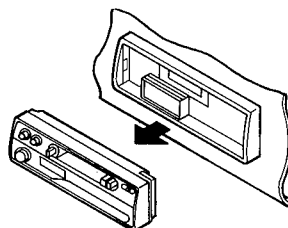
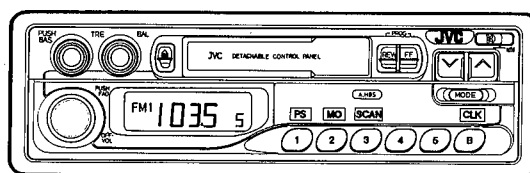


JVC

SERVICE MANUAL

CASSETTE CAR RECEIVER

KS-RT45 B/E/G/GE/GI



Area suffix

B		U.K.
E		Continental Europe
G		Germany
GE		Austria, Switzerland and Eastern Europe
GI		Italy

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Instructions (Extract)

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Note:

For security reasons, a numbered ID card is provided with this unit, and the same ID No. is imprinted on the unit's chassis. Keep the card in a safe place, as it will help the authorities to identify your unit if stolen.

SPECIFICATIONS

AUDIO AMPLIFIER SECTION

(KS-RT35)

Maximum Power Output: 8 W per channel (2-channel),
5W per channel (4-channel)
Continuous Power Output (RMS): 3 W per channel into
4 Ω , 100 to 20,000 Hz at no more than 0.8% total
harmonic distortion (2-channel).

(KS-RT45)

Maximum Power Output: (Front) 22 W per channel,
(Rear) 22 W per channel
Continuous Power Output (RMS): (Front) 8 W per
channel into 4 Ω , 40 to 20,000 Hz at no more than
0.8% total harmonic distortion. (Rear) 8 W per
channel into 4 Ω , 40 to 20,000 Hz at no more than
0.8% total harmonic distortion.

Load Impedance: 4 Ω (4 to 8 Ω allowance)

Tone Control Range

Bass: ± 10 dB at 100 Hz

Treble: ± 10 dB at 10 kHz

Frequency Response: 40 to 20,000 Hz

Signal-to-Noise Ratio: 60 dB

RADIO SECTION

Frequency Range

FM: 87.5 to 108.0 MHz

AM: (MW) 522 to 1,620 kHz

(LW) 144 to 281 kHz (Manual)

(LW) 144 to 279 kHz (Auto)

[FM Tuner]

Usable Sensitivity: 15.3 dBf (1.6 μ V/75 Ω)

50 dB Quieting Sensitivity: 18.8 dBf (2.4 μ V/75 Ω)

Alternate Channel Selectivity: (400 kHz): 65 dB

Frequency Response: 40 to 15,000 Hz

Stereo Separation: 30 dB

Capture Ratio: 1.5 dB

FEATURES

- Detachable Control Panel
- AM/FM Stereo PLL Synthesizer Tuner
- 20-Station Preset Tuning (FM-15, AM [MW/LW]-5)
- Preset Scan/Scan/Seek/Manual Tuning
- SK/DK Traffic Information Reception (G/GE)
- U-Turn Auto-Reverse Mechanism
- Maximum Power Output of 8 watts per channel (2-channel) (KS-RT35)
- 4-Channel Amplifier System
Maximum Power Output of 22 watts per channel (Front)/22 watts per channel (Rear) (KS-RT45)
- Active Hyper-Bass Sound
- Fader Control
- Digital Clock Display
- Mono Button

[MW Tuner]

Sensitivity: 20 μ V

Selectivity: 35 dB

[LW Tuner]

Sensitivity: 50 μ V

CASSETTE DECK SECTION

Wow & Flutter: 0.11% (WRMS)

Fast-Wind Time: 100 sec. (C-60)

Frequency Response: 50 to 14,000 Hz (± 3 dB)

Signal-to-Noise Ratio: 52 dB

Stereo Separation: 40 dB

GENERAL

Power Requirement

Operating Voltage: DC 14.4 volts (11 to 16 volts allowance)

Grounding System: Negative ground

Dimensions (W x H x D) Installation Size: 178 x 50 x 151 mm (7-1/16" x 2" x 6")

Panel Size: 190 x 58 x 18 mm (7-1/2" x 2-5/16" x 3/4")

Gross Weight: 1.8 kg (4.0 lbs)

Design and specifications subject to change without notice.

IMPORTANT INFORMATION

1. This unit is designed to operate with 12 volts DC, **NEGATIVE** ground electrical systems only.
2. Replace the fuse with one of the specified rating. If the fuse blows frequently, consult your JVC "IN-CAR ENTERTAINMENT" dealer.
3. Do not touch the highly-polished head with any metallic or magnetic tools.
4. If noise is a problem...
This unit incorporates a noise filter in the power circuit. However, with some vehicles, clicking or other unwanted noise may occur. If this happens, connect the unit's rear ground terminal to the car's chassis using shorter and thicker cords, such as copper braiding or gauge wire. If noise still persists, consult your JVC "IN-CAR ENTERTAINMENT" dealer.
5. Never play dirty or dusty tapes since they will greatly degrade the sound and performance of your unit. Always keep your tapes clean. (See page 25.)

Antenna Noise

If you can hear static noise when listening to either AM (MW/LW) or FM, check for loose antenna connections.

INSTALLATION (IN-DASH MOUNTING)

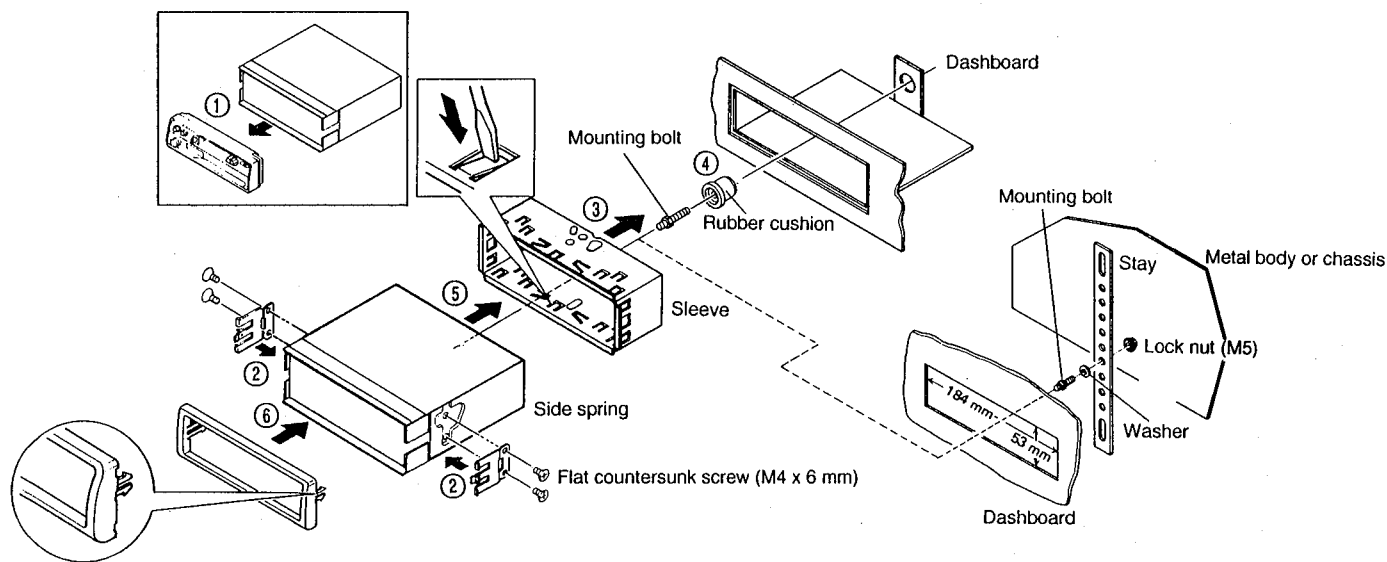
IMPORTANT

- Before using this unit for the first time, press the Eject button fully, to reset the mechanism.

- The following illustration shows a typical installation. However, you should make adjustments corresponding to your specific car. If you have any questions or require information regarding installation kits, consult your JVC "IN-CAR ENTERTAINMENT" dealer.

- ① Slide the Control Panel Release (▲) switch to the right and remove the control panel.
- ② Attach the 2 side springs.
- ③ Install the sleeve in the dashboard.
* After the sleeve is correctly installed in the dashboard, bend the appropriate tabs to hold the sleeve firmly in place, as shown.
- ④ Fix the mounting bolt to the rear of the unit's body and place the rubber cushion over the end of the bolt.
- ⑤ Slide the unit into the sleeve until they are locked together.
- ⑥ Attach the trim plate.

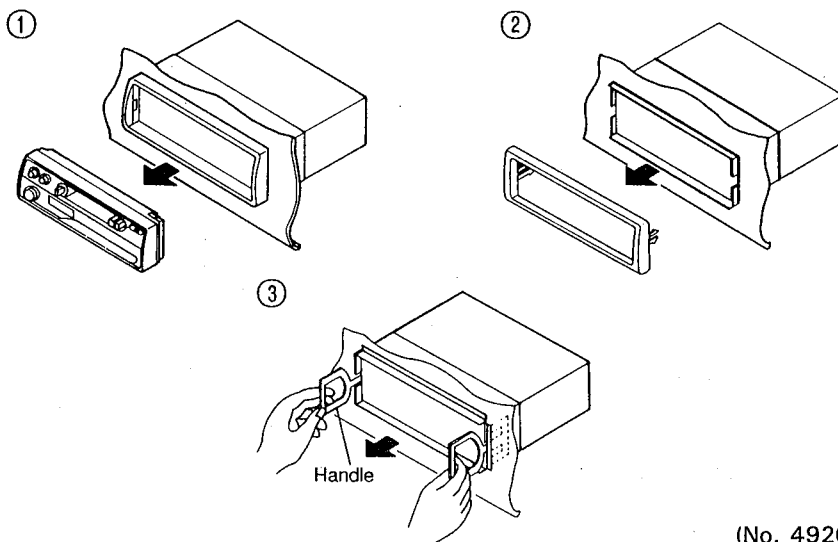
- Follow the numbers for mounting.



Removing the unit

- Before removing the unit, release the rear section.

- ① Remove the control panel.
- ② Remove the trim plate.
- ③ Insert the 2 handles between the side springs and the sleeve, as shown. Then, while gently pulling the handles away from each other, slide out the unit.



ELECTRICAL CONNECTIONS

To prevent short circuits, we recommend that you disconnect the battery's negative terminal and make all electrical connections before installing the unit. If you are not sure how to install this unit correctly, have it installed by a qualified technician.

Note:

This unit is designed for a 12-volt DC negative ground. If your vehicle does not have this system, a voltage inverter is required, which can be purchased at JVC "IN-CAR ENTERTAINMENT" dealers.

- Maximum input of the speakers should be more than 8 watts, with an impedance of 4 to 8 ohms. (KS-RT35)
- Maximum input of the speakers should be more than 22 watts at the rear and 22 watts at the front, with an impedance of 4 to 8 ohms. (KS-RT45)

CAUTIONS:

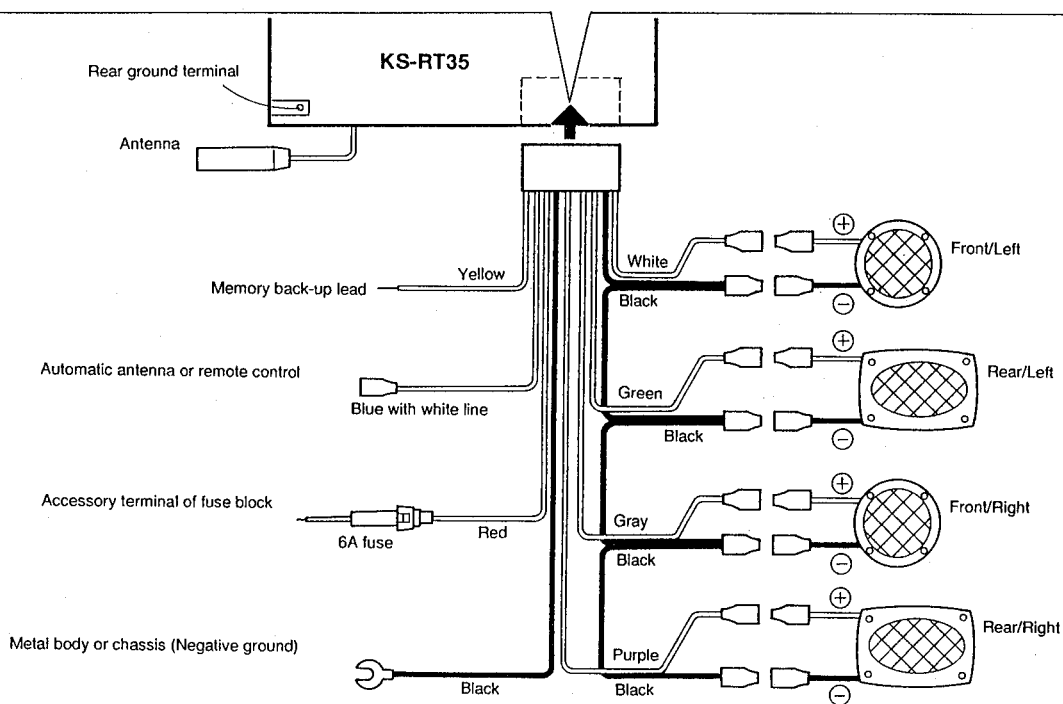
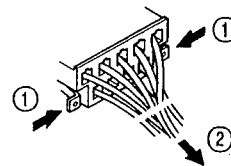
As this unit uses BTL (Balanced Transformerless) amplifier circuitry (floating ground system), please comply with the following:

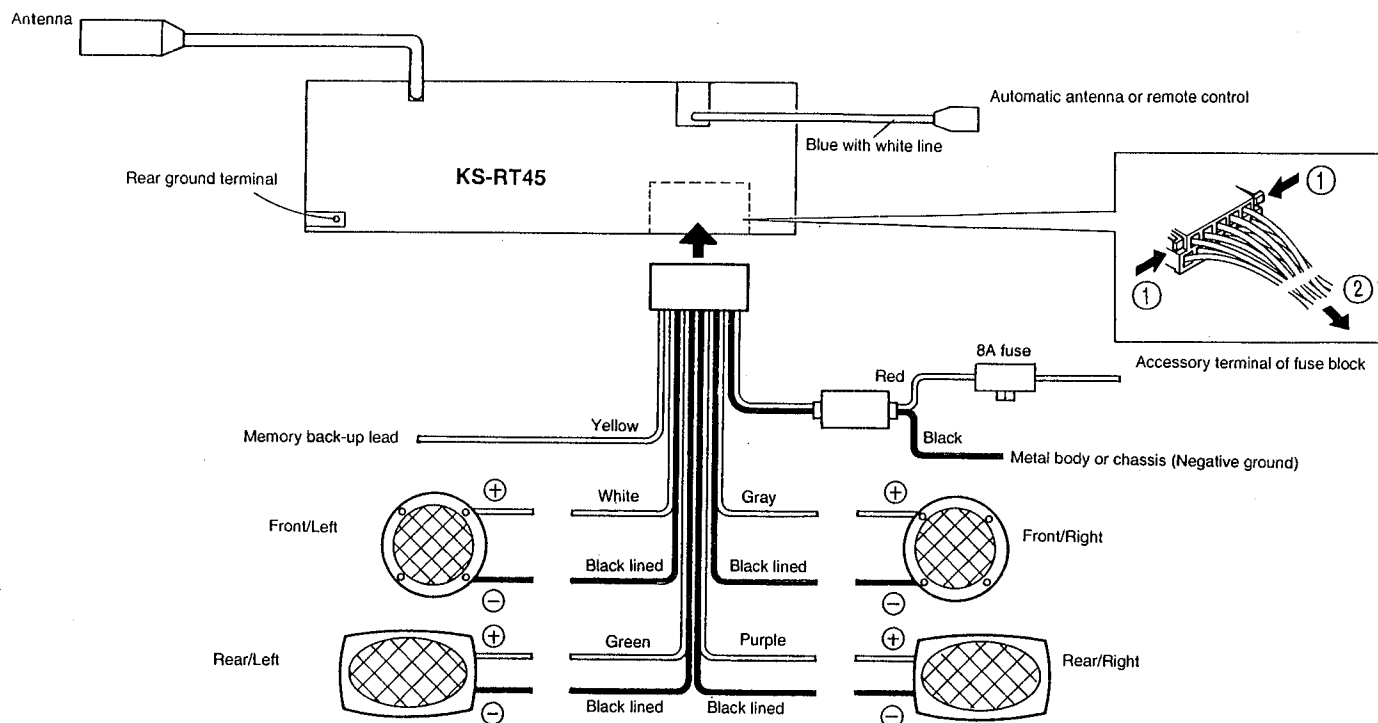
1. Do NOT connect the black-lined speaker leads to a common point.
 2. Do NOT connect the speaker leads to the metal body or chassis.
 3. Cover the terminals of the leads that are NOT used with insulating tape, to prevent them from shorting.
- Be sure to ground this unit to the car's chassis.

A. 4-Speaker Connections

• When attaching the connectors, make sure a click sound is heard.

• When detaching the connectors, first disengage the lock.





B. 2-Speaker Connections

Two speakers can be connected to either the front or rear pair of speaker output terminals. Cover the unused terminals with insulating tape to prevent short-circuits.

C. Power Aerial (Automatic Antenna) Connections

This unit can perform automatic extension/retraction of a power aerial when the power is turned ON/OFF. The remote lead connection (blue with white lines) from the audio unit is via a separate relay to the aerial motor unit.

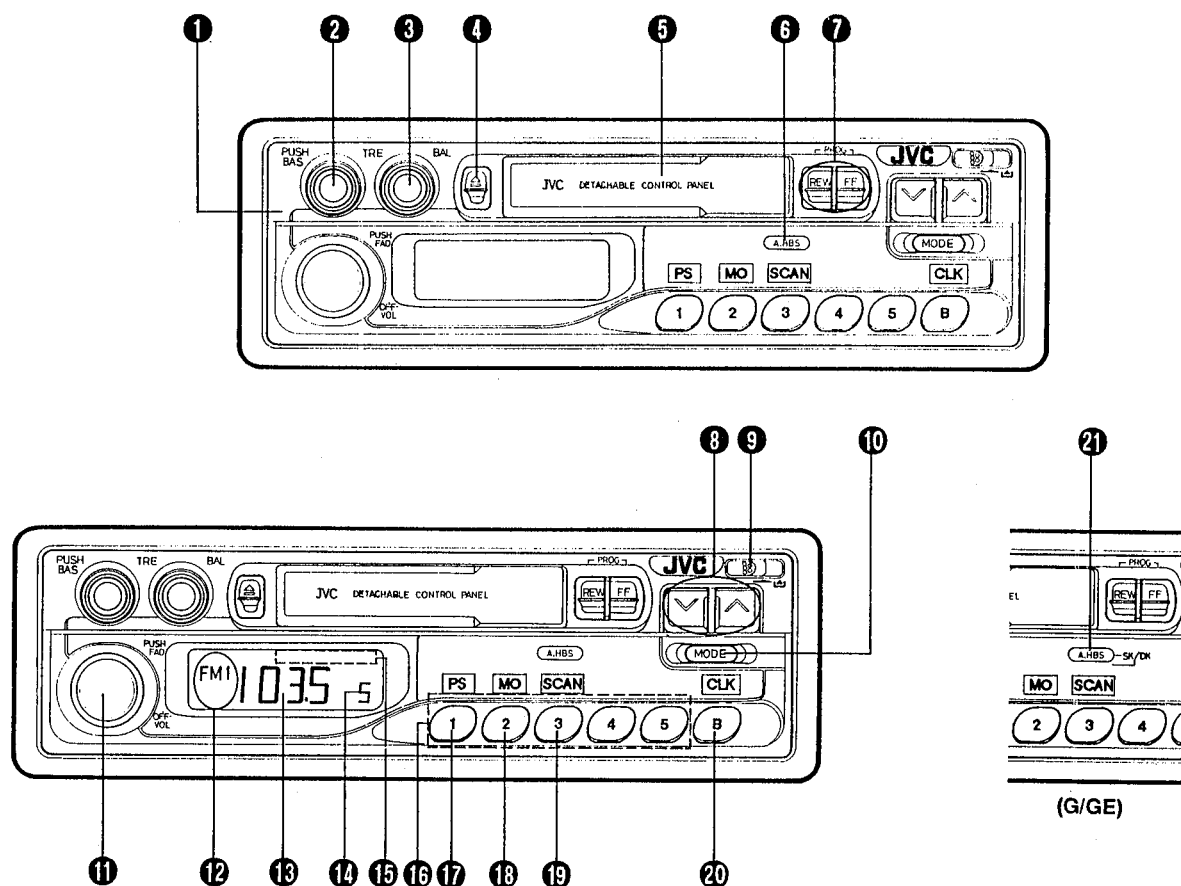
D. Memory Back-Up Lead

Connect this lead to a LIVE power source (supplied even when vehicle ignition is OFF).

E. Fader Control

- When used in a 4-speaker system
When the PUSH FAD control is turned counterclockwise, the sound will be heard from the front speakers, and when turned clockwise, from the rear speakers.
- When used in a 2-speaker system
Set this control to the center position.

LOCATION OF CONTROLS



- 1 Control panel
- 2 Treble (TRE)/Push bass (PUSH BAS) Control
- 3 Balance (BAL) Control
- 4 Eject (▲) button
- 5 Cassette loading slot
- 6 Active Hyper-Bass Sound (A.HBS) button (B/E/GI)
- 7 Program (PROG)/REW, FF buttons
- 8 Tuning/Hour/Minute Adjustment button
Down (▼) frequency/Hour adjustment
Up (▲) frequency/Minute adjustment
- 9 Control Panel Release (▲) switch
- 10 MODE button
- 11 Power ON-OFF/Volume (VOL)/Push fader (PUSH FAD) controls
- 12 Band indicator (AM-FM1-FM2-FM3)
- 13 Radio Frequency/Time display
- 14 Preset Station display

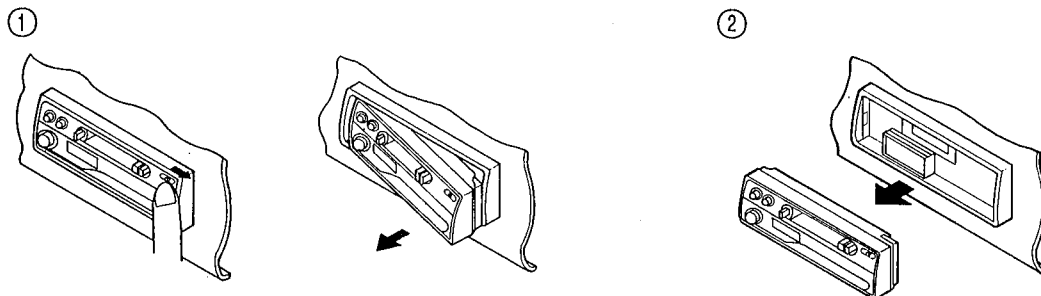
- 15 Indicators
SK/DK (G/GE)
Mono (MO)
ST (FM stereo)
Tape direction (◀▶)
- 16 Preset Station buttons (No.1 to No.5)
- 20 Band (B) button
- 21 Active Hyper-Bass Sound (A.HBS) button
SK/DK button (G/GE)

• Press the following buttons (17 to 20) after the MODE button has been pressed and its red indicator is lit. Five seconds after completing the operation, the MODE button's red indicator goes out.

- 17 Preset Scan (PS) button
- 18 MONO (MO) button
- 19 Scan (SCAN) button
- 20 Clock (CLK) button

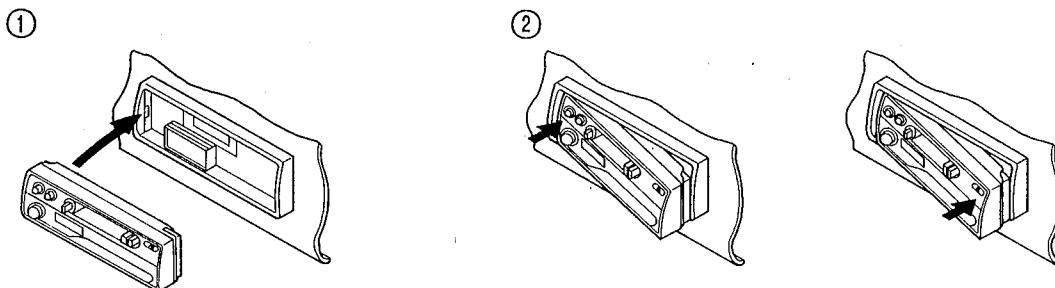
How To Detach The Control Panel

- ① Slide the Control Panel Release (▲) switch in the direction of the arrow to detach the control panel.
- ② Pull the control panel out of the main unit, as shown below.
 - Put the control panel in the provided case for protection.



How To Attach The Control Panel

- ① Align the left side of the control panel with the left side of the holder.
- ② Press the left side of the control panel first, then the right side to set it correctly.



Note:

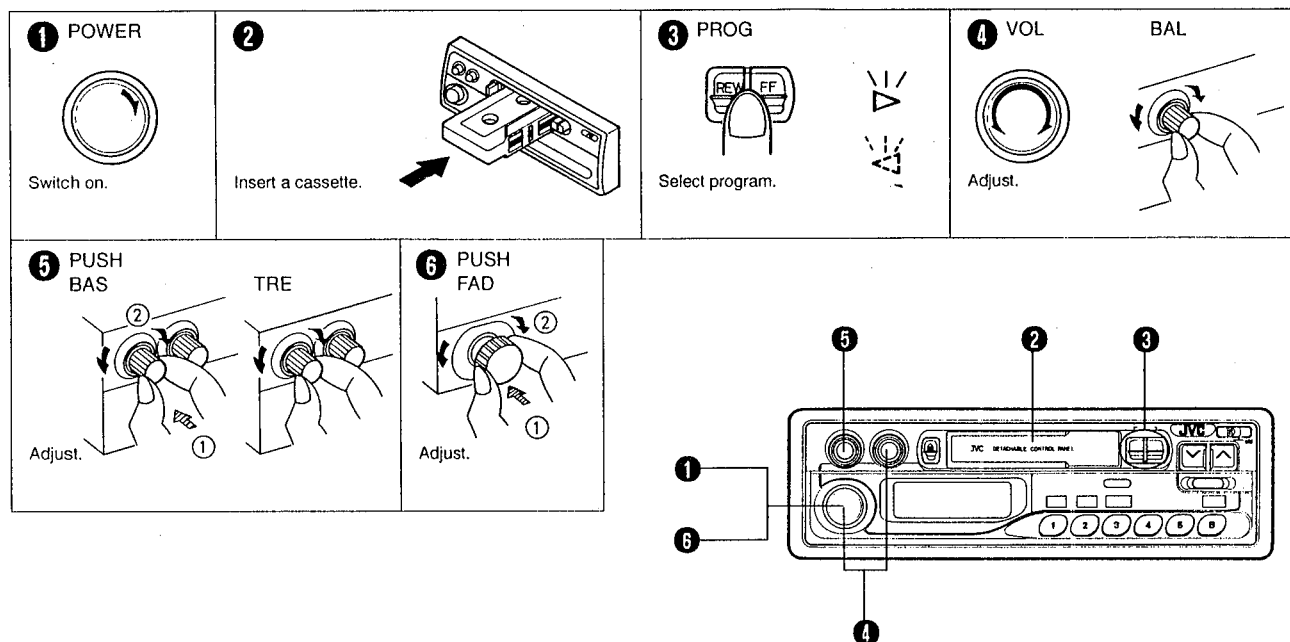
- Be careful not to damage the connector terminals when attaching/detaching the control panel or while the control panel is removed.

Active Hyper-Bass Sound Button

Press the A.HBS button to listen to hyper-bass sound. (The A.HBS button lights red.)

TAPE OPERATION

Operate in the order shown.



How To Fast-Forward And Rewind Tapes

Press the FF button to fast-forward the side being played; when the tape end is detected, the tape is reversed and playback starts from the beginning of the other side.

Press the REW button to rewind the tape to its beginning, where playback restarts.

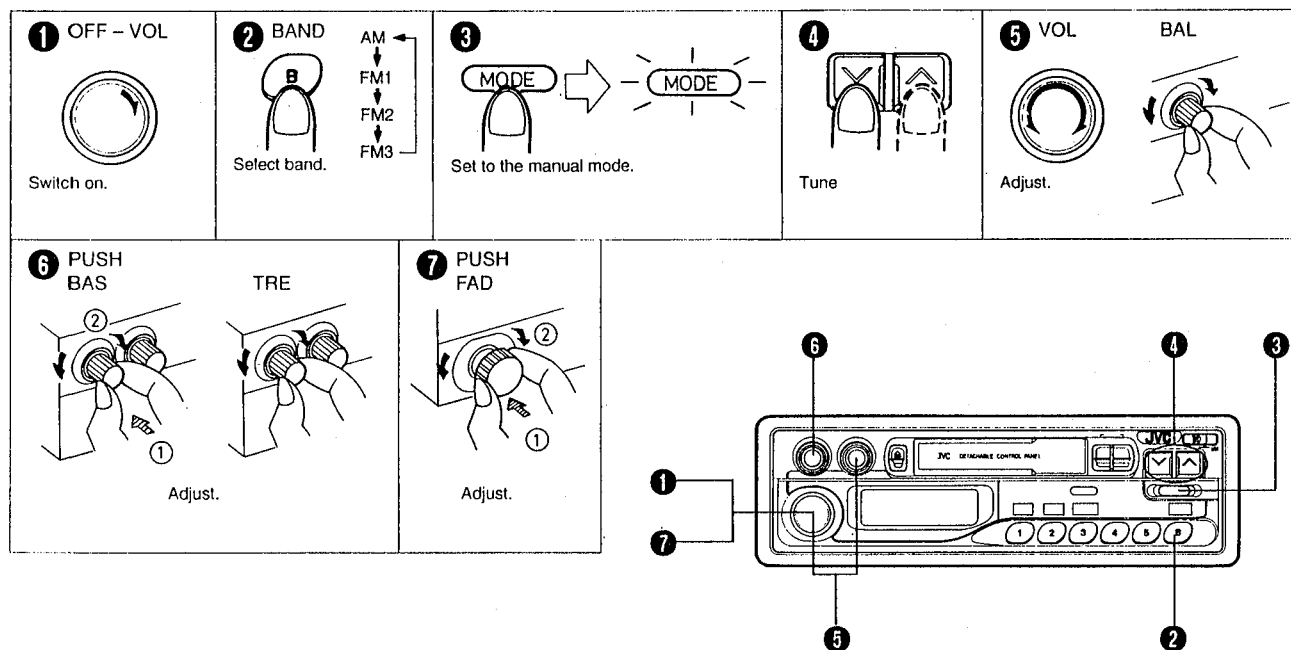
Lightly press the PROG button to start playback from the current position during fast-forward or rewind.

Auto-Reverse Mechanism

When the tape reaches its end, this mechanism automatically switches over to play back the other side. To listen to the other side of the tape during playback, press the PROG button. The change in direction can be checked in the Tape Direction indicator.

RADIO OPERATION

Operate in the order shown.



Manual Tuning

Set Manual mode using the MODE button. When the MODE button's red indicator is lit, the unit is in Manual mode. Then, by pressing the Tuning button, you can move up/down the frequency band. The band is scanned as long as either side of the button is pressed.

Frequency scan steps are as follows:

FM	—	in 50 kHz units
MW	—	in 9 kHz units.
LW	—	in 1 kHz unit.

In AM operation, the frequency continuously moves from the MW (522 to 1,620 kHz) to LW (144 to 281 kHz) band and vice versa.

- When approx. 5 seconds have elapsed after completing manual tuning, the unit switches back to Seek mode and the MODE button's red indicator goes out.



Seek Tuning

The unit is in Seek mode when the MODE button's red indicator goes out. Then, by pressing the or button the unit tunes to the adjacent station with a higher or lower frequency. In AM operation, the frequency continuously moves from the MW to LW band and vice versa.

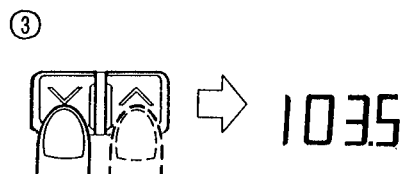
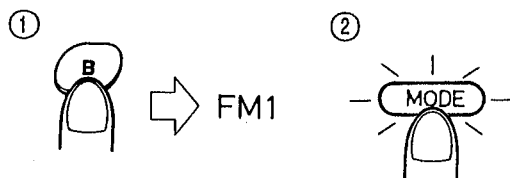
Scan Button Tuning

Use the SCAN button for automatic scanning of the FM and AM (MW/LW) frequency bands. Press this button after the MODE button has been pressed and the MODE button's indicator is lit, each station is monitored for approx. 5 seconds (the frequency blinks during this time). After 5 seconds have elapsed, the frequency advances to the next station which in turn is monitored for 5 seconds. To stop scanning, press the SCAN button again.

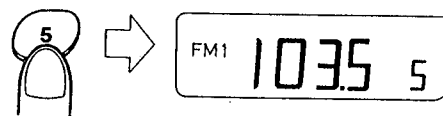
Preset Button Tuning

5 stations in each band (FM1, FM2, FM3 and AM [MW/LW]) can be preset as follows:

- **Example (when presetting Preset Station button "5" of the FM1 band to an FM station at 103.5 MHz)**



④



- ① Select the FM1 band using the B button.
- ② Set Manual mode.
- ③ Tune to the desired station.
- ④ Press Preset Station button "5" for more than 2 seconds. (When "5" blinks in the Preset Station display, the station is preset.)

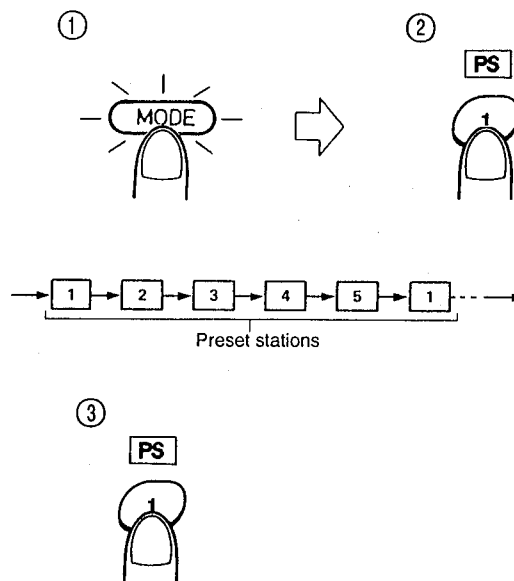
- Repeat the above procedure for the other 4 Preset Station buttons and other bands (FM2, FM3 and AM [MW/LW]).

Notes:

- A previously preset station is erased when a new station is stored in memory.
- The preset stations are erased when the power supply to the memory circuit is interrupted during battery replacement, etc. When this occurs, preset the stations again.

Preset Scan Button Tuning

This function makes it possible to automatically scan preset FM and AM (MW/LW) stations.



- ① Press the MODE button (its red indicator lights).
- ② Press the PS button.
 - Scanning is performed in the order of the preset stations in each frequency band (FM1, FM2, FM3 and AM [MW/LW]). Each preset station is heard for approx. 5 seconds.
- ③ When the required station is heard, press the PS button again.

Receiving Traffic Information Broadcasts (G/GE version only)

1. Press the SK/DK button for more than 1 second before operation. The SK/DK indicator lights.
2. Perform Seek Tuning to search for a station broadcasting traffic information. When such a station is received, the [SK/DK] indicator will light and the broadcast can be heard.
3. As long as the tuner is set to receive traffic information stations, even if you are listening to a cassette tape, when traffic information is broadcast, it is automatically heard. When the broadcast is over, cassette playback restarts.

Note:

If the tuner is not set to a traffic information station or the reception is poor, after approx. 30 seconds an alarm tone will be heard. In such a case, perform Seek Tuning or press the SK/DK button for more than 1 second.

Mono Button

When listening to FM, set the MO button to STEREO or MONO after the MODE button has been pressed and its red indicator is lit.

Note:

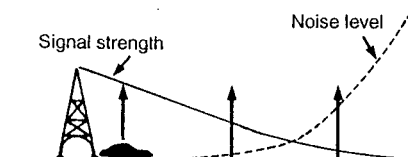
Set to MONO when a stereo FM broadcast is too noisy and cannot be heard satisfactorily.

FM Pulse Noise Suppressor

This unit has built-in circuitry to effectively eliminate engine noise picked up by the antenna, etc. in the form of FM pulses, for a more favorable FM reception.

Automatic FM Noise Suppressor (AFNS)

This unit incorporates an automatic FM noise suppression circuit to ensure satisfactory reception of FM broadcasts when a vehicle is moving and signal strengths are continuously fluctuating.



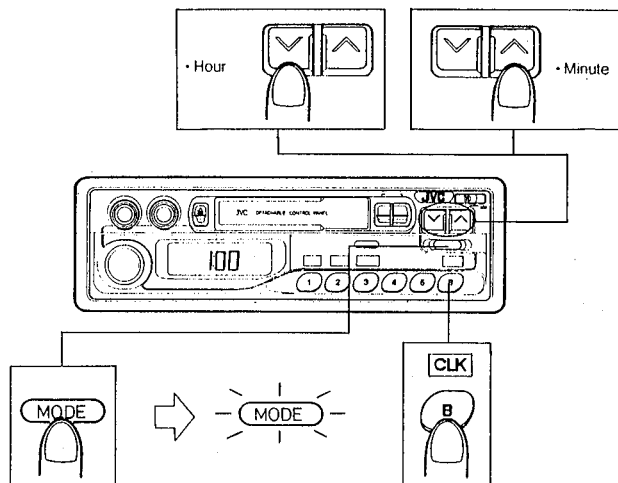
Signal strength	A	B	C
	Strong	Not so strong	Weak
Auto blend	Stereo	Blend	Mono
Auto high-cut	-	→ (Operates)	

DIGITAL CLOCK DISPLAY

Each time the CLK button is pressed after the MODE button has been pressed and its indicator is lit red, Time mode or Tuner mode is engaged. When the radio is operated in Time mode, the displayed time switches to the frequency, and returns to Time mode after a few seconds.

How To Adjust The Time

Make sure the display is in Time mode with the MODE button lit in red. Then, while pressing the CLK button, press the Hour Adjustment button (↙) to adjust the "hours", and press the Minute Adjustment button (↗) to adjust the "minutes".



MAINTENANCE

• Cleaning The Head

After several hours of use, the playback sound may become muffled or wow and flutter may be noticeable. This is usually due to a deposit of oxide on the tape head, capstan and pinch roller. The easiest way to overcome this problem is to use a head-cleaning tape, which can be purchased from your JVC "IN-CAR ENTERTAINMENT" dealer.

• Cleaning The Connector

If the control panel is frequently detached, a poor connection may occur with the control panel holder. To minimize this possibility, periodically wipe the connector with a cotton swab or cloth moistened with alcohol, being careful not to damage the connector terminals.

Your unit requires very little attention, but you will be assured of top performance only if you follow the above notes.

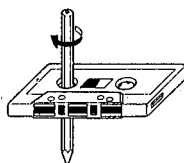
TAPE CARE HINTS

It is very important to keep your tapes clean. Always return them to their storage boxes after playback. Never store tapes in direct sunlight, high humidity or extremely hot temperatures. Never play dirty or dusty tapes — they can damage the head. Slack tape in a cassette can cause trouble by becoming entangled with the capstan or pinch roller.

This may also cause the auto-reverse mechanism to malfunction. Avoid this by tightening the tape, as shown.

Note:

Always remove cassettes from the loading slot when not listening to them, as the tape may become slack.



1 Location of Main Parts

■ B/E/GI version

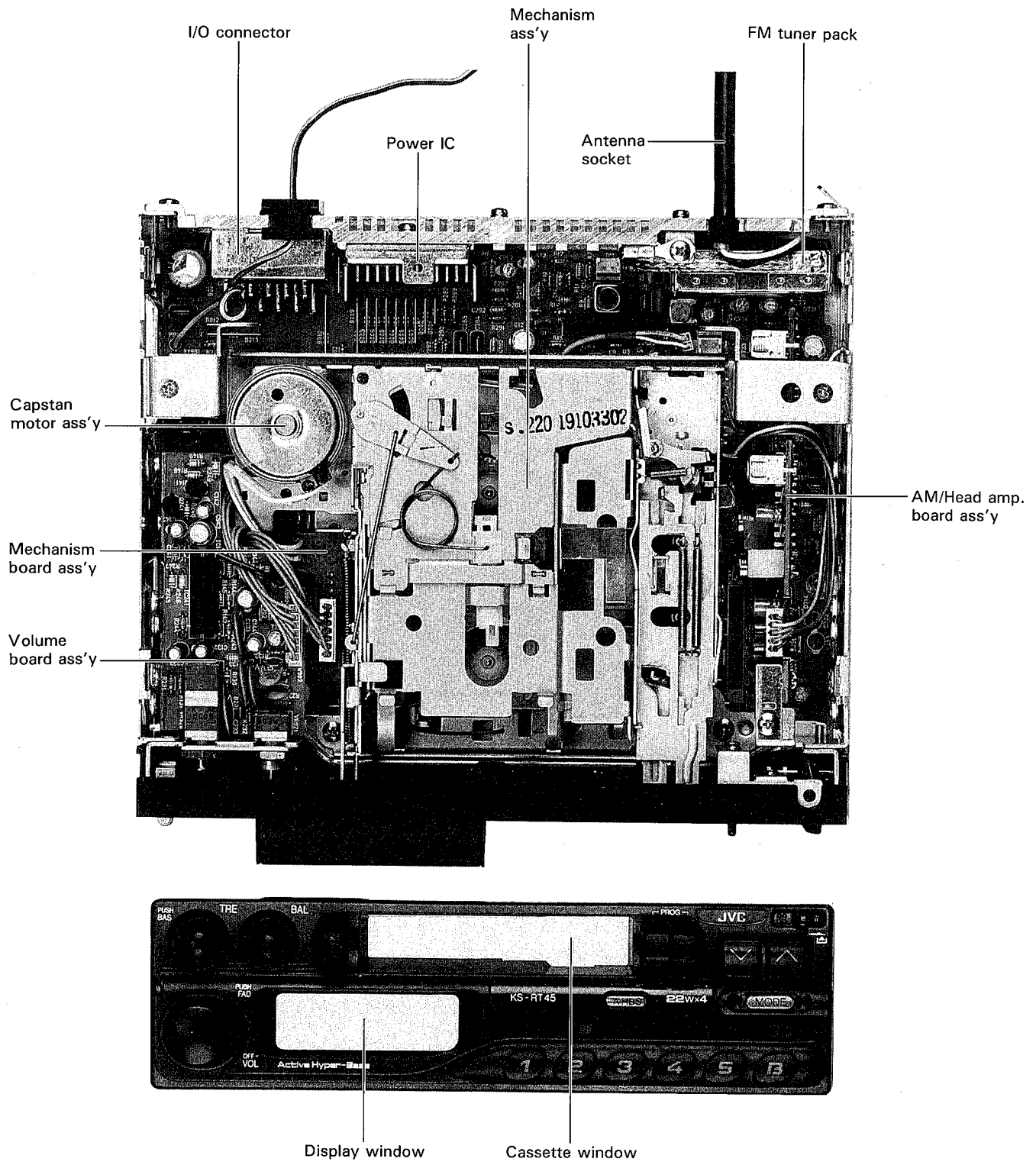


Fig. 1-1

■ G/GE version

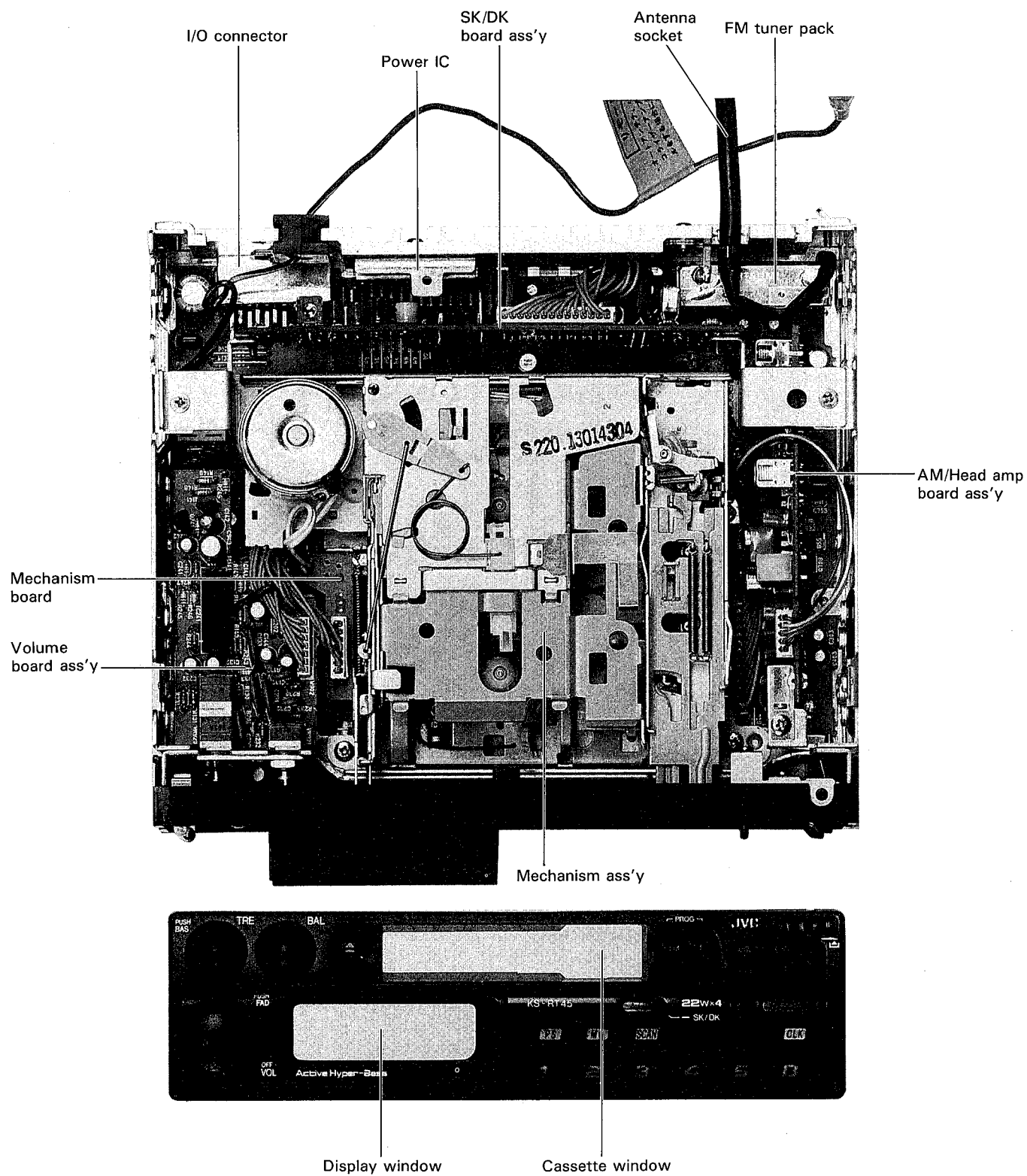


Fig. 1-2

2 Removal of Main Parts

■ Encloser section

◆ Top and bottom cover (See Fig.2 - 1)

1. Remove the two screws ④ retaining the top cover from rear side.
2. Remove the four claws (A~B) on the right, and left sides retaining the top cover.
3. Remove the two screws ⑤ retaining the bottom cover from rear side.
4. Remove the four claws (G~H) on the right, and left sides retaining the bottom cover.

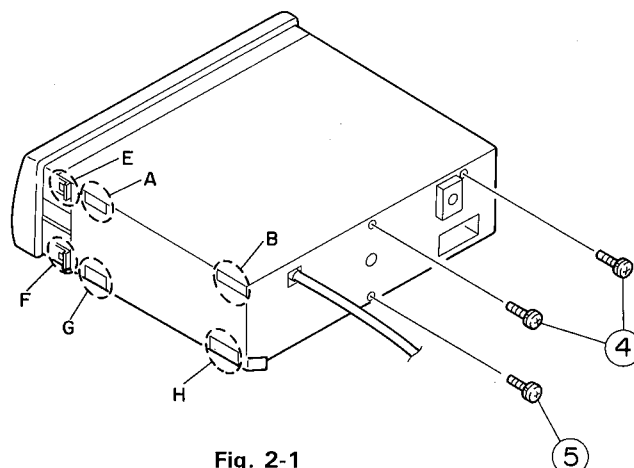


Fig. 2-1

◆ Control unit (See Fig. 2 - 2)

1. Remove the eject knob by sliding it to the right side.

◆ Nose piece ass'y (See Fig.2 - 1~2 - 2)

1. Remove the four claws (E and F) on the right and left side.
2. The nose piece ass'y is connected to the main p. c. board by a connector under the 『PROG』 button on the right side of the mechanism. Dismount the nose piece ass'y by pulling it in straight direction.

★ At the time of assembly align the ass'y so that the lamp enters the lamp hood.

◆ Mechanism ass'y (See Fig.2 - 3)

1. Remove the four screws ① and ② retaining the mechanism ass'y.
2. Disconnect two connectors, namely, the head wire connector from the AM p. c. board ass'y and the control connector from the mechanism p. c. board ass'y.

◆ AM board ass'y (See Fig.2 - 3)

1. Remove the one screw ⑥ retaining the AM board ass'y.
2. Pull out the AM board ass'y.

◆ BASS/TRE. volume ass'y (See Fig.2 - 4)

1. Remove the two shaft knob (knob joint)
2. Remove the two nuts retaining the volume and pull it backward.

★ Under these condition, it will be possible to change the parts on the main p. c. board ass'y.

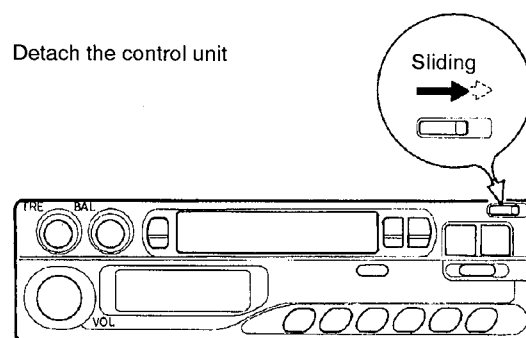


Fig. 2-2

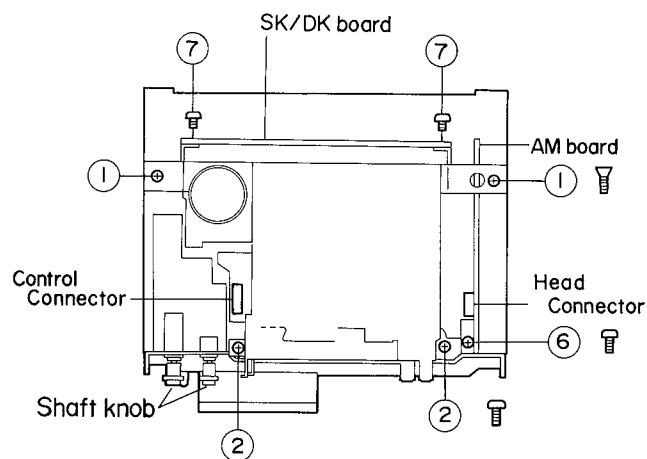


Fig. 2-3

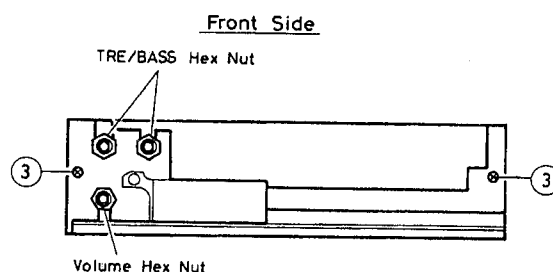


Fig. 2-4

◆ **Main volume** (See Fig.2 – 5)

1. Remove the shaft knob(knob joint).
2. Remove the two screws ③ retaining the front bracket.
3. Remove the nut retaining the volume.

◆ **Control unit**

1. When the screws retaining the case are removed, the retaining spring will be separated. Then, slowly disconnect the case.

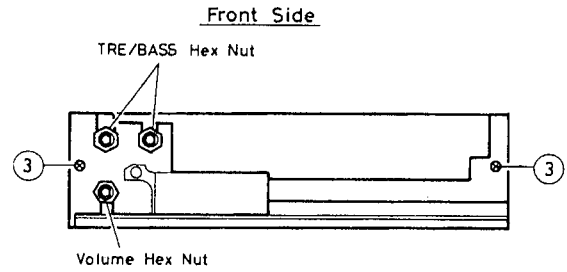


Fig. 2-5

◆ **SK/DK board ass'y** (G/GE only)(See Fig.2 – 6)

1. Remove the two screws ⑦ retaining the SK/DK board from backward of mechanism assembly.

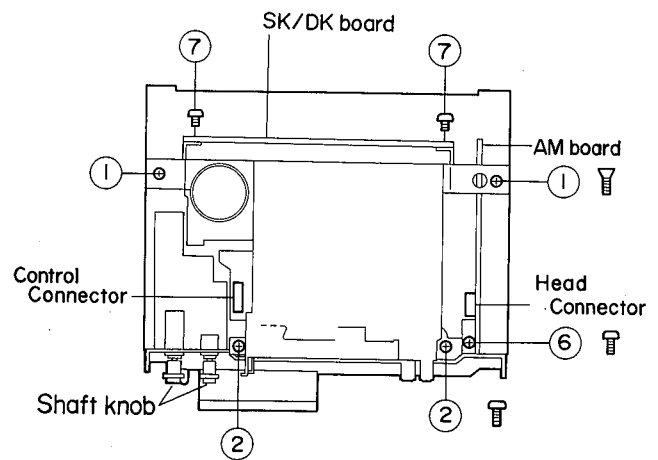


Fig. 2-6

■ Mechanism Section

◆ Head Removal

1. Remove screw ① retaining the FR bracket.
2. Left the FR lever assembly up in the direction of the arrow and remove the FR lever assembly from the chassis slots.
3. Remove the screw ② retaining the head plate.
4. Remove two screws ③ retaining the head.
5. When replacing the head make sure to adjust screws(A~D) and perform head angle and height adjustment.

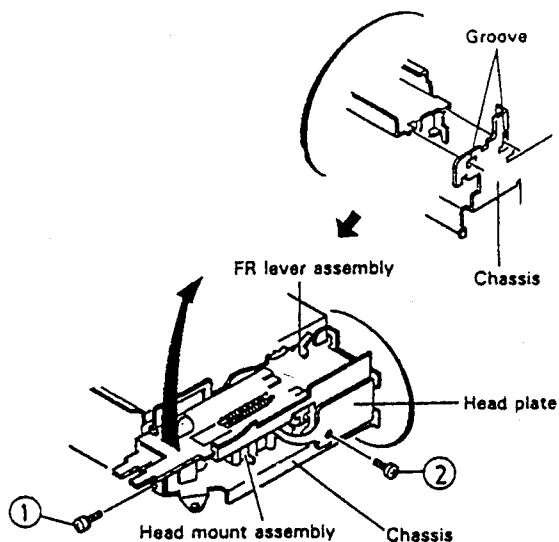


Fig. 2-7

◆ Pinch roller assembly

1. Remove the nylon washers retaining the left and right pinch rollers.
2. Pull out the pinch roller.

◆ Motor Assembly

Remove two screws(5) retaining the motor.

- ※ This operation is facilitated by leaving the belt hooked on to one of the chassis protrusions.

◆ Belt

Thread the belt as indicated in the figure when replacing the belt.

- ※ Take care to avoid contact with grease or oil when replacing the belt.

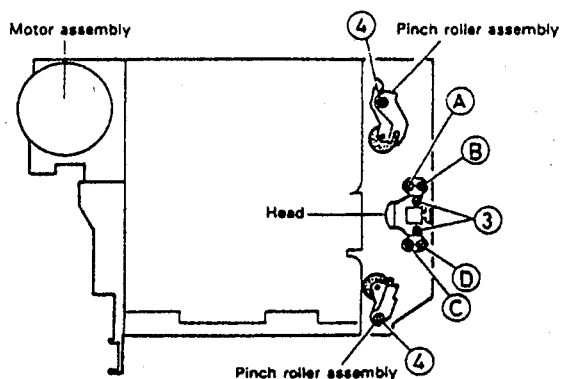


Fig. 2-8

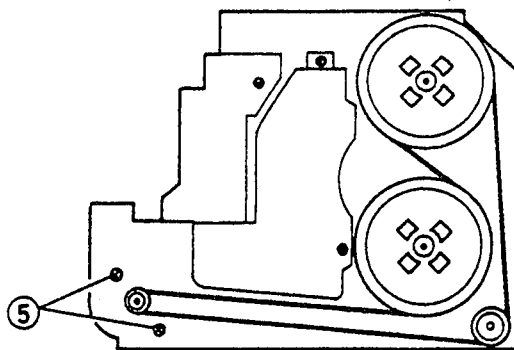


Fig. 2-9

3 Main Adjustment

■ Equipment and measuring instruments used for adjustment

- Electronic voltmeter
- Audio frequency oscillator
(range:50~20kHz and output 0 dB with impedance of 600 Ω)
- Attenuator(impedance;600 Ω)
- Frequency counter
- AM Standard signal generator
- FM Standard signal generator
- Wow flutter meter
- Torque testing cassette gauge
CTG – N (mechanical adjusting)
TW – 2111A (FWD play)
TW – 2121A (REV play)
- Standard tape
VTT703(head azimuth adj.)
VTT712(tape speed,wow&flutter adj.)
VTT724(reference level)
VTT736(playback frequency response)
VTT721(output level)

■ Condition for measurement

- Power Supply DC14.4V
(Reduced Voltage:10.5V)
- Load 4 Ω
(Tow speaker connection)
- BASS/TRE, FADER BALANCE Center
- A – HBS OFF
- Main volume Position with an output level of 2.0V during VTT724 playback

■ Tuner section

- **[FM]**;400Hz, 22.5kHz deviation
- **[FM]** STEREO ;1kHz, 67.5kHz deviation,
pilot signal 7.5kHz deviation.
- **[AM]**;400Hz, 30% modulation
- Output impedance ;50 Ω (Level, 0dB=1 μ V/50 Ω)

■ Dummy antenna

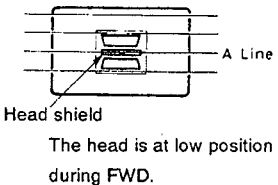
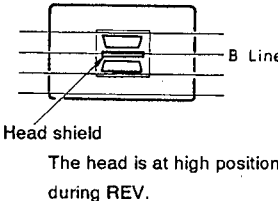
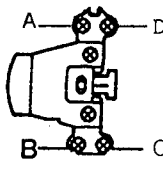
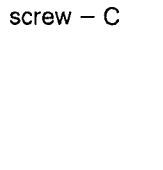
● Preset memory Initialization

Band	Preset Memory				
	M1	M2	M3	M4	M5
FM(MHz)	87.5	89.9	97.9	105.9	107.9
AM(kHz)	144	153	522	603	1404

● Manual Tuning Up/Down Frequency

- [FM]** ;50kHz Step
- [MW]** ;9kHz Step
- [LW]** ;1kHz Step

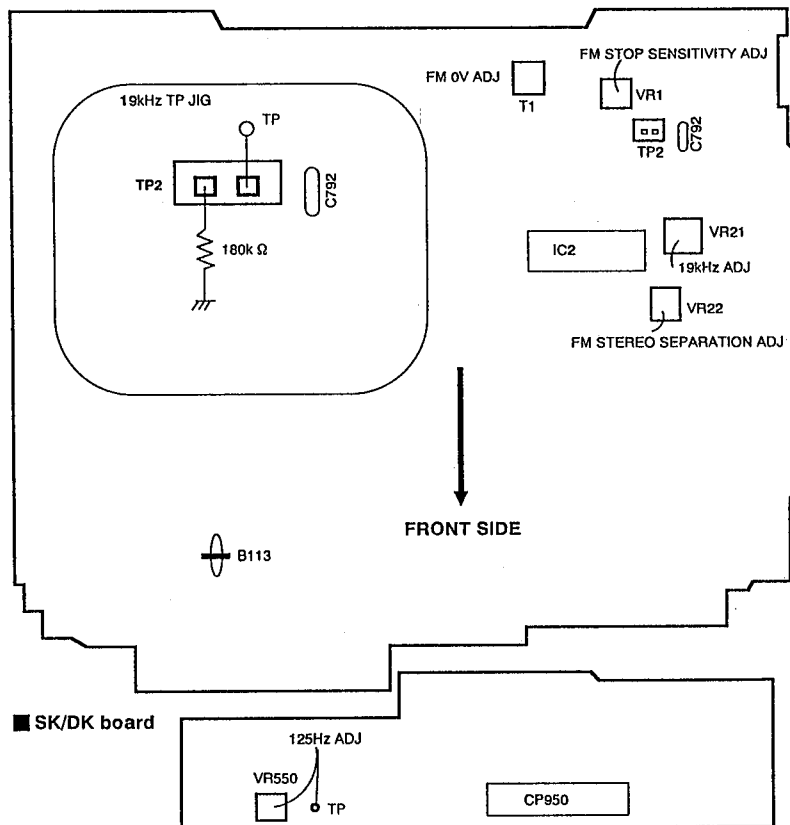
■ Tape section adjustment

Item	Conditions	Adjustment and Confirmation methods	S.Values	Adjust
1. Head Azimuth Adjustment	Test tape: SCC – 1659 VTT703(10kHz)	★ In case the head and its height have been changed, it will be necessary to adjust the height of the head. 1. Adjustment of the height of head 1)When the mirror tape SCC – 1659(2line tape) is travelling in the FWD. direction ,adjust the screws A and B so that the line A is located at the center of the shield plate between the head channels. 2)When the mirror tape SCC – 1659(2line tape) is travelling in the REV.direction, adjust the screws C and D so that the line B is located at the center of the shield plate between the head channels. 2. Head azimuth 1)Adjust the screw B so that the output level becomes maximum and the phase difference becomes minimum when VTT703 is travelling in the FWD. direction. 2)Adjust the screw C so that the output level become maximum the phase difference become minimum when VTT703 is travelling in the REV. direction. 3)By repeating the above adjustments steps 1) and 2),make sure that the output level and phase difference as specified respectively . 4)There is no need to perform bonding after adjustment.	  Output level: Maximum  Output level: Maximum 	
2. Tape speed and wow flutter confirmation	Test tape:VTT712 (3kHz)	1.Check to see if the reading of the F.counter /wow flutter meter is within 3015~3045 (FWD/REV), and less than 0.35%(JIS RMS) . 2. In case of out of specification,adjust the motor with a built – in volume resistor.	Tape speed: 3015 ~3045Hz Wow flutter:less than0.35%	Built – in volume resistor
3.Playback frequency response confirmation	Test tape:VTT724 (1kHz) VTT736 (125Hz/1kHz/8kHz)	1. Play test tape VTT724, the set the volume position at 2V 2. Play test tape VTT736 confirm 1kHz/8kHz:0 ± 3dB 1kHz/125Hz:0 ± 3dB 3. When 8 kHz is out of specification, it will be necessary to read just the azimuth	Speaker out 1kHz/125Hz :0 ± 3dB 1kHz/8kHz :0 ± 3dB	

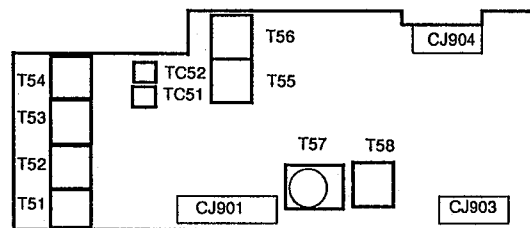
Item	Conditions	Adjustment and Confirmation methods	S.Values	Adjust
4.Maximum output power confirmation	Test tape :VTT721 (1kHz) volume:maximum BASS/TRE:center	1. Confirm both the front and rear output be more than 8.3 V (17W). 2. Confirm that consumption current at above condition to be less than 5A. 3. Sound leakage should not occur at volume minimum. 4. Oscillation should not occur at BASS/TRE at minimum.	Output level:more than 8.3 V(17W) Consumption current :less than 5A	
5.Playback noise	Empty tape	1. Noise level to be less than 2 mV at volume minimum. 2. Current consumption to be less 1A at above condition.	Less than 2 mV Less than 1A	
6.BASS/ TREBLE checking	FM 97.9 MHz, 66 dB μ , 22.5kHz dev. with center click, preemphasis 75 μ s.	Confirm that both BASS/TRE are within a variable range from ± 7 dB to 13 dB.	100 Hz : ± 7 dB ~13 dB (variable) 10 kHz : ± 7 dB ~13 dB (variable)	

■ Tuner Section

MAIN board



■ AM board



■ SK/DK board



■ Tuner Section Adjustment

Item	Conditions	Adjustment and Confirmation methods	S.Values	Adjust
1. MW voltage adjustment	Test point: CJ901 7 pin Measuring: MW 522 kHz MW 1404kHz	- Adjust T55 so that the CJ901 7 pin DC voltage level becomes 1.2 V when 522 kHz is indicated. - Adjust TC51 so that the CJ901 7 pin DC voltage level becomes 6.6 V when 1404 kHz is indicated. - Repeat the Steps 1 and 2 until the voltage levels becomes as specified above.	$1.2 \pm 0.02 \text{ V}$ $6.6 \pm 0.1 \text{ V}$	T55 TC51
2. MW Sensitivity adjustment	MW 603 kHz weak signal MW 1404 kHz weak signal	- Adjust (the output with) T52, T54 and T58 so that the output becomes maximum under the 603 kHz receiving conditions. - Adjust (the output with) TC51 so that the output becomes maximum under the 1404 kHz receiving conditions. - Repeat the Steps 1 and 2. - Confirm the MW voltage. After the voltage has been confirmed, make sure that the CJ901 7 pin output at 1620 kHz is 8.2 V or less.	Output maximum Less than 8.2 V	In sequence T52, T54 and T58 repeatedly until O/P is maximum TC51

Item	Conditions	Adjustment and Confirmation methods	S.Values	Adjust
3. LW voltage adjustment	Test point: CJ901 7 pin Measuring: LW 144 kHz LW 281kHz	1. Adjust T56 so that the CJ901 7 pin DC voltage level becomes 1.2 V when 144 kHz is indicated. 2. Adjust TC52 so that the CJ901 7 pin DC voltage level becomes 5 V when 281 kHz is indicated. 3. Repeat the Steps 1 and 2 until the voltage levels becomes as specified above.	1.2 $\pm$ 0.02 V 5.0 $\pm$ 0.1 V	T56 TC52
4. LW Sensitivity adjustment (I)	LW 153 kHz weak signal LW 281 kHz weak signal	1. Adjust (the output with) T51 and T53 so that the output becomes maximum under the 153 kHz receiving conditions. 2. Adjust (the output with) TC52 so that the output becomes maximum under the 281 kHz receiving conditions. 3. Repeat the Steps 1 and 2.	Output maximum	In sequence T51 and T53 repeatedly until O/P is maximum TC52
LW Sensitivity adjustment (II)	LW 153 kHz weak signal LW 281 kHz weak signal	1. Adjust (the output with) T56 so that the output becomes maximum under the 153 kHz receiving conditions. 2. Adjust (the output with) TC52 so that the output becomes maximum under the 281 kHz receiving conditions. 3. Repeat the Steps 1 and 2. 4. Confirm the AM voltages. After the voltage has been confirmed, make sure that the CJ901 7 pin output 281 kHz is 8.0 V or less.	Output maximum Less than 8.0 V	In sequence T56 repeatedly until O/P is maximum TC51
5. Radio/Tape level difference	AM 999 kHz, 1 kHz, 30% modulation, 74 dB μ	Against VTT724, the output difference level to be within -3 ± 3 dB	Within -3 ± 3 dB	
6. FM 0 V adjustment	Test point: TP3 FM 97.9 MHz, 66 dB non modulation	Adjust T1 so that the TP3 DC voltage level becomes 0 V when 97.9 MHz is indicated.	0 $\pm$ 0.01 V	T1
7. Adjustment of Stop Sensitivity	97.9 MHz, 400 Hz modulation 28 dB μ V TP: SD(B113)	Under receiving conditions, adjust the SD (B113) output with VR1 to a point where the output changes from 0 V to 5 V (by using an oscilloscope).	Changing point from 0 V to 5 V	VR1
8. Adjust of 19 kHz Free Run	FM 97.9 MHz Non modulation 66 dB μ V TP2 (C792 side)	1. Connect 180 k Ω between the test point TP2 and earth as indicated in the diagram. 2. After connecting the high impedance frequency counter to the test point terminal TP2, adjust the frequency with VR21 so that the counter reads 19 kHz $\pm$ 50 Hz	19 $\pm$ 0.05 kHz	VR21

Item	Conditions	Adjustment and Confirmation methods	S.Values	Adjust
9. FM stereo separation	97.9MHz, 1 kHz, 67.5 kHz dev, Pilot 7.5 kHz, 66 dB μ V	1. While applying a modulation output to a single channel, adjust VR22 so that the leak of speaker output to another channel is minimized. 2. Separation to be more than 22 dB. 3. The left/right difference to be within 3 dB.	more than 22 dB	VR22
10. FM S/N ratio	97.9 MHz, 66 dB μ	Output difference level between modulation ON/OFF to be more than 53 dB.	More than 53 dB	
11. Clock frequency check	Test point: 9 pin of IC701 MW 1620 kHz F Counter	When MW 1620 kHz is indicated, confirm that the 9 pin terminal frequency of IC701 is with 2070 ± 0.060 kHz. 1. Clock adjustment to be done after aligning tuner (To get higher accuracy). 2. High impedance can to be use.	2070 ± 0.060 kHz	
12. Adjustment of DK Free Run	FM 97.9 MHz Non modulation 66 dB μ V TP: TP mark on SK/DK board	Under the SK/DK signal receiving conditions, adjust the test point frequency to 125 Hz with VR550.	125 ± 1 Hz	VR550

4 Wiring Connections

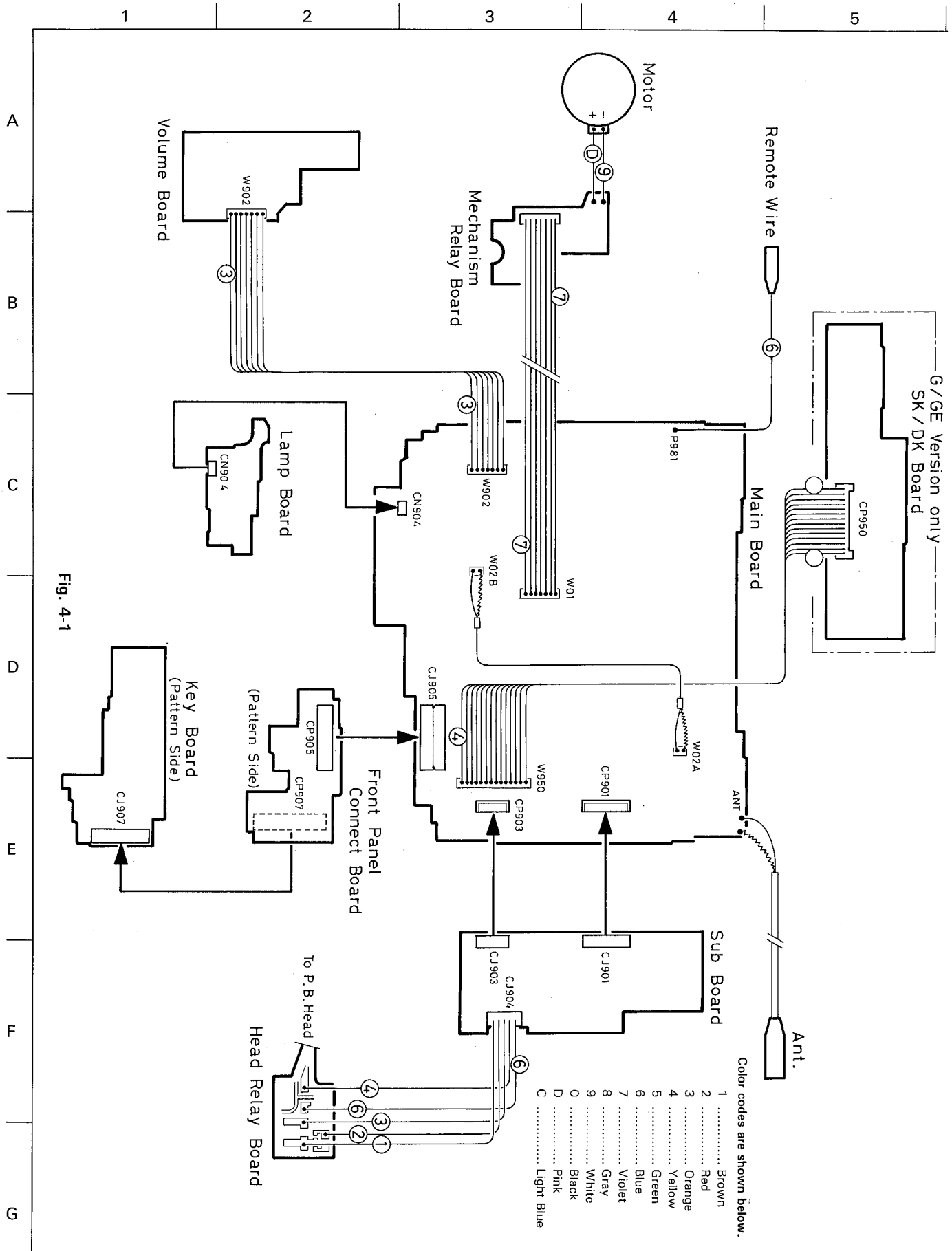


Fig. 4-1

5 Block Diagram

ICs

IC2 AN7465K NOISE C. & MPX

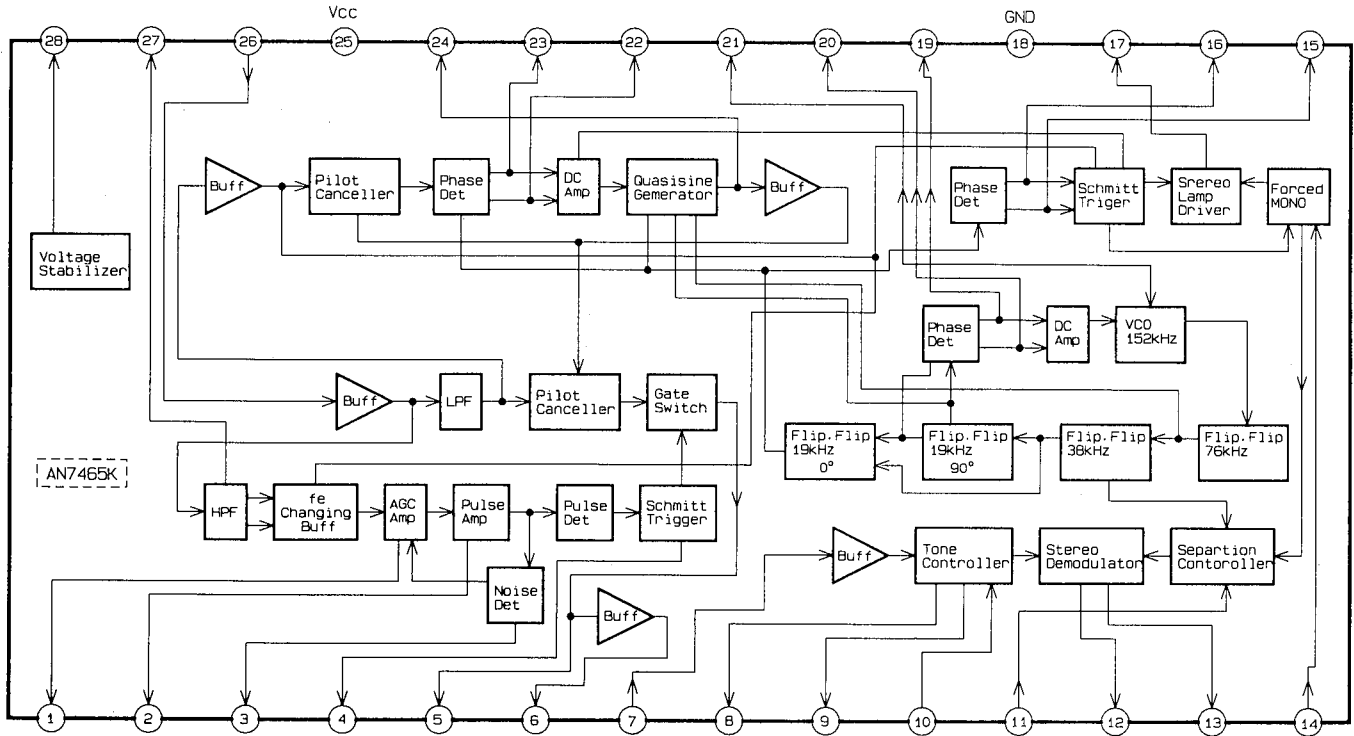


Fig. 5-1

IC961 HA1351 POWER AMP.

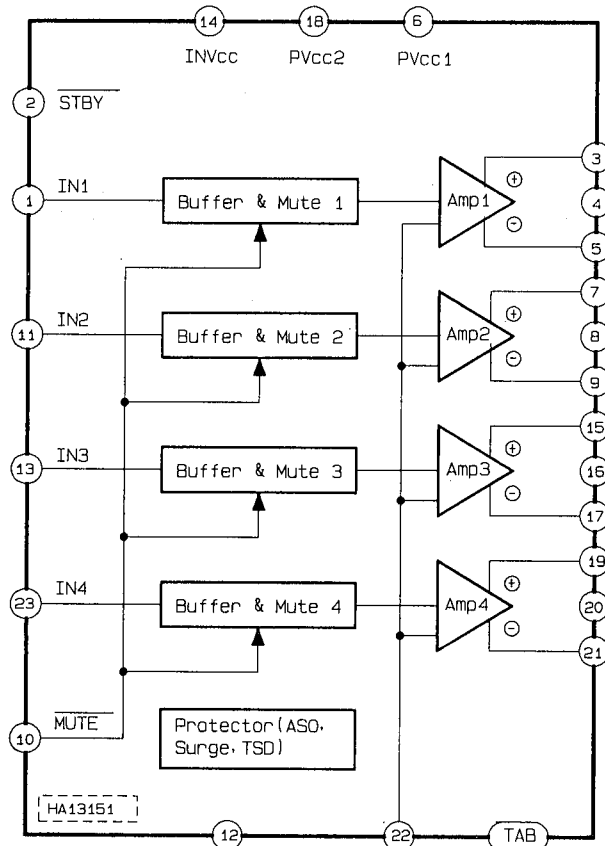


Fig. 5-2

IC910, 911 VC4580L BUFFER AMP.

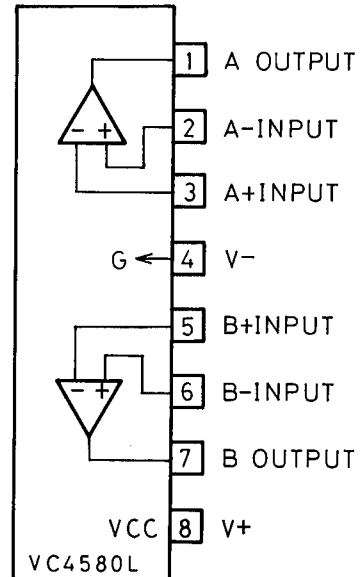


Fig. 5-3

◆ IC510 LA2220 SK (G/GE only)

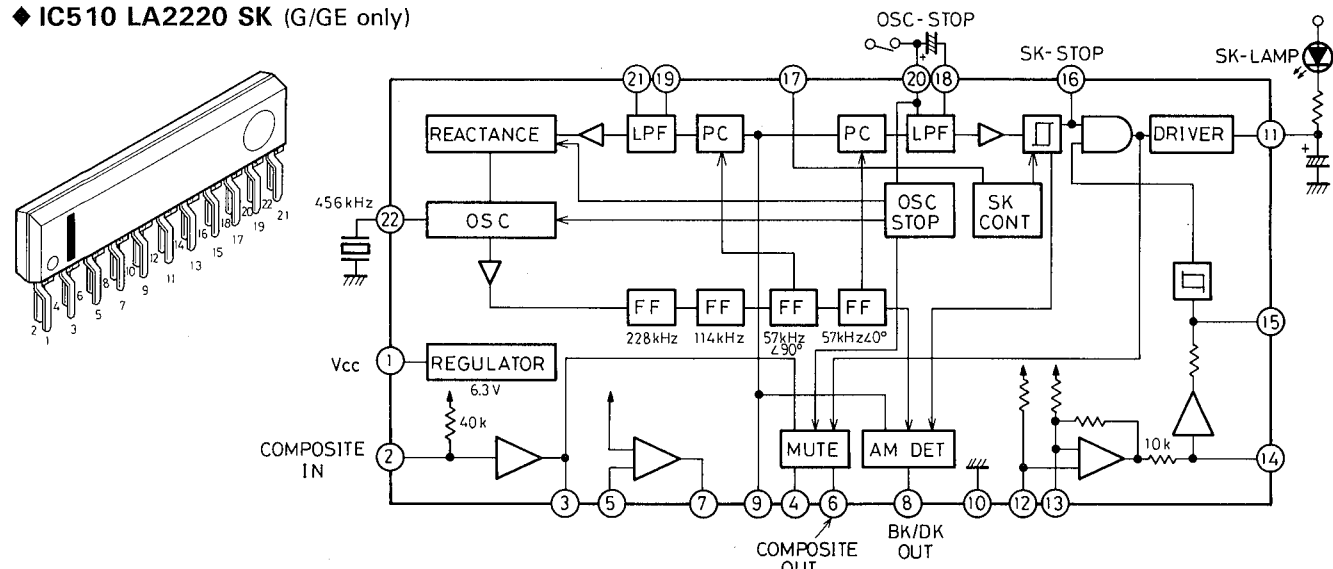


Fig. 5-4

◆ IC550 LA2211 DK (G/GE only)

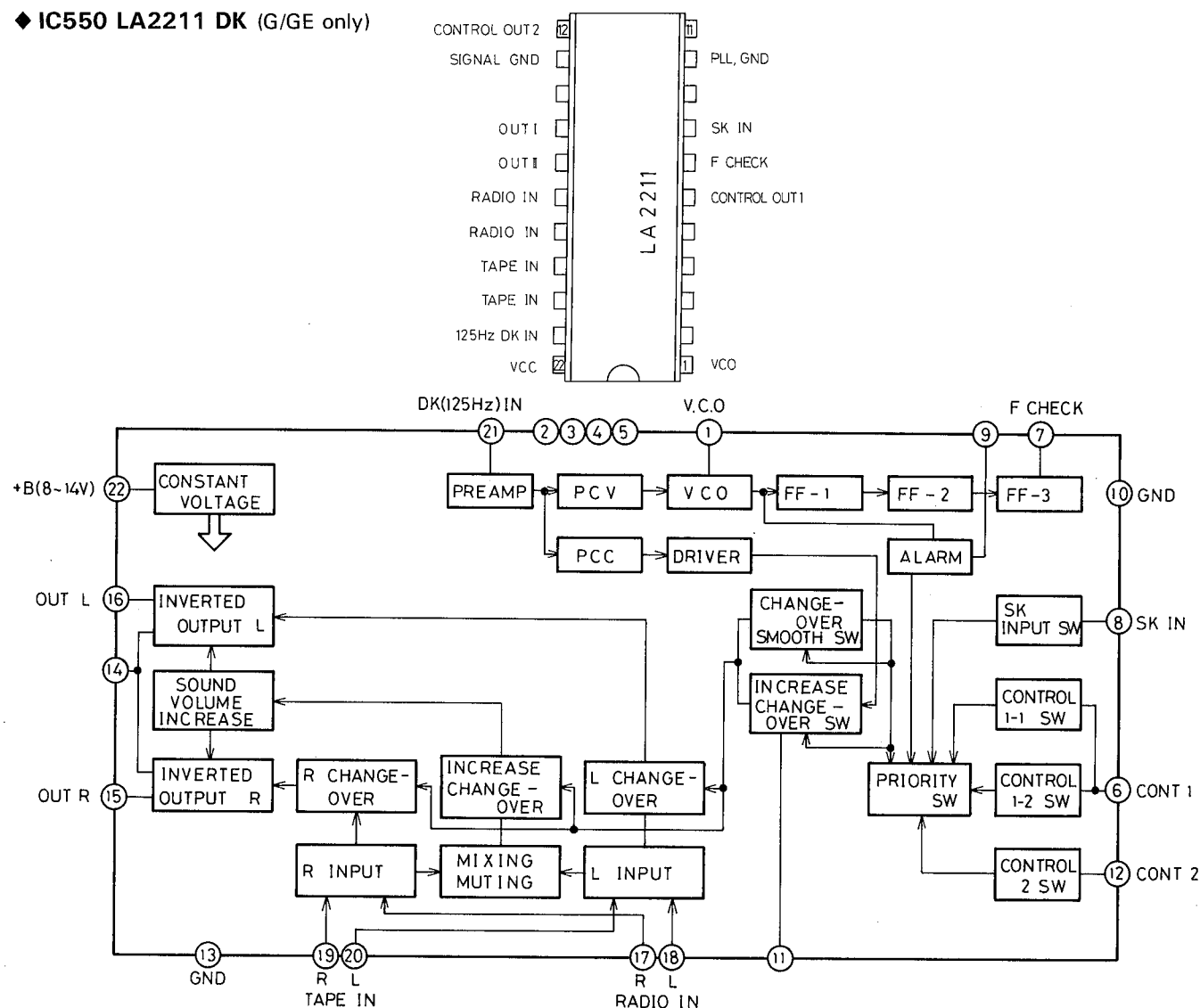


Fig. 5-5

◆ IC1 FM IF LA1140

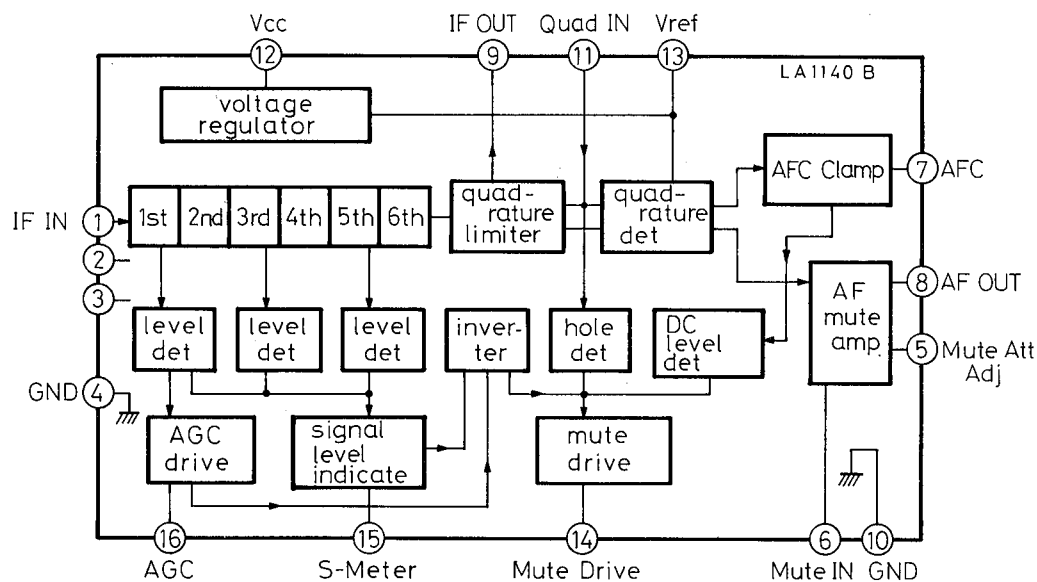
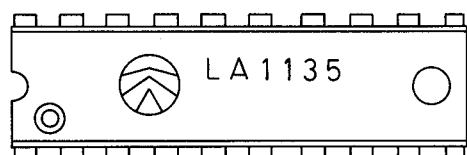


Fig. 5-6

◆ IC51 LA1135



AM TUNER

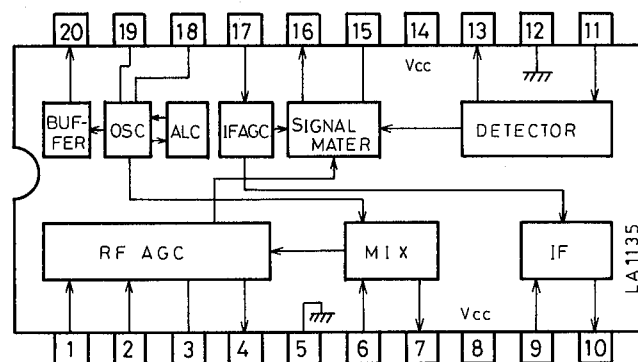


Fig. 5-7

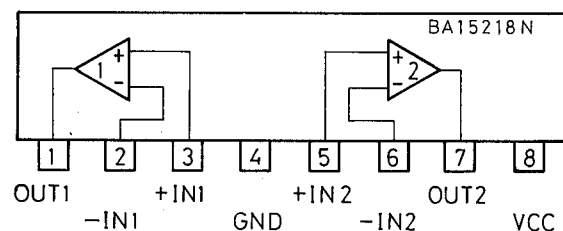
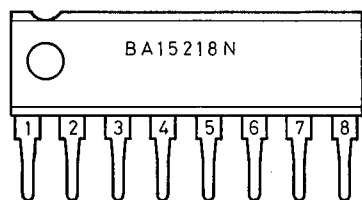
◆ IC141, 241, BA15218N
BASS BOOST AMP.

Fig. 5-8

◆ IC901 UPC1228HA

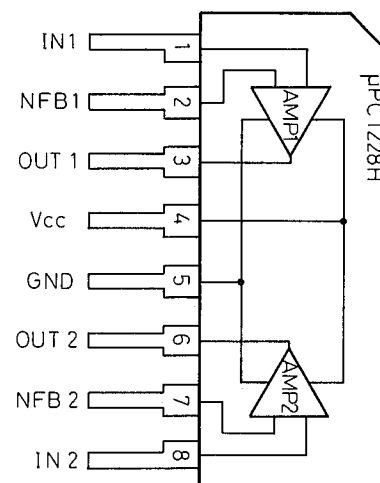


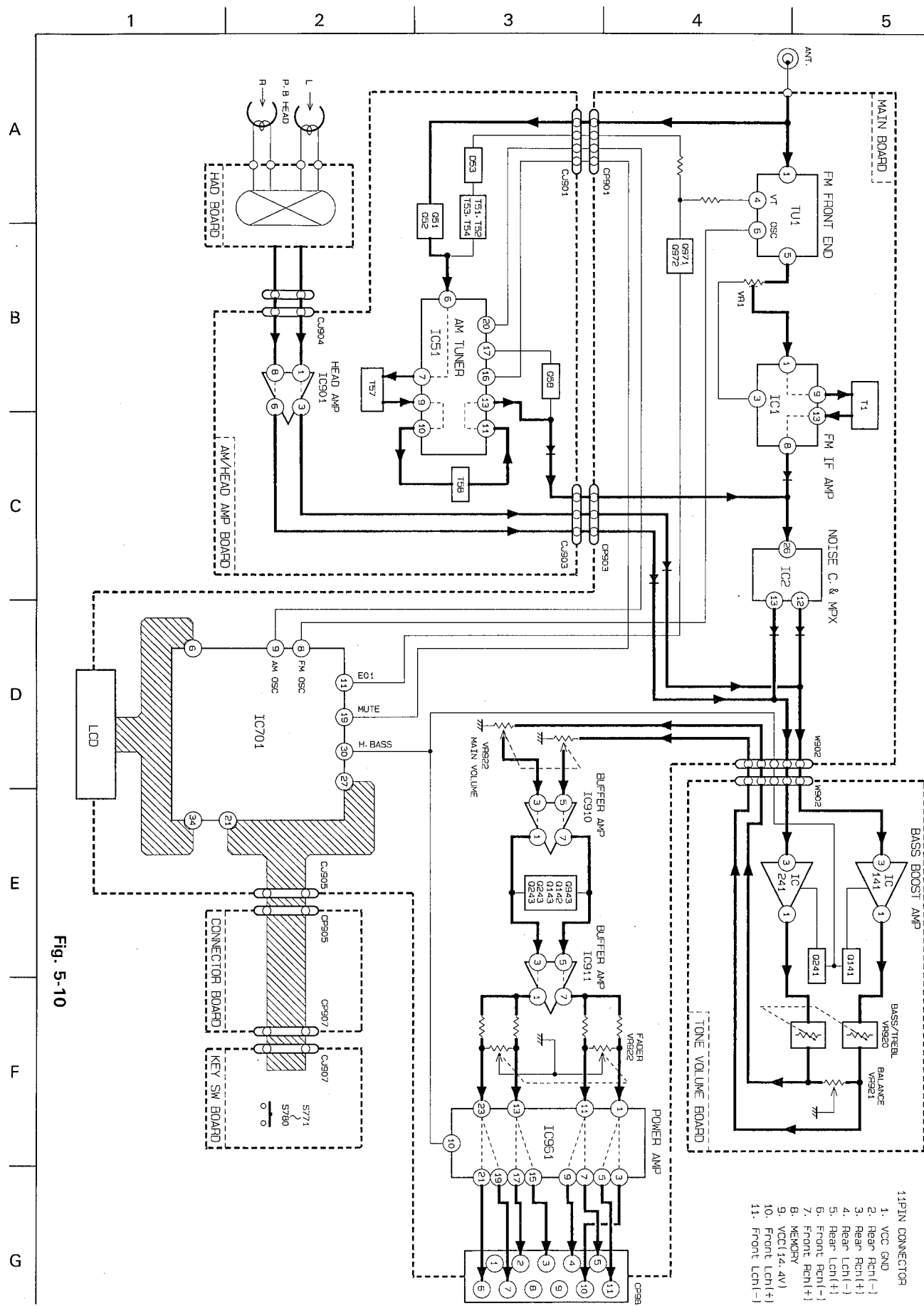
Fig. 5-9

◆ IC701 UPD1708AG SYSTEM CONTROL

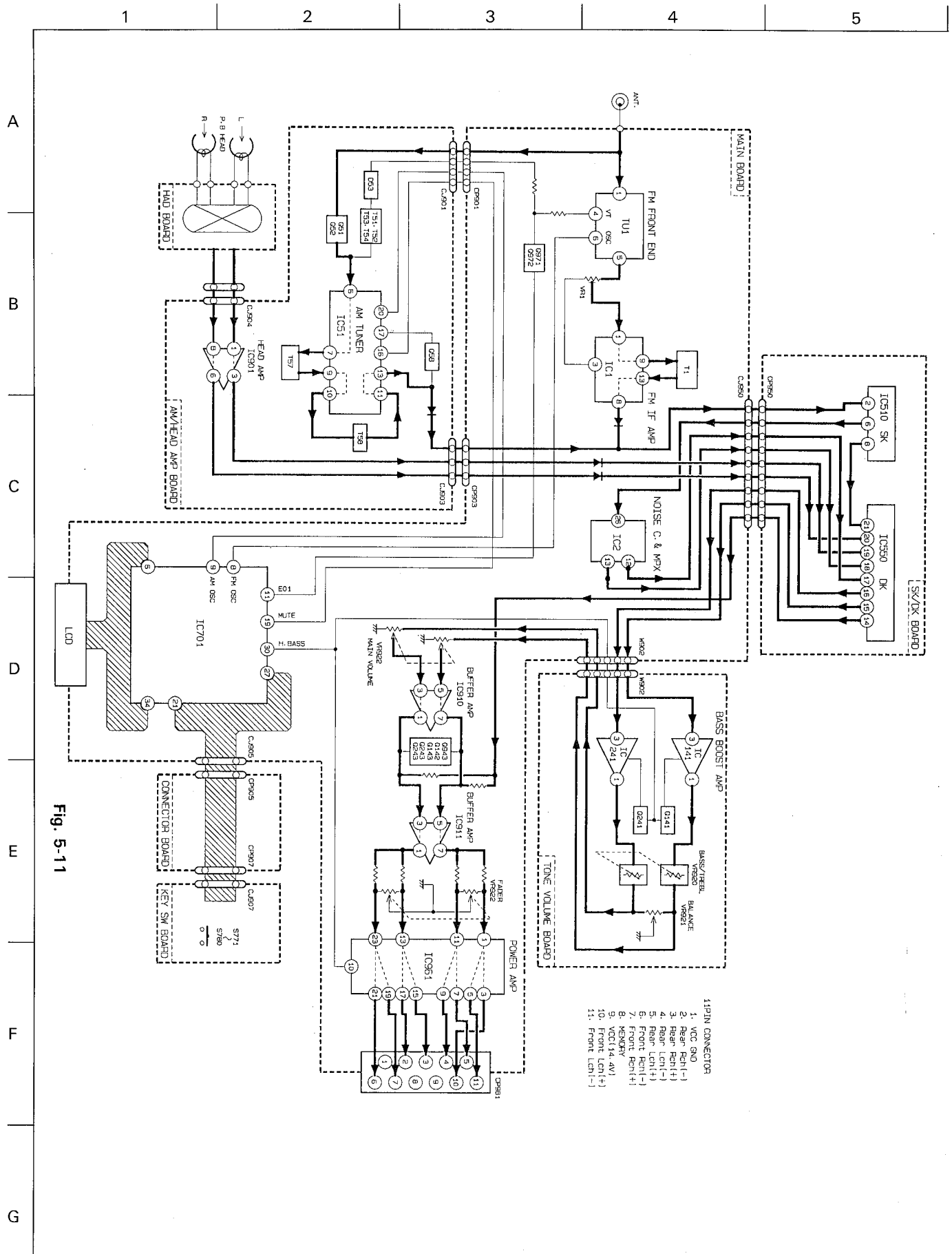
Terminal Description

Pin No.	Abbreviation	Output form	Description of functions																				
1 ~ 4 34 ~ 52	LCD4 ~ LCD1 LCD23 ~ LCD5	COMS push/pull type	This is a segment output terminal to the LCD panel. With the matrix between COM1 and COM2, it is possible to display 46 bites in maximum. * During making of power supply and execution of CKSTP command, "L" will be output automatically.																				
5 ~ 6	COM2 COM1	COMS Push/pull type	This is a common output terminal to the LCD common panel. With the matrix between LCD1 ~ LCD23, it is possible to display 46 bites in maximum. When a potential difference of $\pm V_{DD}$ takes place between the above terminal and LCD1 ~ LCD23 after the three values of GND, $1/2 V_{DD}$ and V_{DD} (5 msec. interval) have been output at a sequence of 50 Hz, the segment will be turned on.																				
7 ~ 33	V_{DD}	—	This is a power supply terminal to the device. Whenever the device is operated, a 5 V $\pm 10\%$ voltage will be supplied. When an internal data memory (RAM) is provided, the voltage can be lowered to 2.5 V. When 0 through 4.5 V voltage is supplied to this terminal, the device will be reset and the program be started from Address 0.																				
8	FM OSC	Input	This is an input terminal of local oscillator output ranging from 10 to 150 MHz. One 1/2 fixed dividing prescaler and two 1/32 and 1/33 module prescalers are provided in the oscillator. Since an AC amplifier is built in, the oscillation output should be made after cutting it with a condenser.																				
9	AM OSC	Input	This is an input terminal of local oscillator output ranging from 0.6 to 50 MHz. The terminal will be selected and actuated when the HF command has been executed according the direct dividing or pulse slower system. Since an AC amplifier is built in, the oscillation output should be input after cutting it with a condenser.																				
10	GND	—	This is a ground terminal of the device.																				
11, 12	EO ₁ EO ₂	COMS three states	These are [PULL] error output terminals. When the divided local oscillation frequency is higher or lower than the reference frequency, the [H] or [L] level (signal) will be output from these terminals. When the local oscillation frequency complies with the reference frequency, moreover, these terminals will be placed into floating conditions. Meanwhile, a same waveform will be output from both EO ₁ and EO ₂ .																				
13	CE	Input	This is selection signal input terminal of the device. When the device is in normal action, the [H] level will be indicated but when it is not acted, the [L] be indicated. During the [L] level, the [PULL] (terminal) will be placed into prohibited conditions, although any 134 μ sec. or smaller input will not be accepted.																				
14	NC	—	Since this terminal is not connected to any internal chip, it can be connected freely.																				
15, 16	Xi XO	Input COMS	This is a crystal oscillator connection terminal (3.5 MHz). Adjust this terminal from the XO terminal.																				
17	SD	COMS push/pull type	This terminal is used as an input port for detecting whether a broadcasting station has been selected during input of station detector (SD) signal and automatic tuning as follows: With station : H Whthout station : L																				
18	SHIFT	COMS push/pull type	This is a shift mode output terminal and used as an output port indicating that the mode has been set to the shift mode with the shift key as follows: Normal mode : H Shift mode : L																				
19	MUTE	COMS push/pull type	This is a [MUTE] output terminal and used as a [MUTE] output port by the device as follows: Normal : H During muting : L																				
20	K4	COMS push/pull type	Although this terminal is used as an output signal source for incorporating the initializing diode matrix at first, it can also be used later as a key return signal input terminal of key matrix.																				
21 ~ 24	K3 ~ K0	Input	This is a key return signal input terminal from external key amtrix.																				
25 ~ 28	KS4 ~ KS1	COMS push/pull type	This terminal is used as a key return signal source of key matrix. By using it as the key return signal source, it is possible to eliminate the necessity of external diode.																				
29	MONO /DOLBY	CMOS push/pull type	This is a [MONORAL/DOLBY] output terminal, namely, a common terminal for forced monoral output under ratio mode and Dolby output under tape mode as follows: [RADIO] Normal : H Forced monoral : L [TAPE] Dolby Off : H Dolby On : L																				
30	LOUD	COMS push/pull type	This is a loudness output terminal and used as a loudness ON/OFF output port as follows: [LOUD] On : H [LOUD] Off : L																				
31 32	FM BAND AM BAND	CMOS push/pull type	This is a mode selection output terminal during radio receiving, and the FM band, AM band and SK/DK will be optput as indicated in the table below: <table border="1"> <thead> <tr> <th>Mode</th><th>Terminal</th><th>FM band</th><th>AM band</th></tr> </thead> <tbody> <tr> <td>FM</td><td></td><td>1</td><td>0</td></tr> <tr> <td>MW</td><td></td><td>0</td><td>0</td></tr> <tr> <td>LW</td><td></td><td>0</td><td>1</td></tr> <tr> <td>SK/DK</td><td></td><td>1</td><td>1</td></tr> </tbody> </table>	Mode	Terminal	FM band	AM band	FM		1	0	MW		0	0	LW		0	1	SK/DK		1	1
Mode	Terminal	FM band	AM band																				
FM		1	0																				
MW		0	0																				
LW		0	1																				
SK/DK		1	1																				

■ Circuit Block Diagram (B/E/GI version)



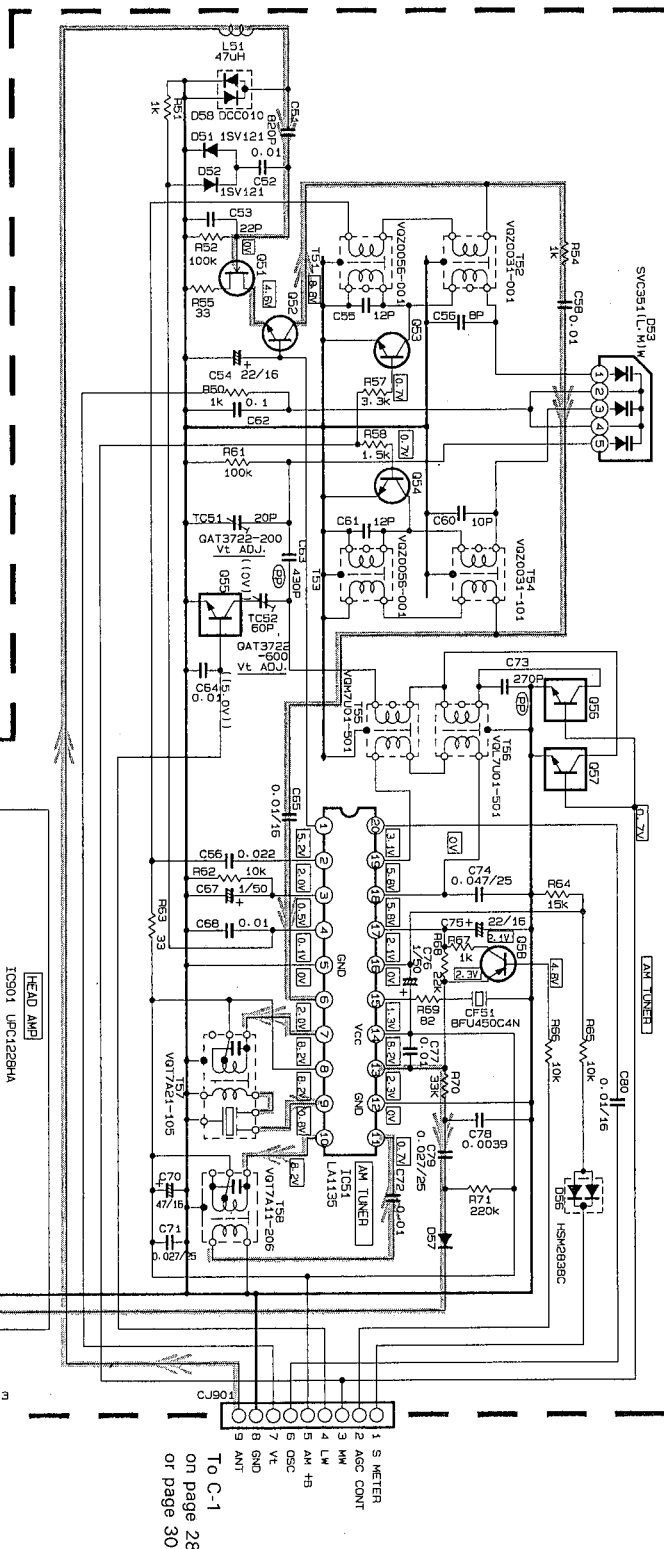
Circuit Block Diagram (G/GE version)



6 Standard Schematic Diagram

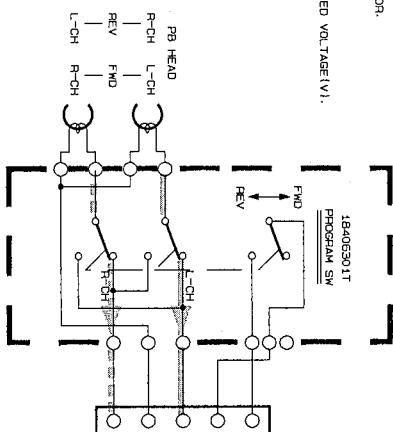
1 2 3 4 5

AM Tuner Circuit (All version)



NOTES
1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL.
CONDITION: □ NM MODE; () LM MODE; () TAPE MODE
2. UNLESS OTHERWISE SPECIFIED,
RESISTORS ARE 1/4W 5% CARBON OR 1/10W 5% METALLURGE RESISTOR.
ALL CAPACITORS ARE 50V CERAMIC CAPACITOR.
ALL RESISTANCE VALUES ARE IN OHM(S).
ALL CAPACITANCE VALUES ARE IN P(F) / RATED VOLTAGE(V).
ALL DIODES ARE 1SS133T

25C1623(6)	025 025 024
25A612(6)	056
25K619(EL, FL)	051
FA1A4Z	055 025 057
25C17A05(1S)	0901



Note
VDH3494-002TW or VDH3494-003TW

Fig. 6-1

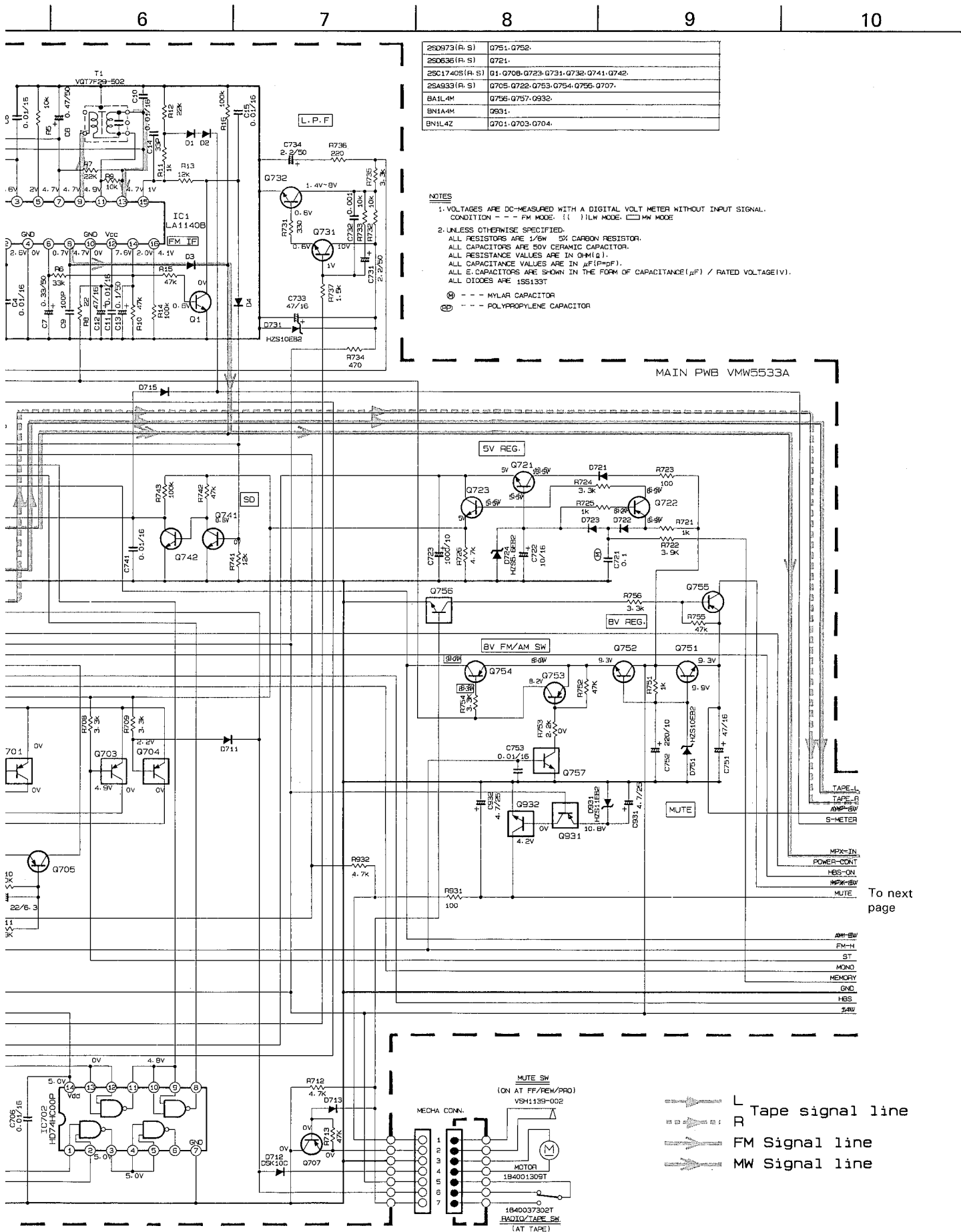
L Tape signal line
R MW Signal line

To D-1
on page 28
or page 30

To C-1
on page 28
or page 30

1	2	3	4	5
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To next page

L Tape signal line
 R Tape signal line
 FM Signal line
 MW Signal line

■ Amplifier Circuit (2/2) (B/E/GI version)

11

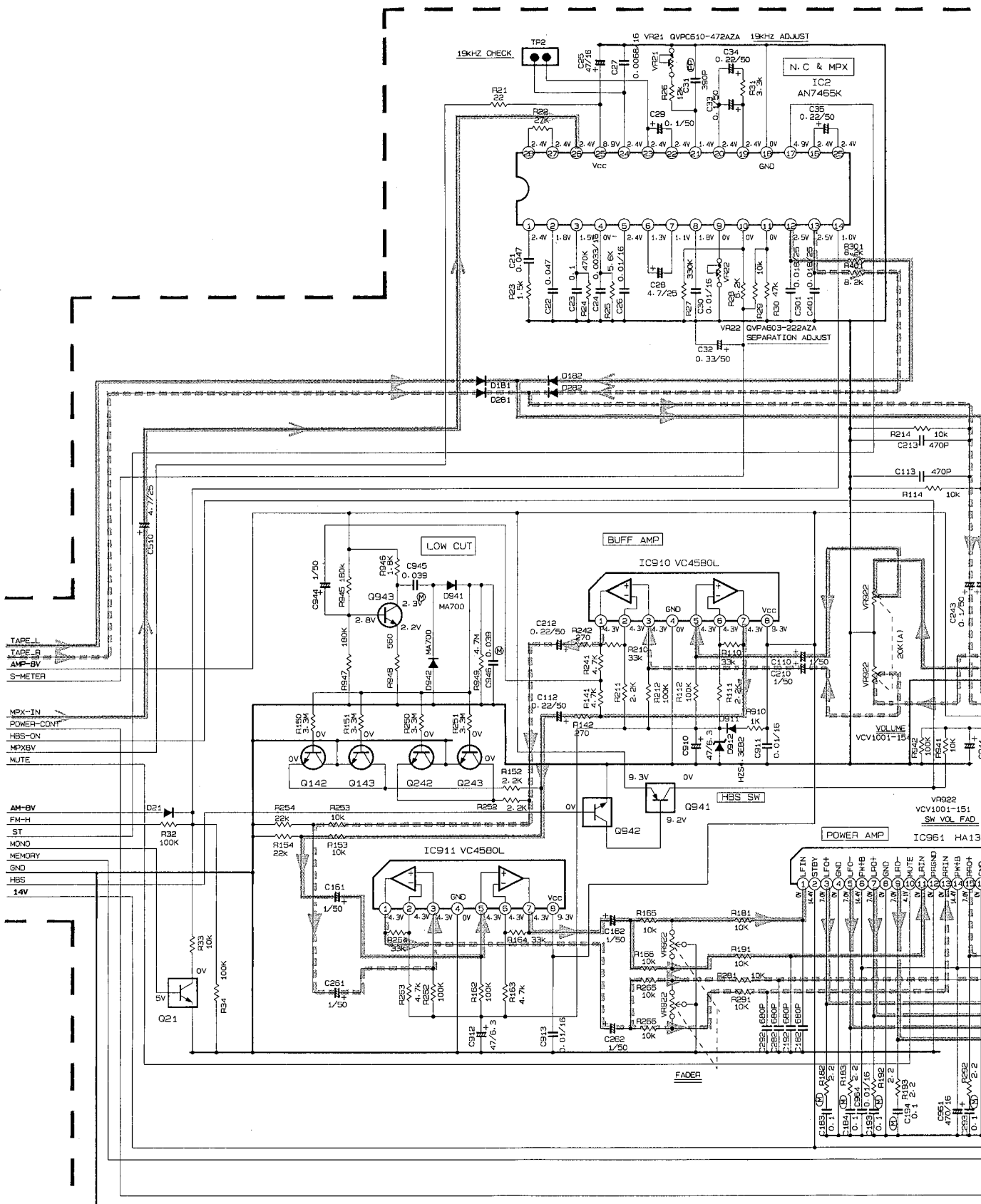
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To before
page



Note
VDH3494-002AV

Fig. 6-4

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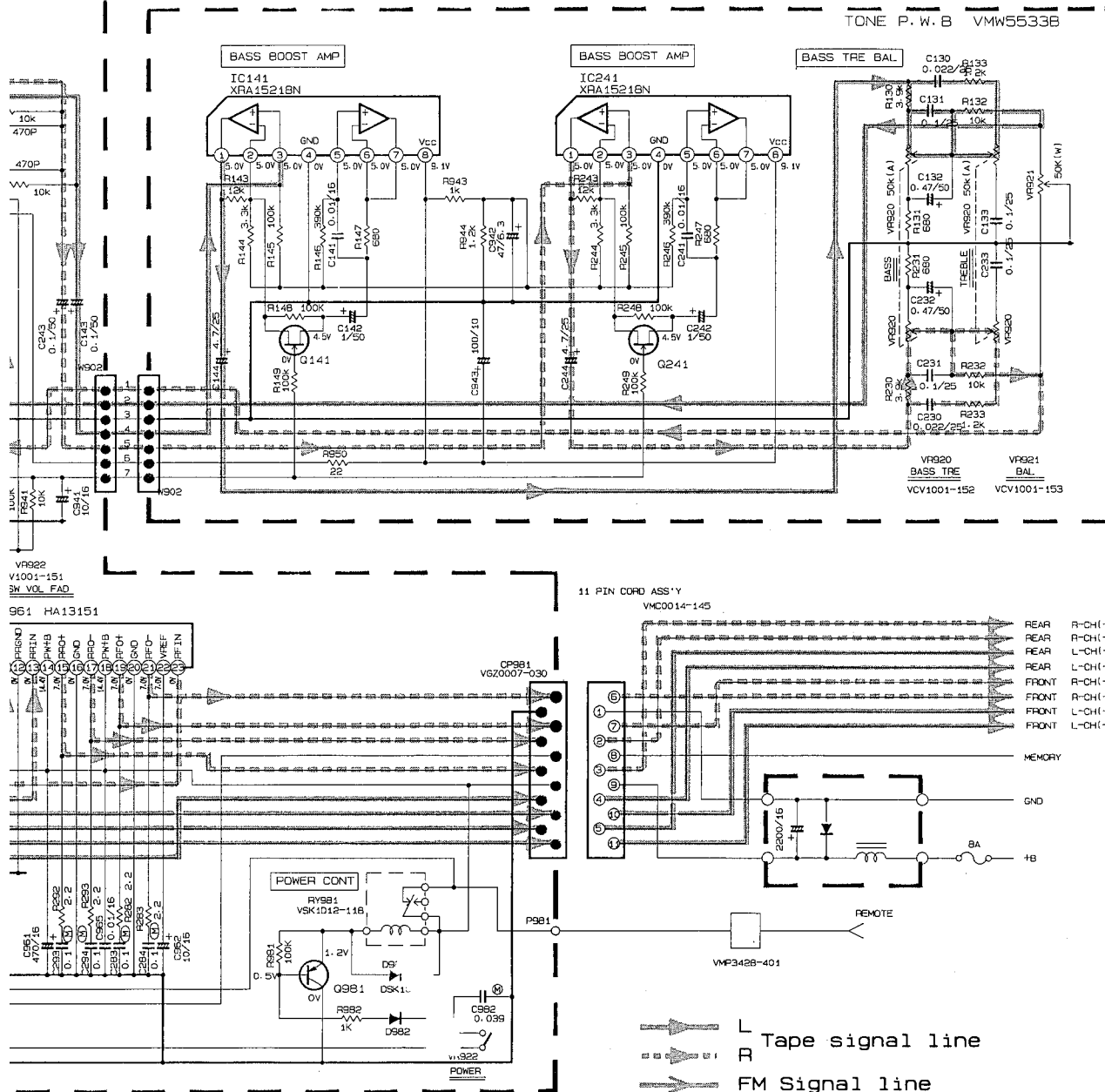
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NOTES

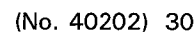
1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL.
CONDITION --- FM MODE () TAPE MODE
2. UNLESS OTHERWISE SPECIFIED:
ALL RESISTORS ARE 1/8W 5% CARBON RESISTOR.
ALL CAPACITORS ARE 50V CERAMIC CAPACITOR.
ALL RESISTANCE VALUES ARE IN OHM(Ω).
ALL CAPACITANCE VALUES ARE IN μ F(μ F).
ALL E-CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE(μ F) / RATED VOLTAGE(V).
ALL DIODES ARE 1SS133T

M --- MYLAR CAPACITOR

25C1740S(R, S)	Q142, Q143, Q242, Q243, Q943.
25A933(R, S)	Q901.
BN1L4M	Q941.
BA1L4M	Q21, Q942.
25K301(P, Q)	Q141, Q241.



1	2	3	4	5
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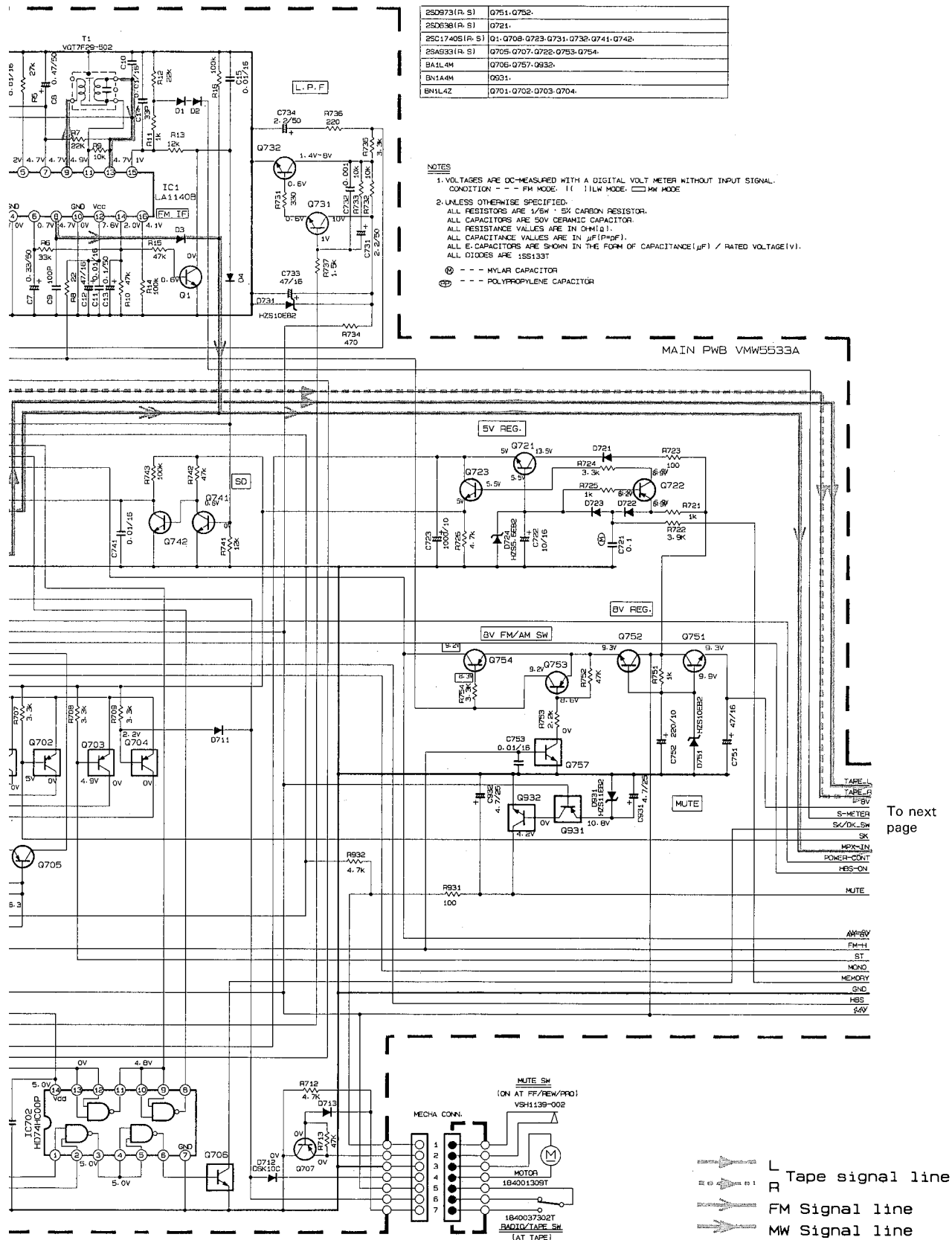


Fig. 6-5

11	12	13	14	15	
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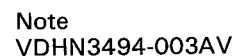


Fig. 6-6

16

17

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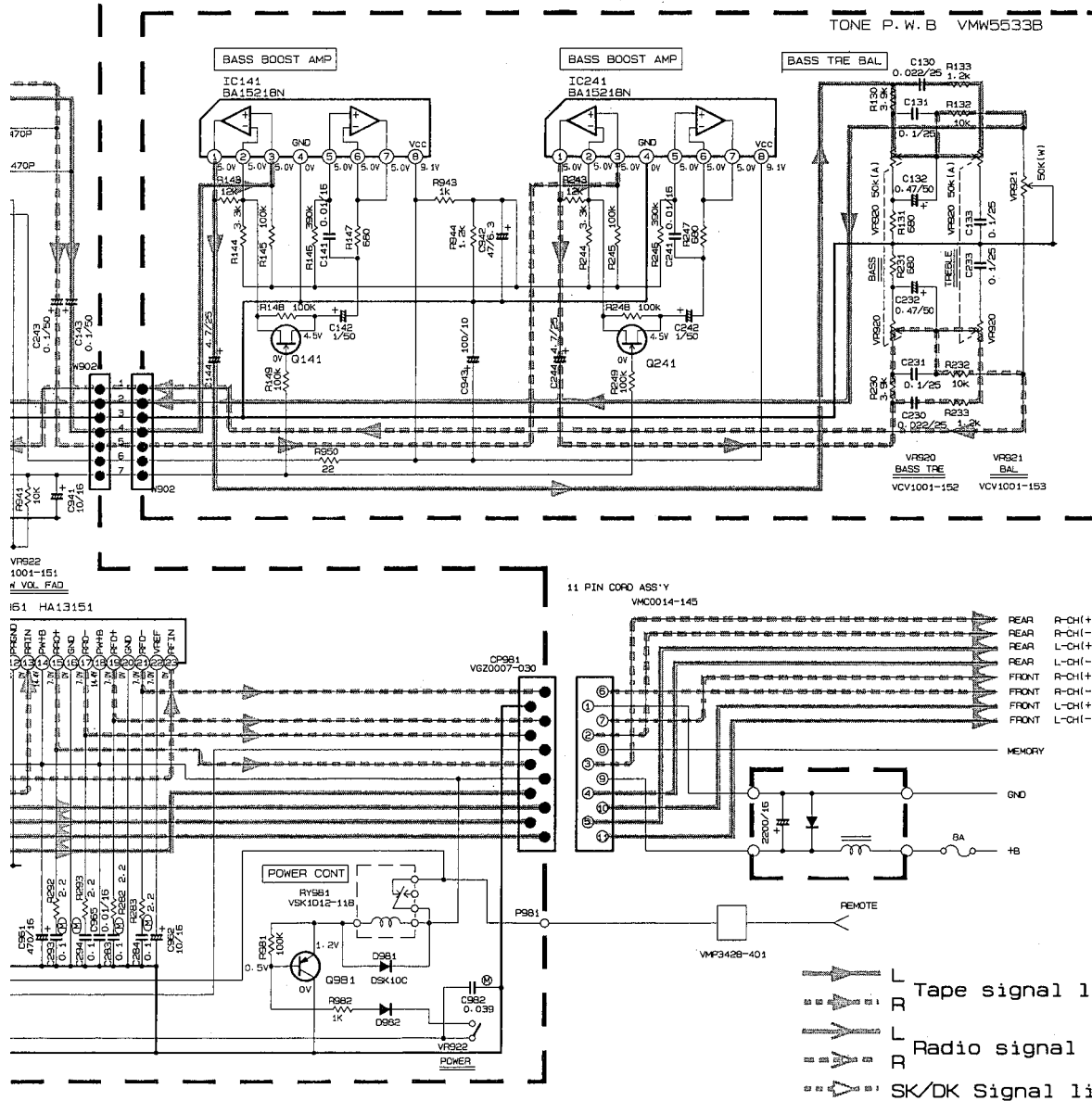
19

20

NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL.
CONDITION --- FM MODE. () TAPE MODE
2. UNLESS OTHERWISE SPECIFIED:
ALL RESISTORS ARE 1/8W 5% CARBON RESISTOR.
ALL CAPACITORS ARE 50V CERAMIC CAPACITOR.
ALL RESISTANCE VALUES ARE IN OHM(Ω).
ALL CAPACITANCE VALUES ARE IN μ F(μ F).
ALL E-CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE(μ F) / RATED VOLTAGE(V).
ALL DIODES ARE 1SS133T
- ④ --- MYLAR CAPACITOR

2SC1740S(R.S)	Q142, Q143, Q242, Q243, Q243.
2SA933(R.S)	Q981.
BN1L4M	Q941.
BA1L4M	Q21, Q942.
2SK3011(P.Q)	Q141, Q241.



7 Location of P.C. Board Parts and Parts List

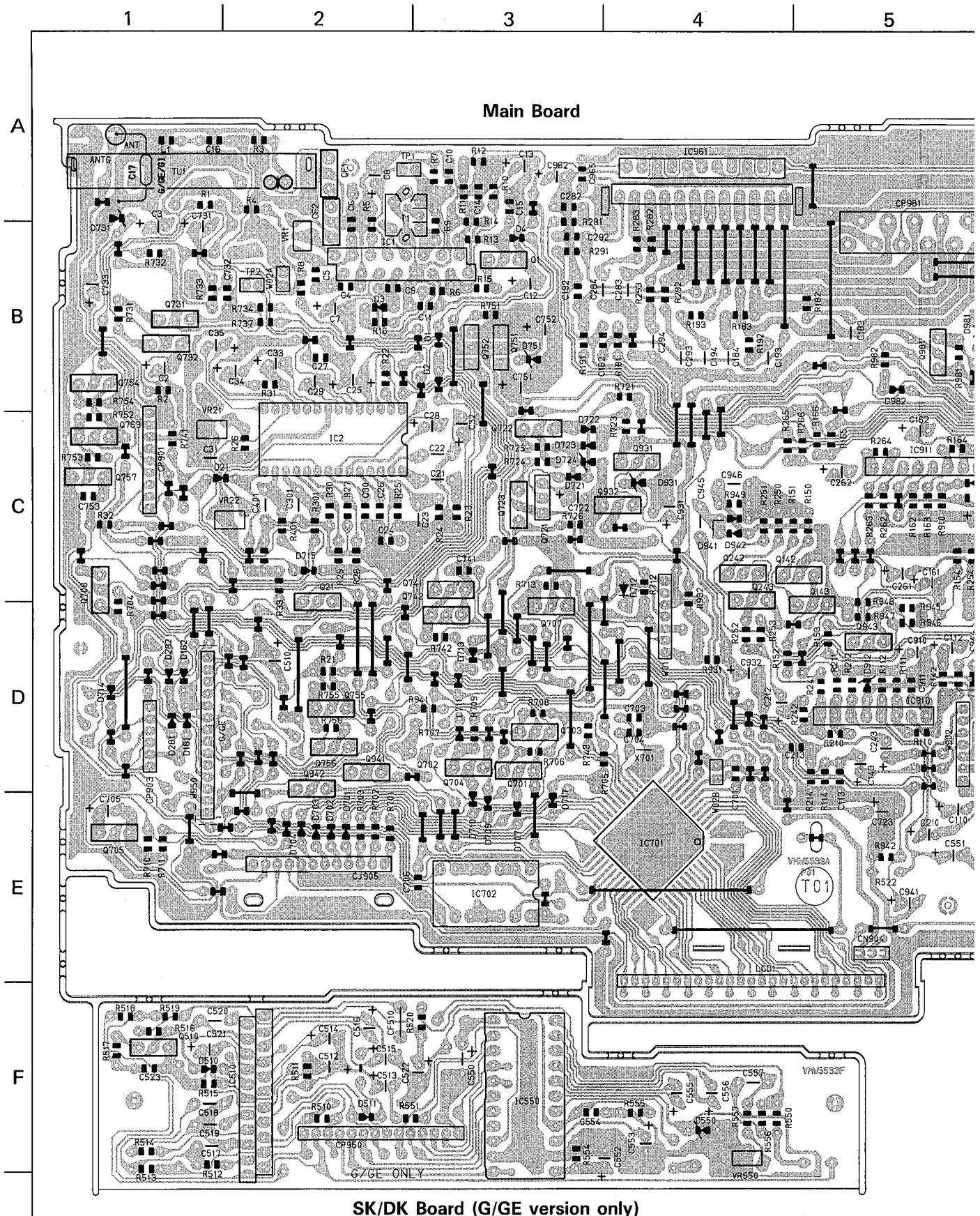
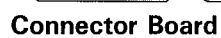


Fig. 7-1



• Main P.C. Board Parts List

BLOCK NO. 01				
REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
ANT 1	VMP0029-026	ANT SOCKET ASSY		
ANT 1	VMP0029-007	ANT SOCKET ASSY		
C 2	QER41HM-104M	E.CAPACITOR	.10MF 20% 50V	B,E
C 3	QEK41HM-104	E.CAPACITOR	.10MF 20% 50V	G,GI,GE
C 4	QCVB1CM-103Y	E.CAPACITOR	.010MF 20% 16V	
C 5	QCVB1CM-103Y	E.CAPACITOR	.010MF 20% 16V	
C 6	QCVB1CM-103Y	E.CAPACITOR	.010MF 20% 16V	
C 7	QER41HM-334VM	E.CAPACITOR	.33MF 20% 50V	
C 8	QEK41HM-474	E.CAPACITOR	.47MF 20% 50V	
C 9	QCVB1HK-101Y	E.CAPACITOR	100PF 10% 50V	
C 10	QCVB1CM-103Y	E.CAPACITOR	.010MF 20% 16V	
C 11	QCVB1CM-103Y	E.CAPACITOR	.010MF 20% 16V	
C 12	QER41CM-476M	E.CAPACITOR	.47MF 20% 16V	
C 13	QEK41HM-104	E.CAPACITOR	.10MF 20% 50V	
C 14	QCS11HJ-330	E.CAPACITOR	33PF 5% 50V	
C 15	QCVB1CM-103Y	E.CAPACITOR	.010MF 20% 16V	
C 16	QCVB1HK-101Y	E.CAPACITOR	100PF 10% 50V	
C 17	QCS11HJ-150	E.CAPACITOR	15PF 5% 50V	
C 21	QFV81HJ-473	FILM CAPACITOR	.047MF 5% 50V	G,GE,GI
C 22	QFV81HJ-473	FILM CAPACITOR	.047MF 5% 50V	
C 23	QFV41HJ-104	FILM CAPACITOR	.10MF 5% 50V	
C 24	QCVB1CM-332Y	E.CAPACITOR	3300PF 20% 16V	
C 25	QER41CM-476M	E.CAPACITOR	.47MF 20% 16V	
C 26	QCVB1CM-103Y	E.CAPACITOR	.010MF 20% 16V	
C 27	QCVB1CM-682Y	E.CAPACITOR	6800PF 20% 16V	
C 28	QER41EM-475VM	E.CAPACITOR	.47MF 20% 25V	
C 29	QER41HM-104M	E.CAPACITOR	.10MF 20% 50V	
C 30	QCVB1CM-103Y	E.CAPACITOR	.010MF 20% 16V	
C 31	QFP31HJ-391ZM	PP-CAPACITOR	390PF 5% 50V	
C 32	QER41HM-334VM	E.CAPACITOR	.33MF 20% 50V	
C 33	QER41HM-104M	E.CAPACITOR	.10MF 20% 50V	
C 34	QER41HM-224VS	E.CAPACITOR	.22MF 20% 50V	
C 35	QER41HM-224VS	E.CAPACITOR	.22MF 20% 50V	
C 36	QER41EM-475VM	E.CAPACITOR	.47MF 20% 25V	G,GE
C 110	QEK41HM-105	E.CAPACITOR	1.0MF 20% 50V	
C 112	QER41HM-224VS	E.CAPACITOR	.22MF 20% 50V	
C 113	QCVB1HK-471Y	E.CAPACITOR	.47MF 20% 10V	
C 130	QCC11EM-223V	E.CAPACITOR	.022MF 20% 25V	
C 131	QCC11EM-104V	E.CAPACITOR	.10MF 20% 25V	
C 132	QEK41HM-474	E.CAPACITOR	.47MF 20% 50V	
C 133	QCC11EM-104V	E.CAPACITOR	.10MF 20% 25V	
C 142	QCVB1CM-103Y	E.CAPACITOR	.010MF 20% 16V	
C 143	QEK41HM-105	E.CAPACITOR	1.0MF 20% 50V	
C 143	QER41HM-104M	E.CAPACITOR	.10MF 20% 50V	
C 144	QEK41EM-475	E.CAPACITOR	.47MF 20% 25V	
C 161	QEK41HM-105	E.CAPACITOR	1.0MF 20% 50V	
C 162	QER41HM-105VM	E.CAPACITOR	1.0MF 20% 50V	
C 182	QCVB1HK-681Y	E.CAPACITOR	680PF 10% 50V	
C 183	QFV41HJ-104	FILM CAPACITOR	.10MF 5% 50V	
C 184	QFV41HJ-104	FILM CAPACITOR	.10MF 5% 50V	
C 192	QCVB1HK-681Y	E.CAPACITOR	680PF 10% 50V	
C 193	QFV41HJ-104	FILM CAPACITOR	.10MF 5% 50V	
C 194	QFV41HJ-104	FILM CAPACITOR	.10MF 5% 50V	
C 210	QEK41HM-105	E.CAPACITOR	1.0MF 20% 50V	
C 212	QER41HM-224VS	E.CAPACITOR	.22MF 20% 50V	

BLOCK NO. 02				
REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C 213	QCVB1HK-471Y	E.CAPACITOR	.47MF 20% 10V	
C 230	QCC11EM-223V	E.CAPACITOR	.022MF 20% 25V	
C 231	QCC11EM-104V	E.CAPACITOR	.10MF 20% 25V	
C 232	QEK41HM-474	E.CAPACITOR	.47MF 20% 50V	
C 233	QCC11EM-104V	E.CAPACITOR	.10MF 20% 25V	
C 241	QCVB1CM-103Y	E.CAPACITOR	.010MF 20% 16V	
C 242	QEK41HM-105	E.CAPACITOR	1.0MF 20% 50V	
C 243	QER41HM-104M	E.CAPACITOR	.10MF 20% 50V	
C 244	QEK41EM-475	E.CAPACITOR	.47MF 20% 25V	
C 241	QEK41HM-105	E.CAPACITOR	1.0MF 20% 50V	
C 242	QER41HM-105VM	E.CAPACITOR	1.0MF 20% 50V	
C 283	QCVB1HK-681Y	FILM CAPACITOR	680PF 10% 50V	
C 283	QFV41HJ-104	FILM CAPACITOR	.10MF 5% 50V	
C 284	QFV41HJ-104	FILM CAPACITOR	.10MF 5% 50V	
C 292	QCVB1HK-681Y	E.CAPACITOR	680PF 10% 50V	
C 293	QFV41HJ-104	FILM CAPACITOR	.10MF 5% 50V	
C 294	QFV41HJ-104	FILM CAPACITOR	.10MF 5% 50V	
C 301	QCC11EM-183ZV	E.CAPACITOR	.018MF 10% 25V	
C 302	QEK41HM-105	E.CAPACITOR	1.0MF 20% 50V	
C 303	QEK41HM-105	E.CAPACITOR	1.0MF 20% 50V	G,GE
C 401	QCC11EM-183ZV	E.CAPACITOR	.018MF 10% 25V	
C 402	QEK41HM-105	E.CAPACITOR	1.0MF 20% 50V	
C 403	QEK41HM-105	E.CAPACITOR	1.0MF 20% 50V	G,GE
C 512	QEK41HM-104	E.CAPACITOR	.10MF 20% 50V	
C 513	QEK41HM-475	E.CAPACITOR	.47MF 20% 25V	
C 514	QEK41HM-474	E.CAPACITOR	.47MF 20% 50V	
C 515	QEK41HM-334	E.CAPACITOR	.33MF 20% 50V	
C 516	QEK41CM-106	E.CAPACITOR	100PF 5% 50V	
C 517	QFN41HJ-102	M.CAPACITOR	1000PF 5% 50V	
C 518	QFN41HJ-102	M.CAPACITOR	1000PF 5% 50V	
C 519	QFN41HJ-222	M.CAPACITOR	2200PF 5% 50V	
C 521	QER41EM-475VM	E.CAPACITOR	.47MF 20% 25V	
C 522	QERF1AM-476ZN	E.CAPACITOR	.47MF 20% 10V	
C 523	QCVB1CM-103Y	E.CAPACITOR	.010MF 20% 16V	
C 550	QETC1AM-337ZN	E.CAPACITOR	330MF 20% 10V	
C 551	QER41EM-475VM	E.CAPACITOR	.47MF 20% 25V	
C 552	QERF01M-107ZN	E.CAPACITOR	100MF 20% 6.3V	
C 553	QEK40JM-227	E.CAPACITOR	220MF 20% 6.3V	
C 554	QCVB1HK-121Y	E.CAPACITOR	120PF 10% 50V	
C 555	QEK41CM-476	E.CAPACITOR	.47MF 20% 16V	
C 556	QEK41HM-105	E.CAPACITOR	1.0MF 20% 50V	
C 557	QFV41HJ-224	FILM CAPACITOR	.22MF 5% 50V	
C 701	QCVB1CM-103Y	E.CAPACITOR	.010MF 20% 16V	
C 703	QCT30UJ-220Y	E.CAPACITOR	22PF 5% 50V	
C 704	QCT30UJ-270Y	E.CAPACITOR	27PF 5% 50V	
C 705	QER40JM-226	E.CAPACITOR	22MF 20% 6.3V	
C 706	QCVB1CM-103Y	E.CAPACITOR	.010MF 20% 16V	
C 721	QFV41HJ-104	FILM CAPACITOR	.10MF 5% 50V	
C 722	QER41CM-106	E.CAPACITOR	10MF 20% 16V	
C 723	QETC1AM-108ZN	E.CAPACITOR	1000MF 20% 10V	
C 731	QEK41HM-225	E.CAPACITOR	2.2MF 20% 50V	
C 732	QCVB1HK-103Y	E.CAPACITOR	1000PF 10% 50V	
C 733	QEK41CM-476	E.CAPACITOR	.47MF 20% 16V	

BLOCK NO. 01

A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C 734	QEK41HM-225	E-CAPACITOR	2.2MF 20% 50V		
C 741	QCVB1CM-103Y	E-CAPACITOR	.010MF 20% 16V		
C 751	QER41CM-476M	E-CAPACITOR	47MF 20% 16V		
C 752	QERF1AM-2272M	E-CAPACITOR	220MF 20% 10V		
C 753	QCVB1CM-103Y	E-CAPACITOR	.010MF 20% 16V		
C 910	QEK40JM-476	E-CAPACITOR	47MF 20% 6.3V		
C 911	QCVB1CM-103Y	E-CAPACITOR	.010MF 20% 16V		
C 912	QEK40JM-476	E-CAPACITOR	47MF 20% 6.3V		
C 913	QCVB1CM-103Y	E-CAPACITOR	.010MF 20% 16V		
C 931	QER41EM-475VM	E-CAPACITOR	4.7MF 20% 25V		
C 932	QER41EM-475VM	E-CAPACITOR	4.7MF 20% 25V		
C 941	QEK41CM-106	E-CAPACITOR	10MF 20% 16V		
C 942	QEK40JM-476	E-CAPACITOR	47MF 20% 6.3V		
C 943	QEKF1AM-1072N	E-CAPACITOR	100MF 20% 10V		
C 944	QEK41HM-105	E-CAPACITOR	1.0MF 20% 50V		
C 945	QEV11HJ-393AZM	FILM CAPACITOR	.039MF 5% 50V		
C 946	QEV11HJ-393AZM	FILM CAPACITOR	.039MF 5% 50V		
C 961	QETC1CM-4772N	E-CAPACITOR	470MF 20% 16V		
C 962	QEK41CM-106	E-CAPACITOR	10MF 20% 16V		
C 964	QCVB1CM-103Y	E-CAPACITOR	.010MF 20% 16V		
C 965	QCVB1CM-103Y	E-CAPACITOR	.010MF 20% 16V		
C 982	QEV11HJ-393AZM	FILM CAPACITOR	.039MF 5% 50V		
CF 1	VCF2S3B-104Z	CERAMIC FILTER			G-GE
CF 2	VCF2M3B-103	CERAMIC FILTER			
CF510	CSB456F11	CERA LOCK			
CJ905	VMC0232-S12	CONNECTOR			
CJ907	VMC0259-002	CONNECTOR			
CN904	VMC0198-003	CONNECTOR			
CP901	VMC0135-009	CONNECTOR			
CP903	VMC0135-006	CONNECTOR			
CP905	VMC0232-Q12	CONNECTOR			
CP907	VMC0278-002	CONNECTOR			G-GE
CP950	TXLL-014-M	FEED THROUGH			
CP981	VGZ0007-030	SI DIODE			
D 1	1SS133	SI DIODE			
D 2	1SS133	SI DIODE			
D 3	1SS133	SI DIODE			
D 4	1SS133	SI DIODE			
D 21	1SS133	SI DIODE			
D 181	1SS133	SI DIODE			B-E,GI
D 182	1SS133	SI DIODE			B-E,GI
D 281	1SS133	SI DIODE			B-E,GI
D 282	1SS133	SI DIODE			B-E,GI
D 510	1SS133	SI DIODE			G-GE
D 511	1SS133	SI DIODE			G-GE
D 550	HZS5-1EB1	ZENER DIODE			G-GE
D 701	1SS133	SI DIODE			
D 702	1SS133	SI DIODE			
D 703	1SS133	SI DIODE			
D 704	1SS133	SI DIODE			
D 707	1SS133	SI DIODE			
D 708	1SS133	SI DIODE			
D 709	1SS133	SI DIODE			
D 710	1SS133	SI DIODE			
D 711	1SS133	SI DIODE			

BLOCK NO. 02

A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
D 712	DSK10C-E	DIODE			
D 713	1SS133	SI DIODE			
D 714	1SS133	SI DIODE			
D 721	1SS133	SI DIODE			
D 722	1SS133	SI DIODE			
D 723	1SS133	SI DIODE			
D 724	HZS5-6EB2	ZENER DIODE			
D 731	HZS10EB2	ZENER DIODE			
D 751	HZS10EB2	ZENER DIODE			
D 771	SLR-34VC3F	LED			
D 772	SLR-34VC3F	LED			
D 911	1SS133	SI DIODE			
D 912	HZS4-3EB2-T2	ZENER DIODE			
D 931	HZS11EB2	ZENER DIODE			
D 941	MA700A	S-B-DIODE			
D 942	MA700A	S-B-DIODE			
D 981	DSK10C-E	DIODE			
D 982	1SS133	SI DIODE			
DS 1	HZS5-6EB2	ZENER DIODE			
DS 2	HZS5-6EB2	ZENER DIODE			
DS 3	HZS5-6EB2	ZENER DIODE			
IC 1	LA1140B	IC			
IC 2	AN7465K	IC			
IC141	BA15218N	IC			
IC241	BA15218N	IC			
IC510	LA2220	IC			G-GE
IC550	LA2211	IC			G-GE
IC701	UPD1708AG-334	IC			
IC702	HD74HC00P	IC			
IC910	VC4580L	IC			
IC911	VC4580L	IC			
IC961	HA13151	IC			
L 1	VQP0018-2R2	INDUCTOR			
LCD 1	VGL1131-001E	LCD			
P 981	VMP3428-401	WIRE ASS'Y			
PL701	VGZ0001-056	LAMP			
PL703	VGZ0001-056	LAMP			
PL771	VGZ0001-055	LAMP			
PL772	VGZ0001-055	LAMP			
Q 1	2SC1740S(R,S)	TRANSISTOR			
Q 21	BA1L4M	TRANSISTOR			
Q 141	2SK301(P,Q)	TRANSISTOR(FET)			
Q 142	2SC1740S(R,S)	TRANSISTOR			
Q 143	2SC1740S(R,S)	TRANSISTOR			
Q 241	2SK301(P,Q)	TRANSISTOR(FET)			
Q 242	2SC1740S(R,S)	TRANSISTOR			
Q 243	2SC1740S(R,S)	TRANSISTOR			
Q 510	2SC1740S(R,S)	TRANSISTOR			G-GE
Q 701	BM1L47-T	TRANSISTOR			
Q 702	BM1L47-T	TRANSISTOR			
Q 703	BM1L47-T	TRANSISTOR			
Q 704	BM1L47-T	TRANSISTOR			
Q 705	2SA933S(RS)	TRANSISTOR			
Q 706	BA1L4M	TRANSISTOR			
Q 707	2SA933S(RS)	TRANSISTOR			

BLOCK NO. 04					
A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	Q 708	25C1740S(R,S)	TRANSISTOR		
	Q 721	25D638(R,S)	TRANSISTOR		
	Q 722	25A933S(RS)	TRANSISTOR		
	Q 723	25C1740S(R,S)	TRANSISTOR		
	Q 731	25C1740S(R,S)	TRANSISTOR		
	Q 732	25C1740S(R,S)	TRANSISTOR		
	Q 741	25C1740S(R,S)	TRANSISTOR		
	Q 742	25C1740S(R,S)	TRANSISTOR		
	Q 751	25D973	TRANSISTOR		
	Q 752	25D973	TRANSISTOR		
	Q 753	25A933S(RS)	TRANSISTOR		
	Q 754	25A933S(RS)	TRANSISTOR		
	Q 757	BA1L4M	TRANSISTOR		
	Q 931	BN1A4M	TRANSISTOR		
	Q 932	BA1L4M	TRANSISTOR		
	Q 941	BN1L4M	TRANSISTOR		
	Q 942	BA1L4M	TRANSISTOR		
	Q 943	25C1740S(R,S)	TRANSISTOR		
	Q 981	25A933S(RS)	TRANSISTOR		
	R 1	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R 2	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R 3	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
	R 4	QRD161J-100	CARBON RESISTOR	10 5% 1/6W	
	R 5	QRD161J-273	CARBON RESISTOR	27K 5% 1/6W	
	R 6	QRD161J-333	CARBON RESISTOR	33K 5% 1/6W	
	R 7	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R 8	QRD161J-220	CARBON RESISTOR	22 5% 1/6W	
	R 9	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 10	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R 11	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R 12	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R 13	QRD161J-123	CARBON RESISTOR	12K 5% 1/6W	
	R 14	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
	R 15	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R 16	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
	R 21	QRD161J-220	CARBON RESISTOR	22 5% 1/6W	
	R 22	QRD161J-273	CARBON RESISTOR	27K 5% 1/6W	
	R 23	QRD161J-152	CARBON RESISTOR	1.5K 5% 1/6W	
	R 24	QRD161J-474	CARBON RESISTOR	470K 5% 1/6W	
	R 25	QRD167J-562	CARBON RESISTOR	5.6K 5% 1/6W	
	R 26	QRD161J-123	CARBON RESISTOR	12K 5% 1/6W	
	R 27	QRD161J-334	CARBON RESISTOR	330K 5% 1/6W	
	R 28	QRD161J-822	CARBON RESISTOR	8.2K 5% 1/6W	
	R 29	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 30	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R 31	QRD167J-332	CARBON RESISTOR	3.3K 5% 1/6W	
	R 32	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
	R 33	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 34	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
	R 110	QRD161J-333	CARBON RESISTOR	33K 5% 1/6W	
	R 111	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
	R 112	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
	R 114	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 130	QRD161J-392	CARBON RESISTOR	3.9K 5% 1/6W	
	R 131	QRD161J-681	CARBON RESISTOR	680 5% 1/6W	
					B,E,G,I

BLOCK NO. 01111111

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R 735	QRD161J-332	CARBON RESISTOR	3.3K 5% 1/6W	
R 736	QRD161J-221	CARBON RESISTOR	220 5% 1/6W	
R 737	QRD161J-152	CARBON RESISTOR	1.5K 5% 1/6W	
R 741	QRD161J-123	CARBON RESISTOR	12K 5% 1/6W	
R 742	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
R 743	QRD161J-104	CARBON RESISTOR	10K 5% 1/6W	
R 751	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 752	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
R 753	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 754	QRD161J-332	CARBON RESISTOR	3.3K 5% 1/6W	
R 781	QRD161J-271	CARBON RESISTOR	270 5% 1/6W	
R 782	QRD161J-681	CARBON RESISTOR	680 5% 1/6W	
R 910	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 931	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
R 932	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 941	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 942	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
R 943	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 944	QRD161J-122	CARBON RESISTOR	1.2K 5% 1/6W	
R 945	QRD161J-184	CARBON RESISTOR	180K 5% 1/6W	
R 946	QRD161J-184	CARBON RESISTOR	1.8K 5% 1/6W	
R 947	QRD161J-184	CARBON RESISTOR	180K 5% 1/6W	
R 948	QRD161J-561	CARBON RESISTOR	560 5% 1/6W	
R 949	QRD161J-475	CARBON RESISTOR	4.7M 5% 1/6W	
R 950	QRD161J-220	CARBON RESISTOR	22 5% 1/6W	
R 981	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
R 982	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
RS 5	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
RS 6	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
RS 7	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
RS 8	QRD161J-682	CARBON RESISTOR	6.8K 5% 1/6W	
RS 9	QRD161J-682	CARBON RESISTOR	6.8K 5% 1/6W	
RS 10	QRD161J-682	CARBON RESISTOR	6.8K 5% 1/6W	
RS 11	QRD161J-682	CARBON RESISTOR	6.8K 5% 1/6W	
RY981	VSK1D12-118	RELAY		
S 771	QSQ1B11-V01Z	TACT SWITCH		
S 772	QSQ1B11-V01Z	TACT SWITCH		
S 773	QSQ1B11-V01Z	TACT SWITCH		
S 774	QSQ1B11-V01Z	TACT SWITCH		
S 775	QSQ1B11-V01Z	TACT SWITCH		
S 776	QSQ1B11-V01Z	TACT SWITCH		
S 777	QSQ1B11-V01Z	TACT SWITCH		
S 778	QSQ1B11-V01Z	TACT SWITCH		
S 779	QSQ1B11-V01Z	TACT SWITCH		
S 780	QSQ1B11-V01Z	TACT SWITCH		
T 1	VQT729-502	IFT		
TP 1	TXLP-002-B	CONNECTOR		
TP 2	TXLP-002-B	CONNECTOR		
TU 1	VAF2S07-402	FM FRONT END		
VR 1	QVZ323-331AZ	V.RESISTOR		
VR 21	QVPE612-502ZM	V.RESISTOR		
VR 22	QVZ323-222AZ	V.RESISTOR		
VR550	QVPC610-472	SEMI.V.RESISTOR		G-GE
VR920	VCV1001-152	V RESISTOR		
VR921	VCV1001-153	V RESISTOR		
VR922	VCV1001-154	V RESISTOR		
X 701	VCX4001-005	CRYSTAL		

BLOCK NO. 01111111

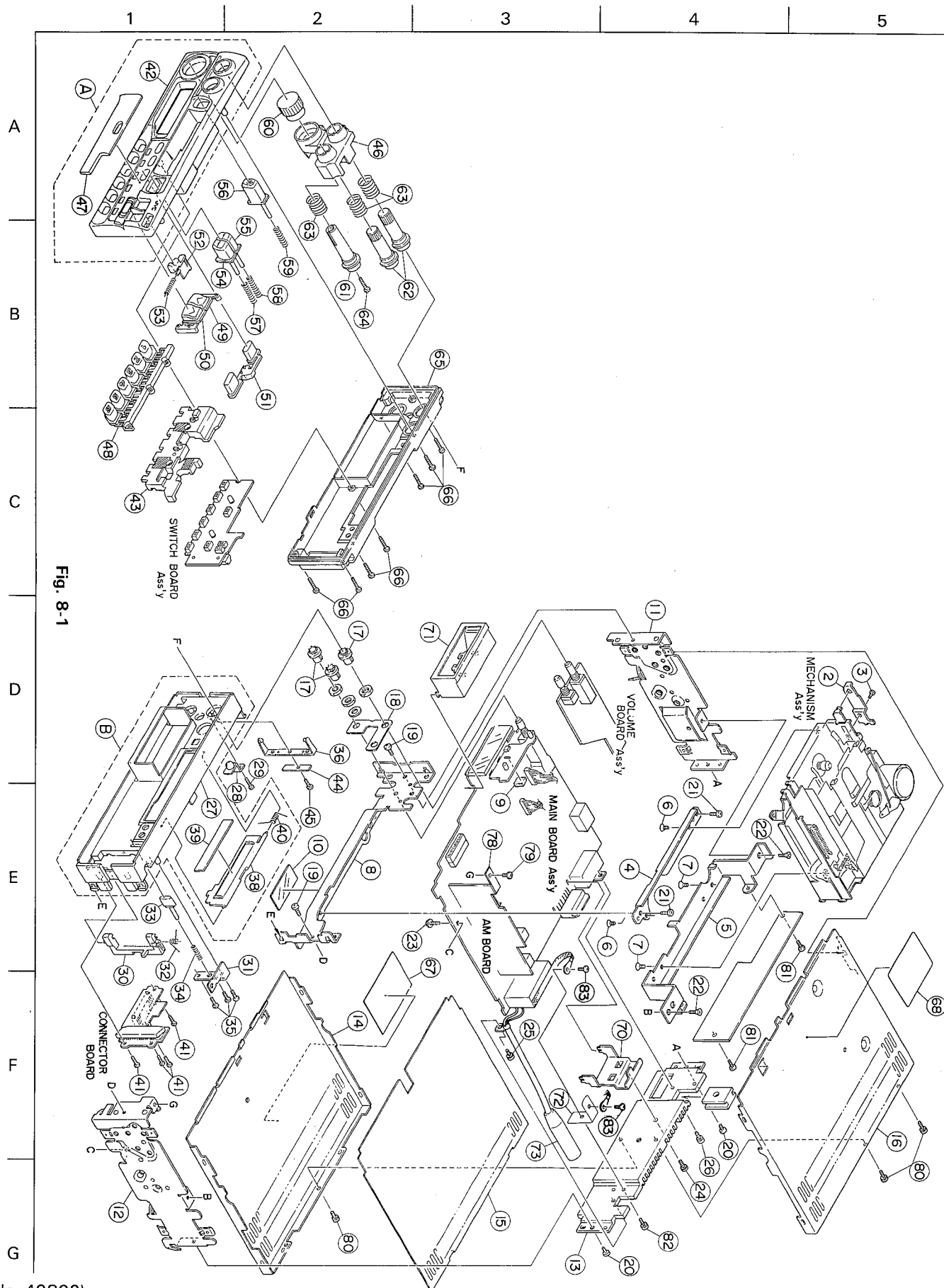
REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R 266	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 281	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 282	QRD161J-2R2	CARBON RESISTOR	2.2 5% 1/6W	
R 283	QRD161J-2R2	CARBON RESISTOR	2.2 5% 1/6W	
R 291	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 292	QRD161J-2R2	CARBON RESISTOR	2.2 5% 1/6W	
R 293	QRD161J-2R2	CARBON RESISTOR	2.2 5% 1/6W	
R 301	QRD161J-153	CARBON RESISTOR	15K 5% 1/6W	G-GE
R 301	QRD161J-822	CARBON RESISTOR	8.2K 5% 1/6W	B-E-GI
R 401	QRD161J-822	CARBON RESISTOR	8.2K 5% 1/6W	B-E-GI
R 401	QRD161J-153	CARBON RESISTOR	15K 5% 1/6W	G-GE
R 510	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	G-GE
R 511	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	G-GE
R 512	QRD161J-182	CARBON RESISTOR	1.8K 5% 1/6W	G-GE
R 513	QRD161J-161	CARBON RESISTOR	160 5% 1/6W	G-GE
R 514	QRD161J-473	CARBON RESISTOR	4.7K 5% 1/6W	G-GE
R 515	QRD161J-473	CARBON RESISTOR	4.7K 5% 1/6W	G-GE
R 516	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	G-GE
R 517	QRD161J-473	CARBON RESISTOR	4.7K 5% 1/6W	G-GE
R 518	QRD161J-332	CARBON RESISTOR	3.3K 5% 1/6W	G-GE
R 519	QRD161J-105	CARBON RESISTOR	1.0M 5% 1/6W	G-GE
R 520	QRD161J-394	CARBON RESISTOR	390K 5% 1/6W	G-GE
R 522	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	G-GE
R 550	QRD161J-470	CARBON RESISTOR	4.7 5% 1/6W	G-GE
R 551	QRD161J-332	CARBON RESISTOR	3.3K 5% 1/6W	G-GE
R 553	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	G-GE
R 554	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	G-GE
R 555	QRD161J-684	CARBON RESISTOR	680K 5% 1/6W	G-GE
R 556	QRD161J-332	CARBON RESISTOR	3.3K 5% 1/6W	G-GE
R 557	QRD161J-682	CARBON RESISTOR	6.8K 5% 1/6W	G-GE
R 701	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 702	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 703	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 704	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R 705	QRD161J-473	CARBON RESISTOR	4.7K 5% 1/6W	
R 706	QRD161J-332	CARBON RESISTOR	3.3K 5% 1/6W	
R 707	QRD161J-332	CARBON RESISTOR	3.3K 5% 1/6W	
R 708	QRD161J-332	CARBON RESISTOR	3.3K 5% 1/6W	
R 709	QRD161J-332	CARBON RESISTOR	3.3K 5% 1/6W	
R 710	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 711	QRD161J-393	CARBON RESISTOR	39K 5% 1/6W	
R 712	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 713	QRD161J-473	CARBON RESISTOR	4.7K 5% 1/6W	
R 714	QRD161J-473	CARBON RESISTOR	4.7K 5% 1/6W	
R 715	QRD161J-473	CARBON RESISTOR	4.7K 5% 1/6W	
R 721	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 722	QRD161J-392	CARBON RESISTOR	3.9K 5% 1/6W	
R 723	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
R 724	QRD161J-332	CARBON RESISTOR	3.3K 5% 1/6W	
R 725	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 726	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 731	QRD161J-331	CARBON RESISTOR	330 5% 1/6W	
R 732	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 733	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 734	QRD161J-471	CARBON RESISTOR	470 5% 1/6W	

• AM Board Parts List

BLOCK NO. 02				
A	REF.	PARTS NO.	PARTS NAME	SUFFIX
B	903	NRS181J-ORONY	MG RESISTOR	
B	904	NRSA02J-ORONY	MG RESISTOR	
B	906	NRS181J-ORONY	MG RESISTOR	
B	908	NRSA02J-ORONY	MG RESISTOR	
B	909	NRSA02J-ORONY	MG RESISTOR	
B	910	NRSA02J-ORONY	MG RESISTOR	
B	911	NRSA02J-ORONY	MG RESISTOR	
B	913	NRSA02J-ORONY	MG RESISTOR	
B	914	NRSA02J-ORONY	MG RESISTOR	
B	915	NRSA02J-ORONY	MG RESISTOR	
C	51	NCS21HJ-821AY	C CAPACITOR	
C	52	NCB21HK-103AY	C CAPACITOR	
C	53	NCS21HJ-220AY	C CAPACITOR	
C	54	QEK41CM-226	E-CAPACITOR	
C	55	NCS21HJ-120AY	C CAPACITOR	
C	56	NCT21CH-8ROAY	C CAPACITOR	
C	58	NCB21HK-103AY	C CAPACITOR	
C	60	NCT21CH-100AY	C CAPACITOR	
C	61	NCS21HJ-120AY	C CAPACITOR	
C	62	NCB21HK-104	C CAPACITOR	
C	63	NCT21CH-431AY	C CAPACITOR	
C	64	NCB21HK-103AY	C CAPACITOR	
C	65	QCVB1CM-103Y	C CAPACITOR	
C	66	NCB21HK-223AY	C CAPACITOR	
C	67	QEK41HM-105	E-CAPACITOR	
C	68	NCB21HK-103AY	C CAPACITOR	
C	70	QEK41CM-476	E-CAPACITOR	
C	71	NCB21HK-273AY	C CAPACITOR	
C	72	NCB21HK-103AY	C CAPACITOR	
C	73	NCT21CH-271AY	C CAPACITOR	
C	74	NCB21HK-473AY	C CAPACITOR	
C	75	QEK41CM-226	E-CAPACITOR	
C	76	QEK41HM-105	E-CAPACITOR	
C	77	NCB21HK-103AY	C CAPACITOR	
C	78	NCB21HK-392AY	C CAPACITOR	
C	79	NCB21HK-273AY	C CAPACITOR	
C	80	QCVB1CM-103Y	C CAPACITOR	
C	101	NCB21HK-681AY	C CAPACITOR	
C	102	QEK41HM-105	E-CAPACITOR	
C	103	NCS21HJ-101AY	C CAPACITOR	
C	104	NCB21HK-123AY	C CAPACITOR	
C	105	QEK41CM-226	E-CAPACITOR	
C	201	NCB21HK-681AY	C CAPACITOR	
C	202	QEK41HM-105	E-CAPACITOR	
C	203	NCS21HJ-101AY	C CAPACITOR	
C	204	NCB21HK-123AY	C CAPACITOR	
C	205	QEK41CM-226	E-CAPACITOR	
C	901	QEK41CM-106	E-CAPACITOR	
C	902	QEK41AM-107ZN	E-CAPACITOR	
CF	51	BFU450C4N	CERAMIC FILTER	
CJ	901	VMC0136-009	CONNECTOR	
CJ	903	VMC0136-006	CONNECTOR	
CJ	904	TXLL-005-M	CONNECTOR	
D	51	1SV121	SI DIODE	
D	52	1SV121	SI DIODE	

BLOCK NO. 02				
A	REF.	PARTS NO.	PARTS NAME	SUFFIX
D	53	SVC351(L-M)W	VARI CAP	
D	56	HSM2838C	DIODE	
D	57	1S133	SI DIODE	
D	58	DC010	SI DIODE	
IC	51	LA1135	IC	
IC	901	UPC1288HA	IC	
L	51	VP0018-470	INDUCTOR	
Q	51	2SK519(EL-FL)	TRANSISTOR(FET)	
Q	52	2SC1623(6)	TRANSISTOR	
Q	53	2SC1623(6)	TRANSISTOR	
Q	54	2SC1623(6)	TRANSISTOR	
Q	55	F1A4ZX	TRANSISTOR	
Q	56	F1A4ZX	TRANSISTOR	
Q	57	F1A4ZX	TRANSISTOR	
Q	58	2SA812(6)	TRANSISTOR	
Q	901	2SC1740S(R-S)	TRANSISTOR	
R	51	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W
R	52	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W
R	53	NRSA02J-ORONY	MG RESISTOR	5% 1/10W
R	54	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W
R	55	NRSA02J-330NY	MG RESISTOR	33 5% 1/10W
R	56	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W
R	58	NRSA02J-152NY	MG RESISTOR	1.5K 5% 1/10W
R	60	Q8D161J-102	CARBON RESISTOR	1.0K 5% 1/6W
R	61	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W
R	62	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W
R	63	NRSA02J-330NY	MG RESISTOR	33 5% 1/10W
R	64	NRSA02J-153NY	MG RESISTOR	15K 5% 1/10W
R	65	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W
R	66	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W
R	67	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W
R	68	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W
R	69	NRSA02J-820NY	MG RESISTOR	82 5% 1/10W
R	70	NRSA02J-333NY	MG RESISTOR	33K 5% 1/10W
R	71	NRSA02J-224NY	MG RESISTOR	220K 5% 1/10W
R	101	NRSA02J-153NY	MG RESISTOR	15K 5% 1/10W
R	102	NRSA02J-151NY	MG RESISTOR	150 5% 1/10W
R	103	NRSA02J-334NY	MG RESISTOR	330K 5% 1/10W
R	201	NRSA02J-153NY	MG RESISTOR	15K 5% 1/10W
R	202	NRSA02J-151NY	MG RESISTOR	150 5% 1/10W
R	203	NRSA02J-334NY	MG RESISTOR	330K 5% 1/10W
R	901	NRSA02J-330NY	MG RESISTOR	33 5% 1/10W
R	902	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W
T	51	V8Z0056-001	LW RF COIL	
T	52	V8Z0031-001	MW RF COIL	
T	53	V8Z0036-001	LW RF COIL	
T	54	V8Z0031-101	MW RF COIL	
T	55	V8M7U01-501	OSC COIL(MW)	
T	56	V8L7U01-501	OSC COIL(LW)	
T	57	V8T7A21-105	IFT	
T	58	V8T7A11-206	IFT	
TC	51	QAT3722-2002M	T-CAPACITOR	
TC	52	QAT3722-6002M	T-CAPACITOR	

8 Exploded View of Enclosure Component Parts and Parts List



• Enclosure Compoment Parts List

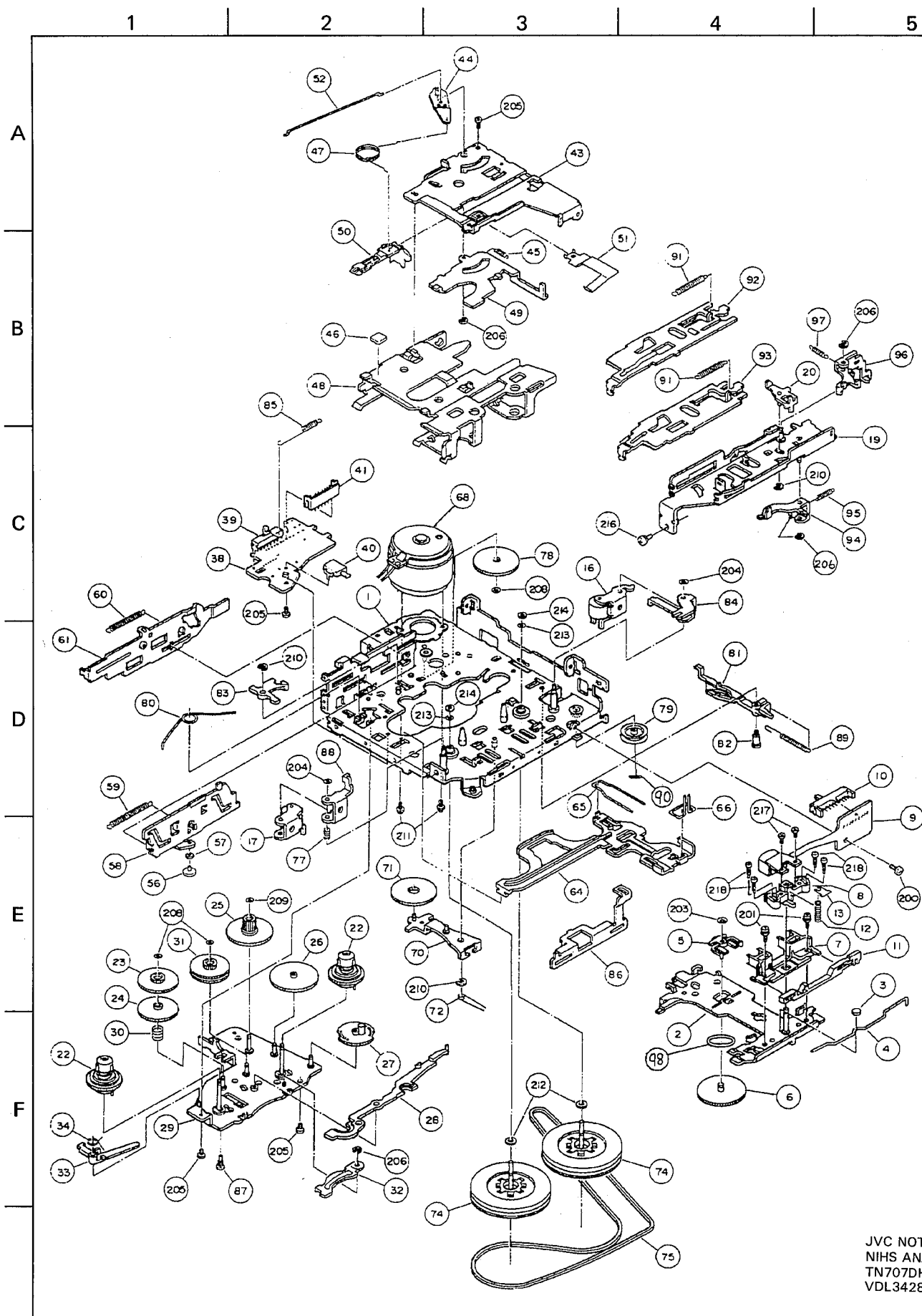
BLOCK NO. M1MM

Δ	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	A	ZCKSRT45K-NPA	FRONT PANEL		1	B/E/GI	
	A	ZCKSRT45G-NPA	FRONT PANEL		1	G/GE	
	B	ZCKSRT45K-FB	FRONT CHASSIS		1		
	2	VKL7226-003	EJECT LEVER		1		
	3	SPSK2625Z	MINI SCREW	EJECT LEVER	1		
	4	VKM3645-001	MECHA BRACKET F		1		
	5	VKM3594-001	MECHA BRACKET R		1		
	6	SSSP3005Z	SCREW	MECHA BRACKET(F	2		
	7	SSSP3005Z	SCREW	MECHA BRACKET(R	2		
	8	VKM3642-002	FRONT BRACKET		1		
	9	VYSR103-048	SPACER	BACKWARD OF LCD	1		
	10	VYSS1R4-040	SPACER	BOTTOMSIDE OF N	1		
	11	VKL2723-001	SIDE BKT(L)		1		
	12	VKL2724-002SS	SIDE BKT(R)		1		
	13	VJC3260-001	REAR PANEL		1		
	14	VKM3352-004	BOTTOM COVER		1		
	15	VMA3216-001	INSULATOR		1		
	16	VKM3398-005	TOP COVER		1		
	17	VKS5439-001	SHAFT KNOB		3		
	18	VKL7274-002	VOLUME HOLDER		1		
	19	SDST2606Z	SCREW	FRONT+SIDE(L,R)	2		
	20	SDST2606Z	SCREW	SIDE(L,R)+REAR	2		
	21	SDST2606Z	SCREW	FRONT BRACKET	2		
	22	SSST2606Z	SCREW	M.BKT+SIDE(L,R)	2		
	23	SDST2606Z	SCREW	MAIN PWB+SIDE B	1		
	24	LPSP2606Z	SCREW	IC BKT+REAR BRA	1		
	25	LPSP2606Z	SCREW	REAR BKT+ANT CO	1		
	26	LPSP2606Z	SCREW	CONNECTOR+REAR	1		
	27	FSJC2004-002	FRONT CHASSIS		1		
	28	VJK4399-002	LENS		1		
	29	SPSN1755N	MINI SCREW	F.CHASSIS+LENS	1		
	30	VKS5438-001	LOCK LEVER		1		
	31	VKL7267-001	LEVER BRACKET		1		
	32	FSKW4005-002	TORSION SPRING	LOCK LEVER	1		
	33	VXP5139-001	RLS KNOB		1		
	34	VKW3001-298	COMP.SPRING	RLS KNOB	1		
	35	SDSF2006Z	SCREW	F.CHASSIS+L.BKT	3		
	36	VKY4665-00E	LOCK SP ASS'Y		1		
	38	VJC4145-002SS	CASSETTE LID		1		
	39	FSJC4001-001	LID PLATE		1		
	40	VKW4947-003	DOOR SPRING		1		
	41	SPSN1755N	MINI SCREW	F.CHASSIS+C.PWB	4		
	42	FSJC1010-006	FRONT PANEL		1		
	43	ZCKSRT45K-LENS	LIGHT LENS ASSY		1		
	44	VKL7647-001	PLATE		1		
	45	SDSF2008M	SCREW	F.CHASSIS+L.SPR	1		
	46	VJK2182-001	KNOB LENS		1		
	47	FSJD3006-00J	FINDER		1		
	48	VXP2066-001	PRESET BUTTON	1/2/3/4/5/B	1		
	49	VXP3571-001	DOWN BUTTON		1		
	50	VXP3572-001	UP BUTTON		1		
	51	VXP3577-005	PUSH BUTTON	MODE/A HBS	1		
	52	FSXP3007-003	DETACH BUTTON		1		
	53	VKW3001-302	COMP. SPRING	DETACH BUTTON	1		
	54	FSXP3009-001	FF BUTTON		1		
	55	FSXP3010-001	REW BUTTON		1		

BLOCK NO. M1MM

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	56	FSXP3008-001	EJECT BUTTON		1		
	57	VKW3001-304	COMP. SPRING	FF BUTTON	1		
	58	VKW3001-304	COMP. SPRING	REW BUTTON	1		
	59	VKW3001-304	COMP. SPRING	EJECT BUTTON	1		
	60	VXL4428-001	VOL KNOB		1		
	61	VKS5445-001	VOL KNOB(R)		1		
	62	VXL4429-001	TONE KNOB		2		
	63	VKW5071-001	SPRING	TONE KNOB	3		
	64	SPSN1755N	MINI SCREW	VOL.KNOB(F)+(R)	1		
	65	FSJC1012-002	REAR COVER		1		
	66	SPSN1755N	MINI SCREW	FRONT+REAR	7		
	67	VYN3494-S012SA	NAME PLATE		1	G,GE	
		VYN3494-S001SA	NAME PLATE		1	B,E	
		VYN3494-S003SA	NAME PLATE		1	GI	
	68	VND4391-001	CAUTION LABEL		1		
	70	VKL7687-001	IC BRACKET		1		
	71	VKL2631-002	LAMP CASE		1		
	72	VMA4628-001	EARTH PLATE	REAR PANEL	1		
	73	VMP0029-007	ANT SOCKET ASSY		1	G,GI,GE	
		VMP0029-026	ANT SOCKET ASSY		1	B,E	
	78	VKL7195-001	BOARD BRACKET		1		
	79	SDST2606Z	SCREW	AM BOARD + FRON	1		
	80	LPSP2606Z	SCREW	TOP/BOTTOM COVE	3		
	81	SDST2606Z	SCREW	SK/DK BOARD	2	G,GE	
	82	LPSP2606Z	SCREW	EARTH PLATE	1		
	83	SDST2606Z	SCREW	EARTH WIRE	1		

9 Exploded View of Melchanism Component Pa



JVC NOTE
NIHS ANAT
TN707DH220
VDL3428001M

Parts and Parts List

• Mechanism Component Parts List

BLOCK NO. M2MM

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	1	194001519T	CHASSIS ASS'Y		1		
	2	194016501T	HEAD PANEL ASY		1		
	3	19400303T	SP ROLLER		1		
	4	19400304T	P.R.SPRING		1		
	5	19400305T	P.GEAR METAL		1		
	6	19400306T			1		
	7	19400312T	TAPE GUIDE U		1		
	8	19400327T	HEAD HOLDER B		1		
	9	62011702T		P-7542-BB0571	1		
	10	64020207T	SLIDE SWITCH	SSSSA3002A	1		
	11	19400328T	SHIFT PLATE B		1		
	12	19400315T	H.G SPRING		1		
	13	9F2635010T	FASTEN WASHER		1		
	16	194004301T	P.ROLL.ARM(F)AS		1		
	17	194004302T	P.ROLL.ARM(R)AS		1		
	19	194005503T	F.R.BKT(M)ASS'Y		1		
	20	194005504T	SEESAW P(M)ASY.		1		
	22	194006302T	T.REEL ASS'Y		2		
	23	19400612T	P.GEAR (R)		1		
	24	19400613T	F.GEAR (R)		1		
	25	19400615T	P.D.GEAR		1		
	26	19400616T	E.D.GEAR		1		
	27	19400617AT	REVERSE GEAR(M)		1		
	28	19400648T	E.D.PLATE B		1		
	29	194002501T	M.G.P.SEMI-ASY.		1		
	30	19400635T	TN SPRING		1		
	31	194006312T	P.CLUTCH ASS'Y		1		
	32	194014129T	LIFT UP PLATE		1		
	33	19401464T	ANTI-REV ARM		1		
	34	19401460T	TRI ARM SPRING		1		
	38	19400704T	SW SUBSTRATE		1		
	39	64020206T	SLIDE SWITCH	SSSSA2001A	1		
	40	64020405T	PUSH SWITCH	SPVC11001A	1		
	41	68140245T	CONNECTOR	53253-0720	1		
	43	19400801T	CASE LIFTER		1		
	44	184008503T	P.E PLATE ASS'Y		1		
	45	18400820T	SPRING		1		
	46	18400875T	CUSSHION RUBBER		1		
	47	19400813T	REVERSE SP.C		1		
	48	19401410T	CASSETTE CASE M		1		
	49	19400804T	C.D PLATE B		1		
	50	19400810T	PACK SLIDER		1		
	51	19400806T	PACK PRESS.SP.		1		
	52	18400823T	P.E SPRING		1		
	56	19400901T	H.P.ROLLER(A)		1		
	57	19400902T	H.P.ROLLER(B)		1		
	58	19400903T	C.H.PUSH PLAT.M		1		
	59	19400905T	C.H.SPRING		1		
	60	19400906T	PUSH LEVER SP.		1		
	61	19400907T	PUSH LEVER M		1		
	64	19401001T	MAIN PLATE		1		
	65	19401002T	M.S.SPRING		1		
	66	19401007T	H.S.SPRING		1		
	68	194011310T	MOTOR ASS'Y	MCI-5U3LCKA	1		

BLOCK NO. M2MM [] [] []

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	70	194012504T	FR W.PLT.SEM.AS		1		
	71	19401703T	F.GEAR		1		
	72	19401704T	FR SPRING M		1		
	74	194013303T	F.L.CAPS.ASS'Y		2		
	75	19401417T	MAIN BELT		1		
	77	18400437T	P.P SPRING		1		
	78	194014123T	MAIN GEAR M		1		
	79	194014115T	MIDDLE PULLEY		1		
	80	19401403T	HEAD PANEL SP.M		1		
	81	19401405T	TRIGGER ARM(C)		1		
	82	19401406T	COLLAR SCREW(T)		1		
	83	19401408T	H.P.PUSH ARM		1		
	84	19401409T	SEESAW WRK.PLT.		1		
	85	19401412T	POWER SW.SPRING		1		
	86	194014127T	FR SLIDE PLT.M		1		
	87	19401415T	COLLAR SCREW(P)		1		
	88	19401416T	H.P.RETURN ARM		1		
	89	19401407T	T.A.SPING(C)		1		
	90	9W0225010T	P.WASHER CUT		1		
	91	19401589T	FR LEVER SPRING		2		
	92	19401590T	FF LEVER (MH)		1		
	93	19401591T	REW LEVER (MH)		1		
	94	19401503T	P.C.PLATE		1		
	95	19401504T	P.C.SPRING		1		
	96	19401505T	ROCK PLATE (M)		1		
	97	19401506T	ROCK PLATE SP.M		1		
	98	9W0540020T	HL WASHER	10 X 14 X 0.4	1		
	200	9P1220051T	S TAPPING SCREW	M2 X 5	1		
	201	9P0220051T	TAMS SCREW	M2 X 5	2		
	203	9W0640070T	HL WASHER CUT	2.1 X 4 X 0.4	1		
	204	9W0630060T	HL WASHER CUT	1.6 X 3.8 X 0.3	2		
	205	9C0420303T	S TAPPING SCREW	FOR CAMERA M2X3	4		
	206	9E0100152T	E RING	S1.5	4		
	208	9W0625030T	HL WASHER CUT	1.2 X 3 X 0.25	3		
	209	9W0630050T	HL WASHER CUT	1.6 X 3.4 X 0.3	1		
	210	9E0100202T	E RING	S2.0	3		
	211	9P0220031T	TAMS SCREW	M2 X 3	2		
	212	9W0513060T	HL WASHER	2.1 X 5 X 0.13	2		
	213	9W0520010T	HL WASHER CUT	1.85 X 3.2 X 0.	2		
	214	9W0650030T	HL WASHER CUT	1.5 X 3.2 X 0.5	2		
	216	9P0226041T	TAMS SCREW	M2.6 X 4	1		
	217	9F2720401T	SCREW	FOR HEAD	2		
	218	9F2220071T	ADJUST SCREW		4		

10 Packing Illustration and Packing Parts List

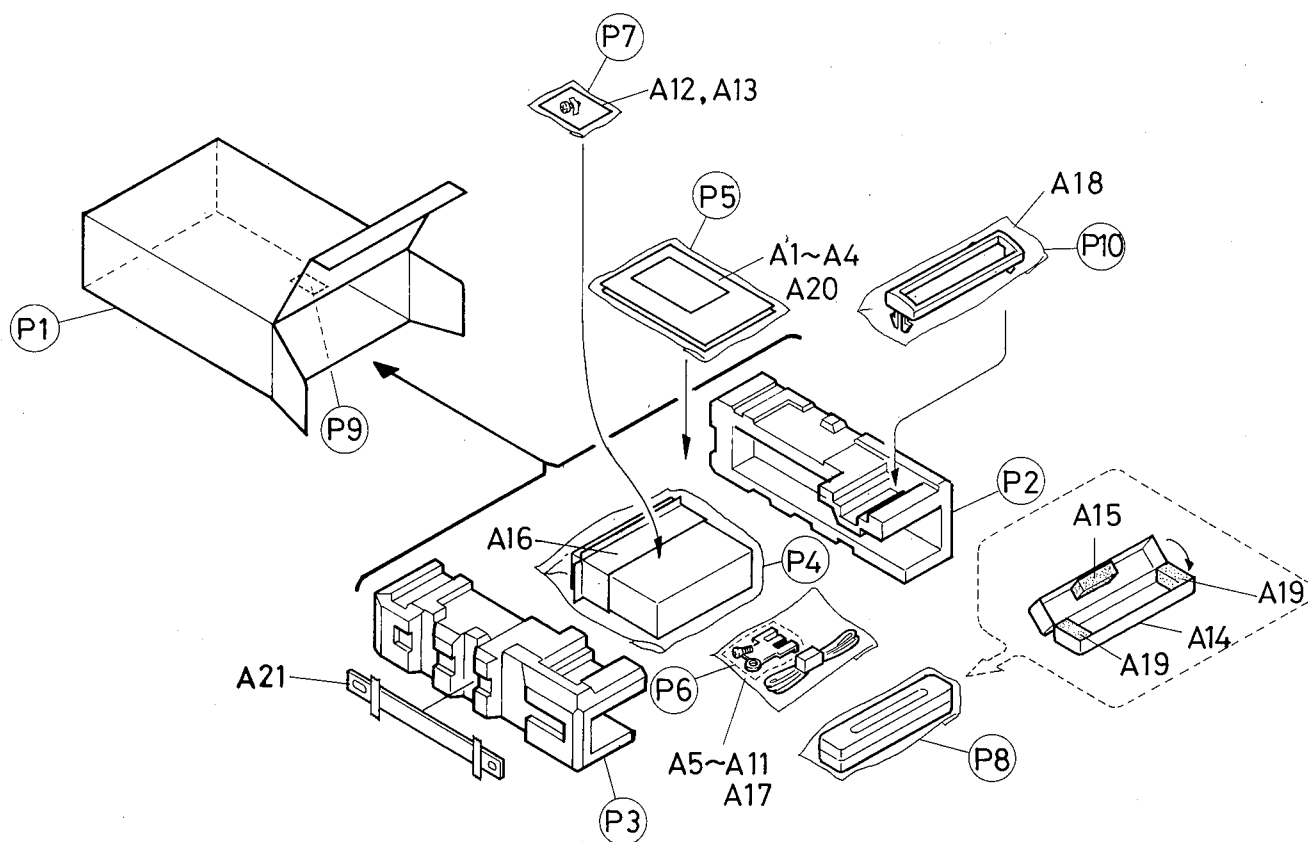


Fig. 10-1

■ Screw Kit Illustration (KSRT30K – SCREW1)

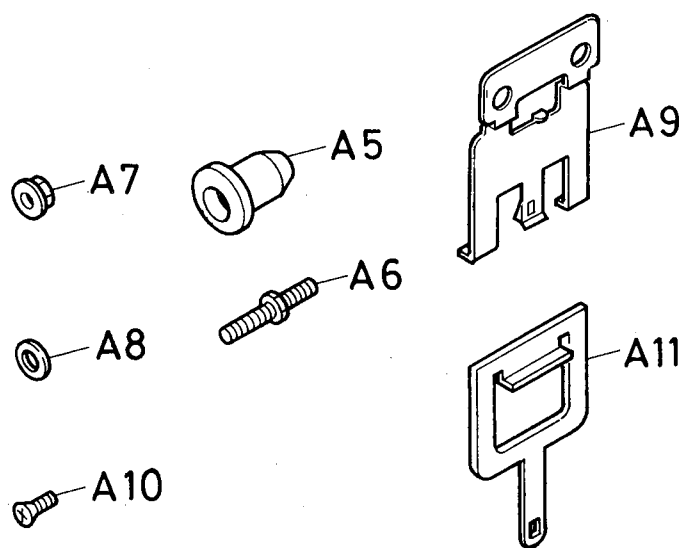


Fig. 10-2

• Packing Parts List

BLOCK NO. M3MM

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	P 1	VPC3494-S003	CARTON	PRINTED IN SING	1		
	P 2	VPH1647-002	CUSHION(L)		1		
	P 3	VPH1648-002	CUSHION(R)		1		
	P 4	VPE3005-066	POLY BAG	SET	1		
	P 5	QPGB017-02404	POLY BAG	INSTRUCTIONS	1		
	P 6	QPGA008-01205	POLY BAG	SCREW KIT	1		
	P 7	QPGA008-01205	POLY BAG	SCREW KIT 2	1		
	P 8	QPGA010-03003	POLY.BAG	FOR HARD CASE	1		
	P 9	VND3046-003	SERIAL TICKET		1	E	
		VND3046-001	SERIAL TICKET		1	GE,GI	
		VND3046-005	SERIAL TICKET		1	G	
		VND3046-004	SERIAL TICKET		1	B	
	P 10	QPGA010-03003	POLY.BAG	FOR TRIM PLATE	1		

BLOCK NO. M3MM

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	A 1	FSUN3004-471S	INSTRUCTIONS		1	GI	
		FSUN3004-481S	INSTRUCTIONS		1	E	
		FSUN3004-211S	INSTRUCTIONS		1		
		FSUN3004-451S	INSTRUCTIONS		1	E	
	A 2	VNC2400-090	CAUTION SHEET		1		
	A 3	BT-20135	WARRANTY CARD		1	G	
		BT-20066A	WARRANTY CARD		1	B	
	A 4	BT20060	SVC CENTER LIST		1	B	
	A 5	VKZ4027-002	PLUG NUT		1		
	A 6	VKH4871-001	MOUNT BOLT		1		
	A 7	VKZ4328-001	LOCK NUT	M5	1		
	A 8	WNS5000Z	WASHER		1		
	A 9	VKY3124-001	SIDE SPRING		2		
	A 10	SSSP4006Z	SCREW	SIDE SPRING	4		
	A 11	VKL7233-001	HOOK		2		
	A 12	SPSJ1725M	MINI SCREW		1		
	A 13	VND4619-001	SHEET		1		
	A 14	VJB2014-001	HARD CASE		1		
	A 15	VYSH118-002	SPACER		1		
	A 16	VKL3732-018SS	MOUNTING SLEEVE		1		
	A 17	VMC0014-145	11P CORD ASS'Y		1		
	A 18	FSJD2004-002	TRIM PLATE		1		
	A 19	FSYH3008-002	SPACER	FOR HARD CASE	2		
	A 20	VND3050-001	IDENTITY CARD		1		
	A 21	VKL5460-001	STAY		1		
	KIT 1	KSRT80RK-SCREW1	SCREW PARTS KIT	A5-A11,A20,P6	1		
	KIT 2	KSRT30K-SCREW2	SCREW PARTS KIT	A12-A13,P7	1		

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