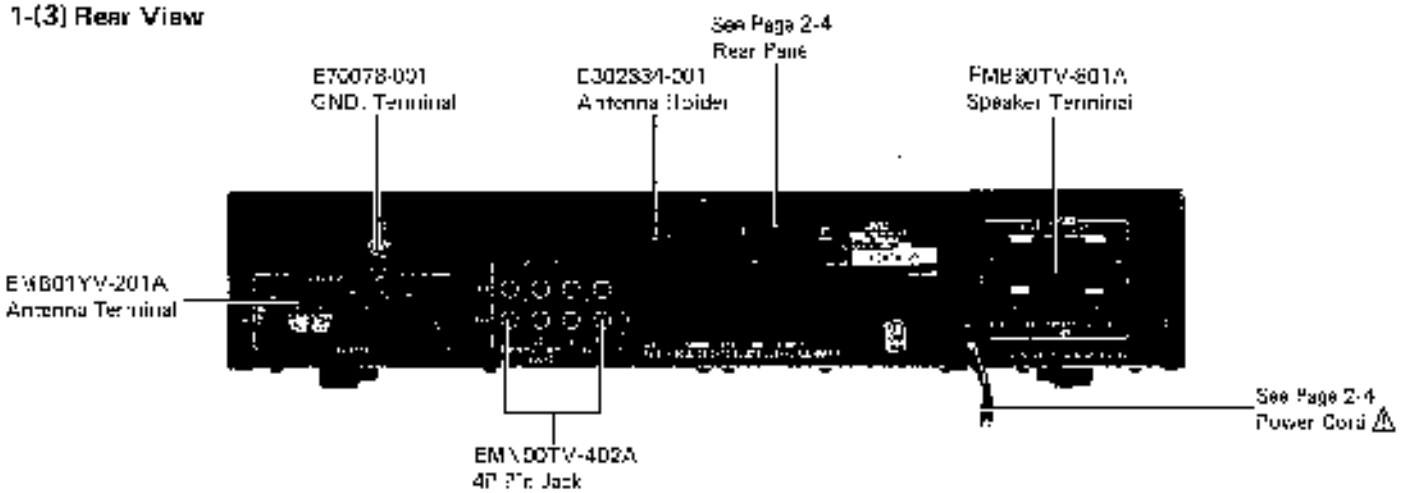
1-(1) Front View



1-(2) Top View



1-(3) Rear View



PARTS LIST

Contents

Transistors

⚠	ITEM	PART NUMBER	DESCRIPTION	MAKER	AREA
	Q801	2SD941S(P,R)	SILICON	MATSUSHITA	
	Q802	2SD1265A(Q,P)	SILICON	MATSUSHITA	
	Q801	2SC2235(O,Y)	SILICON	TOSHIBA	
	Q805	2SC458(C,D)	SILICON	HITACHI	
	Q901	2SD1775AV(E,F)	SILICON	HITACHI	
	Q902	2SD1775AV(E,F)	SILICON	HITACHI	
	Q903	2SA733A(P,R)	SILICON	NEC	

ICs

⚠	ITEM	PART NUMBER	DESCRIPTION	MAKER	AREA
	IC601	LA1241N(?)	I.C.	SANYO	
	IC602	TA7317P	I.C.	TOSHIBA	

Diodes

⚠	ITEM	PART NUMBER	DESCRIPTION	MAKER	AREA
	D801	S3V20F	SILICON		
	D802	S3V20F	SILICON		
	D803	S3V20F	SILICON		
	D804	S3V20F	SILICON		
	D805	RD13EB3	ZENER	NEC	
	D806	RD13EB3	ZENER	NEC	
	D807	1S2473	SILICON	ROHM	K
	D807	1S2473	SILICON	ROHM	LMS
	D807	1S2473	SILICON	ROHM	Y
	D807	1S2473	SILICON	ROHM	N
	D808	RD12EB3	ZENER	NEC	
	D810	1S2473	SILICON	ROHM	
	D811	RD5.1EB2	ZENER	NEC	
	D812	RD9.1EB3	ZENER	NEC	
	D813	1S2473	SILICON	ROHM	K
	D813	1S2473	SILICON	ROHM	LMS
	D813	1S2473	SILICON	ROHM	Y
	D813	1S2473	SILICON	ROHM	N
	D901	1S2473	SILICON	ROHM	
	D902	1S2473	SILICON	ROHM	
	D903	1S2473	SILICON	ROHM	
	D904	1S2473	SILICON	ROHM	

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C001	QFM82AK-104	0.1MF	100V	MYLAR	K
	C001	QFM82AK-104	0.1MF	100V	MYLAR	LBS
	C501	QETS1HM-105	1MF	50V	ELECTRO	
	C502	QETS1HM-105	1MF	50V	ELECTRO	
	C503	QFN81HK-153	0.015MF	50V	MYLAR	
	C504	QFN81HK-153	0.015MF	50V	MYLAR	
	C505	QFN81HK-823	0.082MF	50V	MYLAR	
	C506	QFN81HK-823	0.082MF	50V	MYLAR	
	C507	QETS1HM-105	1MF	50V	ELECTRO	
	C508	QETS1HM-105	1MF	50V	ELECTRO	
	C509	QFN81HK-332	3300PF	50V	MYLAR	
	C510	QFN81HK-332	3300PF	50V	MYLAR	
	C511	QFN81HK-183	0.018MF	50V	MYLAR	
	C512	QFN81HK-183	0.018MF	50V	MYLAR	
	C701	QCS21HJ-680	68PF	50V	CERAMIC	I
	C701	QCS21HJ-680	68PF	50V	CERAMIC	J
	C701	QCS21HJ-680	68PF	50V	CERAMIC	K
	C701	QCS21HJ-680	68PF	50V	CERAMIC	MS
	C701	QCS21HJ-680	68PF	50V	CERAMIC	N
	C702	QCS21HJ-680	68PF	50V	CERAMIC	I
	C702	QCS21HJ-680	68PF	50V	CERAMIC	J
	C702	QCS21HJ-680	68PF	50V	CERAMIC	K
	C702	QCS21HJ-680	68PF	50V	CERAMIC	LBS
	C702	QCS21HJ-680	68PF	50V	CERAMIC	N
	C703	QETS1HM-225	2.2MF	50V	ELECTRO	
	C704	QEN61HM-225	2.2MF	50V	ELECTRO	
	C705	QETS1AM-476	47MF	10V	ELECTRO	
	C706	QEN61AM-476	47MF	10V	ELECTRO	
	C707	QCS21HJ-100	10PF	50V	CERAMIC	
	C708	QCS21HJ-100	10PF	50V	CERAMIC	

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C709	QETA1HM-106	10MF	50V	ELECTRO	
	C710	QETB1EM-227M	220MF	50V	ELECTRO	
	C711	QETB1HM-475	4.7MF	50V	ELECTRO	
	C712	QETB1HM-475	4.7MF	50V	ELECTRO	
	C713	QETS1HM-476	47MF	50V	ELECTRO	
	C714	QETS1HM-476	47MF	50V	ELECTRO	
	C715	QFN81HK-473	0.047MF	50V	MYLAR	
	C716	QFN81HK-473	0.047MF	50V	MYLAR	
	C717	QFN81HK-473	0.047MF	50V	MYLAR	I
	C717	QFN81HK-473	0.047MF	50V	MYLAR	K
	C717	QFN81HK-473	0.047MF	50V	MYLAR	LBS
	C717	QFN81HK-473	0.047MF	50V	MYLAR	K
	C717	QFN81HK-473	0.047MF	50V	MYLAR	N
	C718	QFN81HK-473	0.047MF	50V	MYLAR	I
	C718	QFN81HK-473	0.047MF	50V	MYLAR	K
	C718	QFN81HK-473	0.047MF	50V	MYLAR	LBS
	C718	QFN81HK-473	0.047MF	50V	MYLAR	M
	C718	QFN81HK-473	0.047MF	50V	MYLAR	N
	C721	QCS21HJ-221	220PF	50V	CERAMIC	
	C722	QCS21HJ-221	220PF	50V	CERAMIC	
	C731	QFN81HK-473	0.047MF	50V	MYLAR	M
	C732	QFN81HK-473	0.047MF	50V	MYLAR	M
	C753	QFN81HK-473	0.047MF	50V	MYLAR	M
	C754	QFN81HK-473	0.047MF	50V	MYLAR	M
	C755	QCS21HJ-681	680PF	50V	CERAMIC	M
	C756	QCS21HJ-681	680PF	50V	CERAMIC	M
	C757	QCS21HJ-331	330PF	50V	CERAMIC	M
	C758	QCS21HJ-331	330PF	50V	CERAMIC	M
	C761	QCS21HJ-101	100PF	50V	CERAMIC	M
	C762	QCS21HJ-101	100PF	50V	CERAMIC	M
	C744	QCS21HJ-101	100PF	50V	CERAMIC	M
	C744	QCS21HJ-101	100PF	50V	CERAMIC	M
	C771	QCS21HJ-101	100PF	50V	CERAMIC	M
	C772	QCS21HJ-101	100PF	50V	CERAMIC	M
	C801	QEZ0072-338	3300MF		NON POLE	
	C802	QEZ0072-338	3300MF		NON POLE	
	C803	QFM82AK-104	0.1MF	100V	MYLAR	M
	C803	QFM82AK-473	0.047MF	100V	MYLAR	I
	C803	QFM82AK-473	0.047MF	100V	MYLAR	J
	C803	QFM82AK-473	0.047MF	100V	MYLAR	K
	C803	QFM82AK-473	0.047MF	100V	MYLAR	LBS
	C803	QFM82AK-473	0.047MF	100V	MYLAR	N
	C805	QFM82AK-104	0.1MF	100V	MYLAR	M
	C805	QFM82AK-473	0.047MF	100V	MYLAR	[illegible]
	C805	QFM82AK-473	0.047MF	100V	MYLAR	J
	C805	QFM82AK-473	0.047MF	100V	MYLAR	K
	C805	QFM82AK-473	0.047MF	100V	MYLAR	LBS
	C805	QFM82AK-473	0.047MF	100V	MYLAR	N
	C806	QEH31VM-107	100MF	35V	ELECTRO	
	C807	QCF31HP-103	0.01MF	50V	CERAMIC	
	C808	QETB1EM-107	100MF	25V	ELECTRO	
	C811	QETB1HM-475	4.7MF	50V	ELECTRO	
	C812	QETB1CM-476	47MF	16V	ELECTRO	
	C813	QCF21HP-103	0.01MF	50V	CERAMIC	
	C814	QCF21HK-472	4700PF	50V	CERAMIC	M
	C913	QETB1HM-226	22MF	50V	ELECTRO	
	C914	QETB1AM-107	100MF	10V	ELECTRO	
	C909	QETB1CM-226	22MF	16V	ELECTRO	
	C908	QETB1HM-105	1MF	50V	ELECTRO	

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R001	QRZ123K-273EM	2.7M	1/2W	COMPOSI	I
	R501	QRD143J-203S	20K	1/4W	CARBON	
	R502	QRD143J-203S	20K	1/4W	CARBON	
	R503	QRD143J-362S	3.6K	1/4W	CARBON	
	R504	QRD143J-362S	3.6K	1/4W	CARBON	
	R505	QRD143J-472S	4.7K	1/4W	CARBON	
	R506	QRD143J-472S	4.7K	1/4W	CARBON	
	R507	QRD143J-821S	820	1/4W	CARBON	
	R508	QRD143J-821S	820	1/4W	CARBON	
	R701	QRD143J-222S	2.2K	1/4W	CARBON	
	R702	QRD143J-222S	2.2K	1/4W	CARBON	
	R70[illegible]	QRD143J-104S	100K	1/4W	CARBON	
	R70[illegible]	QRD143J-104S	100K	1/4W	CARBON	
	R705	QRD143J-821S	820	1/4W	CARBON	
	R706	QRD143J-821S	820	1/4W	CARBON	
	R707	QRD143J-133S	13K	1/4W	CARBON	
	R708	QRD143J-133S	13K	1/4W	CARBON	
	R709	QRD143J-823S	82K	1/4W	CARBON	
	R710	QRD143J-823S	82K	1/4W	CARBON	
⚠	R711	QRD145J-222S	2.2K	1/4W	UNF. CARBON	K

⚠ Safety parts

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
⚠	R711	GRD145L-2223	2.2K 1/4W UNF.CARBON	LBS
⚠	R711	GRD145L-2223	2.2K 1/4W UNF.CARBON	N
⚠	R711	GRD145L-2223	2.2K 1/4W UNF.CARBON	H
	R711	GRD148L-2223	2.2K 1/4W CARBON	I
	R711	GRD148L-2223	2.2K 1/4W CARBON	J
⚠	R712	GRD145L-2223	2.2K 1/4W UNF.CARBON	K
⚠	R712	GRD145L-2223	2.2K 1/4W UNF.CARBON	LBS
⚠	R712	GRD145L-2223	2.2K 1/4W UNF.CARBON	M
⚠	R712	GRD145L-2223	2.2K 1/4W UNF.CARBON	N
	R712	GRD148L-2223	2.2K 1/4W CARBON	I
	R712	GRD148L-2223	2.2K 1/4W CARBON	J
	R713	GRD148L-1023	1K 1/4W CARBON	
⚠	R714	GRD145L-1013	100 1/4W UNF.CARBON	I
⚠	R714	GRD145L-1013	100 1/4W UNF.CARBON	J
	R714	GRD146L-1013	100 1/4W UNF.C.RESI	K
	R714	GRD146L-1013	100 1/4W UNF.C.RESI	LBS
	R714	GRD146L-1013	100 1/4W UNF.C.RESI	M
	R714	GRD146L-1013	100 1/4W UNF.C.RESI	N
⚠	R715	GRD145L-2223	2.2K 1/4W UNF.CARBON	K
⚠	R715	GRD145L-2223	2.2K 1/4W UNF.CARBON	LBS
⚠	R715	GRD145L-2223	2.2K 1/4W UNF.CARBON	M
⚠	R715	GRD145L-2223	2.2K 1/4W UNF.CARBON	N
	R715	GRD148L-2223	2.2K 1/4W CARBON	I
	R715	GRD148L-2223	2.2K 1/4W CARBON	J
⚠	R716	GRD145L-2223	2.2K 1/4W UNF.CARBON	K
⚠	R716	GRD145L-2223	2.2K 1/4W UNF.CARBON	LBS
⚠	R716	GRD145L-2223	2.2K 1/4W UNF.CARBON	M
⚠	R716	GRD145L-2223	2.2K 1/4W UNF.CARBON	N
	R716	GRD148L-2223	2.2K 1/4W CARBON	I
	R716	GRD148L-2223	2.2K 1/4W CARBON	J
	R717	GRD148L-2723	2.7K 1/4W CARBON	
⚠	R739	GRX022L-R22KM	0.22 2W M.FILM	
⚠	R740	GRX022L-R22KM	0.22 2W M.FILM	
⚠	R739	GRD145L-3303	33 1/4W UNF.CARBON	
⚠	R740	GRD145L-3303	33 1/4W UNF.CARBON	
⚠	R751	GRZ0062-100	10 1/4W FUSIBLE	Y
⚠	R752	GRZ0062-100	10 1/4W FUSIBLE	Y
⚠	R753	GRZ0062-100	10 1/4W FUSIBLE	Y
⚠	R754	GRZ0062-100	10 1/4W FUSIBLE	Y
⚠	R776	GRD145J-4R7S	4.7 1/4W UNF.CARBON	
⚠	R777	GRD145J-4R7S	4.7 1/4W UNF.CARBON	I
⚠	R777	GRD145J-4R7S	4.7 1/4W UNF.CARBON	J
⚠	R777	GRZ0061-4R7	4.7 FUSIBLE	K
⚠	R777	GRZ0061-4R7	4.7 FUSIBLE	LBS
⚠	R777	GRZ0061-4R7	4.7 FUSIBLE	M
⚠	R777	GRZ0061-4R7	4.7 FUSIBLE	N
⚠	R797	GRD145J-470S	47 1/4W UNF.CARBON	K
⚠	R798	GRD145J-470S	47 1/4W UNF.CARBON	K
⚠	R801	GRD125J-2R2	2.2 1/2W UNF.CARBON	
⚠	R802	GRD125J-122	1.2K 1/2W UNF.CARBON	
⚠	R803	GRG022J-470AN	470 2W UNF.M.FILM	
⚠	R804	GRD145J-150S	15 1/4W UNF.CARBON	
⚠	R804	GRD145J-150S	15 1/4W UNF.CARBON	J
⚠	R804	GRZ0053-150	15 1/4W FUSIBLE	K
⚠	R804	GRZ0053-150	15 1/4W FUSIBLE	LBS
⚠	R804	GRZ0053-150	15 1/4W FUSIBLE	M
⚠	R804	GRZ0053-150	15 1/4W FUSIBLE	N
⚠	R806	GRG022J-101AN	100 2W UNF.M.FILM	I
⚠	R806	GRG022J-101AN	100 2W UNF.M.FILM	J
⚠	R806	GRG026J-101AF	100 2W O.M.FILM	K
⚠	R806	GRG026J-101AF	100 2W O.M.FILM	LBS
⚠	R806	GRG026J-101AF	100 2W O.M.FILM	M
⚠	R806	GRG026J-101AF	100 2W O.M.FILM	N
⚠	R807	GRG022J-101AN	100 2W UNF.M.FILM	I
⚠	R807	GRG022J-101AN	100 2W UNF.M.FILM	J
⚠	R807	GRG026J-101AF	100 2W O.M.FILM	K
⚠	R807	GRG026J-101AF	100 2W O.M.FILM	LBS
⚠	R807	GRG026J-101AF	100 2W O.M.FILM	M
⚠	R807	GRG026J-101AF	100 2W O.M.FILM	N
⚠	R810	GRD125J-182	1.8K 1/2W UNF.CARBON	
⚠	R811	GRD145J-680S	68 1/4W UNF.CARBON	
	R812	GRD148J-122S	1.2K 1/4W CARBON	I
	R812	GRD148J-122S	1.2K 1/4W CARBON	J
	R812	GRD148J-182S	1.8K 1/4W CARBON	K
	R812	GRD148J-182S	1.8K 1/4W CARBON	LBS
	R812	GRD148J-182S	1.8K 1/4W CARBON	M
	R812	GRD148J-182S	1.8K 1/4W CARBON	N
	R813	GRD148J-122S	1.2K 1/4W CARBON	I
	R813	GRD148J-122S	1.2K 1/4W CARBON	J
	R813	GRD148L-2023	2K 1/4W CARBON	K
	R813	GRD148L-2023	2K 1/4W CARBON	LBS
	R813	GRD148L-2023	2K 1/4W CARBON	M
	R813	GRD148L-2023	2K 1/4W CARBON	N
	R814	GRD148L-5633	56K 1/4W CARBON	
	R814	GRD148L-4733	47K 1/4W CARBON	

⚠ Safety parts

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R901	GRD148J-152S	1.5K 1/4W CARBON	
	R902	GRD148J-152S	1.5K 1/4W CARBON	
	R903	GRD148J-562S	5.6K 1/4W CARBON	
	R904	GRD148J-562S	5.6K 1/4W CARBON	
	R905	GRD148J-123S	12K 1/4W CARBON	
	R906	GRD148L-1233	12K 1/4W CARBON	
	R907	GRD148L-1033	10K 1/4W CARBON	
	R908	GRD148L-3323	3.3K 1/4W CARBON	
	R909	GRD148L-4723	4.7K 1/4W CARBON	
	R910	GRD148L-5633	56K 1/4W CARBON	
	R911	GRD148L-1033	10K 1/4W CARBON	
	R912	GRD148L-6833	68K 1/4W CARBON	
	R913	GRD148L-1533	15K 1/4W CARBON	
	R914	GRD148J-224S	220K 1/4W CARBON	
⚠	R915	GRG022J-3R3AP	3.3 2W O.M.FILM	
	R917	GRD148J-223S	22K 1/4W CARBON	
	R918	GRD148J-104S	100K 1/4W CARBON	
	R919	GRD148J-104S	100K 1/4W CARBON	
	R920	GRD148J-224S	22K 1/4W CARBON	
	R921	GRD148J-563S	56K 1/4W CARBON	
	R922	GRD148J-220S	22 1/4W CARBON	
⚠	R931	GRD125J-221	220 1/2W UNF.CARBON	
⚠	R932	GRD125J-221	220 1/2W UNF.CARBON	
	R950	GRD148J-472S	4.7K 1/4W CARBON	
	R999	GRD148J-472S	4.7K 1/4W CARBON	
	VR501	EVJRC15 F15B	VARIABLE	
	VR502	EVJRC15 F15B	VARIABLE	

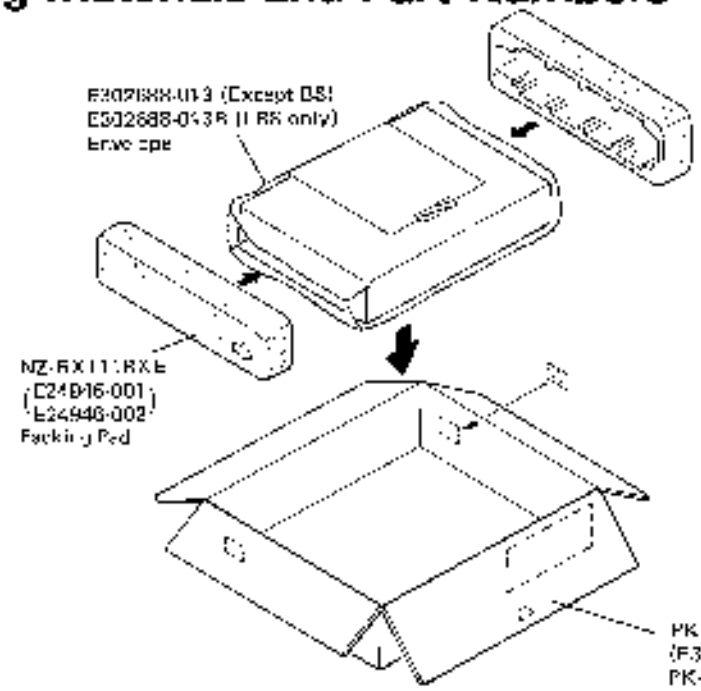
⚠ Safety parts

Others

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		EY09CTV-001A	SPK.TERMINAL	
		EY9/231-001	FUSE CLIP	K
		EY9/231-001	FUSE CLIP	LBS
		EY9/231-001	FUSE CLIP	M
		EY9/231-001	FUSE CLIP	N
		E11028-001	CIRCUIT BOARD	I
		E11028-001	CIRCUIT BOARD	J
		E11028-001	CIRCUIT BOARD	K
		E11028-001	CIRCUIT BOARD	N
		E11028-001	CIRCUIT BOARD	M
		E11029-00130	CIRCUIT BOARD	LBS
		E30/210-003	HEAT SINK	
		E70520-002	FUSE CLIP	I
		E73282 001	SPACER	J
		E73282 001	SPACER	LBS
		E73282 001	SPACER	M
		E73282 001	SPACER	N
		E53308-002	TAB	
		E65654-001	SPACER	K
		E65654-001	SPACER	LBS
		E65654-001	SPACER	M
		E65654-001	SPACER	N
		E67764-102	TERMINAL ASSY	
		E67764-102	TERMINAL ASSY	
		E67764-102	TERMINAL ASSY	I
		E67764-102	TERMINAL ASSY	J
		E67764-202	TERMINAL	I
		E67764-202	TERMINAL	K
		E67764-202	TERMINAL	LBS
		E67764-202	TERMINAL	M
		E67764-202	TERMINAL	N
		E70925-003	DRAIN PLATE	M
		E70957 001	DRAIN PLATE	
		E71170 001	SPRING	
⚠		QMC0437-003	AC SOCKET	J
⚠		QMC0440-001	AC SOCKET	I
		SDSB3008N	SCREW	
		SDSB3008Z	SCREW	
	L701	EXL0801 B53	INDUCTOR	K
	L702	EXL0801 B53	INDUCTOR	K
	J701	E04365 003	SOCKET ASSY	
	J801	E04365-006	SP CONNECTOR	
	P501	QNS0302-126	JACK ASSY	
	RY901	ESK5024-Z16	RELAY	
	SW501	QSP2206-001	PUSH SWITCH	
	SW501	QST0251-002	PUSH SWITCH	
	SW502	QST0251-002	PUSH SWITCH	

⚠ Safety parts

I. Packing Materials and Part Numbers



The Marks for Designated Areas

J	U.S.A.
C	Canada
A	Australia
F, LF	Europe
G	(Reg. Germany
P, PG	U.S. Military Market
LBS	U.K.
E	Other Countries

i. Accessories List

⚠	Part Number	Part Name	Description	Areas
	E30680-1295A	Instruction Book		Except LBS
	E30680-1295ADS	Instruction Book		LBS only
	BT20025H	Warranty Card		C
	BT20048R	Warranty Card		P, PG, J
	BT20029C	Warranty Card		A
	BT20064	Warranty Card		G
	BT20060	Warranty Card		BS
	BT20071A	Service Center		C, J
	BT20016D	Service Information Card		J, P, PG
	BT20036	EEC Agency		G, LBS
	BT20061-009A	FTZ Information Sheet		G
	BT20041E	Safety Instruction		J
	E86418-003	Envelope		J
	E30497-013	Caution Sheet	110V	P
	E30497-015	Caution Sheet	220V	U, PG
	F03614-004	Ribbon Antenna		Except G
	E87002-001	Wire Antenna Ass'y		G
	FDB4001-002	Bar Antenna Coil		
⚠	E04056	Siemens Plug		U, PG
⚠	QMF51A2-1R6S	Fuse		U, PG
⚠	QMT61A2-P80	Fuse		P
	QPGA005-00703	Envelope		U, P, PG
	E41202-2	Envelope		Except LBS
	E41202-23	Envelope		LBS

⚠ Safety parts

JVC

SERVICE MANUAL

MODEL No. RX-150BK/RX-150LBK

This unit is almost the same as the RX-111BK/RX-111LBK.
The differences are listed herein.
When using this Service Manual, refer to the previously published RX-111BK/RX-111LBK Service Manual (No. 2871, Nov. 1985).

Note: The marks for Designated Areas
J ----- U.S.A.
C ----- Canada
A ----- Australia
G ----- West Germany
E,2E ----- Europe
K2S ----- U.K.
P,PG ----- U.S.Military Market
U ----- Other Countries
No mark indicates all areas.

New Parts

1. Printed Circuit Board Ass'y and Parts List

Refer to page 2-10 in the RX-111BK/LBK Service Manual.

Parts Name	Item No.	Parts Number RX-111BK/LBK	Parts Number RX-150BK/LBK	Areas
Audio PCB Ass'y		ENH-055H	ENH-092A	J
		ENH-055J	ENH-092B	C
		ENH-055J	ENH-092C	U,P,PG
		ENH-055K	ENH-092D	E,2E
		ENH-055L	ENH-092E	K2S
		ENH-055N	ENH-092F	G
		ENH-055N	ENH-092G	A
Headphone Jack	P901	QMS6302-128	QMS6302-133	

2. Exploded View Parts List

Refer to page 2-3 in the RX-111BK/LBK Service Manual.

Parts Name	Item No.	Parts Number RX-111BK/LBK	Parts Number RX-150BK/LBK	Areas
Front Panel Ass'y	1	-----	EFP-RX150BKJ	J,C,U,P,PG
		EFP-RX111BKE	EFP-RX150BKE	E,A,G
		EFP-RX111LBKE	EFP-RX150LBKE	LE,LBS
Front Plate	1-4	E24942-014	E24942-017	E,A,G
		E24942-015	E24942-018	LE,LBS
		E24942-016	E24942-019	J,C,U,P,PG
Window Screen	1-5	E303676-005	E303676-006	
Indicator Sheet	1-6	E303678-005	E303678-006	
Front Base	1-7	E11083-003	E11083-005	J,C,U,P,PG,E,A,G
		E11083-004	E11083-006	LE,LBS
Front Panel	1-8	E24940-011	E24940-013	J,C,U,P,PG,E,A,G
		E24940-012	E24940-014	LE,LBS
Metal Cover	23	E24633-003	E24633-005	
Rear Panel	34	E24944-010	E24944-014	J,C
		E24944-011	E24944-015	U,P,PG
		E24944-012	E24944-016	E,A,LE,LBS
		E24944-013	E24944-017	G

3. Packing Materials Parts List

Refer to page 2-13 in the RX-111BK/LBK Service Manual.

Parts Name	Item No.	Parts Number RX-111BK/LBK	Parts Number RX-150BK/LBK	Areas
Packing Case	1	PK-RX111BKJ	PK-RX150BKJ	J,C,P,PG
		(E300382-621)	(E300382-711)	
		PK-RX111BKE	PK-RX150BKE	U,E,A,G
		(E300382-622)	(E300382-712)	
		PK-RX111LBK	PK-RX150LBK	LE,LBS
		(E300382-623)	(E300382-713)	

4. Accessories Parts List

Refer to page 2-13 in the RX-111BK/LBK Service Manual.

Parts Name	Parts Number RX-111BK/LBK	Parts Number RX-150BK/LBK	Areas
Instruction Book	E30580-1295A	E30580-1369A	J,C,U,P,PG,E,A,G,LE
	E30580-1295ABS	E30580-1369ABS	LBS

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