

414

JVC

SERVICE MANUAL

COMPUTER CONTROLLED STEREO RECEIVER

MODEL NO. **RX-9VBK**



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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 these 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 (Δ) 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. 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.

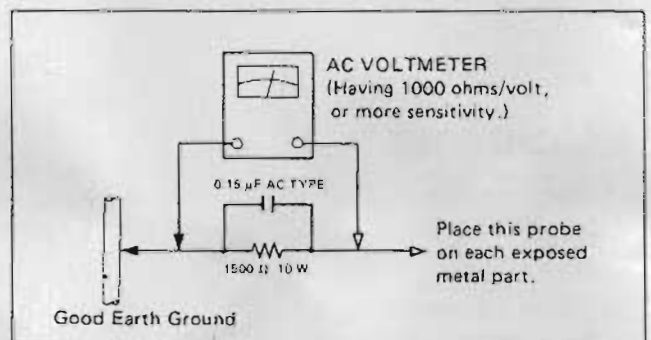
- Plug the AC line cord directly into the AC outlet.
Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5 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 μ F 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.

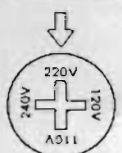
Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).








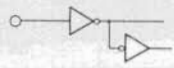
CHECKING YOUR LINE VOLTAGE (Except for U.S.A., Canada, Australia, U.K. and Continental Europe.)

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.



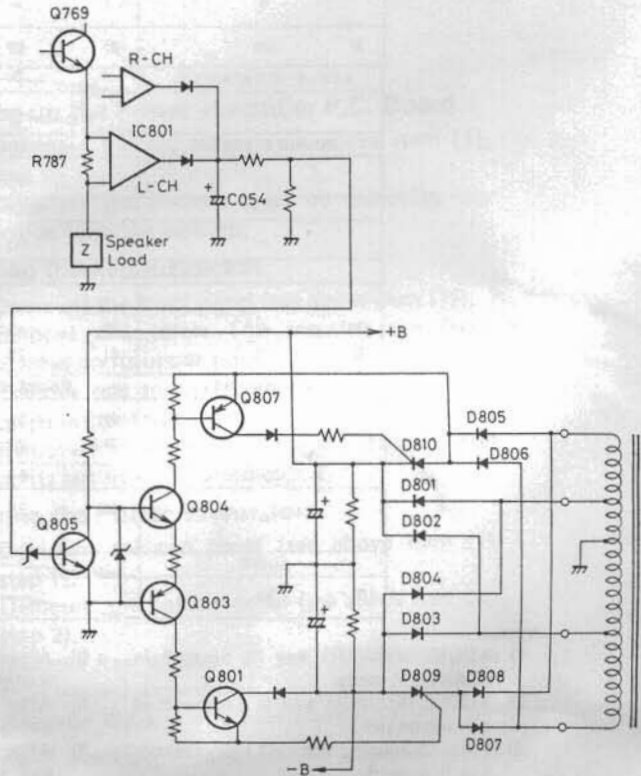
LC7560 (LCD Display Driver) C-MOS LSI, 7 bands, ±2 db step, 11-point display

Name	Terminal No.	Terminal type	Explanation
VDD	24	—	Power supply terminal, +13V
	56		Power supply for A/D conversion
Vcc	52	—	Power supply terminal, +5V Power supply for logic drive
Vss	18	—	Power supply terminal, 0V
DI	57		Terminal for data input from CPU Schmitt inverter type
CLK	55		Terminal for clock input from CPU Schmitt inverter type
COM1	53		Output terminal to LCD common
COM2	54		
A ₁ ~ A ₁₁	31 ~ 41		Output terminal to LCD segment For bands f ₁ and f ₂
B ₁ ~ B ₁₁	19 ~ 30		Output terminal to LCD segment For bands f ₃ and f ₄
C ₁ ~ C ₁₁	7 ~ 17		Output terminal to LCD segment For bands f ₅ and f ₆
D ₁ ~ D ₁₁	60 ~ 64 1 ~ 6		Output terminal to LCD segment For band f ₇ and total display
f ₁ ~ f ₇	42 ~ 48	—	Input terminal for voice signal detection output
T	49		Input terminal for total display Inputs signal detection output
OSC	51		Open-drain-type output buffer Connection terminal of exterior-mounted CR for oscillator
S1	58		Select terminal when a plural number of chips is used (max. 4 chips)
S2	59		

S1	S2	Key Code
1	1	FB
0	1	FA
1	0	F9
0	0	FB

Power Supply Switching Circuit

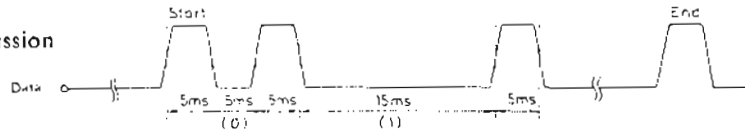
- When the load impedance exceeds 7 ohms, or when the output is small even under 7 ohms, Q804, Q803, Q807, and Q801 go ON because Q805 is OFF. Consequently, current flows to the gates of thyristors D809 and D810, causing these thyristors to be turned ON, and the power amplifier is actuated by high voltage through D805, D806, D807, and D808.
- When output is effected under the load impedance of less than 7 ohms, current and voltage are detected from both ends of R787 (R788 on the right side) to obtain the load impedance, and the detected output is amplified by IC051. When voltage at both ends of C057 rises above 11V, Q805 is turned ON, while Q804, Q803, Q807, and Q801 are turned OFF. As a result, the gate current at D809 and D810 becomes zero, causing these D809 and D810 also to become OFF. This status causes the power amplifier to start functioning at low voltage through D801, D802, D803, and D804.
- Low-voltage functioning is effected at about 70% of high voltage, contributing to improving efficiency during the low-impedance period.



■ Data Transmission through Synchro Terminal

As the synchro terminal has a common bus line to other equipment to be connected externally, data of the both can be mutually exchanged according to the transmission method shown below.

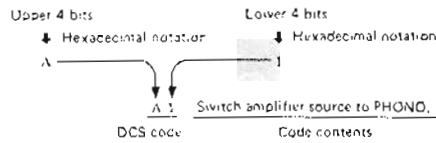
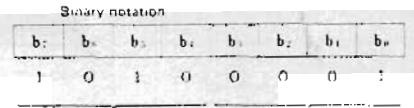
■ Data transmission



Signals "0" and "1" of data are transmitted being discriminated by different intervals between pulses. Namely, pulse interval 5 ms....."0"
pulse interval 15 ms "1"

Every transmission datum is composed of 8 bits, therefore, number of pulses for a datum is nine.

■ Configuration of datum



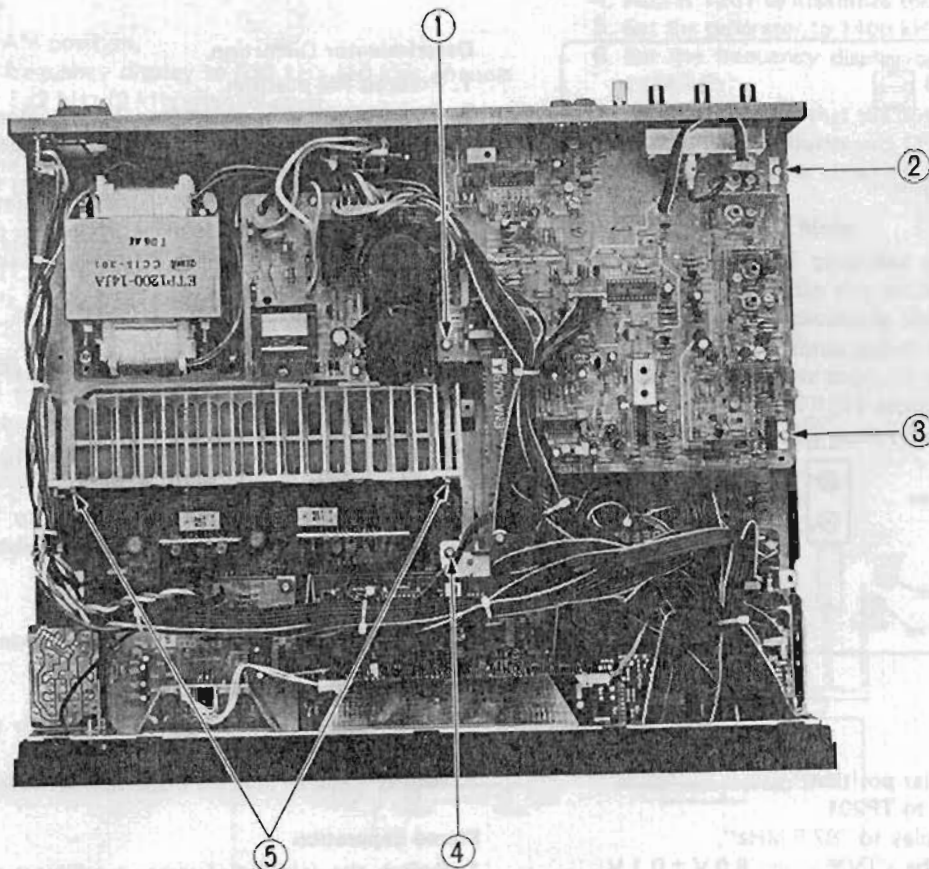
■ Relationship between Remote Control Transmitter (RM-S9) and DCS Codes

SLEEP TIMER	VCR	POWER	
		TV	AUDIO
	-	-	1) C0 2) C1
63 Hz/1	160 Hz/2	400 Hz/3	SEA CONTROL
3) D1	3) D2	3) D3	-
1 kHz/4	2.5 kHz/5	6.3 kHz/8	FM
3) D4	3) D5	3) D6	C2
16 kHz/7	8	9	AM
3) D7	3) D8	3) D9	C3
0	PRESET STATION SEA LEVEL +		TV
3) D0	3) C7	3) C6	-
ACOUSTIC EXPANDER			VIDEO I/TV
-			-
SOUND SELECTOR	SEA SOURCE	SEA PRESET	
-			
VCR	PHONO	CD	TAPE
-	A1	A3	A4
-	CHANNEL SKIP +	STOP	PLAY
7) 44 8) 2C	7) 43 8) 2B	6) 8E 7) 42 8) 2E	6) 87 7) 41 8) 21
TAPE CONTROL	PAUSE/STILL	STOP	REC
-	9) 25 10) 2D	9) 22	11) 2D 12) 29
VCR CONTROL	◀◀ 9) 24	PLAY 9) 20 10) 29	▶▶ 9) 23
MUTE			VOLUME +
10) 26			-

Notes:

- 1) AUDIO (POWER) key is pressed in STANDBY mode.
- 2) AUDIO (POWER) key is depressed at turning on power.
- 3) After depressing FM/AM key, another key is pressed.
- 4) After depressing PHONO key, another key is pressed.
- 5) After depressing CD key, another key is pressed.
- 6) After depressing TAPE key, another key is pressed.
- 7) After depressing TAPE CONTROL key, this key is pressed.
- 8) After depressing TAPE CONTROL key, this key and REC key are pressed at the same time.
- 9) After depressing TAPE CONTROL key, this key and PAUSE/STILL key are pressed at the same time.
- 10) After depressing TAPE CONTROL key, this key and PLAY key are pressed at the same time.

Removal Procedures



(1) Removing the Front Panel

Step 1: Demount the top cover by removing four screws from the two sides and two screws from the rear.

Step 2: Remove three screws securing the front panel on its upper side and three screws securing it on the lower side.

Step 3: Demount the switch P.C. board secured to the front panel with catches.

(2) Removing the Tuner P.C. Board

Step 1: Demount the top cover (see above item (1), step 1).

Step 2: Remove three screws (1) through (3) securing the tuner P.C. board on its upper side.

Step 3: Remove four screws (USA, Canada: five screws) securing the antenna terminal on its rear side.

(3) Checking-up the Pre-Amplifier P.C. Board

Step 1: Demount the tuner P.C. board (see above item (2)).

Step 2: Demount the bottom cover by removing three screws from the bottom.

(4) Checking-up the Power Amplifier P.C. Board

Step 1: Demount the top cover (see above item (1), step 1).

Step 2: Demount the bottom cover by removing two screws from the bottom.

(5) Removing the Front Bracket

Step 1: Demount the front panel (see above item (1)).

Step 2: Remove one screw (4) securing the front bracket on its upper side.

Step 3: Remove one screw securing the front bracket on its bottom side.

Step 4: Remove four screws securing the front bracket on its bottom side (toward you).

(6) Removing the Power Transistors

Step 1: Demount the top cover (see above item (1), step 1).

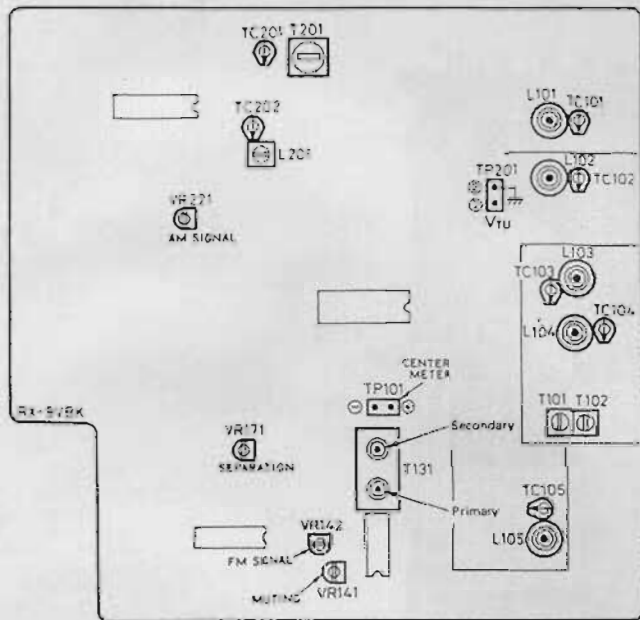
Step 2: Demount the bottom cover (see above item (4), step 2).

Step 3: Remove four screws (5) securing the heat-sink by a bended screwdriver.

Step 4: Resolder the pins of power transistors.

Note: Part number of the bended screwdriver is "EBSJ-1005".

(1) FM/AM Tuner P.C. Board



FM Section

Band Cover

1. Set the TC105 to center position.
2. Connect a DC VTVM to TP201.
3. Set the frequency display to "87.5 MHz".
4. Adjust L105 so that the VTVM shows $8.0\text{ V} \pm 0.1\text{ V}$.
5. Set the frequency display to "108.0 MHz".
6. Adjust TC105 so that the VTVM shows $23.0\text{ V} \pm 0.1\text{ V}$.
7. Repeat these items (from item 3. to item 6.) alternately until reference voltage is obtained.

Sensitivity

Low Frequency

1. Connect an RF generator to the antenna terminals on the rear panel through a dummy antenna.
2. Set an RF generator to 90 MHz, a modulation of 1 kHz and a deviation of 75 kHz to provide an input of $2\text{ }\mu\text{V}$.
3. Connect a VTVM and an oscilloscope to the "REC. OUT" terminal on the rear panel.
4. Set the frequency display to 90 MHz.
5. Adjust coils L101, L102, L103 and L104 to maximize the output.
6. Adjust IFT (T101) to maximize the output.

High Frequency

7. Set the RF generator to 106 MHz, a modulation of 1 kHz and a deviation of 75 kHz to provide an input of $2\text{ }\mu\text{V}$.
8. Set the Frequency Display to 106 MHz.
9. Adjust the FM trimmers TC101, TC102, TC103 and TC104 to maximize the output.
10. Repeat these high and low frequencies adjustment alternately until maximum sensitivity is obtained.

Discriminator Distortion

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" terminal on the rear panel.
4. Set the RF generator to 98 MHz, generator output to $60\text{ dB}/\mu\text{V}$ (1 mV).
5. Set the frequency display to 98 MHz.
6. Connect a DC VTVM between TP101.
7. Adjust the core indicated arrow (Primary) of T131 for DC VTVM reading of (zero) mV.
8. And set the RF generator output to 1 mV .
9. Adjust the core indicated arrow (Secondary) of T131 so that the distortion is minimized.
10. Repeat these items (from item 7. to item 9.) alternately until reference specification is obtained.

Stereo Distortion

Note: This adjustment is after the discriminator distortion adjustment.

1. Set the frequency display to 98 MHz.
2. Switch the selector of stereo-modulator to left channel modulation.
3. Adjust T102 so that the distortion is minimized.

Stereo Separation

1. Switch the selector of stereo modulator to left channel modulation.
2. Adjust VR171 so that the output of right channel is minimized.
3. Switch the selector of the modulator to right channel modulation.
4. Adjust VR171 so that the left channel is minimized.
5. Set VR171 to a average, if the separation of left and right is different.

Muting

1. Connect the RF generator to the antenna terminal on the rear panel.
2. Set the RF generator at 100.1 MHz, $10\text{ }\mu\text{V}$. Rotate VR141 counterclockwise, and stop rotating at the point where muting is eliminated (signals are output).

Signal Strength Display

1. Set the RF generator at 100.1 MHz, $100\text{ }\mu\text{V}$. While rotating VR142 clockwise, adjust the FM-signal strength meter so that this meter displays 40 dB.

AM Section

Band Cover

1. Press to AM position.
2. Set the frequency display to 530 kHz (10 kHz channel step), or 522 kHz (9 kHz channel step).
3. Connect DC VTVM to TP201.
4. Adjust L201 so that the VTVM shows 2.0 V (530 kHz), or 1.8 V (522 kHz).
5. And set the frequency display to 1710 kHz (10 kHz channel step), or 1629 kHz (9 kHz channel step).
6. Adjust TC202 so that the DC VTVM reads 22.0 V for 1710 kHz, or 20.0 V for 1629 kHz.

Tracking and Sensitivity

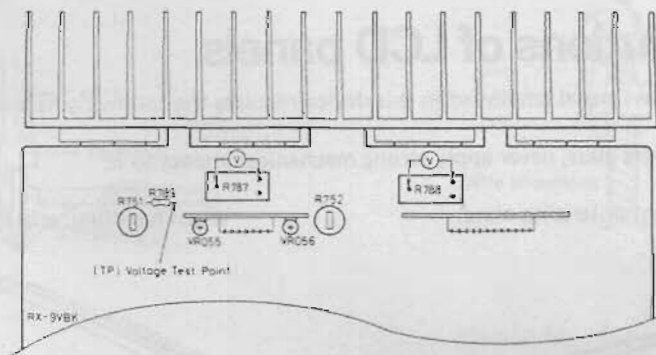
1. Connect the loop antenna. Also connect the RF generator to the antenna terminal on the rear panel.
2. Set the generator to 600 kHz (or 603 kHz) with 30% modulation at 400 Hz.

3. Set the frequency display to 600 kHz, or 603 kHz.
4. Adjust T201 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 TC201 so that the output signal is maximized.
8. Repeat these adjustments (1 ~ 7) alternately until maximum sensitivity is obtained.

AM-signal Strength Meter

1. Connect the RF generator to the antenna terminal on the rear panel. On this work, use the dummy antenna and achieve connection in series via 5.6 k Ω .
2. Set the RF generator either at 999 kHz (9 kHz step) or 1000 kHz (10 kHz step), 10 mV.
3. While rotating VR221 clockwise, adjust the AM-signal strength meter so that this meter displays 90 dB.

(2) Power Amplifier P.C. Board



Idling Current Adjustment

1. Turn R751 and R752 fully counterclockwise before the power switch on.
2. Allow the set warm up at least 10 minutes before adjustment.
3. Must keep the heatsink to prevent overheating before adjustment.

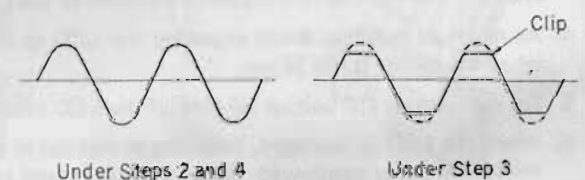
Power Supply Switching Circuit Adjustment

1. Before turning the power ON, turn the semi-fixed resistors (VR055 for Left channel and VR056 for Right channel) of the amplifier circuit board fully counterclockwise.
2. Turn the power ON and input a 20 Hz sine wave to the Left channel (or the Right channel) of the AUX. Then, connect a 7 Ω dummy load to the speaker terminal, adjust either the amplifier's volume or the oscillator's volume to obtain 29 V output.
3. Measure voltage on the R789 (TP) and confirm that the range of "58 V \pm 3 V" exists. Next, slowly rotate clockwise the semi-fixed resistors (VR055/L or VR056/R) and set voltage at the R789 (TP) to the level of 38 V \pm 3 V.
4. Shift the dummy load from 7 ohms to 8 ohms and confirm that voltage at the R789 (TP) is 58 V \pm 3 V. When

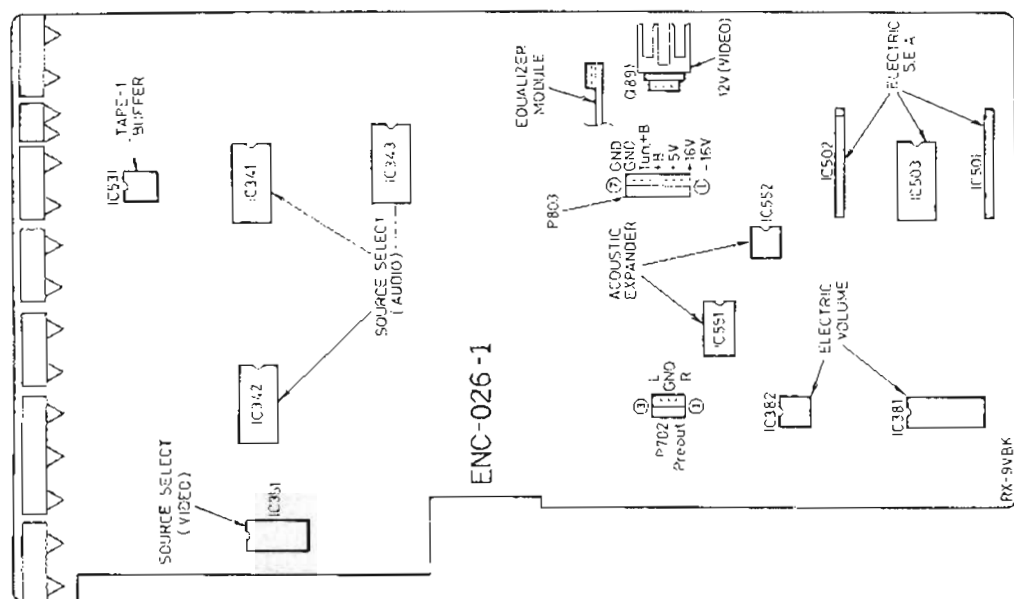
4. Set the volume control to minimum during this adjustment.
5. Connect a DC VTVM to R787 resistor's leads for left channel, or to R788's leads for right channel.
6. Adjust R751 for left channel, or R752 for right channel, so that the DC VTVM reads 5 mV.

this voltage is out of the range (58 V \pm 3 V), readjust the semi-fixed resistors.

- Note:**
- Adjust on one channel at a time, either on the "L" channel or the "R" channel.
 - When you need dummy (7 ohms/8 ohms), consult with JVC.
 - When speaker output is observed with an oscilloscope, waveforms present a "clip" status after voltage has been switched (after (TP) has become 38 V \pm 3 V).



Functions of ICs on the Pre-Amplifier PC Board



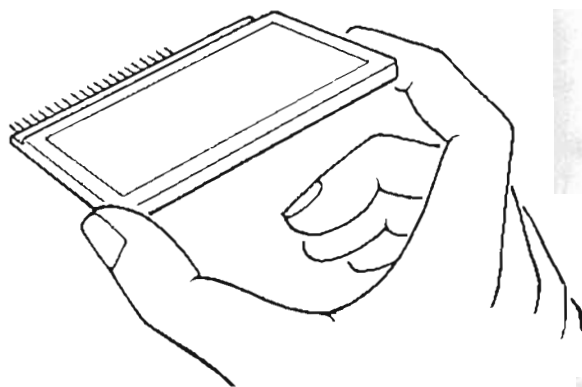
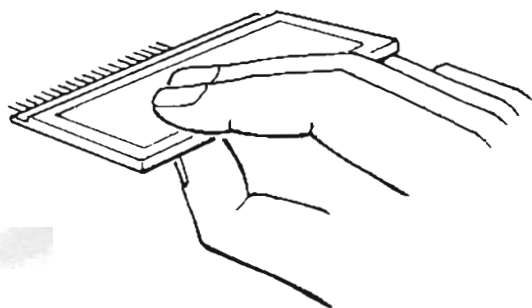
Handling precautions of LCD panels

The LCD (Liquid Crystal Display) panel employed in this device requires the following handling precautions.

1. Since the LCD is made of plate glass, never apply strong mechanical impact to it.

Do not forcibly press the light-polarizing plate.

When handling, grip it as shown in the figure below.



2. When handling the LCD, wear gloves whenever possible.
3. When the light-polarizing plate (surface other than silk-printed areas) becomes contaminated, use an applicator wet with isopropyl alcohol to gently wipe it clean. As for the silk-printed areas, use a soft cloth also to gently wipe it clean.
NOTE: The light-polarizing plate attached to the LCD surface and the silk-printed areas are made of soft material.
4. As much as possible, avoid exposing the LCD to irradiation of harmful light (direct sunlight or ultraviolet rays), especially when the device is not in use.
5. Do not imprint DC voltage on pins of the LCD (characteristics will be degraded).
6. When the LCD is damaged, resulting in leakage of liquid crystal, be very cautious to avoid the liquid from penetrating one's mouth or being swallowed. Should liquid crystal contact the hands or clothing, immediately wash with water, using soap or other appropriate cleanser.

Servicing Method for AWG #20 Wires with Clamping Terminals

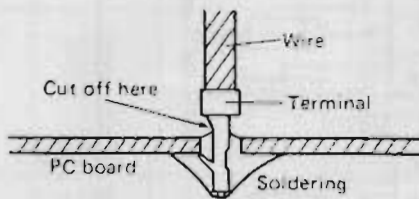
(1) Application objective → Confirmation of safety
Used to prevent breakage/disconnection troubles of primary and secondary wires within PC boards (or between PC boards). Even when wire breakage/disconnection has actually occurred, a safe air-gap distance between the primary wire and the secondary wire/possibly contacting metal surface can be maintained because the terminal retains the wire sheathing.

(2) Type of wire used

- ① 1015 AWG-#20 (single-coated)
- ② 1672 AWG-#20 (double-coated)

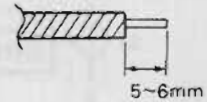
(3) Servicing precautions

① The structural design of this terminal causes its catch to hook onto the PC board, preventing the wire from being easily pulled out. As shown in the figure, use cutting pliers or a similar tool to cut off the ends of the terminal and wire; then remove the remaining terminal clip by melting the soldering.

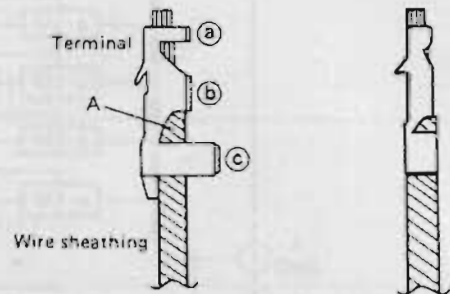


② Prior to soldering the wire onto the PC board, confirm safety by pressure-fitting the terminal to the wire by observing the following procedures.

1. Strip off the wire 5 ~ 6 mm from its end.

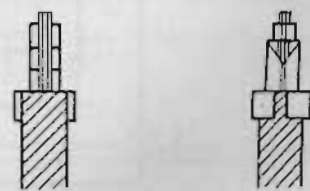


2. Insert the wire until its sheathing contacts section "A" of the terminal and pressure-fit the terminal clamp at three sections of (a), (b), and (c) (section (c) is especially important to assure safety. Exercise particular care to achieve secure clamping).



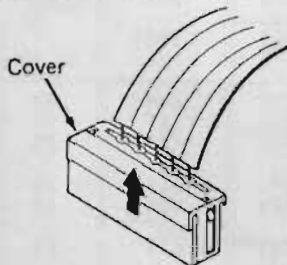
③ Part No., and name

Part No. : 5298T
Name : CRIMP PIN

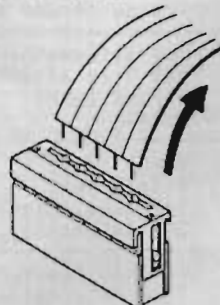


■ Use of new-type connector

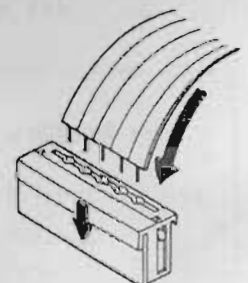
(1) Slide the cover upward.



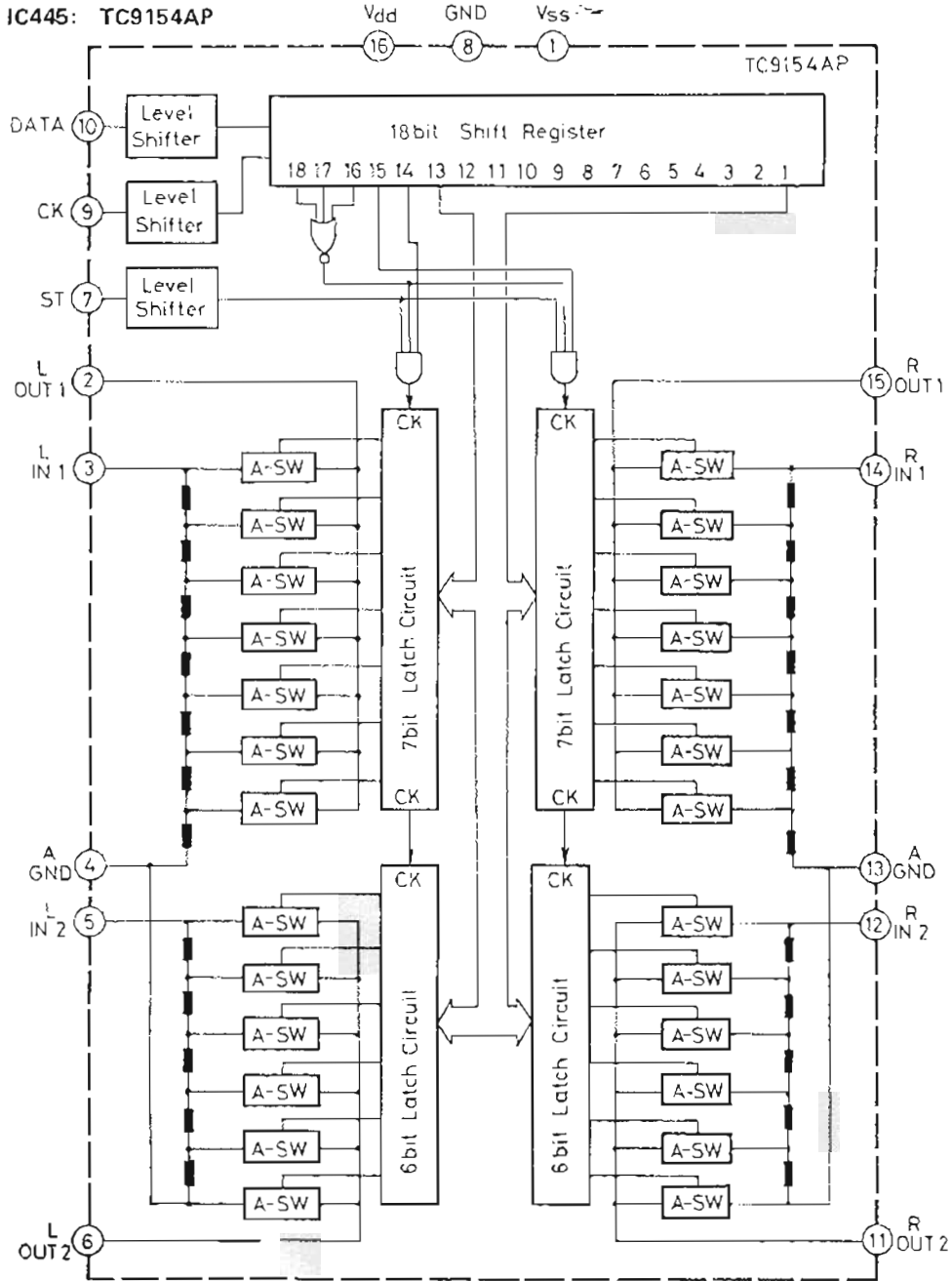
(2) Extract the wires.



(3) Insert the wires after pushing in the cover.



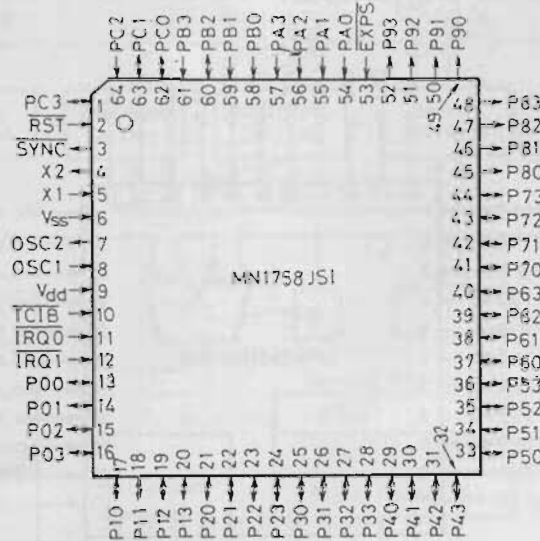
Internal Block Diagrams of Major ICs



IC445: TC9154AP

Pin No.	Symbol	Function
1	V _{ss}	(-)Power Supply
2	L-OUT1	10dB Step Attenuator Output
3	L-IN 1	10dB Attenuator Input
4	A-GND	Ground (Power Supply)
5	L-IN 2	2dB Attenuator Input
6	L-OUT2	2dB Step Attenuator Output
7	ST	Strobe Input
8	GND	Ground
9	CK	Clock Input
10	DATA	Data Input
11	R-OUT2	2dB Step Attenuator Output
12	R-IN 2	2dB Attenuator Input
13	A-GND	Ground (Power Supply)
14	R-IN 1	10dB Attenuator Input
15	R-OUT1	10dB Step Attenuator Output
16	V _{dd}	(+)Power Supply

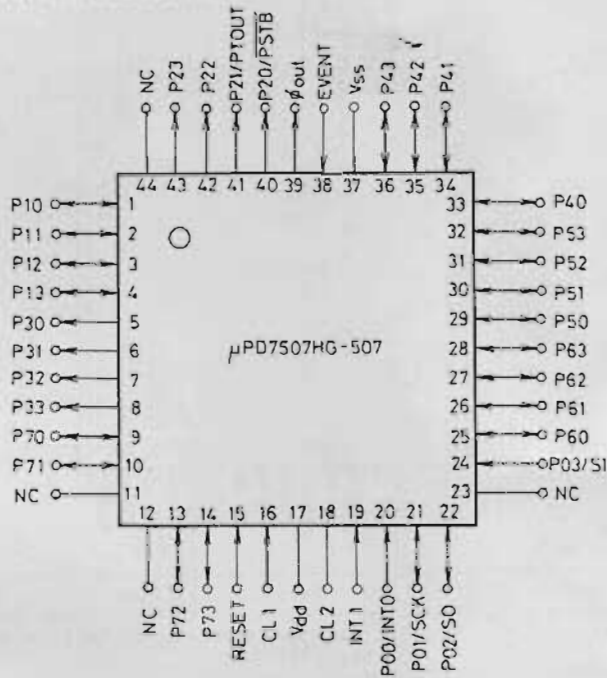
IC461: MN1758JS1



IC461: MN1758JS1

Pin No.	Symbol	Name	I/O	Terminal Function
1	PC3	DATA1	0	Serial data out; Connect to DATA terminal of TC9164N, TC9163N, TC9177P.
2	RST	RESET	1	RESET signal input
3-5	---	---	---	Not use.
6	Vss	Vss	---	GND
7	OSC2	OSC OUT	0	Connect the Ceramic Oscillator.
8	OSC1	OSC IN	1	Connect the Ceramic Oscillator.
9	Vdd	Vdd	---	+5V
10	TCIB	TCIB	---	Not use. (GND)
11	IRQ0	INH in	1	INH signal input
12	IRQ1	IRQ1	---	Not use. (GND)
13	P00	RH in	1	Remote control signal input
14	P01	INH in	1	INH signal input
15	P02	DCS in	1	DCS signal input
16	P03	DCS out	0	DCS signal output
17	P10	RM IND out	0	"H" output when Remote control signal input.
18	P11	LCD C/D	0	Connect the C/D terminal of μ PD7225G.
19	P12	LCD CD	0	Connect the CD terminal of μ PD7225G.
20	---	---	---	Not use. (pull down)
21	P20	REQ-IN	1	Connect the DATA REQUEST OUT terminal of TC9302AF-013BS.
22	P21	MUT	0	"L" output when TUNER Source selected.
23	P22	REQ-OUT	0	Connect the DATA REQUEST IN terminal of TC9302AF-013BS.
24-29	P23-P33	DO-D4	0	Parallel DATA output to control TC9302AF-013BS (DO:LSB, D4:MSB)
29	P40	INH out1	0	"H" output when power "ON".
30	P41	INH out2	0	Connect the INH terminal of μ PD7507HG-507, TC9302AF-013BS.
31	P42	RESET	0	Connect the RESET terminal of μ PD7507HG-507.
32	P43	RESET	0	Connect the RESET terminal of μ PD7225G.
33	P50	VC 0	0	"H" output when VIDEO 1 selected.
34	P51	VC 1	0	"H" output when VIDEO 2 selected.
35	P52	VC 2	0	"H" output when VCR selected.
36	P53	---	---	Not use. (pull down)
37	P60	---	---	Not use. (pull down)
38	P61	MC	0	"H" output when MC phono mode selected.
39	P62	Phono Mute	0	Muting pulse out for each pushing of MC/MM switch.
40	P63	A-EXP	0	"H" output when Acoustic Expander ON.
41	---	---	---	Not use. (pull down)
42	P71	ST-1	0	Connect the strobe terminal of TC9154AP.
43	P72	ST-2	0	Connect the strobe terminal of TC9164N (IC343).
44	P73	ST-3	0	Connect the strobe terminal of TC9164N (IC341), TC9163N, TC9177P.
45-52	---	---	0	Key output; Composed the key matrix with PA0 - PA3.
53	EXPS	EXPS	---	Not use. (open)
54-57	---	---	1	Key input
58	P80	BUSY	1/0	Connect the BUSY terminal of μ PD7225G.
59	P81	TEST	0	Volume UP/DOWN test mode
60	P82	CLK2	0	Serial clock out; Connect the SCK terminal of μ PD7225G and CK terminal of TC9154AP.
61	P83	P83	---	Not use. (GND)
62	PC0	DATA2	---	Serial DATA out; Connect the ST terminal of μ PD7225G and DATA terminal of TC9154AP.
63	PC1	CLK1	---	Serial CLOCK out; Connect the CLK terminal of TC9164N, TC9163N, TC9177P.
64	PC2	PC2	---	Not use. (GND)

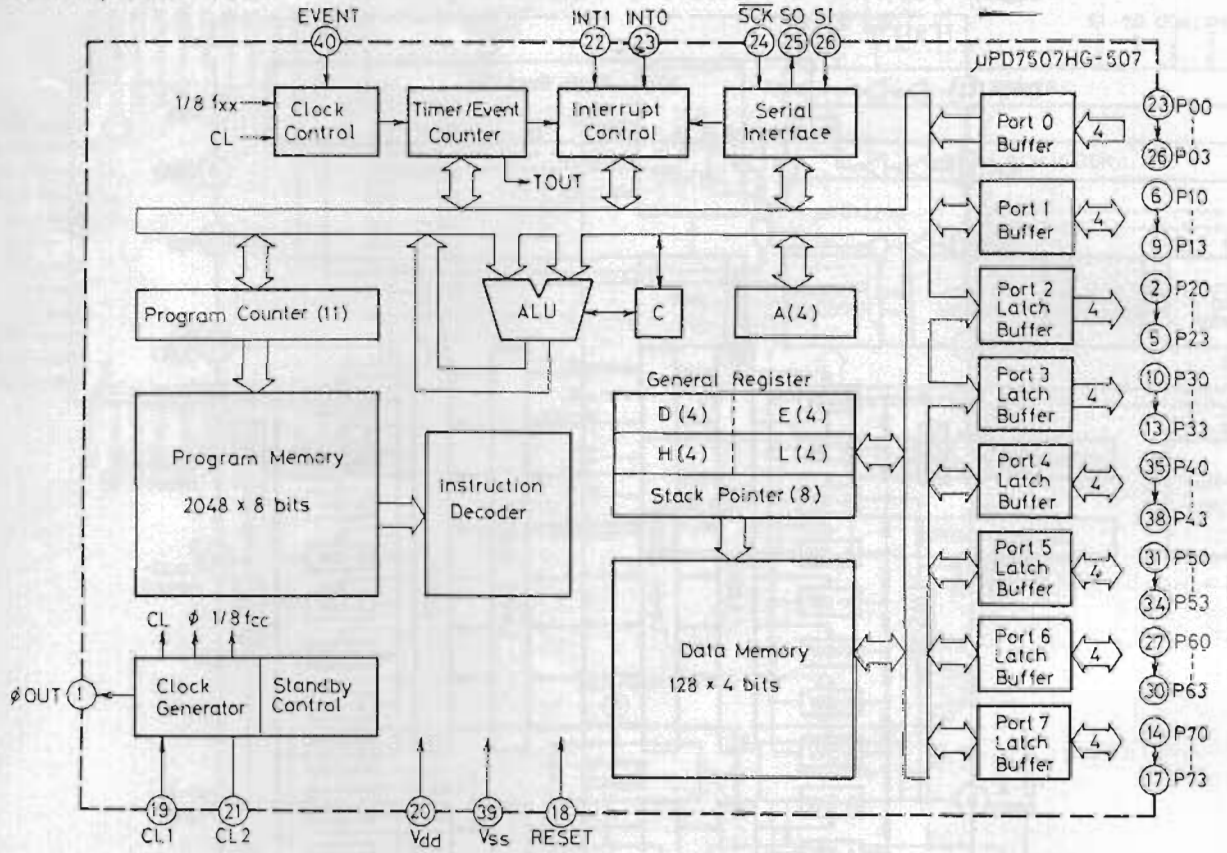
IC441: μ PD7507HG-507



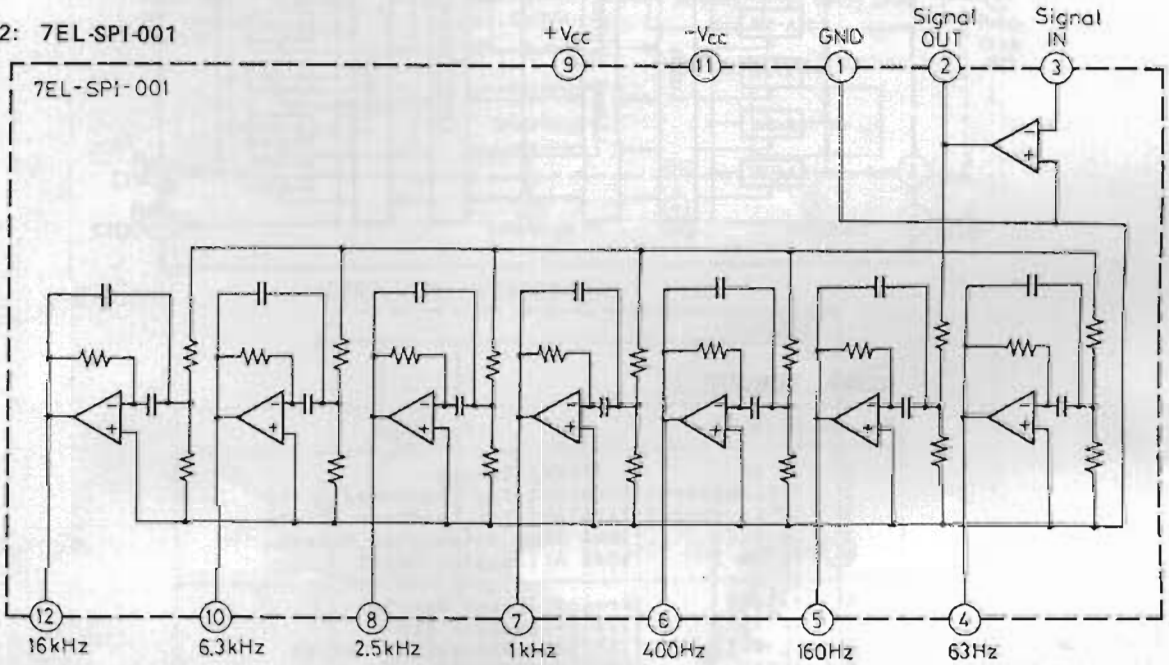
IC441: μ PD7507HG-507

Pin No.	Symbol	Name	I/O	Terminal Function
1	P10	P10	I	Key input; Composed the key matrix with P30 → P33.
2	P11	P11	I	Key input; Composed the key matrix with P30 → P33.
3	P12	P12	I	Key input; Composed the key matrix with P30 → P33.
4	P13	P13	I	Key input; Composed the key matrix with P30 → P33.
5	P30	P30	O	Key output.
6	P31	P31	O	Key output.
7	P32	P32	O	Key output.
8	P33	P33	O	Key output.
9	P70	P70	I	Key input; Composed the key matrix with P30 → P33.
10	P71	P71	I	Key input; Composed the key matrix with P30 → P33.
11	NC	NC	---	Non connection.
12	NC	NC	---	Non connection.
13	P72	P72	I	Key input; Composed the key matrix with P30 → P33.
14	P73	P73	I	Key input; Composed the key matrix with P30 → P33.
15	RESET	RESET	I	Connect the RESET of MN1758J51.
16	CL1	X'tal in	I	Connect the ceramic oscillator.
17	Vdd	Vdd	---	+5V
18	CL2	X'tal out	O	Connect the ceramic oscillator.
19	INT1	INT1	---	Not use. (GND)
20	P00/INT1	RM IN	I	Remote control signal input.
21	P01/SCK	P01/SCK	---	Not use. (Vdd)
22	P02/S0	INH	I	Connect the INH2 of MN1758J51.
23	NC	NC	---	Non connection.
24	P03/S1	TEST	I	SEA volume UP/DOWN test mode.
25	P60	CLK	O	Serial CLOCK OUT.
26	P61	DATA	O	Serial DATA OUT.
27	P62	RM IND	O	"H" output when remote control signal received.
28	P63	P63	---	Not use. (open)
29	P50	P50	---	Not use. (GND)
30	P51	P51	---	Not use. (GND)
31	P52	P52	---	Not use. (GND)
32	P53	P53	---	Not use. (GND)
33	P40	P40	---	Not use. (GND)
34	P41	P41	---	Not use. (GND)
35	P42	P42	---	Not use. (GND)
36	P43	P43	---	Not use. (GND)
37	Vss	Vss	---	GND
38	EVENT	EVENT	---	Not use. (GND)
39	φ OUT	φ OUT	---	Not use. (open)
40	P20	P20	---	Not use. (open)
41	P21	P21	---	Not use. (open)
42	P22	P22	---	Not use. (open)
43	P23	P23	---	Not use. (open)
44	NC	NC	---	Non connect.

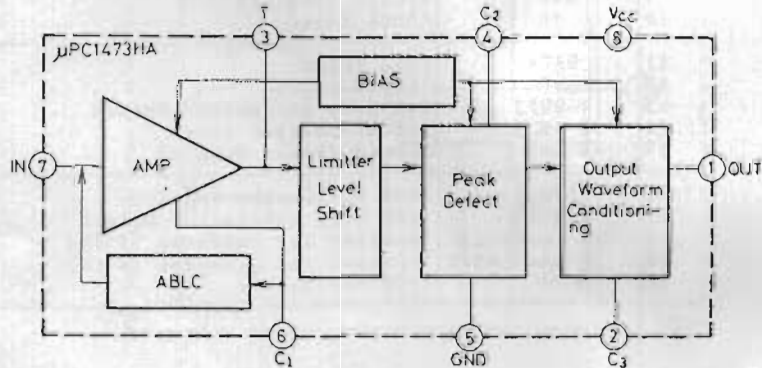
IC441: μ PD7507HG-507



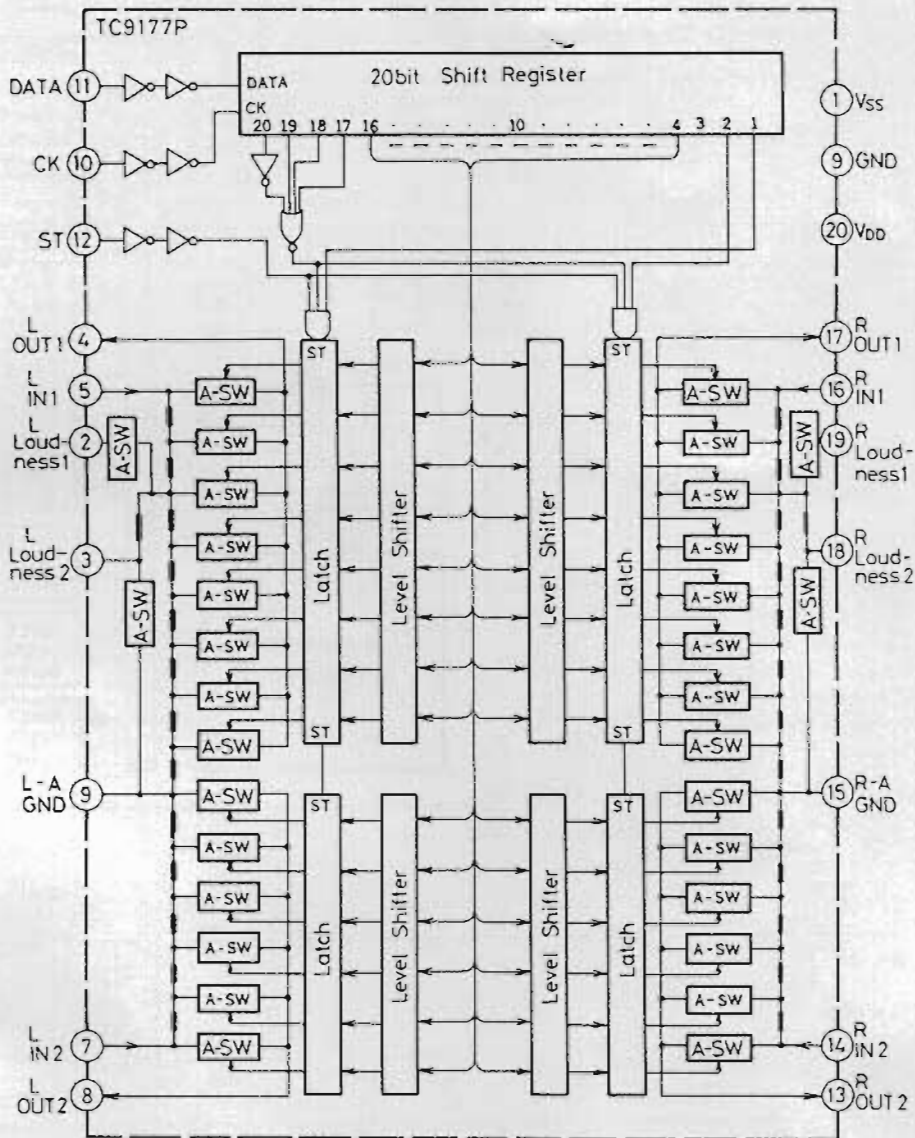
IC462: 7EL-SPI-001



IC481: μ PC1473HA



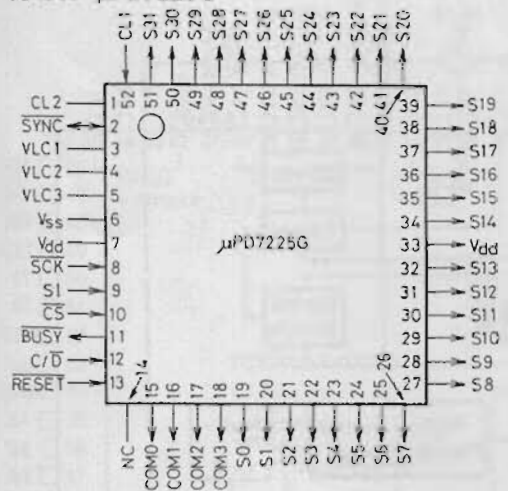
IC381: TC9177P



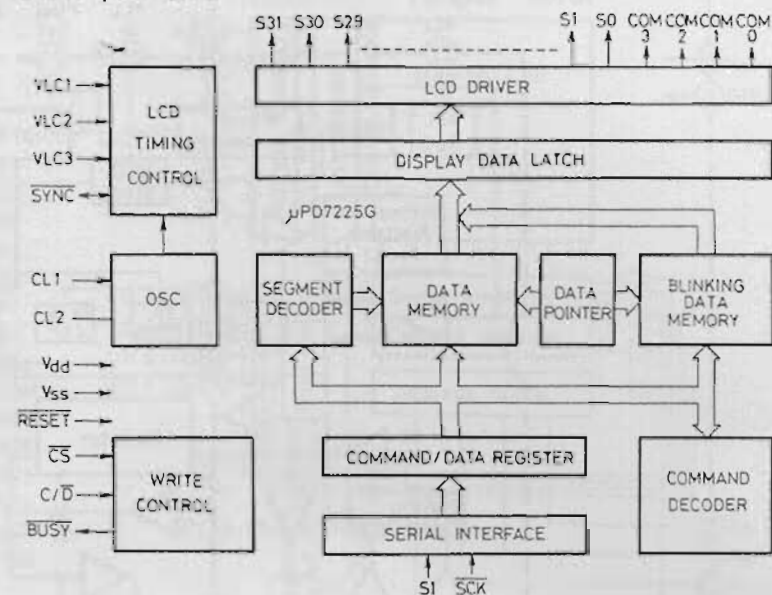
IC381: TC9177P

Pin No.	Symbol	Function
1	V _{SS}	(-) Power Supply
2	L Loudness1	Terminal for Loudness (L-ch)
3	L Loudness2	Terminal for Loudness (L-ch)
4	L-OUT1	10dB Step Attenuator Output
5	L-IN 1	10dB Attenuator Input
6	A GND	Ground (Power Supply)
7	L-IN 2	2dB Attenuator Input
8	L-OUT2	2dB Step Attenuator Output
9	GND	Ground (Signal)
10	CK	Clock Input
11	DATA	Data Input
12	ST	Strobe Input
13	R-OUT2	2dB Step Attenuator Output
14	R-IN 2	2dB Attenuator Input
15	A GND	Ground (Power Supply)
16	R-IN 1	10dB Attenuator Input
17	R-OUT1	10dB Step Attenuator Output
18	R-Loudness2	Terminal for Loudness (R-ch)
19	R-Loudness1	Terminal for Loudness (R-ch)
20	V _{DD}	(+) Power Supply

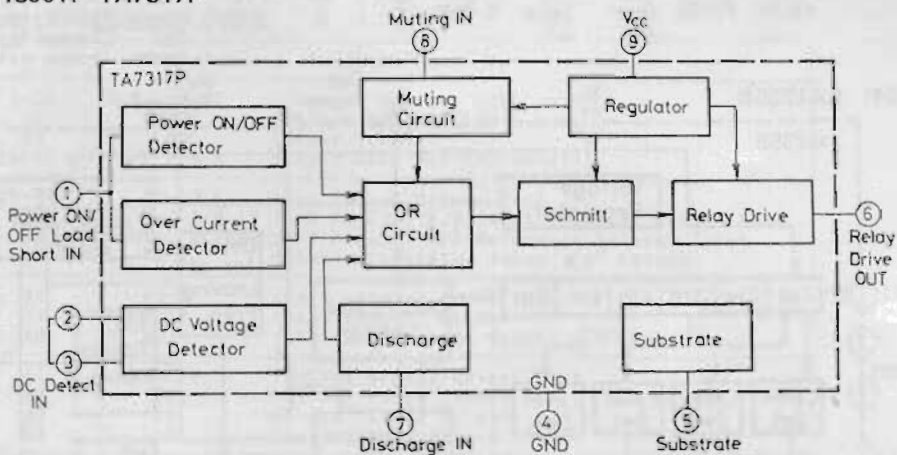
IC451: μ PD7225G



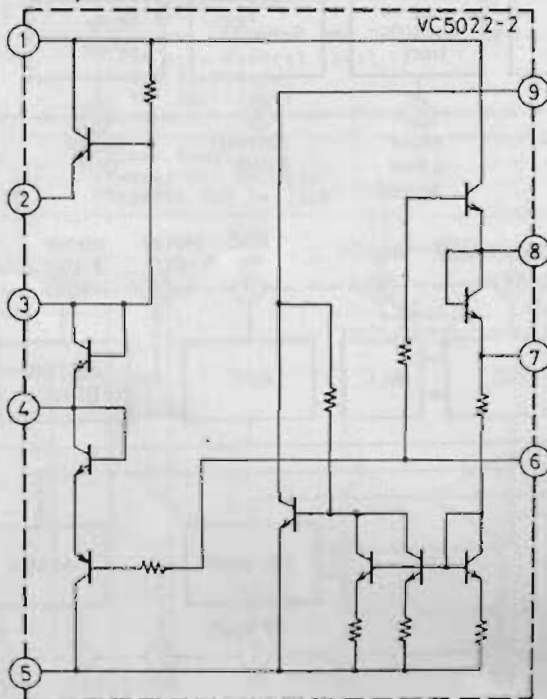
IC451: μ PD7255G



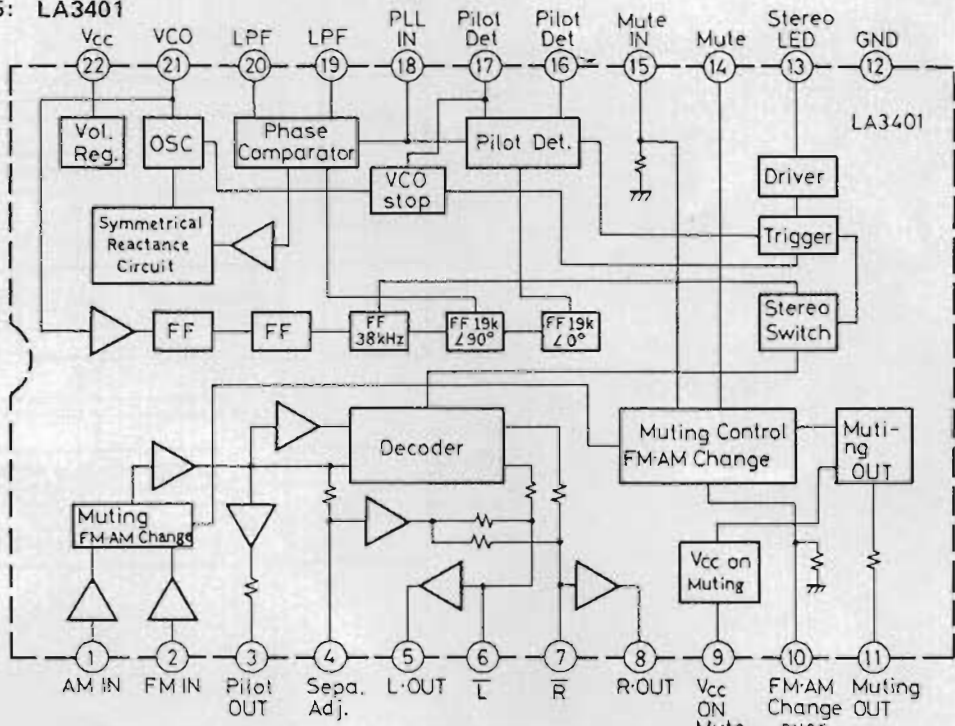
IC901: TA7317P



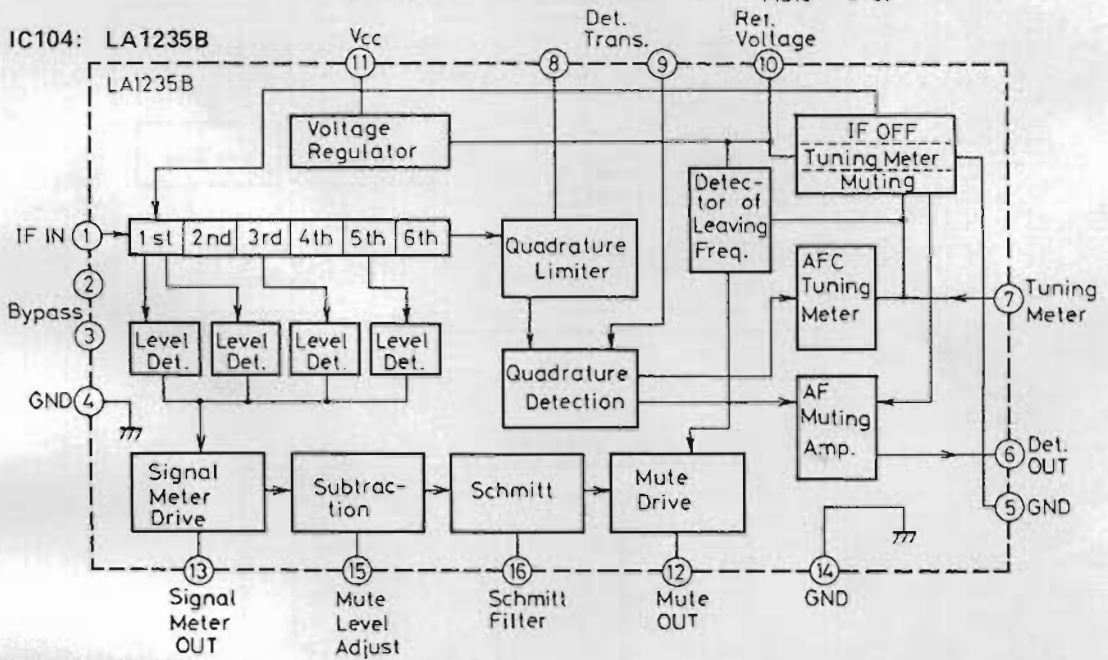
IC751, IC75: VC5022-2



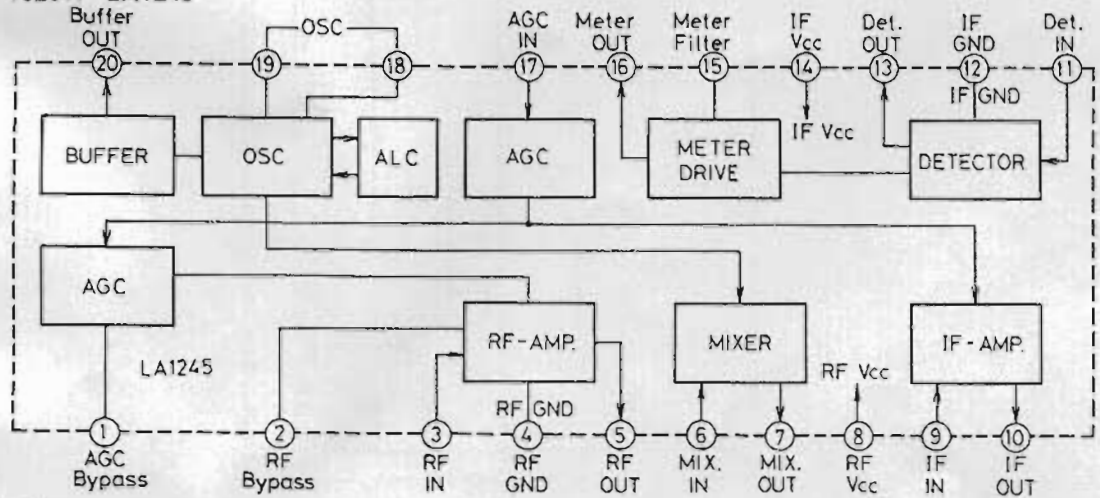
IC105: LA3401



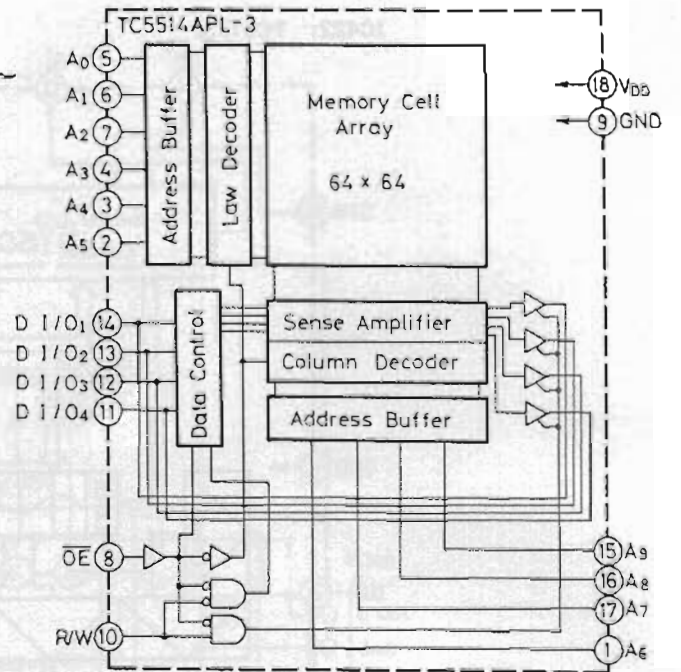
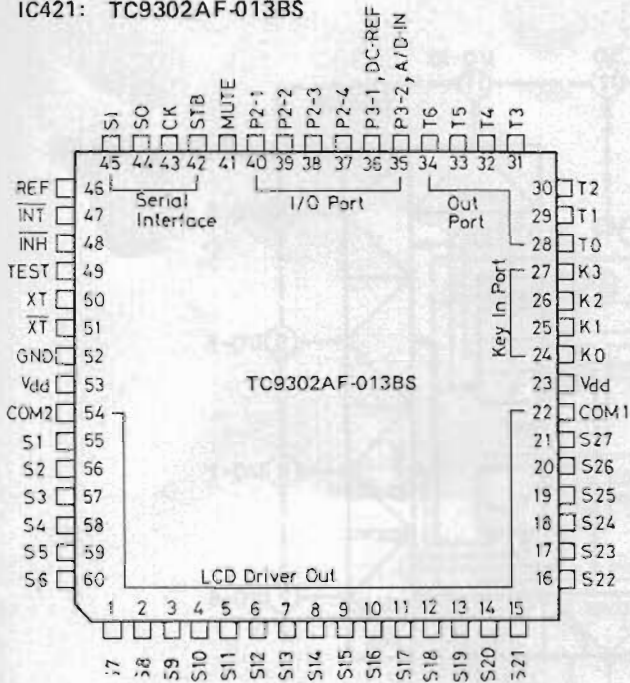
IC104: LA1235B



IC201: LA1245



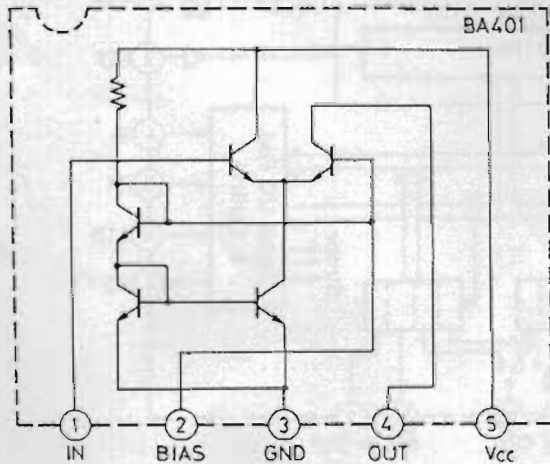
IC421: TC9302AF-013BS



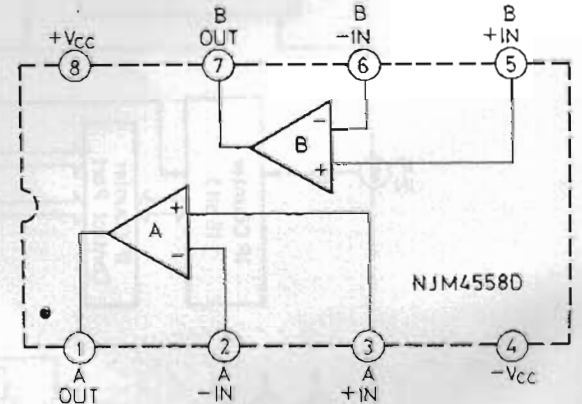
IC421: TC9302AF-013BS

Pin No.	Symbol	Terminal Function
1-21	S7 ~ S27	Segment Out to "LCD"
22	COM 1	Common Out to "LCD"
23	Vdd	Power Supply
24-27	K0 ~ K3	Input Port for Key matrix
28-34	T0 ~ T6	Key Timing Output Port
35	P3-2, A/D-IN	I/O Port3, A/D Input, Signal Meter Input
36	P3-1, DC-REF	I/O Port3, A/D Reference Voltage Input
37	P2-4	Stereo Indicator Input ("L" Level)
38	P2-3	DATA Request Input
39	P2-2	DATA Request Output
40	P2-1	IF Count Request Output ("H" Level)
41	MUTE	Muting Signal Output Port
42	STB	Strobe Pulse Output
43	CX	Serial Clock Output
44	S0	Serial Data Output
45	S1	Serial Data Input
46	REF	PLL Reference Frequency Output
47	INT	Initialize Input
48	INH	Inhibit Input
49	TEST	Test Mode Control Input
50	XT	X'tal Oscillator
51	XT	X'tal Oscillator
52	GND	Ground
53	Vdd	Power Supply
54	COM 2	Common Out to "LCD"
55-60	S1-S6	Segment Out to "LCD"

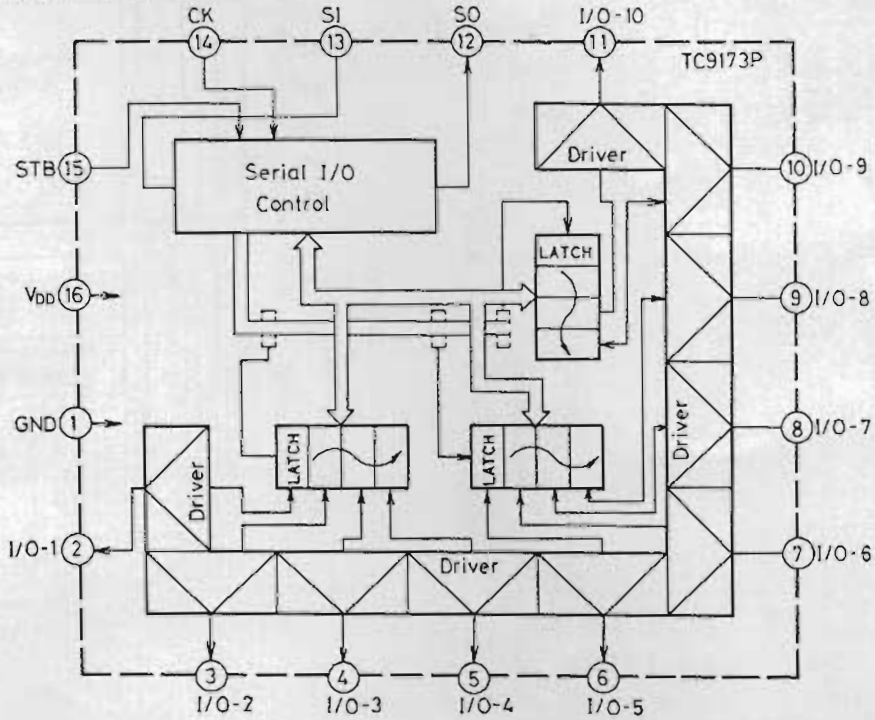
IC101, IC103: BA401



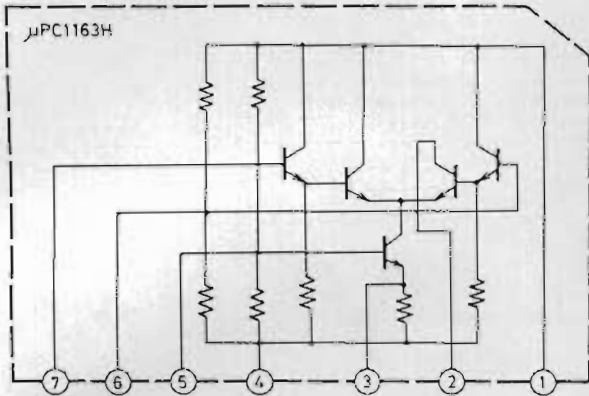
IC446: NJM4558D



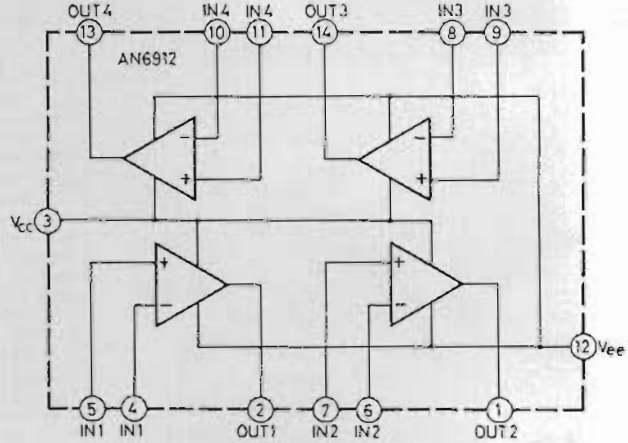
IC422: TC9173P



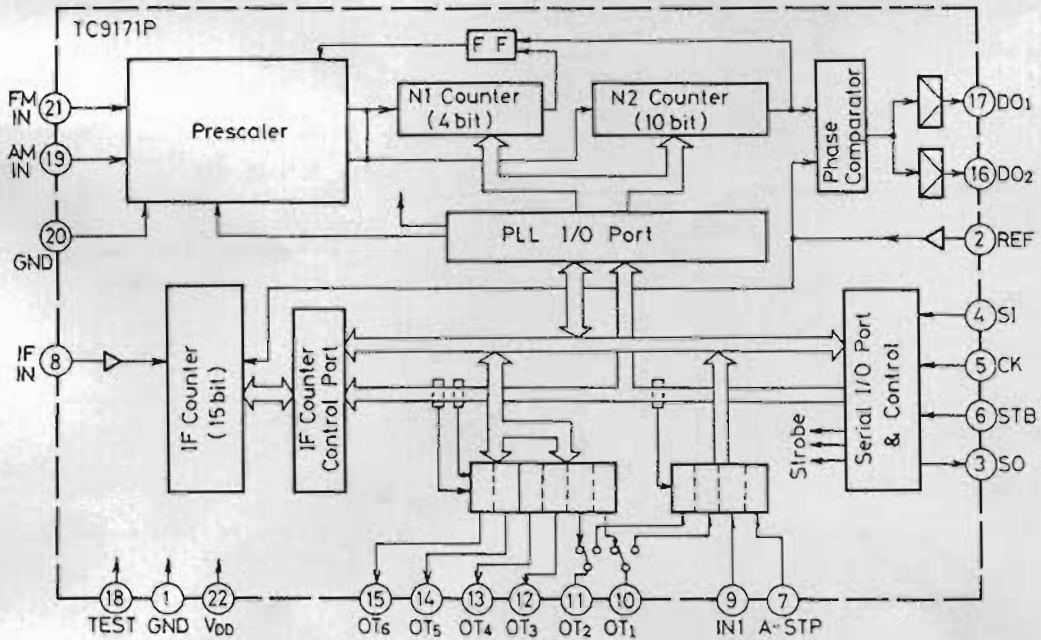
IC102: μ PC1163H



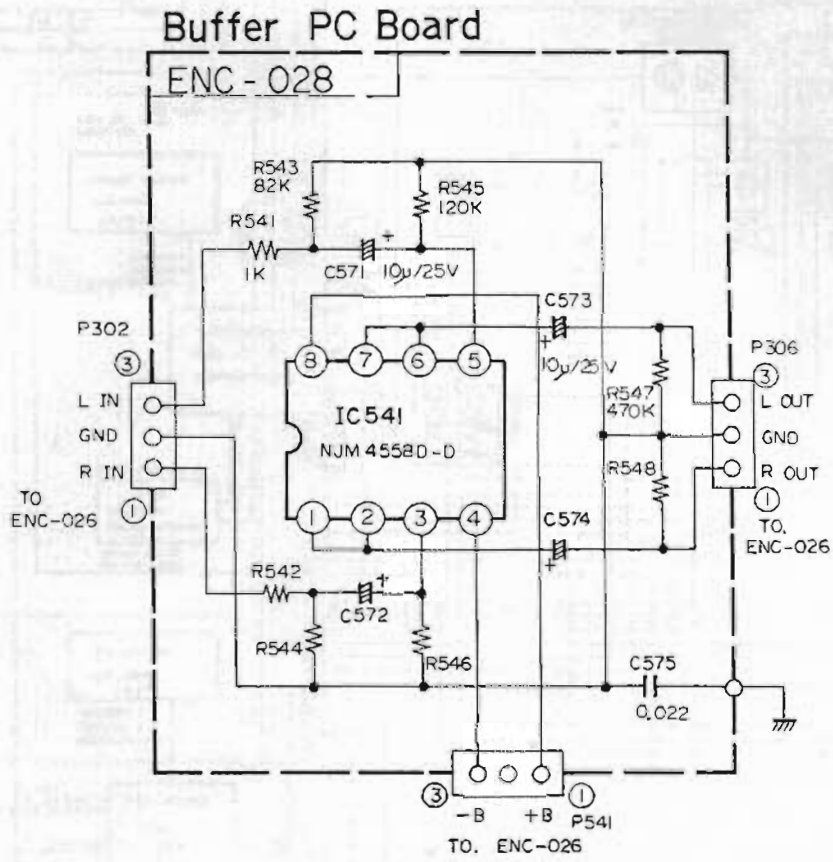
IC051: AN6912

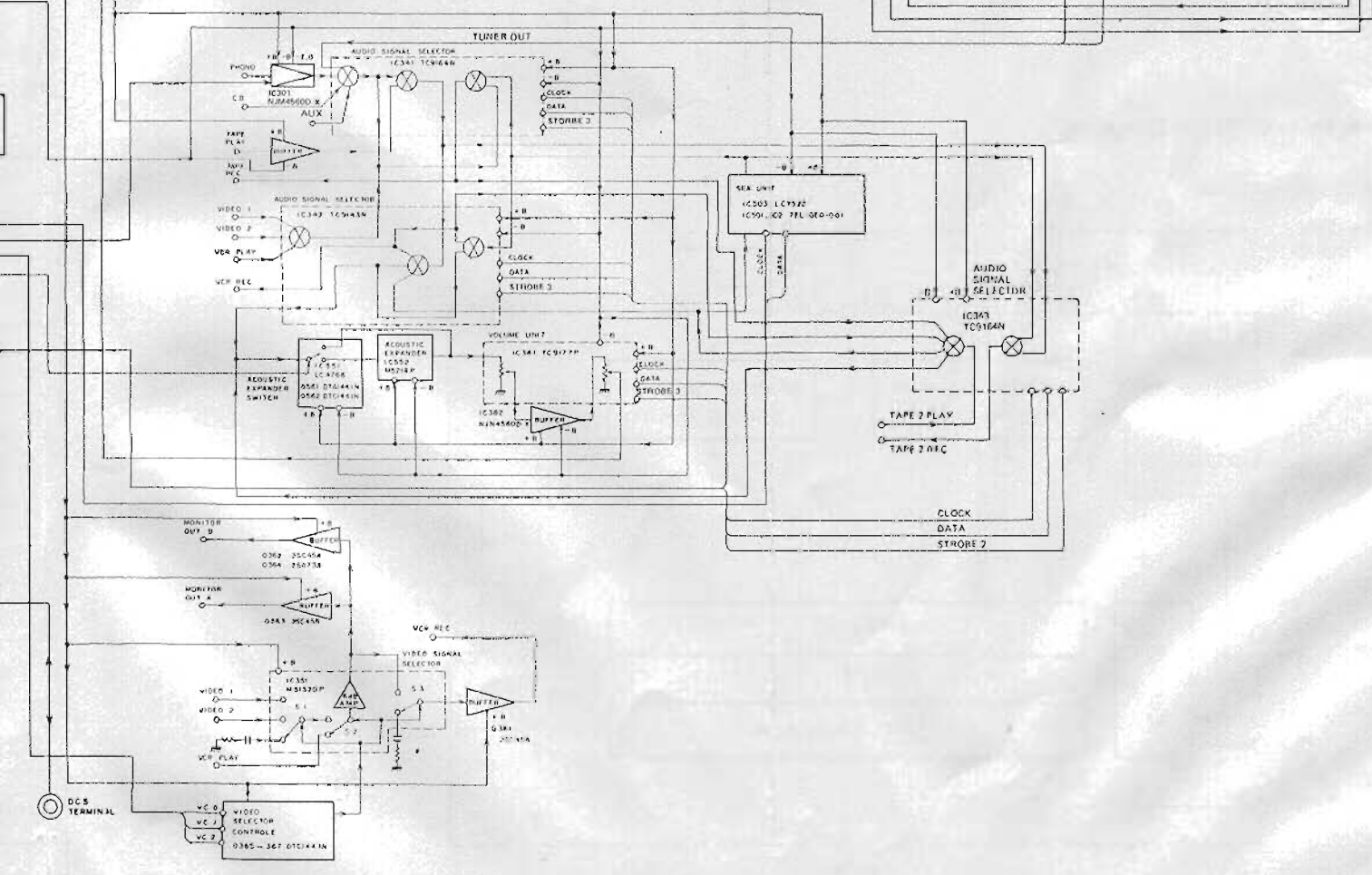
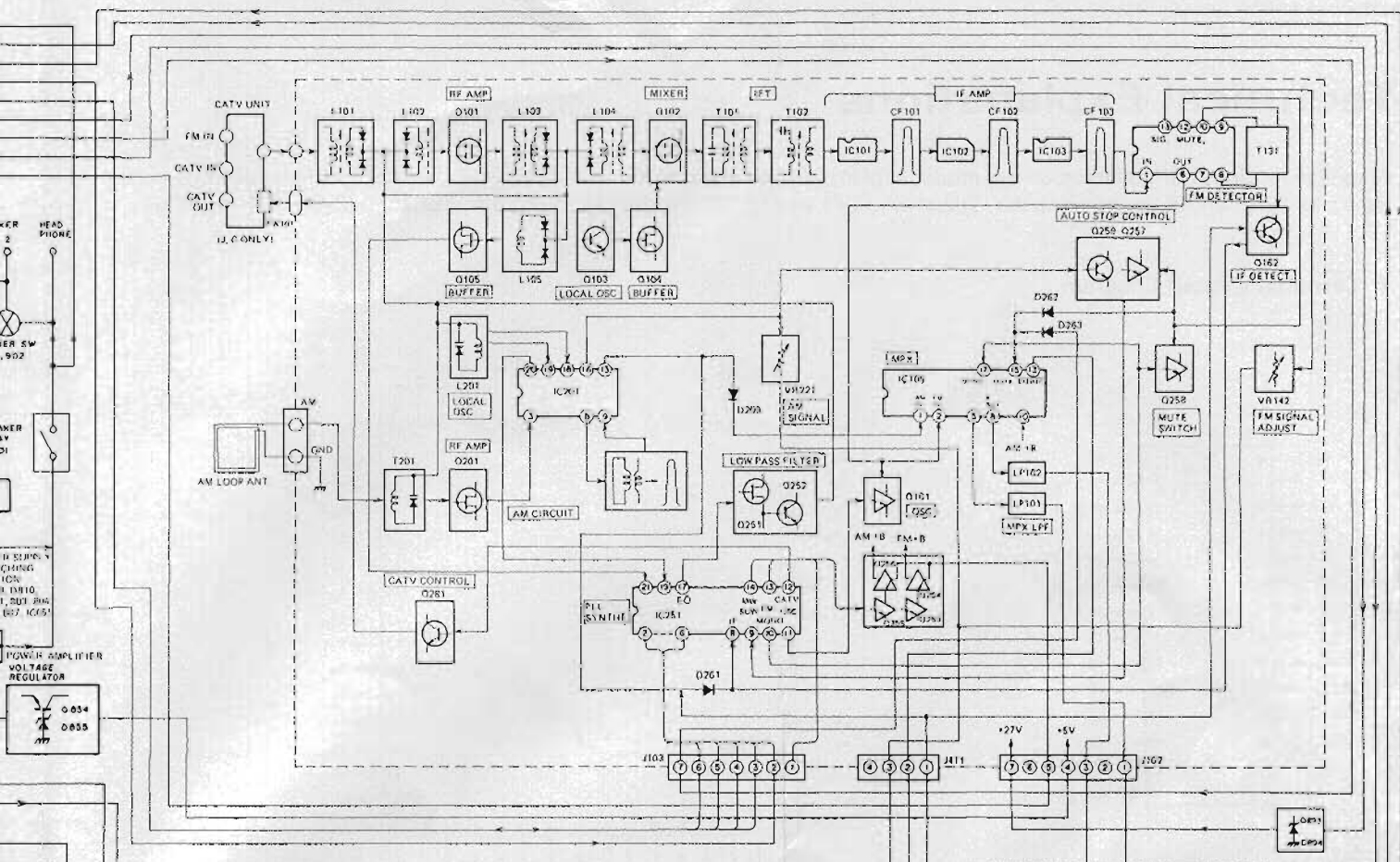


IC251: TC9171P

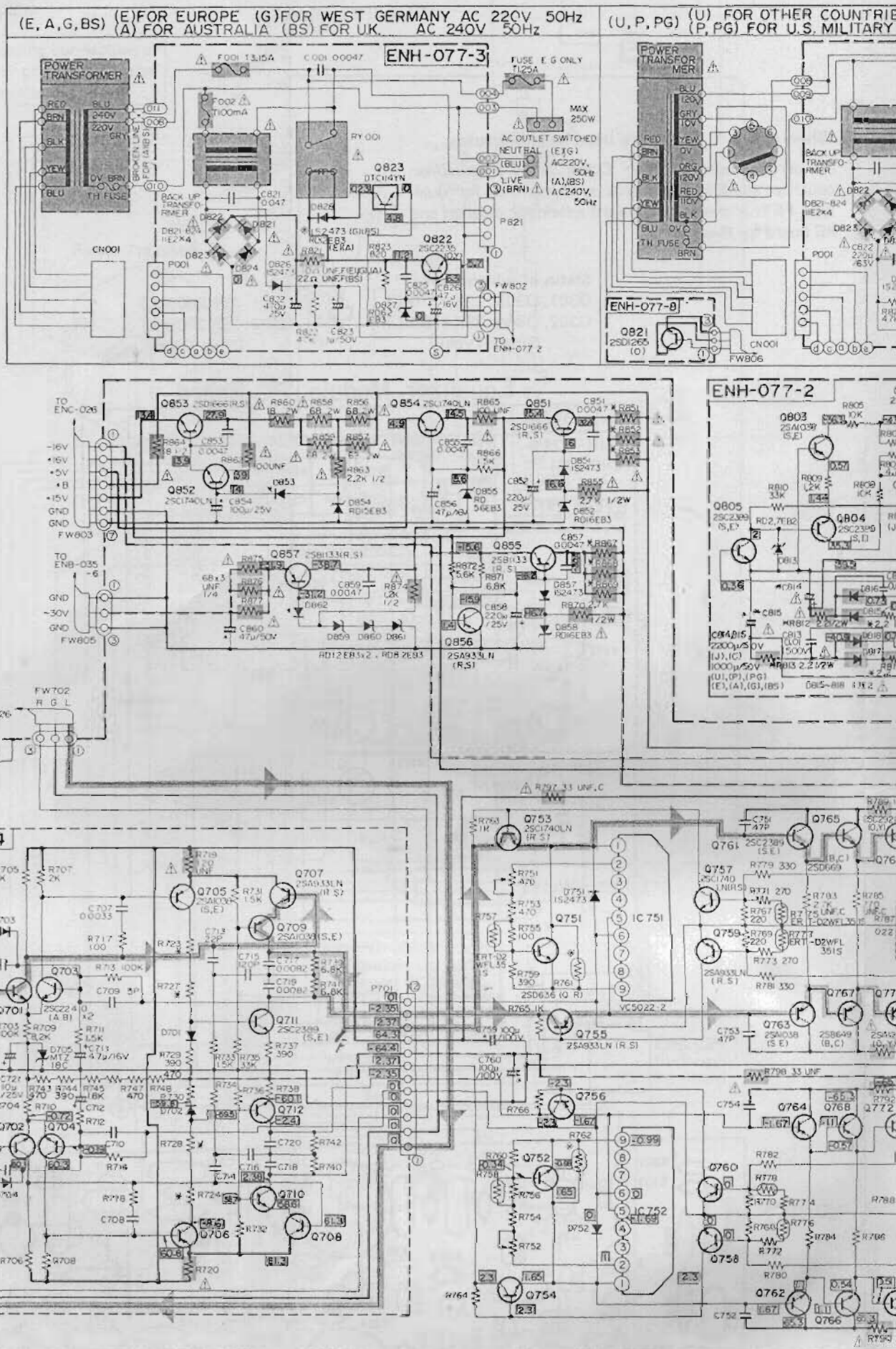


(7) Buffer PC Board Section





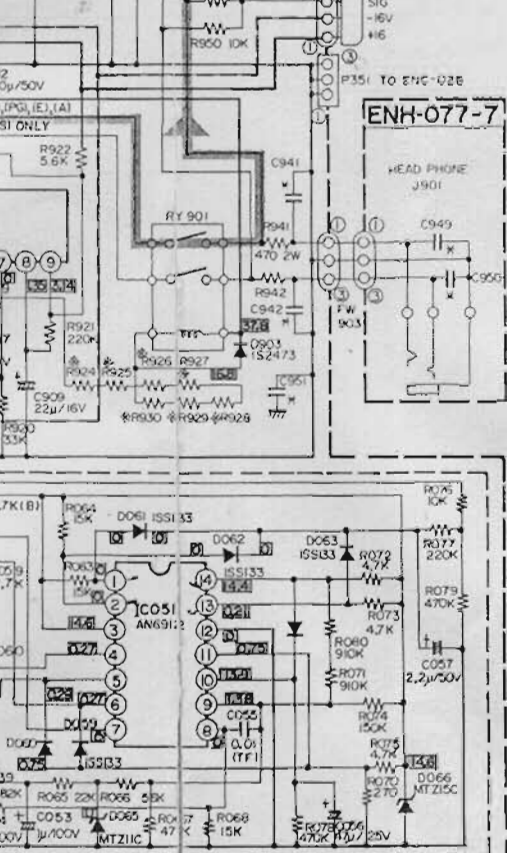
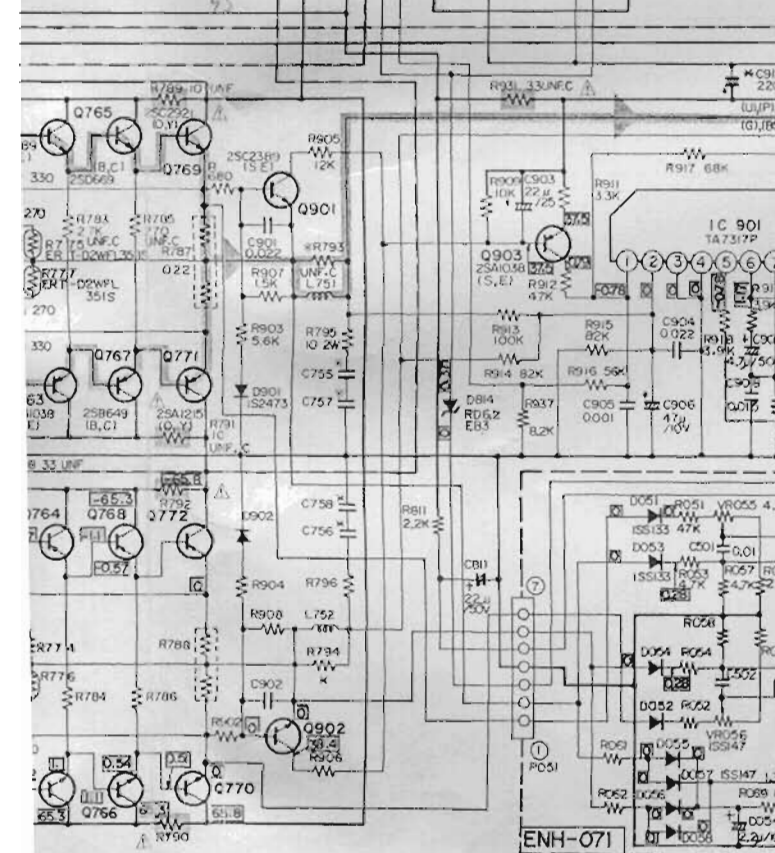
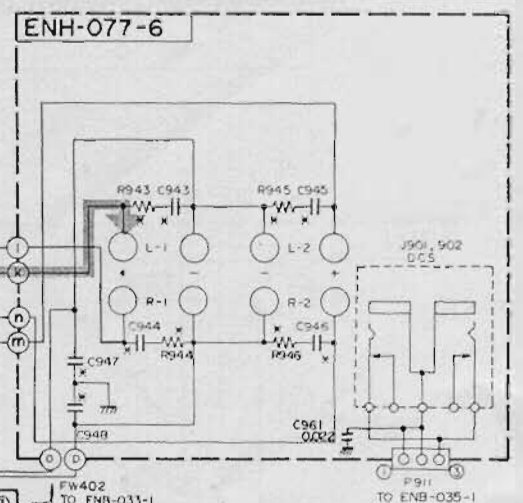
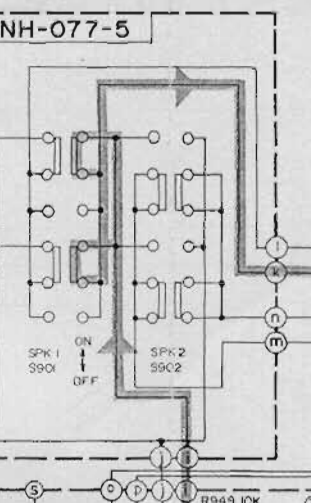
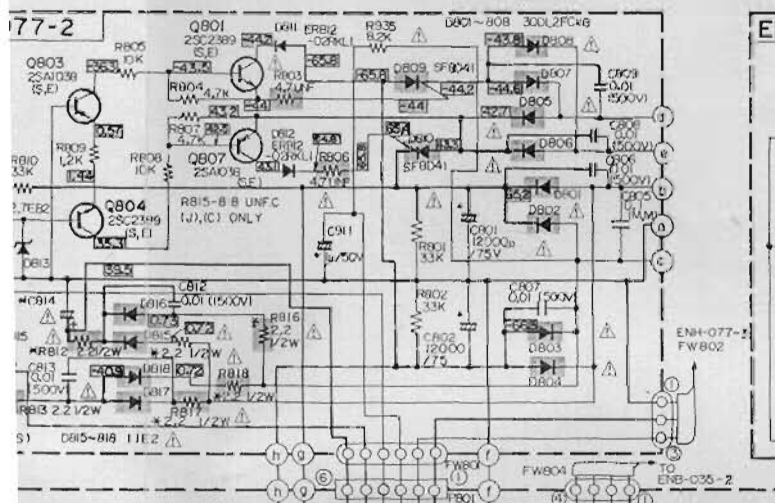
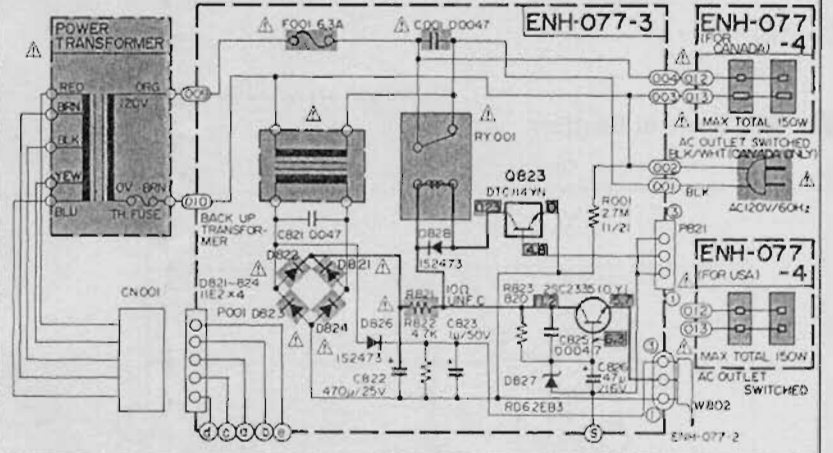
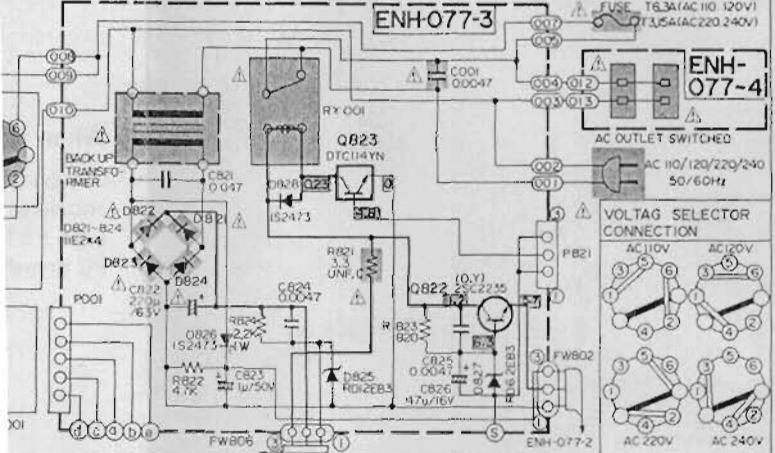
(4) Power Amplifier Section



OTHER COUNTRIES
OR U.S. MILITARY MARKET

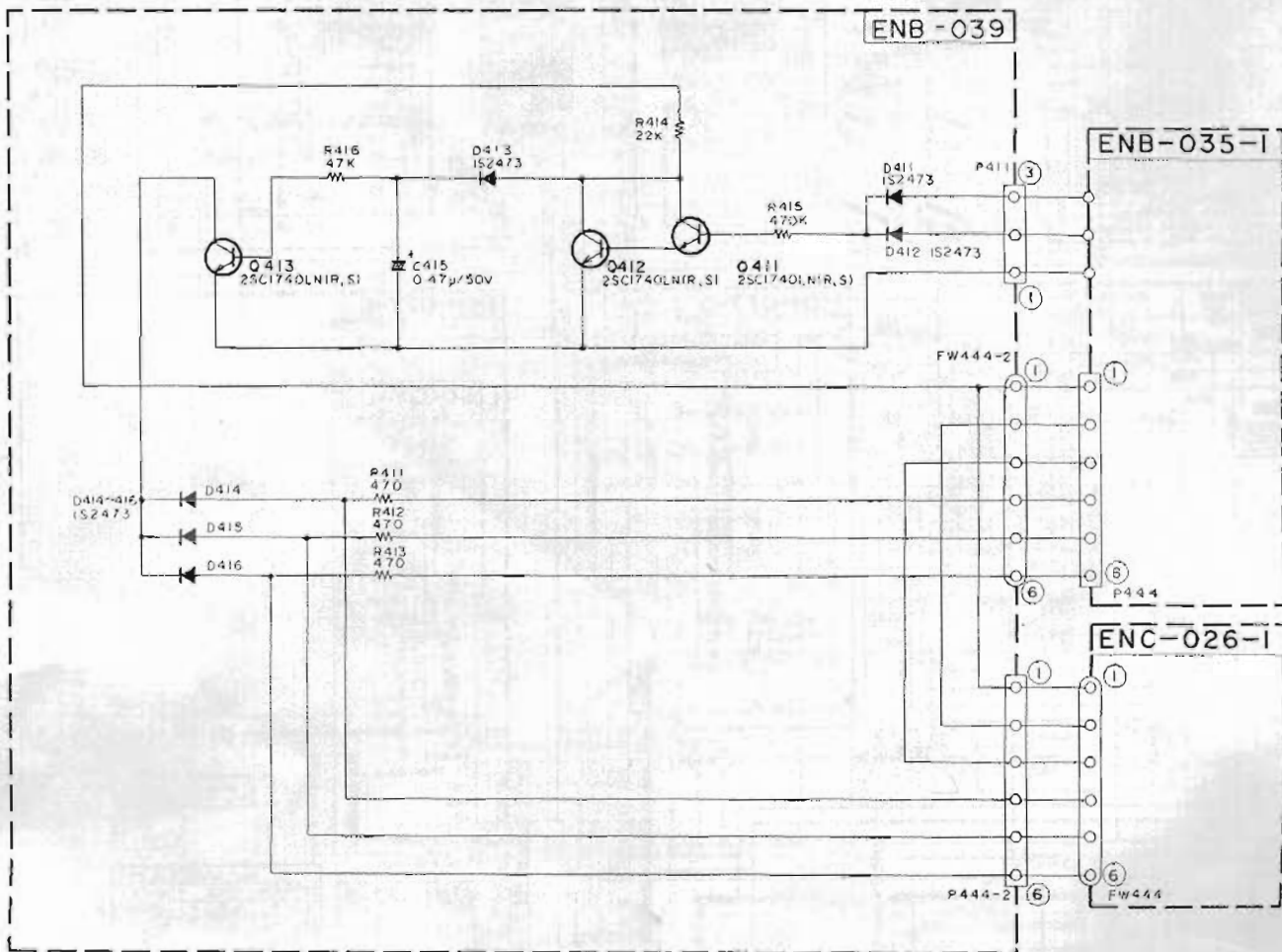
(J, C) (J) FOR U.S.A.
(C) FOR CANADA

AC 120V 60Hz
AC 120V 60Hz



	J,C,U,P,G	E, A, B5	G
D703,704	NONE	IS2473	IS2473
R761,762	NONE	50T250	60T250
R793,794	33 1/2	33 1/2	47 1/2
C755,756	0.022	0.047	0.047
C757,758	SHORT	0.047	0.047
D853,862	SHORT	IS2473	IS2473
C805	0.01(500V)	0.1(250V)	0.1(250V)
C941,942	NONE	NONE	330P
C943,946	NONE	NONE	0.01
R943,946	NONE	NONE	10 UNF.C
C949,950	NONE	NONE	IS0P
C947,948	NONE	NONE	0.01
C951	NONE	NONE	0.01
R851,852	120 2W	180 2W	180 2W
R853	NONE	180 2W	180 2W
R857,858	220 2W	330 2W	330 2W
R859	NONE	330 2W	330 2W
R867,868	220 2W	330 2W	330 2W
R869	NONE	330 2W	330 2W
R862	UNF.C	UNF.F	UNF.F
R865	UNF.C	UNF.F	UNF.F
R875-877	UNF.C	UNF.F	UNF.F
R812-813	NONE	UNF.C	UNF.C
R924	56	B2UNF.C	B2UNF.C
R925	56	ISUNF.C	ISUNF.C
R926	56	B2UNF.C	B2UNF.C
R927	56	ISUNF.C	ISUNF.C
R928	6.8	B2UNF.C	B2UNF.C
R929	6.8	ISUNF.C	ISUNF.C
R930	SHORT	B2UNF.C	B2UNF.C
R723,724	5.6K	56K UNF.C	56K UNF.C
R727,728	5.6K	56K UNF.C	56K UNF.C

(5) Sub Control Section



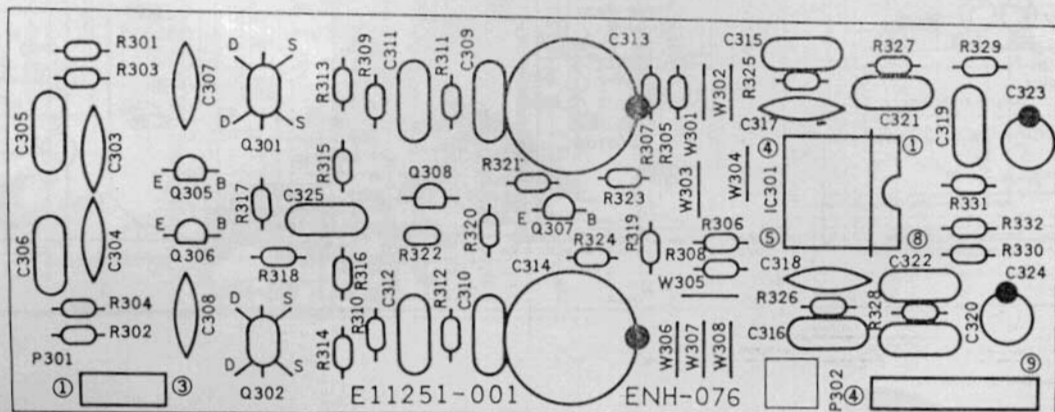
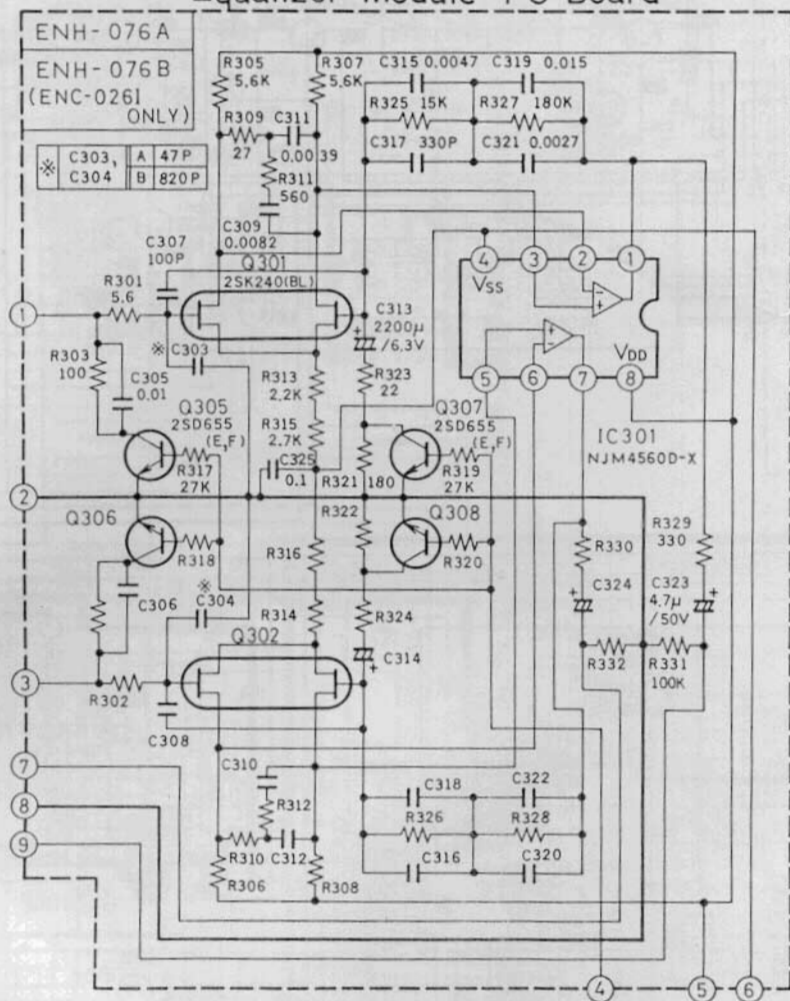
6) When Q301 ~ Q304 are used as substitutes

On certain units, Q301 ~ Q304 (FET) are used on equalizer module PC boards as substitutes for dual-type FET. Shown below are the schematic diagram and PC board for these units.

Status of substitution

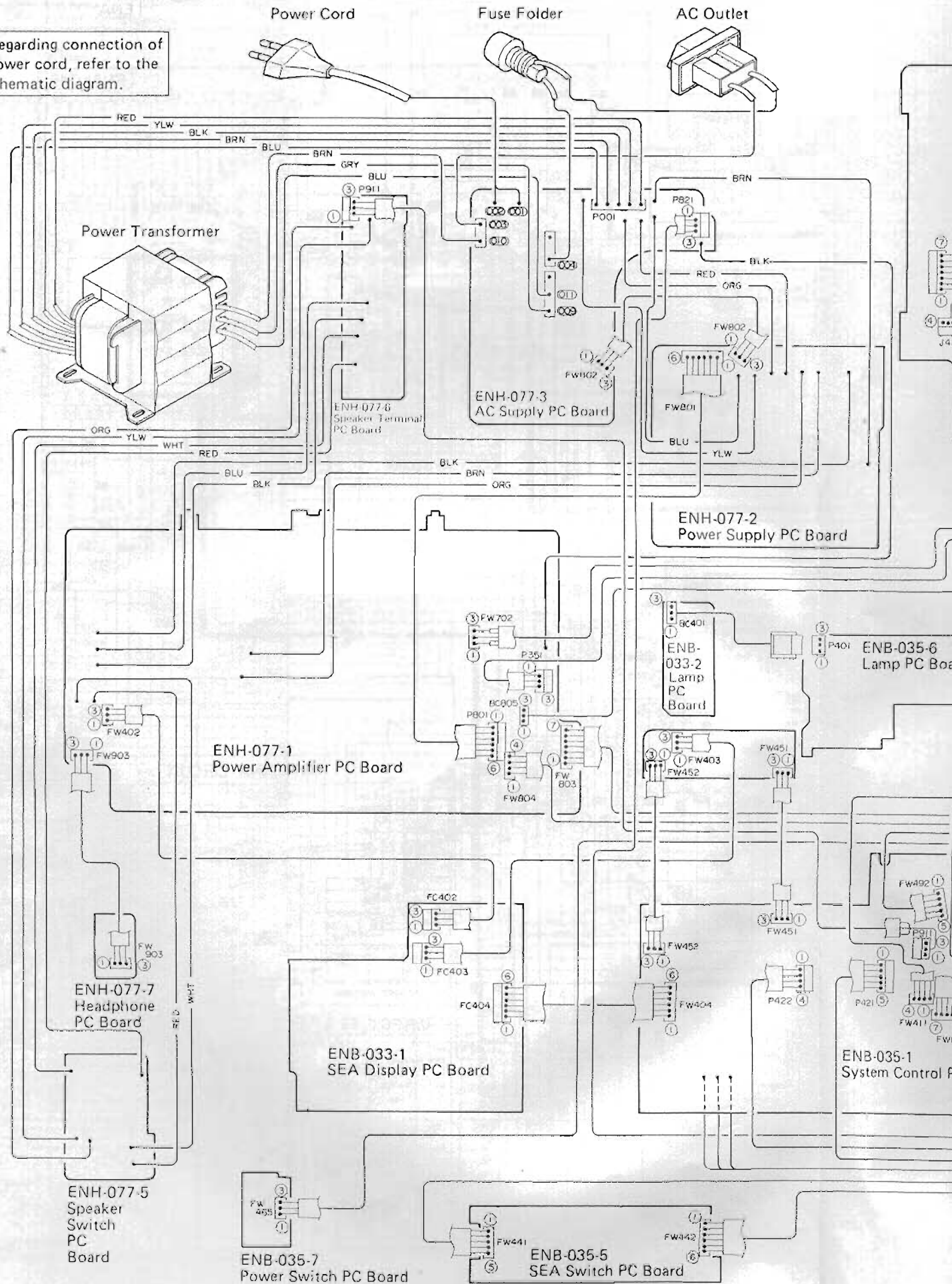
Q301, Q303: 2SK170(BL)	} ⇒	{	Q301: 2SK240(BL)
Q302, Q304: 2SK170(BL) (Single Type)			Q302: 2SK240(BL) (Dual Type)

Equalizer Module PC Board



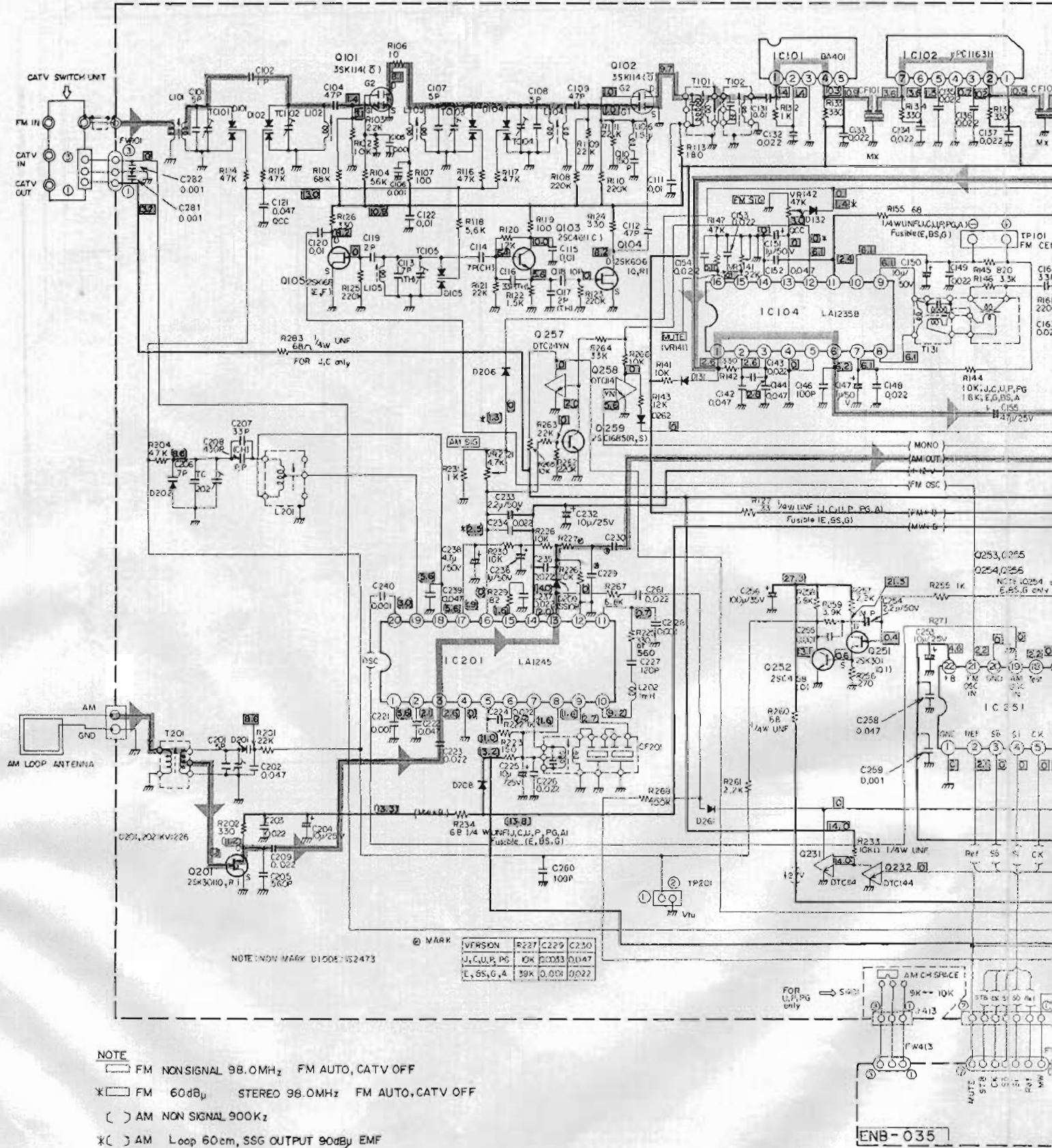
Connection Diagram

Note: Regarding connection of power cord, refer to the schematic diagram.



Schematic Diagram

(1) Tuner Section



NOTE
 [] FM NONSIGNAL 98.0MHz FM AUTO, CATV OFF
 * [] FM 60dB_u STEREO 98.0MHz FM AUTO, CATV OFF
 () AM NON SIGNAL 900Kz
 * () AM Loop 60cm, SSG OUTPUT 90dB_u EMF

MARK	VERSION	R227	C229	C230
[]	J,C,U,P,PG	10K	0.0033	0.047
[]	E,SS,G,4	39K	0.0033	0.022

Notes:

1. ——— indicates positive B power supply.
2. - - - indicates negative B power supply.
3. [] indicates signal path.
4. [] / [] shows DC voltage to the chassis with no signal input.

5. When replacing the parts in the darkened area ([]) and those marked with Δ, 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.

PARTS LIST

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▪ ENC-026 <input type="checkbox"/> Pre-Amplifier PC Board Ass'y	2-11
▪ ENB-035 <input type="checkbox"/> Logic PC Board Ass'y	2-14
▪ ENA-049 <input type="checkbox"/> Tuner PC Board Ass'y	2-17
▪ ENH-071 <input checked="" type="checkbox"/> Switching Regulator PC Board Ass'y	2-20
▪ ENB-033 <input type="checkbox"/> LCD Display PC Board Ass'y	2-21
▪ ENC-028 <input checked="" type="checkbox"/> Buffer PC Board Ass'y	2-22
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Packing Materials and Part Numbers	2-26
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Printed Circuit Board Ass'y and Parts List

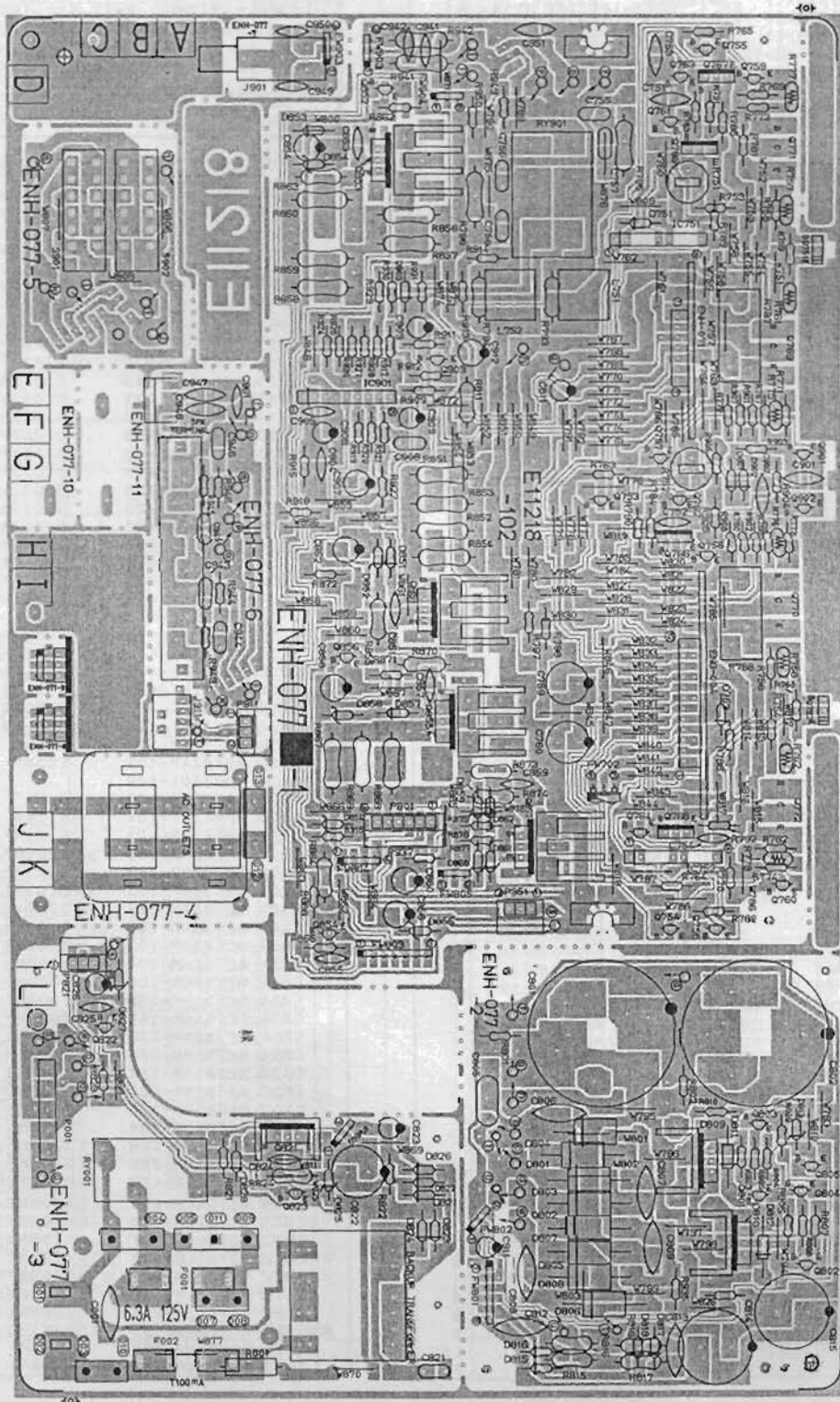
■ ENH-077 □ Power Amplifier PC Board Ass'y

Note: ENH-077 □ Varies according to the area employed. See note (1) when placing an order.

Note (1)

PC Board Ass'y	Designated Areas
ENH-077 A	U.S.A.
ENH-077 B	Canada
ENH-077 C	U.S. Military Market & Other Countries

PC Board Ass'y	Designated Areas
ENH-077 D	Europe & Australia
ENH-077 E BS	U.K.
ENH-077 F	West Germany



Capacitors

ITEM	PART NUMBER	DESCRIPTION	AREA
C826	QETB1CM-476	47MF 16V ELECTRO	
C851	QCF21HP-472	4700PF 50V CERAMIC	
C852	QETB1EM-227	220MF 25V ELECTRO	
C853	QCF21HP-472	4700PF 50V CERAMIC	
C854	QETB1EM-107	100MF 25V ELECTRO	
C855	QCF21HP-472	4700PF 50V CERAMIC	
C856	QETB1EM-476	47MF 25V ELECTRO	
C857	QCF21HP-472	4700PF 50V CERAMIC	
C858	QETB1EM-227	220MF 25V ELECTRO	
C859	QCF21HP-472	4700PF 50V CERAMIC	
C860	QETB1HM-476	47MF 50V ELECTRO	
C901	QCF21HP-223	0.022MF 50V CERAMIC	
C902	QCF21HP-223	0.022MF 50V CERAMIC	
C903	QETB1EM-226	22MF 25V ELECTRO	
C904	QCF21HP-223	0.022MF 50V CERAMIC	
C905	QCY21HK-102	1000PF 50V CERAMIC	
C906	QETB1AM-476	47MF 10V ELECTRO	
C907	QETB1HM-474	0.47MF 50V ELECTRO	
C908	QFN81HK-153	0.015MF 50V MYLAR	
C909	QETB1CM-226	22MF 16V ELECTRO	
C911	QETB1HM-105	1MF 50V ELECTRO	
C912	QETB1HM-227	220MF 50V ELECTRO	
C912	QETB1HM-227	220MF 50V ELECTRO	
C912	QETB1HM-227	220MF 50V ELECTRO	
C912	QETB1HM-227	220MF 50V ELECTRO	
C912	QETB1HM-227	220MF 50V ELECTRO	
C941	QCS21HJ-331	330PF 50V CERAMIC	
C942	QCS21HJ-331	330PF 50V CERAMIC	
C943	QFN81HK-103	0.01MF 50V MYLAR	
C944	QFN81HK-103	0.01MF 50V MYLAR	
C945	QFN81HK-103	0.01MF 50V MYLAR	
C946	QFN81HK-103	0.01MF 50V MYLAR	
C947	QCF21HP-103	0.01MF 50V CERAMIC	
C948	QCF21HP-103	0.01MF 50V CERAMIC	
C949	QCS21HJ-151	150PF 50V CERAMIC	
C950	QCS21HJ-151	150PF 50V CERAMIC	
C951	QCF21HP-103	0.01MF 50V CERAMIC	
C961	QCF21HP-223	0.022MF 50V CERAMIC	

Resistors

ITEM	PART NUMBER	DESCRIPTION	AREA
R001	QRC121K-275EM	2.7M 1/2W COMPOS1	A
R001	QRC121K-275EM	2.7M 1/2W COMPOS1	B
R751	QVP4A0B-471	VARIABLE	
R752	QVP4A0B-471	VARIABLE	
R753	QRD148J-471S	470 1/4W CARBON	
R754	QRD148J-471S	470 1/4W CARBON	
R755	QRD148J-101S	100 1/4W CARBON	
R756	QRD148J-101S	100 1/4W CARBON	
R757	ERT-D2WFL351S	THERMISTER	
R758	ERT-D2WFL351S	THERMISTER	
R759	QRD148J-391S	390 1/4W CARBON	
R760	QRD148J-391S	390 1/4W CARBON	
R761	SDT250	THERMISTER	D
R761	SDT250	THERMISTER	EBS
R761	SDT250	THERMISTER	F
R762	SDT250	THERMISTER	D
R762	SDT250	THERMISTER	EBS
R762	SDT250	THERMISTER	F
R763	QRD148J-102S	1K 1/4W CARBON	
R764	QRD148J-102S	1K 1/4W CARBON	
R765	QRD148J-102S	1K 1/4W CARBON	
R766	QRD148J-102S	1K 1/4W CARBON	
R767	QRD148J-221S	220 1/4W CARBON	
R768	QRD148J-221S	220 1/4W CARBON	
R769	QRD148J-221S	220 1/4W CARBON	
R770	QRD148J-221S	220 1/4W CARBON	
R771	QRD148J-271S	270 1/4W CARBON	
R772	QRD148J-271S	270 1/4W CARBON	
R773	QRD148J-271S	270 1/4W CARBON	
R774	QRD148J-271S	270 1/4W CARBON	
R775	ERT-D2WFL351S	THERMISTER	
R776	ERT-D2WFL351S	THERMISTER	
R777	ERT-D2WFL351S	THERMISTER	
R778	ERT-D2WFL351S	THERMISTER	
R779	QRD148J-331S	330 1/4W CARBON	
R780	QRD148J-331S	330 1/4W CARBON	
R781	QRD148J-331S	330 1/4W CARBON	
R782	QRD148J-331S	330 1/4W CARBON	
R783	QRD145J-272S	2.7K 1/4W UNF. CARBON	
R784	QRD145J-272S	2.7K 1/4W UNF. CARBON	
R785	QRD145J-271S	270 1/4W UNF. CARBON	
R786	QRD145J-271S	270 1/4W UNF. CARBON	
R787	ERF032K-R22	CEMENT	
R788	ERF032K-R22	CEMENT	
R789	QRD145J-100S	10 1/4W UNF. CARBON	

△ Safety parts

Resistors

ITEM	PART NUMBER	DESCRIPTION	AREA
R790	QRD145J-100S	10 1/4W UNF. CARBON	
R791	QRD145J-100S	10 1/4W UNF. CARBON	
R792	QRD145J-100S	10 1/4W UNF. CARBON	
R793	QRD125J-330	33 1/2W UNF. CARBON	A
R793	QRD125J-330	33 1/2W UNF. CARBON	B
R793	QRD125J-330	33 1/2W UNF. CARBON	C
R793	QRD125J-330	33 1/2W UNF. CARBON	D
R793	QRD125J-330	33 1/2W UNF. CARBON	EBS
R793	QRD125J-470	47 1/2W UNF. CARBON	F
R794	QRD125J-330	33 1/2W UNF. CARBON	A
R794	QRD125J-330	33 1/2W UNF. CARBON	B
R794	QRD125J-330	33 1/2W UNF. CARBON	C
R794	QRD125J-330	33 1/2W UNF. CARBON	D
R794	QRD125J-330	33 1/2W UNF. CARBON	EBS
R794	QRD125J-470	47 1/2W UNF. CARBON	F
R795	QRG022J-100A	10 2W O.M. FILM	
R796	QRG022J-100A	10 2W O.M. FILM	
R797	QRD145J-330S	33 1/4W UNF. CARBON	
R798	QRD145J-330S	33 1/4W UNF. CARBON	
R801	QRD148J-333S	33K 1/4W CARBON	
R802	QRD148J-333S	33K 1/4W CARBON	
R803	QRD145J-477S	4.7 1/4W UNF. CARBON	
R804	QRD148J-472S	4.7K 1/4W CARBON	
R805	QRD148J-103S	10K 1/4W CARBON	
R806	QRD145J-477S	4.7 1/4W UNF. CARBON	
R807	QRD148J-472S	4.7K 1/4W CARBON	
R808	QRD148J-103S	10K 1/4W CARBON	
R809	QRD148J-122S	1.2K 1/4W CARBON	
R810	QRD148J-333S	33K 1/4W CARBON	
R811	QRG012J-222A	2.2K 1W O.M. FILM	
R812	QRD125J-2R2	2.2 1/2W UNF. CARBON	C
R812	QRD125J-2R2	2.2 1/2W UNF. CARBON	D
R812	QRD125J-2R2	2.2 1/2W UNF. CARBON	EBS
R812	QRD125J-2R2	2.2 1/2W UNF. CARBON	F
R813	QRD125J-2R2	2.2 1/2W UNF. CARBON	C
R813	QRD125J-2R2	2.2 1/2W UNF. CARBON	D
R813	QRD125J-2R2	2.2 1/2W UNF. CARBON	EBS
R813	QRD125J-2R2	2.2 1/2W UNF. CARBON	F
R815	QRD125J-2R2	2.2 1/2W UNF. CARBON	A
R815	QRD125J-2R2	2.2 1/2W UNF. CARBON	B
R818	QRD125J-2R2	2.2 1/2W UNF. CARBON	A
R818	QRD125J-2R2	2.2 1/2W UNF. CARBON	B
R821	QRD145J-100S	10 1/4W UNF. CARBON	A
R821	QRD145J-100S	10 1/4W UNF. CARBON	B
R821	QRD145J-100S	10 1/4W UNF. CARBON	C
R821	QRD145J-3R3S	3.3 1/4W UNF. CARBON	C
R821	QR20062-100	10 1/4W FUSIBLE	D
R821	QR20062-100	10 1/4W FUSIBLE	F
R821	QR20062-220	22 1/4W FUSIBLE	EBS
R822	QRD148J-472S	4.7K 1/4W CARBON	
R823	QRD148J-821S	820 1/4W CARBON	
R824	QRG012J-222A	2.2K 1W O.M. FILM	C
R851	QRG022J-121A	120 2W O.M. FILM	A
R851	QRG022J-121A	120 2W O.M. FILM	B
R851	QRG022J-121A	120 2W O.M. FILM	C
R851	QRG022J-181A	180 2W O.M. FILM	D
R851	QRG022J-181A	180 2W O.M. FILM	EBS
R851	QRG022J-181A	180 2W O.M. FILM	F
R852	QRG022J-121A	120 2W O.M. FILM	A
R852	QRG022J-121A	120 2W O.M. FILM	B
R852	QRG022J-121A	120 2W O.M. FILM	C
R852	QRG022J-181A	180 2W O.M. FILM	D
R852	QRG022J-181A	180 2W O.M. FILM	EBS
R852	QRG022J-181A	180 2W O.M. FILM	F
R853	QRG022J-181A	180 2W O.M. FILM	D
R853	QRG022J-181A	180 2W O.M. FILM	EBS
R853	QRG022J-181A	180 2W O.M. FILM	F
R855	QRD125J-272	2.7K 1/2W UNF. CARBON	
R856	QRG022J-680AF	68 2W O.M. FILM	
R857	QRG022J-680AF	68 2W O.M. FILM	
R858	QRG022J-680AF	68 2W O.M. FILM	
R859	QRG022J-680AF	68 2W O.M. FILM	
R860	QRG022J-180AF	18 2W O.M. FILM	
R862	QRD145J-101S	100 1/4W UNF. CARBON	A
R862	QRD145J-101S	100 1/4W UNF. CARBON	B
R862	QRD145J-101S	100 1/4W UNF. CARBON	C
R862	QR20062-101	100 1/4W FUSIBLE	D
R862	QR20062-101	100 1/4W FUSIBLE	EBS
R862	QR20062-101	100 1/4W FUSIBLE	F
R863	QRD125J-222	2.2K 1/2W UNF. CARBON	
R864	QRD125J-180	18 1/2W UNF. CARBON	
R865	QRD145J-101S	100 1/4W UNF. CARBON	A
R865	QRD145J-101S	100 1/4W UNF. CARBON	B
R865	QRD145J-101S	100 1/4W UNF. CARBON	C
R865	QR20062-101	100 1/4W FUSIBLE	D
R865	QR20062-101	100 1/4W FUSIBLE	EBS
R865	QR20062-101	100 1/4W FUSIBLE	F
R866	QRD148J-152S	1.5K 1/4W CARBON	
R867	QRG022J-221A	220 2W O.M. FILM	A
R867	QRG022J-221A	220 2W O.M. FILM	B
R867	QRG022J-221A	220 2W O.M. FILM	C
R867	QRG022J-331A	330 2W O.M. FILM	D

△ Safety parts

Resistors

ITEM	PART NUMBER	DESCRIPTION	AREA
R867	QRG022J-331A	330 2W O.M.FILM	EBS
R867	QRG022J-331A	330 2W O.M.FILM	F
R868	QRG022J-221A	220 2W O.M.FILM	A
R868	QRG022J-221A	220 2W O.M.FILM	B
R868	QRG022J-221A	220 2W O.M.FILM	C
R868	QRG022J-331A	330 2W O.M.FILM	D
R868	QRG022J-331A	330 2W O.M.FILM	EBS
R868	QRG022J-331A	330 2W O.M.FILM	F
R869	QRG022J-331A	330 2W O.M.FILM	D
R869	QRG022J-331A	330 2W O.M.FILM	EBS
R869	QRG022J-331A	330 2W O.M.FILM	F
R870	QRD125J-272	2.7K 1/2W UNF.CARBON	F
R871	QRD148J-682S	6.8K 1/4W CARBON	F
R872	QRD148J-562S	5.6K 1/4W CARBON	F
R874	QRD125J-122	1.2K 1/2W UNF.CARBON	F
R875	QRD145J-680S	68 1/4W UNF.CARBON	A
R875	QRD145J-680S	68 1/4W UNF.CARBON	B
R875	QRD145J-680S	68 1/4W UNF.CARBON	C
R875	QRZ0062-680	68 1/4W FUSIBLE	D
R875	QRZ0062-680	68 1/4W FUSIBLE	EBS
R875	QRZ0062-680	68 1/4W FUSIBLE	F
R876	QRD145J-680S	68 1/4W UNF.CARBON	A
R876	QRD145J-680S	68 1/4W UNF.CARBON	B
R876	QRD145J-680S	68 1/4W UNF.CARBON	C
R876	QRZ0062-680	68 1/4W FUSIBLE	D
R876	QRZ0062-680	68 1/4W FUSIBLE	EBS
R876	QRZ0062-680	68 1/4W FUSIBLE	F
R877	QRD145J-680S	68 1/4W UNF.CARBON	A
R877	QRD145J-680S	68 1/4W UNF.CARBON	B
R877	QRD145J-680S	68 1/4W UNF.CARBON	C
R877	QRZ0062-680	68 1/4W FUSIBLE	D
R877	QRZ0062-680	68 1/4W FUSIBLE	EBS
R877	QRZ0062-680	68 1/4W FUSIBLE	F
R901	QRD148J-681S	680 1/4W CARBON	F
R902	QRD148J-681S	680 1/4W CARBON	F
R903	QRD148J-562S	5.6K 1/4W CARBON	F
R904	QRD148J-562S	5.6K 1/4W CARBON	F
R905	QRD148J-123S	12K 1/4W CARBON	F
R906	QRD148J-123S	12K 1/4W CARBON	F
R907	QRD148J-152S	1.5K 1/4W CARBON	F
R908	QRD148J-152S	1.5K 1/4W CARBON	F
R909	QRD148J-103S	10K 1/4W CARBON	F
R911	QRD148J-332S	3.3K 1/4W CARBON	F
R912	QRD148J-473S	47K 1/4W CARBON	F
R913	QRD148J-104S	100K 1/4W CARBON	F
R914	QRD148J-823S	82K 1/4W CARBON	F
R915	QRD148J-473S	47K 1/4W CARBON	F
R916	QRD148J-563S	56K 1/4W CARBON	F
R917	QRD148J-683S	68K 1/4W CARBON	F
R918	QRD148J-392S	3.9K 1/4W CARBON	F
R919	QRD148J-392S	3.9K 1/4W CARBON	F
R920	QRD148J-333S	33K 1/4W CARBON	F
R921	QRD148J-224S	220K 1/4W CARBON	F
R922	QRD148J-562S	5.6K 1/4W CARBON	F
R924	QRD145J-820S	82 1/4W UNF.CARBON	C
R924	QRD145J-820S	82 1/4W UNF.CARBON	D
R924	QRD145J-820S	82 1/4W UNF.CARBON	EBS
R924	QRD145J-820S	82 1/4W UNF.CARBON	F
R924	QRD148J-560S	56 1/4W CARBON	A
R924	QRD148J-560S	56 1/4W CARBON	B
R925	QRD145J-150S	15 1/4W UNF.CARBON	C
R925	QRD145J-150S	15 1/4W UNF.CARBON	D
R925	QRD145J-150S	15 1/4W UNF.CARBON	EBS
R925	QRD145J-150S	15 1/4W UNF.CARBON	F
R925	QRD148J-560S	56 1/4W CARBON	A
R925	QRD148J-560S	56 1/4W CARBON	B
R926	QRD145J-820S	82 1/4W UNF.CARBON	C
R926	QRD145J-820S	82 1/4W UNF.CARBON	D
R926	QRD145J-820S	82 1/4W UNF.CARBON	EBS
R926	QRD145J-820S	82 1/4W UNF.CARBON	F
R926	QRD148J-560S	56 1/4W CARBON	A
R926	QRD148J-560S	56 1/4W CARBON	B
R927	QRD145J-150S	15 1/4W UNF.CARBON	C
R927	QRD145J-150S	15 1/4W UNF.CARBON	D
R927	QRD145J-150S	15 1/4W UNF.CARBON	EBS
R927	QRD145J-150S	15 1/4W UNF.CARBON	F
R927	QRD148J-560S	56 1/4W CARBON	A
R927	QRD148J-560S	56 1/4W CARBON	B
R928	QRD145J-820S	82 1/4W UNF.CARBON	C
R928	QRD145J-820S	82 1/4W UNF.CARBON	D
R928	QRD145J-820S	82 1/4W UNF.CARBON	EBS
R928	QRD145J-820S	82 1/4W UNF.CARBON	F
R928	QRD148J-680S	68 1/4W CARBON	A
R928	QRD148J-680S	68 1/4W CARBON	B
R929	QRD145J-150S	15 1/4W UNF.CARBON	C
R929	QRD145J-150S	15 1/4W UNF.CARBON	D
R929	QRD145J-150S	15 1/4W UNF.CARBON	EBS
R929	QRD145J-150S	15 1/4W UNF.CARBON	F
R929	QRD148J-680S	68 1/4W CARBON	A
R929	QRD148J-680S	68 1/4W CARBON	B
R930	QRD145J-820S	82 1/4W UNF.CARBON	C

△ Safety Parts

Resistors

ITEM	PART NUMBER	DESCRIPTION	AREA
R930	QRD145J-820S	82 1/4W UNF.CARBON	D
R930	QRD145J-820S	82 1/4W UNF.CARBON	EBS
R930	QRD145J-820S	82 1/4W UNF.CARBON	F
R931	QRD145J-330S	33 1/4W UNF.CARBON	F
R935	QRD148J-822S	8.2K 1/4W CARBON	F
R937	QRD148J-822S	8.2K 1/4W CARBON	F
R941	QRG022J-471A	470 2W O.M.FILM	F
R942	QRG022J-471A	470 2W O.M.FILM	F
R943	QRZ0062-101	100 1/4W FUSIBLE	F
R944	QRZ0062-101	100 1/4W FUSIBLE	F
R945	QRZ0062-101	100 1/4W FUSIBLE	F
R946	QRZ0062-101	100 1/4W FUSIBLE	F
R949	QRD148J-103S	10K 1/4W CARBON	F
R950	QRD148J-103S	10K 1/4W CARBON	F

Others

△ Safety parts

ITEM	PART NUMBER	DESCRIPTION	AREA	
	EMB90TV-B01A	SPK. TERMINAL		
	EMG7331-001	FUSE CLIP	A	
	EMG7331-001	FUSE CLIP	B	
	EMG7331-001	FUSE CLIP	D	
	EMG7331-001	FUSE CLIP	EBS	
	EMG7331-001	FUSE CLIP	F	
	ENG-004A	PC BOARD ASS'Y	A	
	ENG-004A	PC BOARD ASS'Y	B	
	ENG-004A	PC BOARD ASS'Y	C	
	ENG-004B	PC BOARD ASS'Y	D	
	ENG-004B	PC BOARD ASS'Y	EBS	
	ENG-004C	PC BOARD ASS'Y	F	
	ENH-071A	PC BOARD ASS'Y	F	
	ETP1000-41EA	POWER TRANSFORM	D	
	ETP1000-41EA	POWER TRANSFORM	F	
	ETP1000-41EABS	POWER TRANSFORM	EBS	
	ETP1000-41JA	POWER TRANSFORM	A	
	ETP1000-41JA	POWER TRANSFORM	B	
	ETP1000-41ZA	POWER TRANSFORM	C	
	EW23A-60RR	WIER		
	E11218-103	CIRCUIT BOARD	A	
	E11218-103	CIRCUIT BOARD	B	
	E11218-201	CIRCUIT BOARD	C	
	E11218-201	CIRCUIT BOARD	D	
	E11218-201	CIRCUIT BOARD	F	
	E11218-201BS	CIRCUIT BOARD	EBS	
	E303551-002	HEAT SINK		
	E304105-001	BRACKET		
	E304105-002	BRACKET		
	E33754-001	TIE BAND		
	E65508-002	TAB		
	E67132-T3R15	FUSE LABEL	D	
	E67132-T3R15	FUSE LABEL	EBS	
	E67132-T3R15	FUSE LABEL	F	
	E67764-102	TERMINAL ASSY		
	E67764-103	TERMINAL		
	E67764-202	TERMINAL		
	E67764-302	TERMINAL	A	
	E67764-302	TERMINAL	B	
	E67764-302	TERMINAL	C	
	E69826-H22B	HEAT SINK		
	E69826-H22B	HEAT SINK		
	E70208-001	PLATE		
	E70225-001	EARTH PLATE		
	E70306-001	HEAT SINK		
	E70306-001	HEAT SINK	C	
	E70859-001	EARTH PLATE		
	QMC0437-002	AC SOCKET	A	
	QMC0437-002	AC SOCKET	C	
	QMC0440-001	AC SOCKET	B	
	SBSB3008CC	SCREW		
	SBSB3008Z	SCREW		
	SBSB3008Z	SCREW	C	
	SBSB3012Z	SCREW		
	SBSB3012Z	SCREW		
	SBSE3016CC	SCREW		
	J901	QMS6A30-021	JACK ASSY	
	J911	QMS3533-001	JACK ASSY	
	L751	EQL0001-1R0	INDUCTOR	
	L752	EQL0001-1R0	INDUCTOR	
	P001	EMV5102-005A	PLUG ASSY	
	P351	EMV7112-003	SOCKET WIRE	
	P801	EMV7112-006	SOCKET WIRE	
	P821	EMV7112-003	SOCKET WIRE	
	P911	EMV7112-003	SOCKET WIRE	
	S901	QST4231-E04	PUSH SWITCH	
	S902	QST4231-E04	PUSH SWITCH	
	RY001	ESK1012-113	RELAY	A
	RY001	ESK1D12-113	RELAY	B
	RY001	ESK1D12-113	RELAY	C
	RY001	ESK1D12-113	RELAY	D
	RY001	ESK1D12-113	RELAY	F
	RY001	ESK1D12-113BS	RELAY	EBS
	RY901	ESK5D24-214	RELAY	

△ Safety parts

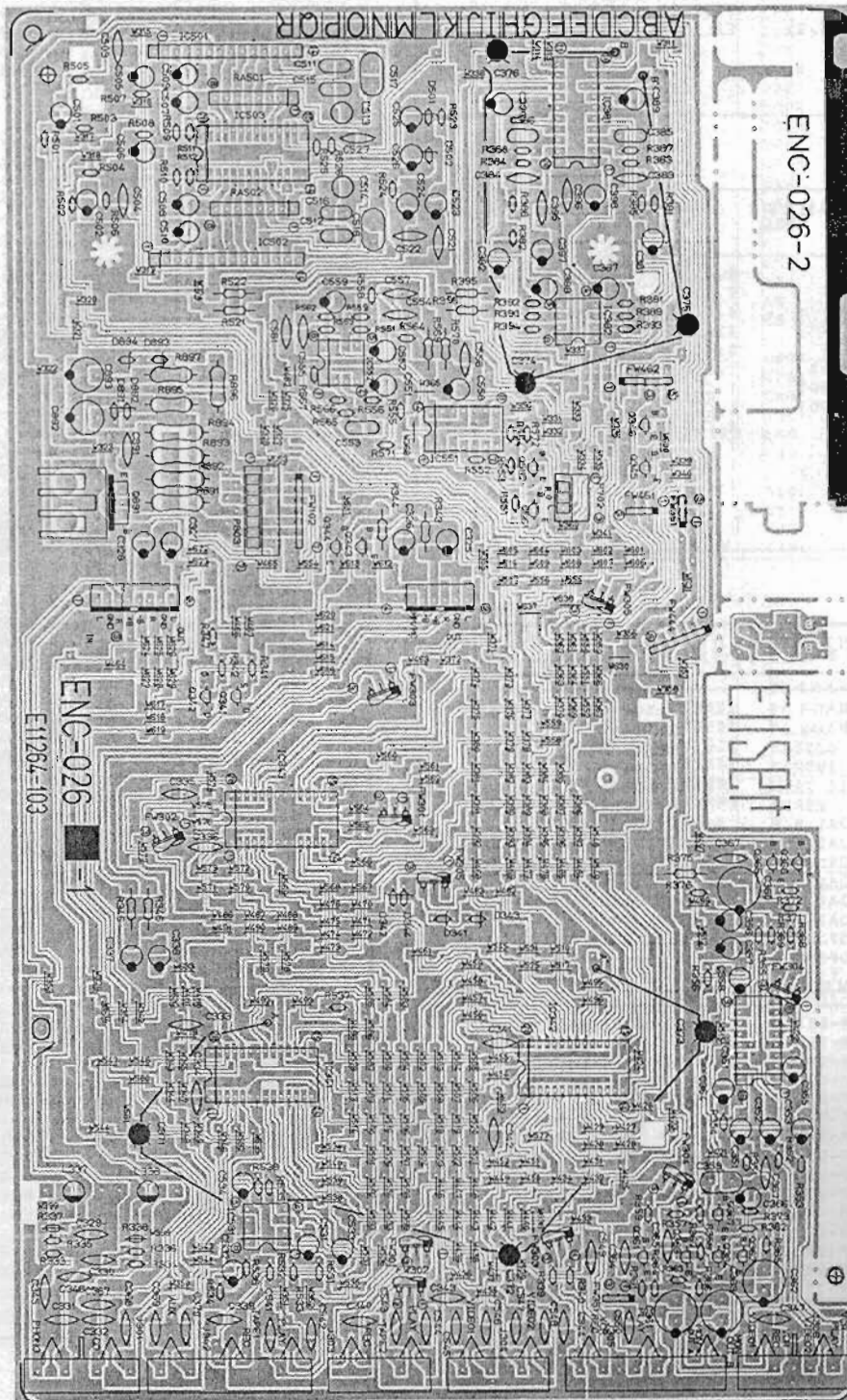
■ ENC-026 □ Pre-Amplifier PC Board Ass'y

Note: ENC-026 □ Varies according to the area employed. See note (1) when placing an order.

Note (1)

PC Board Ass'y	Designated Areas
ENC-026 A	U.S.A., Canada U.S. Military Market & Other Countries
ENC-026 B	Eruope, Australia & U.K.
ENC-026 C	West Germany

NOTE: To replace either C513 or C515, demount both capacitors and mount one QFV81HJ-274 (0.27 μ F, T.F. Capacitor).
The same procedure is required to replace C514 or C516.



Transistors

ITEM	PART NUMBER	DESCRIPTION			AREA
				MAKER	
Q341	2SK163(L1)	F.E.T	NEC		
Q342	2SK163(L1)	F.E.T	NEC		
Q343	DTA114YN	SILICON	ROHM		
Q344	DTA114YN	SILICON	ROHM		
Q345	DTC144EN	SILICON	ROHM		
Q346	DTC144EN	SILICON	ROHM		
Q361	2SC458(C,D)	SILICON	HITACHI		
Q362	2SC458(C,D)	SILICON	HITACHI		
Q363	2SC458(C,D)	SILICON	HITACHI		
Q364	2SA733A(P,Q)	SILICON	NEC		
Q365	DTC144EN	SILICON	ROHM		
Q366	DTC144EN	SILICON	ROHM		
Q367	DTC144EN	SILICON	ROHM		
Q561	DTA114YN	SILICON	ROHM		
Q562	DTC144EN	SILICON	ROHM		
Q891	2SD1666(R,S)	SILICON	SANYO		

ICs

ITEM	PART NUMBER	DESCRIPTION			AREA
				MAKER	
IC341	TC9164N	I.C.	TOSHIBA		
IC342	TC9163N	I.C.	TOSHIBA		
IC343	TC9164N	I.C.	TOSHIBA		
IC351	M51320P	I.C.	mitsubishi		
IC381	TC9177P	I.C.	TOSHIBA		
IC382	NJM4560D-X	I.C.			
IC501	7EL-GEQ-001	I.C.			
IC502	7EL-GEQ-001	I.C.			
IC503	LC7522	I.C.	SANYO		
IC531	M521BP	I.C.	MITSUBISHI		
IC551	LC4966	I.C.	SANYO		
IC552	M521BP	I.C.	MITSUBISHI		

Diodes

ITEM	PART NUMBER	DESCRIPTION			AREA
				MAKER	
D501	MT26-8C	ZENER	ROHM		
D502	MT26-8C	ZENER	ROHM		
D891	1SS133	SILICON	ROHM		
D892	MT213C	ZENER	ROHM		
D893	MT213C	ZENER	ROHM		
D894	MT213C	ZENER	ROHM		

Capacitors

ITEM	PART NUMBER	DESCRIPTION			AREA
C325	QETB1EM-107	100MF	25V	ELECTRO	
C326	QETB1EM-107	100MF	25V	ELECTRO	
C329	QCS21HJ-151	150PF	50V	CERAMIC	
C330	QCS21HJ-151	150PF	50V	CERAMIC	
C331	QCF21HP-223	0.022MF	50V	CERAMIC	
C332	QCF21HP-223	0.022MF	50V	CERAMIC	
C333	QCF21HP-223	0.022MF	50V	CERAMIC	
C334	QCF21HP-223	0.022MF	50V	CERAMIC	
C335	QCF21HP-223	0.022MF	50V	CERAMIC	
C336	QCF21HP-223	0.022MF	50V	CERAMIC	
C337	QETB1EM-476	47MF	25V	ELECTRO	
C338	QETB1EM-476	47MF	25V	ELECTRO	
C339	QCF21HP-223	0.022MF	50V	CERAMIC	
C340	QCF21HP-223	0.022MF	50V	CERAMIC	
C341	QCF21HP-223	0.022MF	50V	CERAMIC	

Capacitors

ITEM	PART NUMBER	DESCRIPTION			AREA
C342	QCF21HP-223	0.022MF	50V	CERAMIC	
C343	QCF21HP-223	0.022MF	50V	CERAMIC	
C344	QCF21HP-223	0.022MF	50V	CERAMIC	
C345	QCS21HJ-101	100PF	50V	CERAMIC	C
C346	QCS21HJ-101	100PF	50V	CERAMIC	C
C347	QCF21HP-223	0.022MF	50V	CERAMIC	
C351	QETB1CM-476	47MF	16V	ELECTRO	
C352	QETB1CM-476	47MF	16V	ELECTRO	
C353	QETB1CM-476	47MF	16V	ELECTRO	
C354	QETB1CM-476	47MF	16V	ELECTRO	
C355	QETB1CM-476	47MF	16V	ELECTRO	
C356	QETB1CM-476	47MF	16V	ELECTRO	
C357	QETB1CM-476	47MF	16V	ELECTRO	
C358	QETB1CM-476	47MF	16V	ELECTRO	
C359	QFN81HK-104	0.1MF	50V	MYLAR	
C360	QETB1CM-108	1000MF	16V	ELECTRO	
C361	QETB1AM-108	1000MF	10V	ELECTRO	
C362	QETB1AM-108	1000MF	10V	ELECTRO	
C363	QETB1AM-108	1000MF	10V	ELECTRO	
C364	QCS21HJ-270	27PF	50V	CERAMIC	
C365	QCS21HJ-270	27PF	50V	CERAMIC	
C366	QETB1EM-106	10MF	25V	ELECTRO	
C371	QCS21HJ-101	100PF	50V	CERAMIC	
C372	QCS21HJ-101	100PF	50V	CERAMIC	
C373	QCS21HJ-101	100PF	50V	CERAMIC	
C374	QCS21HJ-101	100PF	50V	CERAMIC	
C375	QCS21HJ-101	100PF	50V	CERAMIC	
C376	QCS21HJ-101	100PF	50V	CERAMIC	
C381	QETB1HM-475	4.7MF	50V	ELECTRO	
C382	QETB1HM-475	4.7MF	50V	ELECTRO	
C383	QCS21HJ-181	180PF	50V	CERAMIC	
C384	QCS21HJ-181	180PF	50V	CERAMIC	
C385	QFN81HK-333	0.033MF	50V	MYLAR	
C386	QFN81HK-333	0.033MF	50V	MYLAR	
C387	QETB1HM-105	1MF	50V	ELECTRO	
C388	QETB1HM-105	1MF	50V	ELECTRO	
C389	QETB1EM-106	10MF	25V	ELECTRO	
C390	QETB1EM-106	10MF	25V	ELECTRO	
C395	QCF21HP-223	0.022MF	50V	CERAMIC	
C396	QCF21HP-223	0.022MF	50V	CERAMIC	
C397	QETB1EM-476	47MF	25V	ELECTRO	
C398	QETB1EM-476	47MF	25V	ELECTRO	
C501	QETB1HM-475	4.7MF	50V	ELECTRO	
C502	QETB1HM-475	4.7MF	50V	ELECTRO	
C503	QCS21HJ-470	47PF	50V	CERAMIC	
C504	QCS21HJ-470	47PF	50V	CERAMIC	
C505	QETB1HM-475	4.7MF	50V	ELECTRO	
C506	QETB1HM-475	4.7MF	50V	ELECTRO	
C507	QETB1HM-475	4.7MF	50V	ELECTRO	
C508	QETB1HM-475	4.7MF	50V	ELECTRO	
C509	QETB1HM-475	4.7MF	50V	ELECTRO	
C510	QETB1HM-475	4.7MF	50V	ELECTRO	
C511	QFN81HK-104	0.1MF	50V	MYLAR	
C512	QFN81HK-104	0.1MF	50V	MYLAR	
C513	QEB51HM-224	0.22MF	50V	L.L.C.E.	
C514	QEB51HM-224	0.22MF	50V	L.L.C.E.	
C515	QFV81HJ-274	0.27MF	50V	T.FILM	
C516	QFV81HJ-274	0.27MF	50V	T.FILM	
C517	QFV81HJ-684	0.68MF	50V	T.FILM	
C518	QFV81HJ-684	0.68MF	50V	T.FILM	
C521	QCF21HP-223	0.022MF	50V	CERAMIC	
C522	QCF21HP-223	0.022MF	50V	CERAMIC	
C523	QETB1HM-475	4.7MF	50V	ELECTRO	
C524	QETB1HM-475	4.7MF	50V	ELECTRO	
C525	QETB1HM-475	4.7MF	50V	ELECTRO	
C526	QETB1HM-475	4.7MF	50V	ELECTRO	
C527	QCF21HP-223	0.022MF	50V	CERAMIC	
C531	QETB1EM-106	10MF	25V	ELECTRO	
C532	QETB1EM-106	10MF	25V	ELECTRO	
C533	QETB1EM-106	10MF	25V	ELECTRO	
C534	QETB1EM-106	10MF	25V	ELECTRO	
C551	QETB1HM-475	4.7MF	50V	ELECTRO	
C552	QETB1HM-475	4.7MF	50V	ELECTRO	
C553	QFN81HK-333	0.033MF	50V	MYLAR	
C554	QCY21HK-472	4700PF	50V	CERAMIC	
C555	QCS21HJ-271	270PF	50V	CERAMIC	
C556	QCF21HP-223	0.022MF	50V	CERAMIC	
C557	QCF21HP-223	0.022MF	50V	CERAMIC	
C558	QETB1EM-106	10MF	25V	ELECTRO	
C559	QETB1EM-106	10MF	25V	ELECTRO	
C891	QCF21HP-472	4700PF	50V	CERAMIC	
C892	QETB1EM-107	100MF	25V	ELECTRO	
C893	QETB1HM-476	47MF	50V	ELECTRO	

Resistors

ITEM	PART NUMBER	DESCRIPTION	AREA
R332	QRD161J-473	47K 1/6W CARBON	
R334	QRD161J-473	47K 1/6W CARBON	
R335	QRD161J-471	470 1/6W CARBON	
R336	QRD161J-471	470 1/6W CARBON	
R337	QRD161J-152	1.5K 1/6W CARBON	C
R338	QRD161J-152	1.5K 1/6W CARBON	C
R339	QRD161J-471	470 1/6W CARBON	
R340	QRD161J-471	470 1/6W CARBON	
R341	QRD161J-473	47K 1/6W CARBON	
R342	QRD161J-473	47K 1/6W CARBON	
R343	QRZ0062-680	68 1/4W UNF. CARBON	A
R343	QRZ0062-680	68 1/4W FUSIBLE	B
R343	QRZ0062-680	68 1/4W FUSIBLE	C
R344	QRD145J-680S	68 1/4W UNF. CARBON	A
R344	QRZ0062-680	68 1/4W FUSIBLE	B
R344	QRZ0062-680	68 1/4W FUSIBLE	C
R345	QRD145J-680S	68 1/4W UNF. CARBON	A
R345	QRZ0062-680	68 1/4W FUSIBLE	B
R345	QRZ0062-680	68 1/4W FUSIBLE	C
R346	QRD145J-680S	68 1/4W UNF. CARBON	A
R346	QRZ0062-680	68 1/4W FUSIBLE	B
R346	QRZ0062-680	68 1/4W FUSIBLE	C
R347	QRD161J-104	100K 1/6W CARBON	
R351	QRD161J-750	75 1/6W CARBON	
R352	QRD161J-750	75 1/6W CARBON	
R353	QRD161J-750	75 1/6W CARBON	
R354	QRD161J-750	75 1/6W CARBON	
R355	QRD161J-750	75 1/6W CARBON	
R356	QRD161J-821	820 1/6W CARBON	
R357	QRD161J-101	100 1/6W CARBON	
R358	QRD161J-102	1K 1/6W CARBON	
R359	QRD161J-100	10 1/6W CARBON	
R361	QRD161J-151	150 1/6W CARBON	
R362	QRD161J-331	330 1/6W CARBON	
R363	QRD161J-331	330 1/6W CARBON	
R364	QRD161J-680	68 1/6W CARBON	
R365	QRD161J-680	68 1/6W CARBON	
R366	QRD161J-750	75 1/6W CARBON	
R367	QRD161J-182	1.8K 1/6W CARBON	
R368	QRD161J-563	56K 1/6W CARBON	
R369	QRD161J-563	56K 1/6W CARBON	
R373	QRD161J-103	10K 1/6W CARBON	
R372	QRD161J-103	10K 1/6W CARBON	
R373	QRD161J-102	1K 1/6W CARBON	
R375	QRD145J-220S	22 1/4W UNF. CARBON	A
R375	QRZ0062-220	22 1/4W FUSIBLE	B
R375	QRZ0062-220	22 1/4W FUSIBLE	C
R376	QRD161J-104	100K 1/6W CARBON	
R381	QRD161J-104	100K 1/6W CARBON	
R382	QRD161J-104	100K 1/6W CARBON	
R383	QRD161J-105	1M 1/6W CARBON	
R384	QRD161J-105	1M 1/6W CARBON	
R385	QRD161J-563	56K 1/6W CARBON	
R386	QRD161J-563	56K 1/6W CARBON	
R387	QRD161J-563	56K 1/6W CARBON	
R388	QRD161J-563	56K 1/6W CARBON	
R389	QRD161J-103	10K 1/6W CARBON	
R390	QRD161J-103	10K 1/6W CARBON	
R391	QRD161J-105	1M 1/6W CARBON	
R392	QRD161J-105	1M 1/6W CARBON	
R393	QRD161J-103	10K 1/6W CARBON	
R394	QRD161J-103	10K 1/6W CARBON	
R395	QRD145J-680S	68 1/4W UNF. CARBON	A
R395	QRZ0062-680	68 1/4W FUSIBLE	B
R395	QRZ0062-680	68 1/4W FUSIBLE	C
R396	QRD145J-680S	68 1/4W UNF. CARBON	A
R396	QRZ0062-680	68 1/4W FUSIBLE	B
R396	QRZ0062-680	68 1/4W FUSIBLE	C
R501	QRD161J-273	27K 1/6W CARBON	
R502	QRD161J-273	27K 1/6W CARBON	
R503	QRD161J-393	39K 1/6W CARBON	
R504	QRD161J-393	39K 1/6W CARBON	
R505	QRD161J-823	82K 1/6W CARBON	
R506	QRD161J-823	82K 1/6W CARBON	
R507	QRD161J-104	100K 1/6W CARBON	
R508	QRD161J-104	100K 1/6W CARBON	
R509	QRD161J-224	220K 1/6W CARBON	
R510	QRD161J-224	220K 1/6W CARBON	
R511	QRD161J-224	220K 1/6W CARBON	
R512	QRD161J-224	220K 1/6W CARBON	
R521	QRD145J-680S	68 1/4W UNF. CARBON	A
R521	QRZ0062-680	68 1/4W FUSIBLE	B
R521	QRZ0062-680	68 1/4W FUSIBLE	C
R522	QRD145J-680S	68 1/4W UNF. CARBON	A
R522	QRZ0062-680	68 1/4W FUSIBLE	B

△ Safety parts

Resistors

ITEM	PART NUMBER	DESCRIPTION	AREA
R522	QRZ0062-680	68 1/4W FUSIBLE	C
R523	QRD161J-821	820 1/6W CARBON	
R524	QRD161J-821	820 1/6W CARBON	
R525	QRD161J-681	680 1/6W CARBON	
R526	QRD161J-272	2.7K 1/6W CARBON	
R531	QRD161J-102	1K 1/6W CARBON	
R532	QRD161J-102	1K 1/6W CARBON	
R533	QRD161J-823	82K 1/6W CARBON	
R534	QRD161J-823	82K 1/6W CARBON	
R535	QRD161J-174	170K 1/6W CARBON	
R536	QRD161J-124	120K 1/6W CARBON	
R537	QRD161J-474	470K 1/6W CARBON	
R538	QRD161J-474	470K 1/6W CARBON	
R551	QRD161J-563	56K 1/6W CARBON	
R552	QRD161J-563	56K 1/6W CARBON	
R553	QRD161J-563	56K 1/6W CARBON	
R554	QRD161J-563	56K 1/6W CARBON	
R555	QRD161J-223	22K 1/6W CARBON	
R556	QRD161J-273	27K 1/6W CARBON	
R558	QRD161J-474	470K 1/6W CARBON	
R559	QRD161J-223	22K 1/6W CARBON	
R561	QRD161J-104	100K 1/6W CARBON	
R562	QRD161J-154	150K 1/6W CARBON	
R563	QRD161J-394	390K 1/6W CARBON	
R564	QRD161J-474	470K 1/6W CARBON	
R565	QRD161J-333	33K 1/6W CARBON	
R566	QRD161J-683	68K 1/6W CARBON	
R567	QRD161J-273	27K 1/6W CARBON	
R569	QRD145J-680S	68 1/4W UNF. CARBON	A
R569	QRZ0062-680	68 1/4W FUSIBLE	B
R569	QRZ0062-680	68 1/4W FUSIBLE	C
R570	QRD145J-680S	68 1/4W UNF. CARBON	A
R570	QRZ0062-680	68 1/4W FUSIBLE	B
R570	QRZ0062-680	68 1/4W FUSIBLE	C
R571	QRD161J-474	470K 1/6W CARBON	
R572	QRD161J-474	470K 1/6W CARBON	
R891	QRG022J-181A	180 2W O.M. FILM	
R892	QRG022J-181A	180 2W O.M. FILM	
R893	QRG022J-181A	180 2W O.M. FILM	
R894	QRG022J-181A	180 2W O.M. FILM	
R895	QRD125J-272	2.7K 1/2W UNF. CARBON	
R896	QRD125J-561	560 1/2W UNF. CARBON	
R897	QRD125J-681	680 1/2W UNF. CARBON	
RA501	QRB075J-474	470K 7W ARRAY	
RA502	QRB075J-474	470K 7W ARRAY	

△ Safety parts

Others

ITEM	PART NUMBER	DESCRIPTION	AREA
	ENH-076A	PC BOARD ASSY	A
	ENH-076A	PC BOARD ASSY	B
	ENH-076B	PC BOARD ASSY	C
	E03532-001	SHIELD CASE	C
	E11264-102	CIRCUIT BOARD	
	E69826-H22B	HEAT SINK	
	S95B3012Z	SCREW	
J301	EMN00TV-405A	PIN JACK ASSY	
J302	EMN00TV-602A	PIN JACK ASSY	
J303	EMN00TV-402A	PIN JACK ASSY	
J304	EMN00TV-402A	PIN JACK ASSY	
J305	EMN00TV-602A	PIN JACK ASSY	
J306	EMN00TV-405A	PIN JACK ASSY	
L337	EQL0111-151	INDUCTOR	C
L338	EQL0111-151	INDUCTOR	C
P702	EMV7112-003	SOCKET WIRE	
P803	EMV7112-007	SOCKET WIRE	

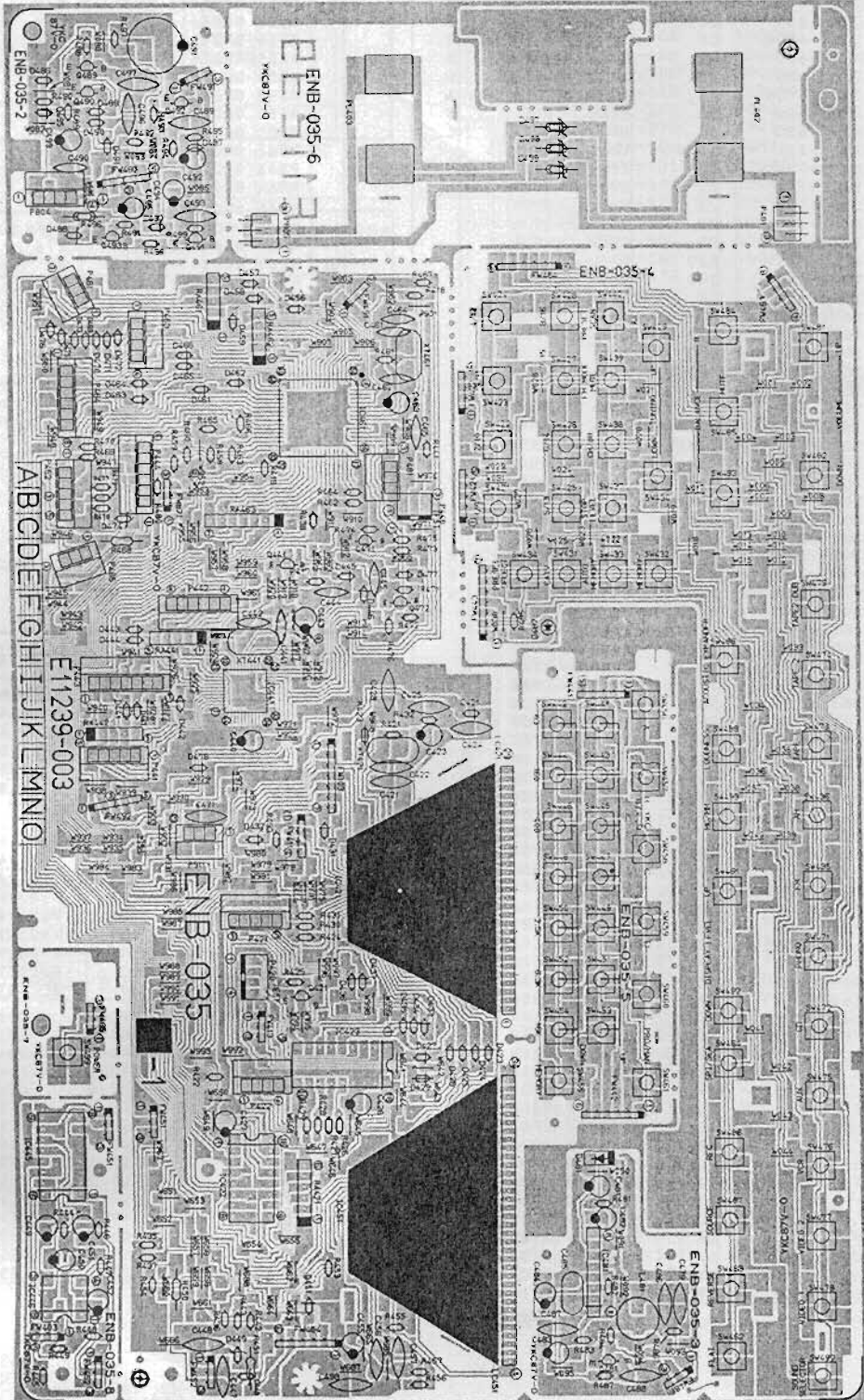
■ ENB-035 □ Logic PC Board Ass'y

Note: ENB-035 □ Varies according to the area employed. See note (1) when placing an order.

Note (1)

PC Board Ass'y	Designated Area
ENB-035 <input type="checkbox"/> F	U.S.A.
ENB-035 <input type="checkbox"/> G	Canada
ENB-035 <input type="checkbox"/> H	U.S. Military Market & Other Countries

PC Board Ass'y	Designated Area
ENB-035 <input type="checkbox"/> I	Europe, Australia & U.K.
ENB-035 <input type="checkbox"/> J	West Germany



Transistor

ITEM	PART NUMBER	DESCRIPTION		AREA
			MAKER	
Q421	DTC144EN	SILICON	ROHM	
Q441	DTC144EN	SILICON	ROHM	
Q471	2SC458(C,D)	SILICON	HITACHI	
Q472	2SC458(C,D)	SILICON	HITACHI	
Q481	2SC458(C,D)	SILICON	HITACHI	
Q489	DTC144EN	SILICON	ROHM	
Q490	DTC144EN	SILICON	ROHM	
Q491	2SC458(C,D)	SILICON	HITACHI	
Q492	2SC458(C,D)	SILICON	HITACHI	
Q493	DTC144EN	SILICON	ROHM	

Diodes

ITEM	PART NUMBER	DESCRIPTION		AREA
			MAKER	
D497	MTZ12C	ZENER	ROHM	G
D497	MTZ12C	ZENER	ROHM	H
D497	RD12EB3	ZENER	NEC	I
D497	RD12EB3	ZENER	NEC	J
D498	MTZ12C	ZENER	ROHM	F
D498	MTZ12C	ZENER	ROHM	G
D498	MTZ12C	ZENER	ROHM	H
D498	RD12EB3	ZENER	NEC	I
D498	RD12EB3	ZENER	NEC	J
D499	MTZ12C	ZENER	ROHM	F
D499	MTZ12C	ZENER	ROHM	G
D499	MTZ12C	ZENER	ROHM	H
D499	RD12EB3	ZENER	NEC	I
D499	RD12EB3	ZENER	NEC	J

ICs

ITEM	PART NUMBER	DESCRIPTION		AREA
			MAKER	
IC421	TC9302AF-013BS	I.C.	TOSHIBA	
IC422	TC9173P	I.C.	TOSHIBA	
IC423	TC5514APL-3	I.C.	TOSHIBA	
IC441	UPD7507HG-507	I.C.	NEC	
IC445	TC9154AP	I.C.	TOSHIBA	
IC446	NJM4558D	I.C.		
IC451	UPD7225G00	I.C.	NEC	
IC461	MN1758US1	I.C.	MATSUSHITA	
IC481	UPC1473HA	I.C.	NEC	

Capacitors

ITEM	PART NUMBER	DESCRIPTION		AREA
C421	QCS21HJ-120	12PF	50V CERAMIC	
C422	QCS21HJ-120	12PF	50V CERAMIC	
C423	QETB1AM-107	100MF	10V ELECTRO	
C424	QCF21HP-223	0.022MF	50V CERAMIC	
C425	QCF21HP-223	0.022MF	50V CERAMIC	
C426	QETB1EM-106	10MF	25V ELECTRO	
C427	QETB1EM-106	10MF	25V ELECTRO	
C440	QETB0JM-477	470MF	6.3V ELECTRO	
C441	QCS21HJ-330	33PF	50V CERAMIC	
C442	QCS21HJ-330	33PF	50V CERAMIC	
C443	QETB0JM-227	220MF	6.3V ELECTRO	
C444	QCF21HP-223	0.022MF	50V CERAMIC	
C447	QCF21HP-223	0.022MF	50V CERAMIC	
C448	QCF21HP-223	0.022MF	50V CERAMIC	
C449	QETB1HM-474	0.47MF	50V ELECTRO	
C450	QETB1HM-474	0.47MF	50V ELECTRO	
C451	QETB1HM-474	0.47MF	50V ELECTRO	
C452	QETB1EM-106	10MF	25V ELECTRO	
C455	QETB1EM-106	10MF	25V ELECTRO	
C456	QCF21HP-223	0.022MF	50V CERAMIC	
C457	QCF21HP-223	0.022MF	50V CERAMIC	
C461	QCS21HJ-330	33PF	50V CERAMIC	
C462	QCS21HJ-330	33PF	50V CERAMIC	
C463	QETB0JM-477	470MF	6.3V ELECTRO	
C464	QCF21HP-223	0.022MF	50V CERAMIC	
C481	QETB1EM-106	10MF	25V ELECTRO	
C482	QETB1EM-476	47MF	25V ELECTRO	
C483	QETB1HM-475	4.7MF	50V ELECTRO	
C484	QETB1EM-106	10MF	25V ELECTRO	
C485	QFN81HK-333	0.033MF	50V MYLAR	
C486	QCY21HK-332	3300PF	50V CERAMIC	
C491	EEZ0502-479	47MF	ELECTRO	
C492	QETB1HM-225	2.2MF	50V ELECTRO	
C493	QCF21HP-223	0.022MF	50V CERAMIC	
C494	QETB1AM-476	47MF	10V ELECTRO	
C495	QETB1HM-225	2.2MF	50V ELECTRO	
C499	QETB0JM-227	220MF	6.3V ELECTRO	

Diodes

ITEM	PART NUMBER	DESCRIPTION		AREA
			MAKER	
D421	1SS133	SILICON	ROHM	
D423	1SS133	SILICON	ROHM	
D424	1SS133	SILICON	ROHM	
D425	1SS133	SILICON	ROHM	
D426	1SS133	SILICON	ROHM	
D427	1SS133	SILICON	ROHM	H
D427	1SS133	SILICON	ROHM	I
D427	1SS133	SILICON	ROHM	J
D429	1SS133	SILICON	ROHM	H
D429	1SS133	SILICON	ROHM	I
D429	1SS133	SILICON	ROHM	J
D431	1SS133	SILICON	ROHM	
D432	1SS133	SILICON	ROHM	
D433	1SS133	SILICON	ROHM	
D434	1SS133	SILICON	ROHM	
D435	1SS133	SILICON	ROHM	
D436	1SS133	SILICON	ROHM	
D437	1SS133	SILICON	ROHM	
D441	1SS133	SILICON	ROHM	
D442	1SS133	SILICON	ROHM	
D443	1SS133	SILICON	ROHM	
D444	1SS133	SILICON	ROHM	
D445	1SS133	SILICON	ROHM	
D446	1SS133	SILICON	ROHM	
D448	MTZ1.6C	ZENER	ROHM	
D449	MTZ1.6C	ZENER	ROHM	
D451	1SS133	SILICON	ROHM	
D456	1SS133	SILICON	ROHM	
D457	1SS133	SILICON	ROHM	
D458	1SS133	SILICON	ROHM	
D459	1SS133	SILICON	ROHM	
D461	1SS133	SILICON	ROHM	
D462	1SS133	SILICON	ROHM	
D463	1SS133	SILICON	ROHM	
D464	1SS133	SILICON	ROHM	
D465	1SS133	SILICON	ROHM	
D466	1SS133	SILICON	ROHM	
D470	1SS133	SILICON	ROHM	
D471	1SS133	SILICON	ROHM	
D472	1SS133	SILICON	ROHM	
D473	1SS133	SILICON	ROHM	
D474	MTZ1.6C	ZENER	ROHM	
D477	1SS133	SILICON	ROHM	
D478	1SS133	SILICON	ROHM	
D481	PD49P1	SILICON		
D482	SLM-34VC3F	L.E.D.	ROHM	
D485	1SS133	SILICON	ROHM	
D486	1SS133	SILICON	ROHM	
D487	1SS133	SILICON	ROHM	
D488	MTZ1.6C	ZENER	ROHM	
D489	1SS133	SILICON	ROHM	
D490	1SS133	SILICON	ROHM	
D491	1SS133	SILICON	ROHM	
D492	1SS133	SILICON	ROHM	
D497	MTZ12C	ZENER	ROHM	F

Resistors

ITEM	PART NUMBER	DESCRIPTION		AREA
R417	QRD161J-104	100K	1/6W CARBON	
R421	QRD161J-333	33K	1/6W CARBON	
R422	QRD161J-332	3.3K	1/6W CARBON	
R424	QRD161J-104	100K	1/6W CARBON	
R425	QRD161J-473	47K	1/6W CARBON	
R426	QRD161J-103	10K	1/6W CARBON	
R427	QRD161J-103	10K	1/6W CARBON	
R428	QRD161J-203	20K	1/6W CARBON	
R429	QRD161J-103	10K	1/6W CARBON	
R430	QRD161J-332	3.3K	1/6W CARBON	
R431	QRD161J-222	2.2K	1/6W CARBON	
R432	QRD161J-104	100K	1/6W CARBON	
R433	QRD161J-104	100K	1/6W CARBON	
R435	QRD161J-104	100K	1/6W CARBON	
R436	QRD161J-104	100K	1/6W CARBON	
R437	QRD161J-104	100K	1/6W CARBON	
R438	QRD161J-104	100K	1/6W CARBON	
R441	QRD161J-102	1K	1/6W CARBON	
R444	QRD161J-474	470K	1/6W CARBON	
R445	QRD161J-471	470	1/6W CARBON	

Resistors

ITEM	PART NUMBER	DESCRIPTION	AREA
R446	QRD161J-474	470K 1/6W CARBON	
R447	QRD161J-474	470K 1/6W CARBON	
R448	QRD161J-102	1K 1/6W CARBON	
R449	QRD161J-334	330K 1/6W CARBON	
R450	QRD145J-681S	680 1/4W UNF. CARBON	
R451	QRD145J-821S	820 1/4W UNF. CARBON	
R453	QRD161J-104	100K 1/6W CARBON	
R454	QRD161J-474	470K 1/6W CARBON	
R455	QRD161J-184	180K 1/6W CARBON	
R456	QRD161J-102	1K 1/6W CARBON	
R457	QRD161J-102	1K 1/6W CARBON	
R458	QRD161J-474	470K 1/6W CARBON	
R459	QRD161J-474	470K 1/6W CARBON	
R460	QRD161J-474	470K 1/6W CARBON	
R461	QRD161J-104	100K 1/6W CARBON	
R462	QRD161J-473	47K 1/6W CARBON	
R463	QRD161J-473	47K 1/6W CARBON	
R464	QRD161J-473	47K 1/6W CARBON	
R465	QRD161J-473	47K 1/6W CARBON	
R466	QRD161J-473	47K 1/6W CARBON	
R467	QRD161J-102	1K 1/6W CARBON	
R468	QRD145J-681S	680 1/4W UNF. CARBON	
R469	QRD161J-474	470K 1/6W CARBON	
R470	QRD161J-474	470K 1/6W CARBON	
R471	QRD161J-473	47K 1/6W CARBON	
R472	QRD161J-473	47K 1/6W CARBON	
R473	QRD161J-471	470 1/6W CARBON	
R474	QRD161J-473	47K 1/6W CARBON	
R475	QRD161J-473	47K 1/6W CARBON	
R476	QRD161J-103	10K 1/6W CARBON	
R477	QRD161J-474	470K 1/6W CARBON	
R478	QRD161J-474	470K 1/6W CARBON	
R479	QRD161J-474	470K 1/6W CARBON	
R480	QRD161J-474	470K 1/6W CARBON	
R481	QRD161J-102	1K 1/6W CARBON	
R482	QRD161J-220	22 1/6W CARBON	
R483	QRD161J-104	100K 1/6W CARBON	
R484	QRD161J-104	100K 1/6W CARBON	
R485	QRD161J-221	220 1/6W CARBON	
R487	QRD161J-223	22K 1/6W CARBON	
R488	QRD161J-472	4.7K 1/6W CARBON	
R489	QRD161J-472	4.7K 1/6W CARBON	
R490	QRD161J-472	4.7K 1/6W CARBON	
R491	QRD161J-472	4.7K 1/6W CARBON	
R492	QRD161J-102	1K 1/6W CARBON	
R493	QRD161J-472	4.7K 1/6W CARBON	
R494	QRD161J-223	22K 1/6W CARBON	
R495	QRD161J-473	47K 1/6W CARBON	
R496	QRD145J-222S	2.2K 1/4W UNF. CARBON	I
R496	QRD145J-222S	2.2K 1/4W UNF. CARBON	J
R496	QRD161J-222	2.2K 1/6W CARBON	F
R496	QRD161J-222	2.2K 1/6W CARBON	G
R496	QRD161J-222	2.2K 1/6W CARBON	H
R497	QRD161J-331	330 1/6W CARBON	
R498	QRD161J-103	10K 1/6W CARBON	
R499	QRD161J-223	22K 1/6W CARBON	
RA421	QRB055J-473	47K 5W ARRAY	
RA441	QRB045J-104	100K 4W ARRAY	
RA442	QRB045J-104	100K 4W ARRAY	
RA461	QRB045J-103	10K 4W ARRAY	
RA462	QRB045J-473	47K 4W ARRAY	
RA463	QRB065J-473	47K 6W ARRAY	

△ Safety parts

Others

ITEM	PART NUMBER	DESCRIPTION	AREA
P481	EMV7112-003	SOCKET WIRE	
P804	EMV7112-004	SOCKET WIRE	
P805	QMV5004-003K	PULAG ASSY	
P911	EMV7112-003	SOCKET WIRE	
LC421	ELU0002-011	F.L.TUBE	
LC451	ELU0002-013	F.L.TUBE	
SW421	ESP0001-007	PUSH SWITCH	
SW422	ESP0001-007	PUSH SWITCH	
SW423	ESP0001-007	PUSH SWITCH	
SW424	ESP0001-007	PUSH SWITCH	
SW425	ESP0001-007	PUSH SWITCH	
SW426	ESP0001-007	PUSH SWITCH	
SW427	ESP0001-007	PUSH SWITCH	
SW428	ESP0001-007	PUSH SWITCH	
SW429	ESP0001-007	PUSH SWITCH	
SW430	ESP0001-007	PUSH SWITCH	
SW431	ESP0001-007	PUSH SWITCH	
SW431	ESP0001-007	PUSH SWITCH	F
SW431	ESP0001-007	PUSH SWITCH	G
SW432	ESP0001-007	PUSH SWITCH	
SW433	ESP0001-007	PUSH SWITCH	
SW434	ESP0001-007	PUSH SWITCH	
SW435	ESP0001-007	PUSH SWITCH	
SW436	ESP0001-007	PUSH SWITCH	
SW437	ESP0001-007	PUSH SWITCH	
SW438	ESP0001-007	PUSH SWITCH	
SW439	ESP0001-007	PUSH SWITCH	
SW440	ESP0001-007	PUSH SWITCH	
SW441	ESP0001-007	PUSH SWITCH	
SW442	ESP0001-007	PUSH SWITCH	
SW443	ESP0001-007	PUSH SWITCH	
SW444	ESP0001-007	PUSH SWITCH	
SW445	ESP0001-007	PUSH SWITCH	
SW446	ESP0001-007	PUSH SWITCH	
SW447	ESP0001-007	PUSH SWITCH	
SW448	ESP0001-007	PUSH SWITCH	
SW449	ESP0001-007	PUSH SWITCH	
SW450	ESP0001-007	PUSH SWITCH	
SW451	ESP0001-007	PUSH SWITCH	
SW452	ESP0001-007	PUSH SWITCH	
SW453	ESP0001-007	PUSH SWITCH	
SW454	ESP0001-007	PUSH SWITCH	
SW455	ESP0001-007	PUSH SWITCH	
SW456	ESP0001-007	PUSH SWITCH	
SW457	ESP0001-007	PUSH SWITCH	
SW458	ESP0001-007	PUSH SWITCH	
SW459	ESP0001-007	PUSH SWITCH	
SW460	ESP0001-007	PUSH SWITCH	
SW461	ESP0001-007	PUSH SWITCH	
SW462	ESP0001-007	PUSH SWITCH	
SW463	ESP0001-007	PUSH SWITCH	
SW464	ESP0001-007	PUSH SWITCH	
SW471	ESP0001-007	PUSH SWITCH	
SW472	ESP0001-007	PUSH SWITCH	
SW473	ESP0001-007	PUSH SWITCH	
SW474	ESP0001-007	PUSH SWITCH	
SW475	ESP0001-007	PUSH SWITCH	
SW476	ESP0001-007	PUSH SWITCH	
SW477	ESP0001-007	PUSH SWITCH	
SW478	ESP0001-007	PUSH SWITCH	
SW479	ESP0001-007	PUSH SWITCH	
SW481	ESP0001-007	PUSH SWITCH	
SW482	ESP0001-007	PUSH SWITCH	
SW483	ESP0001-007	PUSH SWITCH	
SW484	ESP0001-007	PUSH SWITCH	
SW485	ESP0001-007	PUSH SWITCH	
SW486	ESP0001-007	PUSH SWITCH	
SW487	ESP0001-007	PUSH SWITCH	
SW488	ESP0001-007	PUSH SWITCH	
SW489	ESP0001-007	PUSH SWITCH	
SW490	ESP0001-007	PUSH SWITCH	
SW491	ESP0001-007	PUSH SWITCH	
SW492	ESP0001-007	PUSH SWITCH	
SW493	ESP0001-007	PUSH SWITCH	
SW493	ESP0001-007	PUSH SWITCH	F
SW493	ESP0001-007	PUSH SWITCH	G
SW493	ESP0001-007	PUSH SWITCH	M
SW493	ESP0001-007	PUSH SWITCH	I
SW493	ESP0001-007	PUSH SWITCH	J
SW499	ESP0001-007	PUSH SWITCH	
XT421	ECX0007-200KC	CRYSTAL	
XT441	ECX0004-190KU	RESONATOR	
XT461	ECX0007-200KM	RESONATOR	

Others

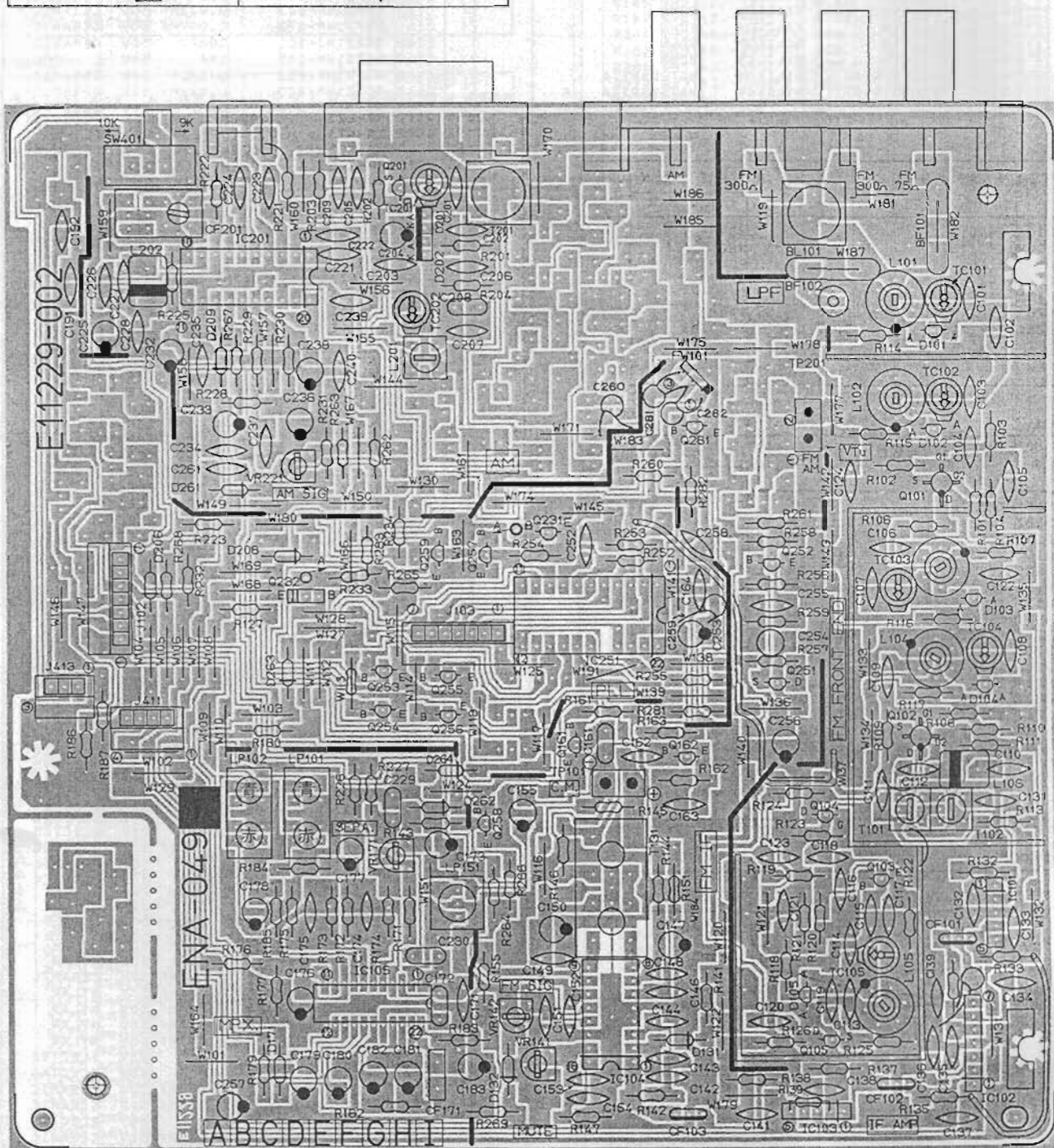
ITEM	PART NUMBER	DESCRIPTION	AREA
E11239-003		CIRCUIT BOARD	
E45524-002		FUSE CLIP	
E48269-001		SPACER	I
E48269-001		SPACER	J
E71504-001		SHIELD COVER	
L481	ERL2103-562	INDUCTOR	
P401	QMV5004-003K	PULAG ASSY	
P420	QMV5005-004K	PULAG ASSY	
P421	EMV7112-005	SOCKET WIRE	
P422	EMV7112-004	SOCKET WIRE	
P440	QMV5005-003K	PULAG ASSY	
P441	EMV7112-005	SOCKET WIRE	
P442	EMV7112-006	SOCKET WIRE	
P443	EMV7112-007	SOCKET WIRE	
P444	EMV7112-006	SOCKET WIRE	
P461	EMV7112-003	SOCKET WIRE	
P462	EMV7112-005	SOCKET WIRE	
P463	EMV7112-004	SOCKET WIRE	
P464	EMV7112-006	SOCKET WIRE	
P465	EMV7112-003	SOCKET WIRE	

■ ENA-049 □ Tuner PC Board Ass'y

Note: ENA-049 □ Varies according to the area employed. See note (1) when placing an order.

Note (1)

PC Board Ass'y	Designated Areas
ENA-049 A	U.S.A. & Canada
ENA-049 C	U.S. Military Market & Other Countries
ENA-049 D	Australia
ENA-049 E	Europe & U.K.
ENA-049 F	West Germany



Transistors

ITEM	PART NUMBER	DESCRIPTION		AREA
			MAKER	
Q101	3SK114(C)	F.E.T.	TOSHIBA	
Q102	3SK114(C)	F.E.T.	TOSHIBA	
Q103	2SC461(C)	SILICON	HITACHI	
Q104	2SK606(Q,R)	F.E.T.	MATSUSHITA	
Q105	2SK168(E,F)	F.E.T.	HITACHI	
Q161	DTC114YN	SILICON	ROHM	
Q162	2SC535(B,C)	SILICON	HITACHI	
Q201	2SK301(Q,R)	F.E.T.	MATSUSHITA	
Q231	DTC114YN	SILICON	ROHM	
Q232	DTC144EFF	SILICON	ROHM	
Q251	2SK301(Q1)	F.E.T.	MATSUSHITA	
Q252	2SC458(D)	SILICON	HITACHI	
Q253	DTC114YN	SILICON	ROHM	
Q254	DTA114YN	SILICON	ROHM	A
Q254	DTA114YN	SILICON	ROHM	C
Q254	DTA114YN	SILICON	ROHM	D
Q254	2SB562(C)	SILICON	HITACHI	E
Q254	2SB562(C)	SILICON	HITACHI	F
Q255	DTC114YN	SILICON	ROHM	
Q256	DTA114YN	SILICON	ROHM	
Q257	DTC114YN	SILICON	ROHM	
Q258	DTC114YN	SILICON	ROHM	
Q259	2SC1685(R,S)	SILICON	MATSUSHITA	
Q281	2SC1685(R,S)	SILICON	MATSUSHITA	A

ICs

ITEM	PART NUMBER	DESCRIPTION		AREA
			MAKER	
IC101	BA401	I.C.	ROHM	
IC102	UPC1163H	I.C.	NEC	
IC103	BA401	I.C.	ROHM	
IC104	LA1235B	I.C.	SANYO	
IC105	LA3401	I.C.	SANYO	
IC201	LA1245	I.C.	SANYO	
IC251	TC9171P	I.C.	TOSHIBA	

Diodes

ITEM	PART NUMBER	DESCRIPTION		AREA
			MAKER	
D101	KV1320	SILICON	TOKO	
D102	KV1320	SILICON	TOKO	
D103	KV1320	SILICON	TOKO	
D104	KV1320	SILICON	TOKO	
D105	KV1320	SILICON	TOKO	
D131	1S2473	SILICON	ROHM	
D132	1S2473	SILICON	ROHM	
D171	1S2473	SILICON	ROHM	
D201	KV1226	SILICON	TOKO	
D202	KV1226	SILICON	TOKO	
D204	1S2473	SILICON	ROHM	
D208	1S2473	SILICON	ROHM	
D209	1SS108	SILICON	HITACHI	
D261	1S2473	SILICON	ROHM	
D262	1S2473	SILICON	ROHM	
D263	1S2473	SILICON	ROHM	
D264	1S2473	SILICON	ROHM	

Capacitors

ITEM	PART NUMBER	DESCRIPTION		AREA
			MAKER	
C101	QCS21HJ-5R0	5.0PF	50V CERAMIC	
C102	QCS21HJ-1R0	1.0PF	50V CERAMIC	
C104	QCS21HJ-470	47PF	50V CERAMIC	
C105	QCF21HP-102	1000PF	50V CERAMIC	
C106	QCF21HP-102	1000PF	50V CERAMIC	
C107	QCS21HJ-5R0	5.0PF	50V CERAMIC	
C108	QCS21HJ-5R0	5.0PF	50V CERAMIC	
C109	QCS21HJ-470	47PF	50V CERAMIC	
C110	QCS21HJ-151	150PF	50V CERAMIC	
C111	QCF21HP-103	0.01MF	50V CERAMIC	
C112	QCS21HJ-470	47PF	50V CERAMIC	
C113	QCT26TH-7R0	7.0PF	50V CERAMIC	
C114	QCT26CH-7R0	7.0PF	50V CERAMIC	
C115	QCF21HP-103	0.01MF	50V CERAMIC	
C116	QCT26TH-330	33PF	50V CERAMIC	

Capacitors

ITEM	PART NUMBER	DESCRIPTION		AREA
			MAKER	
C117	QCT26TH-2R0	2.0PF	50V CERAMIC	
C118	QCS21HJ-100	10PF	50V CERAMIC	
C119	QCS21HJ-2R0	2.0PF	50V CERAMIC	
C120	QCF21HP-103	0.01MF	50V CERAMIC	
C121	QCC21EM-473	0.047MF	25V CERAMIC	
C122	QCF21HP-103	0.01MF	50V CERAMIC	
C123	QCF21HP-103	0.01MF	50V CERAMIC	
C124	QCC21EM-473	0.047MF	25V CERAMIC	
C131	QCF21HP-103	0.01MF	50V CERAMIC	
C132	QCF21HP-223	0.022MF	50V CERAMIC	
C133	QCF21HP-223	0.022MF	50V CERAMIC	
C134	QCF21HP-223	0.022MF	50V CERAMIC	
C135	QCF21HP-223	0.022MF	50V CERAMIC	
C136	QCF21HP-223	0.022MF	50V CERAMIC	
C137	QCF21HP-223	0.022MF	50V CERAMIC	
C138	QCF21HP-223	0.022MF	50V CERAMIC	
C139	QCF21HP-223	0.022MF	50V CERAMIC	
C141	QCF21HP-223	0.022MF	50V CERAMIC	
C142	QCF21HP-473	0.047MF	50V CERAMIC	
C143	QCF21HP-223	0.022MF	50V CERAMIC	
C144	QCF21HP-473	0.047MF	50V CERAMIC	
C145	QCS21HJ-101	100PF	50V CERAMIC	
C147	QETB1HM-105	1MF	50V ELECTRO	
C148	QCF21HP-223	0.022MF	50V CERAMIC	
C149	QCF21HP-223	0.022MF	50V CERAMIC	
C150	QETB1HM-106	10MF	50V ELECTRO	
C151	QCF21HP-223	0.022MF	50V CERAMIC	
C152	QCC21EM-473	0.047MF	25V CERAMIC	
C153	QCF21HP-223	0.022MF	50V CERAMIC	
C154	QCF21HP-223	0.022MF	50V CERAMIC	
C155	QETB1HM-475	4.7MF	50V ELECTRO	
C161	QFN81HK-152	1500PF	50V MYLAR	
C162	QCS21HJ-330	33PF	50V CERAMIC	
C163	QCF21HP-223	0.022MF	50V CERAMIC	
C164	QCS21HJ-470	47PF	50V CERAMIC	
C171	QCF21HP-102	1000PF	50V CERAMIC	
C172	QFN81HK-473	0.047MF	50V MYLAR	
C173	QETB1EM-106	10MF	25V ELECTRO	
C174	QCS21HJ-561	560PF	50V CERAMIC	A
C174	QCS21HJ-561	560PF	50V CERAMIC	C
C174	QCY21HK-271	270PF	50V CERAMIC	D
C174	QCY21HK-271	270PF	50V CERAMIC	E
C174	QCY21HK-271	270PF	50V CERAMIC	F
C175	QCS21HJ-561	560PF	50V CERAMIC	A
C175	QCS21HJ-561	560PF	50V CERAMIC	C
C175	QCY21HK-271	270PF	50V CERAMIC	D
C175	QCY21HK-271	270PF	50V CERAMIC	E
C175	QCY21HK-271	270PF	50V CERAMIC	F
C176	QETB1HM-225	2.2MF	50V ELECTRO	
C177	QETB1HM-475	4.7MF	50V ELECTRO	
C178	QETB1HM-475	4.7MF	50V ELECTRO	
C179	QETB1HM-105	1MF	50V ELECTRO	
C180	QETB1HM-105	1MF	50V ELECTRO	
C181	QEB51EM-335	3.3MF	25V L.L.C.E.	
C182	QEB51EM-224	0.22MF	50V L.L.C.E.	
C183	QETB1CM-476	47MF	16V ELECTRO	
C191	QCS21HJ-331	330PF	50V CERAMIC	
C192	QCS21HJ-331	330PF	50V CERAMIC	
C202	QCF21HP-473	0.047MF	50V CERAMIC	
C203	QCF21HP-223	0.022MF	50V CERAMIC	
C204	QETB1EM-106	10MF	25V ELECTRO	
C205	QCS21HJ-561	560PF	50V CERAMIC	
C206	QCS21HJ-7R0	7.0PF	50V CERAMIC	
C207	QCT26CH-330	33PF	50V CERAMIC	
C208	QFPB1HJ-431	430PF	50V POLY	
C209	QCF21HP-223	0.022MF	50V CERAMIC	
C221	QCF21HP-102	1000PF	50V CERAMIC	
C222	QCF21HP-473	0.047MF	50V CERAMIC	
C223	QCF21HP-223	0.022MF	50V CERAMIC	
C224	QCF21HP-223	0.022MF	50V CERAMIC	
C225	QETB1EM-106	10MF	25V ELECTRO	
C226	QCF21HP-223	0.022MF	50V CERAMIC	
C227	QCS21HJ-121	120PF	50V CERAMIC	
C228	QCF21HP-102	1000PF	50V CERAMIC	
C229	QFN81HK-102	1000PF	50V MYLAR	D
C229	QFN81HK-102	1000PF	50V MYLAR	E
C229	QFN81HK-102	1000PF	50V MYLAR	F
C229	QFN81HK-332	3300PF	50V MYLAR	A
C229	QFN81HK-332	3300PF	50V MYLAR	C
C230	QCF21HP-223	0.022MF	50V CERAMIC	D
C230	QFN81HK-223	0.022MF	50V MYLAR	E
C230	QFN81HK-223	0.022MF	50V MYLAR	F
C230	QFN81HK-473	0.047MF	50V MYLAR	A
C230	QFN81HK-473	0.047MF	50V MYLAR	C
C232	QETB1EM-106	10MF	25V ELECTRO	
C233	QETB1HM-105	1MF	50V ELECTRO	
C234	QCF21HP-223	0.022MF	50V CERAMIC	
C235	QCF21HP-223	0.022MF	50V CERAMIC	
C236	QETB1HM-105	1MF	50V ELECTRO	
C237	QCF21HP-223	0.022MF	50V CERAMIC	
C238	QETB1HM-475	4.7MF	50V ELECTRO	

Capacitors

ITEM	PART NUMBER	DESCRIPTION	AREA
C239	QCF21HP-473	0.047MF 50V CERAMIC	
C240	QCF21HP-102	1000PF 50V CERAMIC	
C252	QCS21HJ-101	100PF 50V CERAMIC	
C253	QETB1EM-107	100MF 25V ELECTRO	
C254	QEN51HM-225	2.2MF 50V NON POLE	
C255	QCF21HP-102	1000PF 50V CERAMIC	
C256	QETB1VM-107	100MF 35V ELECTRO	
C257	QETB1HM-105	1MF 50V ELECTRO	
C258	QCC21EM-473	0.047MF 25V CERAMIC	
C259	QCF21HP-102	1000PF 50V CERAMIC	A
C260	QCS21HJ-102	100PF 50V CERAMIC	A
C261	QCF21HP-223	0.022MF 50V CERAMIC	
C281	QCF21HP-102	1000PF 50V CERAMIC	A
C282	QCF21HP-102	1000PF 50V CERAMIC	A
TC101	ENZ1003-003	TRIMMER	
TC102	ENZ1003-003	TRIMMER	
TC103	ENZ1003-003	TRIMMER	
TC104	ENZ1003-003	TRIMMER	
TC105	ENZ1003-003	TRIMMER	
TC201	ENZ1003-002	TRIMMER	
TC202	ENZ1003-002	TRIMMER	

Resistors

ITEM	PART NUMBER	DESCRIPTION	AREA
R101	QRD148J-683S	68K 1/4W CARBON	
R102	QRD148J-103S	10K 1/4W CARBON	
R103	QRD148J-223S	22K 1/4W CARBON	
R104	QRD148J-563S	56K 1/4W CARBON	
R106	QRD148J-100S	10 1/4W CARBON	
R107	QRD148J-101S	100 1/4W CARBON	
R108	QRD148J-224S	220K 1/4W CARBON	
R109	QRD148J-223S	22K 1/4W CARBON	
R110	QRD148J-224S	220K 1/4W CARBON	
R111	QRD148J-223S	22K 1/4W CARBON	
R113	QRD148J-181S	180 1/4W CARBON	
R114	QRD148J-473S	47K 1/4W CARBON	
R115	QRD148J-473S	47K 1/4W CARBON	
R116	QRD148J-473S	47K 1/4W CARBON	
R117	QRD148J-473S	47K 1/4W CARBON	
R118	QRD148J-562S	5.6K 1/4W CARBON	
R119	QRD148J-101S	100 1/4W CARBON	
R120	QRD148J-123S	12K 1/4W CARBON	
R121	QRD148J-223S	22K 1/4W CARBON	
R122	QRD148J-152S	1.5K 1/4W CARBON	
R123	QRD148J-224S	220K 1/4W CARBON	
R124	QRD148J-331S	330 1/4W CARBON	
R125	QRD148J-224S	220K 1/4W CARBON	
R126	QRD148J-331S	330 1/4W CARBON	
R127	QRZ0062-330	33 1/4W FUSIBLE	E
R127	QRZ0062-330	33 1/4W FUSIBLE	F
R132	QRD148J-102S	1K 1/4W CARBON	
R133	QRD148J-331S	330 1/4W CARBON	
R134	QRD148J-331S	330 1/4W CARBON	
R135	QRD148J-331S	330 1/4W CARBON	
R137	QRD148J-331S	330 1/4W CARBON	
R138	QRD148J-331S	330 1/4W CARBON	
R139	QRD148J-102S	1K 1/4W CARBON	
R141	QRD148J-103S	10K 1/4W CARBON	
R142	QRD148J-331S	330 1/4W CARBON	
R143	QRD148J-123S	12K 1/4W CARBON	
R144	QRD148J-103S	10K 1/4W CARBON	A
R144	QRD148J-103S	10K 1/4W CARBON	C
R144	QRD148J-183S	18K 1/4W CARBON	D
R144	QRD148J-183S	18K 1/4W CARBON	E
R144	QRD148J-183S	18K 1/4W CARBON	F
R145	QRD148J-821S	820 1/4W CARBON	
R146	QRD148J-332S	3.3K 1/4W CARBON	
R147	QRD148J-473S	47K 1/4W CARBON	
R155	QRD145J-680S	68 1/4W UNF. CARBON	A
R155	QRD145J-680S	68 1/4W UNF. CARBON	C
R155	QRD145J-680S	68 1/4W UNF. CARBON	D
R155	QRZ0062-680	68 1/4W FUSIBLE	E
R155	QRZ0062-680	68 1/4W FUSIBLE	F
R161	QRD148J-224S	220K 1/4W CARBON	
R162	QRD148J-332S	3.3K 1/4W CARBON	
R163	QRD148J-681S	680 1/4W CARBON	
R171	QRD148J-103S	10K 1/4W CARBON	
R172	QRD148J-134S	130K 1/4W CARBON	A
R172	QRD148J-134S	130K 1/4W CARBON	C
R172	QRD148J-184S	180K 1/4W CARBON	D
R172	QRD148J-184S	180K 1/4W CARBON	E
R172	QRD148J-184S	180K 1/4W CARBON	F
R173	QRD148J-134S	130K 1/4W CARBON	A
R173	QRD148J-134S	130K 1/4W CARBON	C
R173	QRD148J-184S	180K 1/4W CARBON	D
R173	QRD148J-184S	180K 1/4W CARBON	E
R173	QRD148J-184S	180K 1/4W CARBON	F
R174	QRD148J-134S	130K 1/4W CARBON	A
R174	QRD148J-134S	130K 1/4W CARBON	C
R174	QRD148J-224S	220K 1/4W CARBON	D

Resistors

ITEM	PART NUMBER	DESCRIPTION	AREA
R174	QRD148J-224S	220K 1/4W CARBON	E
R174	QRD148J-224S	220K 1/4W CARBON	F
R175	QRD148J-184S	180K 1/4W CARBON	A
R175	QRD148J-184S	180K 1/4W CARBON	C
R175	QRD148J-224S	220K 1/4W CARBON	D
R175	QRD148J-224S	220K 1/4W CARBON	E
R175	QRD148J-224S	220K 1/4W CARBON	F
R176	QRD148J-103S	10K 1/4W CARBON	
R177	QRD148J-103S	10K 1/4W CARBON	
R179	QRD148J-103S	10K 1/4W CARBON	
R180	QRD148J-123S	12K 1/4W CARBON	
R182	QRD148J-332S	3.3K 1/4W CARBON	
R183	QRD145J-680S	68 1/4W UNF. CARBON	A
R183	QRD145J-680S	68 1/4W UNF. CARBON	C
R183	QRD145J-680S	68 1/4W UNF. CARBON	D
R183	QRZ0062-680	68 1/4W FUSIBLE	E
R183	QRZ0062-680	68 1/4W FUSIBLE	F
R184	QRD148J-332S	3.3K 1/4W CARBON	
R185	QRD148J-332S	3.3K 1/4W CARBON	
R186	QRD148J-682S	6.8K 1/4W CARBON	
R187	QRD148J-682S	6.8K 1/4W CARBON	
R201	QRD148J-231S	22K 1/4W CARBON	
R202	QRD148J-331S	330 1/4W CARBON	
R204	QRD148J-473S	47K 1/4W CARBON	
R222	QRD148J-102S	1K 1/4W CARBON	
R223	QRD148J-151S	150 1/4W CARBON	
R225	QRD148J-331S	330 1/4W CARBON	A
R225	QRD148J-561S	560 1/4W CARBON	B
R225	QRD148J-661S	560 1/4W CARBON	C
R225	QRD148J-561S	560 1/4W CARBON	D
R225	QRD148J-561S	560 1/4W CARBON	E
R225	QRD148J-561S	560 1/4W CARBON	F
R226	QRD148J-103S	10K 1/4W CARBON	
R227	QRD148J-103S	10K 1/4W CARBON	A
R227	QRD148J-103S	10K 1/4W CARBON	C
R227	QRD148J-393S	39K 1/4W CARBON	D
R227	QRD148J-393S	39K 1/4W CARBON	E
R227	QRD148J-393S	39K 1/4W CARBON	F
R228	QRD148J-103S	10K 1/4W CARBON	
R229	QRD148J-820S	82 1/4W CARBON	
R230	QRD148J-103S	10K 1/4W CARBON	
R231	QRD148J-102S	1K 1/4W CARBON	
R232	QRD145J-680S	68 1/4W UNF. CARBON	A
R232	QRD145J-680S	68 1/4W UNF. CARBON	C
R232	QRD145J-680S	68 1/4W UNF. CARBON	D
R232	QRZ0062-680	68 1/4W FUSIBLE	E
R232	QRZ0062-680	68 1/4W FUSIBLE	F
R233	QRD145J-103S	10K 1/4W UNF. CARBON	
R234	QRD145J-680S	68 1/4W UNF. CARBON	A
R234	QRD145J-680S	68 1/4W UNF. CARBON	C
R234	QRD145J-680S	68 1/4W UNF. CARBON	D
R234	QRZ0062-680	68 1/4W FUSIBLE	E
R234	QRZ0062-680	68 1/4W FUSIBLE	F
R235	QRD148J-470S	47 1/4W CARBON	
R251	QRD148J-103S	10K 1/4W CARBON	E
R251	QRD148J-103S	10K 1/4W CARBON	F
R252	QRD148J-473S	47K 1/4W CARBON	
R253	QRD148J-103S	10K 1/4W CARBON	
R254	QRD148J-473S	47K 1/4W CARBON	
R255	QRD148J-102S	1K 1/4W CARBON	
R256	QRD148J-271S	270 1/4W CARBON	
R257	QRD148J-222S	2.2K 1/4W CARBON	
R258	QRD148J-682S	6.8K 1/4W CARBON	
R259	QRD148J-392S	3.9K 1/4W CARBON	
R260	QRD145J-680S	68 1/4W UNF. CARBON	A
R260	QRD145J-680S	68 1/4W UNF. CARBON	C
R260	QRD145J-680S	68 1/4W UNF. CARBON	D
R260	QRZ0062-680	68 1/4W FUSIBLE	E
R260	QRZ0062-680	68 1/4W FUSIBLE	F
R261	QRD148J-222S	2.2K 1/4W CARBON	
R262	QRD148J-224S	220K 1/4W CARBON	
R263	QRD148J-223S	22K 1/4W CARBON	
R264	QRD148J-333S	33K 1/4W CARBON	
R265	QRD148J-103S	10K 1/4W CARBON	
R266	QRD148J-103S	10K 1/4W CARBON	
R267	QRD148J-682S	6.8K 1/4W CARBON	
R268	QRD148J-104S	100K 1/4W CARBON	
R269	QRD148J-473S	47K 1/4W CARBON	
R281	QRD148J-103S	10K 1/4W CARBON	A
R282	QRD148J-103S	10K 1/4W CARBON	A
R283	QRD145J-680S	68 1/4W UNF. CARBON	A
VR141	QVZ3518-223	VARIABLE	
VR142	QVZ3518-473	VARIABLE	
VR171	QVZ3518-473	VARIABLE	
VR221	QVZ3518-472	VARIABLE	

△ Safety parts

Others

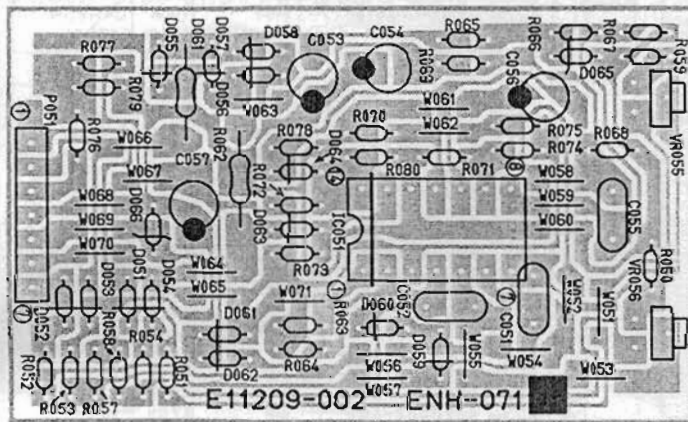
ITEM	PART NUMBER	DESCRIPTION	AREA
	EMB01YV-401K	ANT. TERMINAL	C
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	EMB01YV-401K	ANT. TERMINAL	E
	EMB01YV-402K	ANT. TERMINAL	F
	EMB10YV-201K	ANT. TERMINAL	A
	EWP001-101	CORD ASSY	A
	E11229-003	CIRCUIT BOARD	
	E304173-001	SHIELD CASE	
	E67883-001	SHIELD PLATE	
	E70225-002	EARTH PLATE	
	E70859-001	EARTH PLATE	
	E72108-001	SHIELD CASE	
J102	EMV7112-007	SOCKET WIRE	
J103	EMV7112-007	SOCKET WIRE	
J411	EMV7112-004	SOCKET WIRE	
J413	EMV7112-003	SOCKET WIRE	C
L101	EQR2304-016	RF COIL	
L102	EQR2304-015	RF COIL	
L103	EQR2304-013	RF COIL	
L104	EQR2304-013	RF COIL	
L105	EQR2404-004	RF COIL	
L106	EGL3001-1RSKY	INDUCTOR	
L201	EQR1207-009	RF COIL	
L202	EGL3001-102KY	INDUCTOR	
T101	EQT2121-006	I. F. TRANSFORMER	

Others

ITEM	PART NUMBER	DESCRIPTION	AREA
T102	EQT2121-007	I. F. TRANSFORMER	
T131	EQT2140-003	I. F. TRANSFORMER	
T201	EQR1111-006	RF COIL	
BL101	EQR4111-001	BALUN	C
BL101	EQR4111-001	BALUN	D
BL101	EQR4111-001	BALUN	E
CF101	ECB2125-004R	CERAMIC FILTER	
CF102	ECB2125-004R	CERAMIC FILTER	
CF103	ECB2118-004R	CERAMIC FILTER	E
CF103	ECB2118-004R	CERAMIC FILTER	F
CF103	ECB2125-003R	CERAMIC FILTER	A
CF103	ECB2125-003R	CERAMIC FILTER	C
CF103	ECB2125-003R	CERAMIC FILTER	D
CF171	ECX0000-456KR	RESONATOR	
CF201	ECB1560-002	CERAMIC FILTER	
LP101	EQF0101-006	FILTER	
LP102	EQF0101-006	FILTER	
LP151	EQF0102-001	FILTER	F
SW401	QSS6A12-E01	SLIDE SWITCH	C
TP101	E67764-002	TERMINAL ASSY	
TP201	E67764-002	TERMINAL ASSY	

ENH-071 Switching Regulator PC Board Ass'y

Capacitors

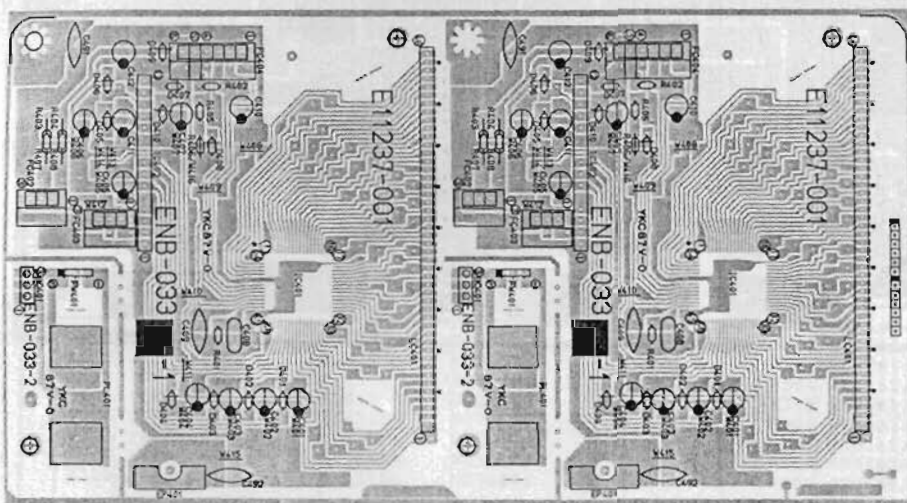


■ ENB-033 □ LCD Display PC Board Ass'y

Note: ENB-033 □ Varies according to the area employed. See note (1) when placing an order.

Note (1)

PC Board Ass'y	Designated Areas
ENB-033 E	U.S.A., Canada, U.S. Military Market & Other Countries
ENB-033 F	Europe, Australia, U.K. & West Germany



ICs

ITEM	PART NUMBER	DESCRIPTION	AREA	
			MAKER	
IC401	LC7560	I.C.	SANYO	E
IC402	7EL-SPI-001	I.C.		F
IC402	7EL-SPI-001	I.C.		F

Capacitors

ITEM	PART NUMBER	DESCRIPTION	AREA
C411	GETB1EM-106	25MF 25V ELECTRO	
C412	GETB1EM-106	30MF 25V ELECTRO	

Diodes

ITEM	PART NUMBER	DESCRIPTION	AREA	
			MAKER	
D401	1SS133	SILICON ROHM		
D402	1SS133	SILICON ROHM		
D403	1SS133	SILICON ROHM		
D404	1SS133	SILICON ROHM		
D405	1SS133	SILICON ROHM		
D406	1SS133	SILICON ROHM		
D407	1SS133	SILICON ROHM		
D408	1SS133	SILICON ROHM		

Resistors

ITEM	PART NUMBER	DESCRIPTION	AREA
R401	QR3161J-273	27K 1/6W CARBON	
R402	QR0161J-471	470 1/6W CARBON	
R403	QR20062-560	56 1/4W FUSIBLE	F
R404	QR3145J-560S	56 1/4W EXP. CARBON	E
R404	QR20062-560	56 1/4W FUSIBLE	F
R405	QR0161J-121	120 1/6W CARBON	

△ Safety parts

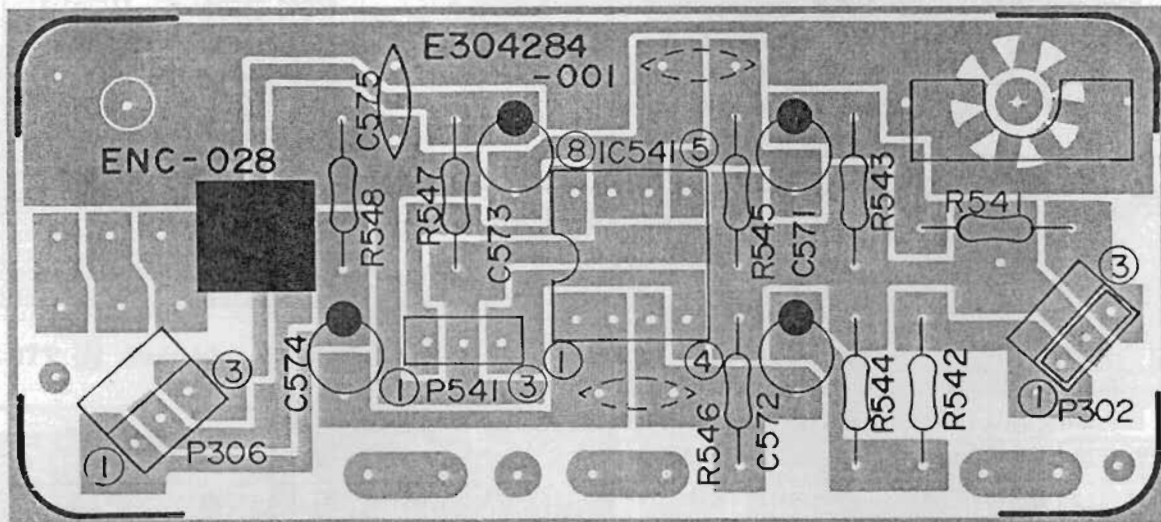
Capacitors

ITEM	PART NUMBER	DESCRIPTION	AREA
C401	GETB1HM-474	0.47MF 50V ELECTRO	
C402	GETB1HM-474	0.47MF 50V ELECTRO	
C403	GETB1HM-474	0.47MF 50V ELECTRO	
C404	GETB1HM-474	0.47MF 50V ELECTRO	
C405	GETB1HM-474	0.47MF 50V ELECTRO	
C406	GETB1HM-474	0.47MF 50V ELECTRO	
C407	GETB1HM-474	0.47MF 50V ELECTRO	
C408	GFYB39J-103	0.01MF 50V MYLAR	
C409	QCF21HF-223	0.022MF 50V CERAMIC	
C410	QATB1HM-475	4.7MF 50V ELECTRO	

Others

ITEM	PART NUMBER	DESCRIPTION	AREA
	E11237-001	CIRCUIT BOARD	
	E45524-002	FUSE CLIP	
PC402	EMV7112-003	SOCKET WIRE	
PC403	EMV7112-003	SOCKET WIRE	
PC404	EMV7112-006	SOCKET WIRE	
LC401	EL10002-014	F.L. TUBE	

ENC-028 [A] Buffer PC Board Ass'y



I.C.S.

ITEM	PART NUMBER	DESCRIPTION		AREA
			MAKER	
IC541	NJM4558D-D			

Others

ITEM	PART NUMBER	DESCRIPTION	AREA
	E304284-001	CIRCUIT BOARD	
P302	EMV7112-003	SOCKET	
P306	EMV7112-003	SOCKET	
P541	OMV5005-003K	3P PLUG ASS'Y	
	E70859-001	EARTH PLATE	

Capacitors

ITEM	PART NUMBER	DESCRIPTION			AREA
C571	QETB1EM-106	10MF	25V	ELECTRO	
C572	QETB1EM-106	10MF	25V	ELECTRO	
C573	QETB1EM-106	10MF	25V	ELECTRO	
C574	QETB1EM-106	10MF	25V	ELECTRO	
C575	QCF21HP-223	0.022MF	50V	CERAMIC	

Resistors

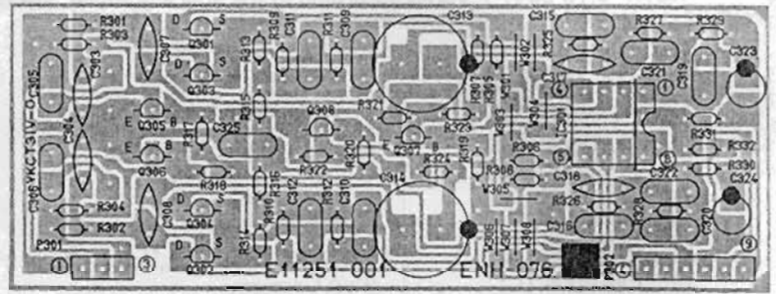
ITEM	PART NUMBER	DESCRIPTION			AREA
R541	QRD148J-102S	1K	1/4W	CARBON	
R542	QRD148J-102S	1K	1/4W	CARBON	
R543	QRD148J-823S	82K	1/4W	CARBON	
R544	QRD148J-823S	82K	1/4W	CARBON	
R545	QRD148J-124S	120K	1/4W	CARBON	
R546	QRD148J-124S	120K	1/4W	CARBON	
R547	QRD148J-474S	470K	1/4W	CARBON	
R548	QRD148J-474S	470K	1/4W	CARBON	

■ ENH-076 □ Equalizer PC Board Ass'y

Note: ENH-076 □ Varies according to the area employed. See note (1) when placing an order.

Note (1)

PC Board Ass'y	Designated Areas
ENH-076 A	U.S.A., Canada, Europe, Australia, U.K., U.S. Military Market & Other Countries
ENH-076 B	West Germany



Transistors

ITEM	PART NUMBER	DESCRIPTION	AREA	
			MAKER	
Q301	2SK170(BL)	F.E.T	TOSHIBA	
Q302	2SK170(BL)	F.E.T	TOSHIBA	
Q303	2SK170(BL)	F.E.T	TOSHIBA	
Q304	2SK170(BL)	F.E.T	TOSHIBA	
Q305	2SD655(E,F)	SILICON	HITACHI	
Q306	2SD655(E,F)	SILICON	HITACHI	
Q307	2SD655(E,F)	SILICON	HITACHI	
Q308	2SD655(E,F)	SILICON	HITACHI	

ICs

ITEM	PART NUMBER	DESCRIPTION	AREA	
			MAKER	
IC301	NJM4560DD	I.C.		

Capacitors

ITEM	PART NUMBER	DESCRIPTION	AREA	
			MAKER	
C303	QCS21HJ-470	47PF 50V CERAMIC		A
C303	QCS21HJ-821	820PF 50V CERAMIC		B
C304	QCS21HJ-470	47PF 50V CERAMIC		A
C304	QCS21HJ-821	820PF 50V CERAMIC		B
C305	QFN81HJ-103	0.01MF 50V MYLAR		
C306	QFN81HJ-103	0.01MF 50V MYLAR		
C307	QCS21HJ-101	100PF 50V CERAMIC		
C308	QCS21HJ-101	100PF 50V CERAMIC		
C309	QFN81HJ-822	8200PF 50V MYLAR		
C310	QFN81HJ-822	8200PF 50V MYLAR		
C311	QFN81HJ-392	3900PF 50V MYLAR		
C312	QFN81HJ-392	3900PF 50V MYLAR		
C313	QETB0JM-228	2200MF 6.3V ELECTRO		
C314	QETB0JM-228	2200MF 6.3V ELECTRO		
C315	QFN81HJ-472	4700PF 50V MYLAR		
C316	QFN81HJ-472	4700PF 50V MYLAR		
C317	QCS21HJ-331	330PF 50V CERAMIC		
C318	QCS21HJ-331	330PF 50V CERAMIC		
C319	QFN81HJ-153	0.015MF 50V MYLAR		
C320	QFN81HJ-153	0.015MF 50V MYLAR		
C321	QFN81HJ-272	2700PF 50V MYLAR		
C322	QFN81HJ-272	2700PF 50V MYLAR		
C323	QEK61HM-475	4.7MF 50V ELECTRO		
C324	QEK61HM-475	4.7MF 50V ELECTRO		
C325	QFN81HJ-104	0.1MF 50V MYLAR		

Resistors

ITEM	PART NUMBER	DESCRIPTION	AREA	
			MAKER	
R301	QRD161J-5R6	5.6 1/6W CARBON		
R302	QRD161J-5R6	5.6 1/6W CARBON		
R303	QRD161J-101	100 1/6W CARBON		
R304	QRD161J-101	100 1/6W CARBON		
R305	QRD161J-562	5.6K 1/6W CARBON		
R306	QRD161J-562	5.6K 1/6W CARBON		
R307	QRD161J-562	5.6K 1/6W CARBON		
R308	QRD161J-562	5.6K 1/6W CARBON		
R309	QRD161J-270	27 1/6W CARBON		
R310	QRD161J-270	27 1/6W CARBON		
R311	QRD161J-561	560 1/6W CARBON		
R312	QRD161J-561	560 1/6W CARBON		
R313	QRD161J-222	2.2K 1/6W CARBON		
R314	QRD161J-222	2.2K 1/6W CARBON		
R315	QRD161J-272	2.7K 1/6W CARBON		
R316	QRD161J-272	2.7K 1/6W CARBON		
R317	QRD161J-273	27K 1/6W CARBON		
R318	QRD161J-273	27K 1/6W CARBON		
R319	QRD161J-273	27K 1/6W CARBON		
R320	QRD161J-273	27K 1/6W CARBON		
R321	QRD161J-181	180 1/6W CARBON		
R322	QRD161J-181	180 1/6W CARBON		
R323	QRD161J-200	20 1/6W CARBON		
R324	QRD161J-200	20 1/6W CARBON		
R325	QRD161J-153	15K 1/6W CARBON		
R326	QRD161J-153	15K 1/6W CARBON		
R327	QRD161J-184	180K 1/6W CARBON		
R328	QRD161J-184	180K 1/6W CARBON		
R329	QRD161J-331	330 1/6W CARBON		
R330	QRD161J-331	330 1/6W CARBON		
R331	QRD161J-104	100K 1/6W CARBON		
R332	QRD161J-104	100K 1/6W CARBON		

Others

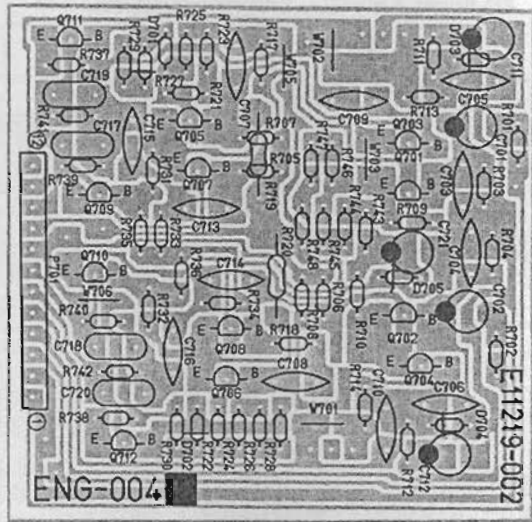
ITEM	PART NUMBER	DESCRIPTION	AREA
P301	E11251-001	CIRCUIT BOARD	
P302	EMV5101-0038	PLUG ASSY	
P302	EMV5101-0068	PLUG ASSY	

■ ENG-004 Pre-Driver PC Board Ass'y

Note: ENG-004 Varies according to the area employed. See note (1) when placing an order.

Note (1)

PC Board Ass'y	Designated Areas
ENG-004 <input type="checkbox"/> A	U.S.A., Canada, U.S. Military Market & Other Countries
ENG-004 <input type="checkbox"/> B	Europe, Australia & U.K.
ENG-004 <input type="checkbox"/> C	West Germany



Transistors

ITEM	PART NUMBER	DESCRIPTION	AREA	
			MAKER	
G701	2SC2240(A,B)	SILICON	TOSHIBA	
G702	2SC2240(A,B)	SILICON	TOSHIBA	
G703	2SC2240(A,B)	SILICON	TOSHIBA	
G704	2SC2240(A,B)	SILICON	TOSHIBA	
G705	2SA1038(S,E)	SILICON	ROHM	
G706	2SA1038(S,E)	SILICON	ROHM	
G707	2SA933LN(R,S)	SILICON	ROHM	
G708	2SA933LN(R,S)	SILICON	ROHM	
G709	2SA1038(S,E)	SILICON	ROHM	
G710	2SA1038(S,E)	SILICON	ROHM	
G711	2SC2389(S,E)	SILICON	ROHM	
G712	2SC2389(S,E)	SILICON	ROHM	

Capacitors

ITEM	PART NUMBER	DESCRIPTION	AREA
C711	GETB1CM-476	47MF 16V ELECTRO	
C712	GETB1CM-476	47MF 16V ELECTRO	
C713	QCS21HJ-220	22PF 50V CERAMIC	
C714	QCS21HJ-220	22PF 50V CERAMIC	
C715	QCS21HJ-121	120PF 50V CERAMIC	
C716	QCS21HJ-121	120PF 50V CERAMIC	
C717	QFN81HJ-822	8200PF 50V MYLAR	
C718	QFN81HJ-822	8200PF 50V MYLAR	
C719	QFN81HJ-822	8200PF 50V MYLAR	
C720	QFN81HJ-822	8200PF 50V MYLAR	
C721	GETB1EM-106	10MF 25V ELECTRO	

Diodes

ITEM	PART NUMBER	DESCRIPTION	AREA	
			MAKER	
D701	1SS133	SILICON	ROHM	
D702	1SS133	SILICON	ROHM	
D703	1SS133	SILICON	ROHM	B
D704	1SS133	SILICON	ROHM	B
D705	MTZ18C	ZENER	ROHM	C

Resistors

ITEM	PART NUMBER	DESCRIPTION	AREA
R701	QRD161J-222	2.2K 1/6W CARBON	
R702	QRD161J-222	2.2K 1/6W CARBON	
R703	QRD161J-104	100K 1/6W CARBON	
R704	QRD161J-104	100K 1/6W CARBON	
R705	QRD161J-202	2K 1/6W CARBON	
R706	QRD161J-202	2K 1/6W CARBON	
R707	QRD161J-202	2K 1/6W CARBON	
R708	QRD161J-202	2K 1/6W CARBON	
R709	QRD161J-822	8.2K 1/6W CARBON	
R710	QRD161J-822	8.2K 1/6W CARBON	
R711	QRD161J-152	1.5K 1/6W CARBON	
R712	QRD161J-152	1.5K 1/6W CARBON	
R713	QRD161J-104	100K 1/6W CARBON	
R714	QRD161J-104	100K 1/6W CARBON	
R717	QRD161J-101	100 1/6W CARBON	
R718	QRD161J-101	100 1/6W CARBON	
R719	QRD145J-121S	120 1/4W UNF. CARBON	
R720	QRD145J-121S	120 1/4W UNF. CARBON	
R721	QRD161J-222	2.2K 1/6W CARBON	A
R722	QRD161J-222	2.2K 1/6W CARBON	A
R723	QRD144J-562S	5.6K 1/4W CARBON	
R724	QRD144J-562S	5.6K 1/4W CARBON	
R725	QRD161J-222	2.2K 1/6W CARBON	A
R726	QRD161J-222	2.2K 1/6W CARBON	A

Capacitors

ITEM	PART NUMBER	DESCRIPTION	AREA
C701	GETB1HM-475	4.7MF 50V ELECTRO	
C702	GETB1HM-475	4.7MF 50V ELECTRO	
C703	QCS21HJ-271	270PF 50V CERAMIC	
C704	QCS21HJ-271	270PF 50V CERAMIC	
C705	QCS21HJ-101	100PF 50V CERAMIC	
C706	QCS21HJ-101	100PF 50V CERAMIC	
C707	QCY21HK-332	3300PF 50V CERAMIC	
C708	QCY21HK-332	3300PF 50V CERAMIC	
C709	QCS21HJ-5R0	5.0PF 50V CERAMIC	
C710	QCS21HJ-5R0	5.0PF 50V CERAMIC	

△ Safety parts

Resistors

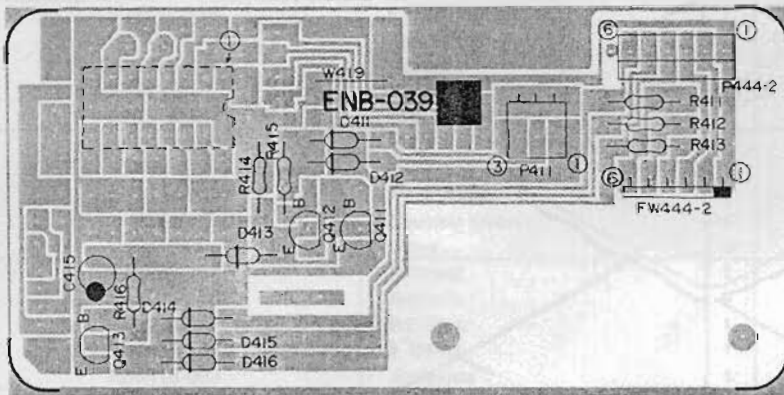
ITEM	PART NUMBER	DESCRIPTION	AREA
R727	QRD144J-562S	5.6K 1/4W CARBON	
R728	QRD144J-562S	5.6K 1/4W CARBON	
R729	QRD161J-391	390 1/6W CARBON	
R730	QRD161J-391	390 1/6W CARBON	
R731	QRD161J-152	1.5K 1/6W CARBON	
R732	QRD161J-152	1.5K 1/6W CARBON	
R733	QRD161J-152	1.5K 1/6W CARBON	
R734	QRD161J-152	1.5K 1/6W CARBON	
R735	QRD161J-333	33K 1/6W CARBON	
R736	QRD161J-333	33K 1/6W CARBON	
R737	QRD161J-391	390 1/6W CARBON	
R738	QRD161J-391	390 1/6W CARBON	
R739	QRD161J-682	6.8K 1/6W CARBON	
R740	QRD161J-682	6.8K 1/6W CARBON	
R741	QRD161J-682	6.8K 1/6W CARBON	
R742	QRD161J-682	6.8K 1/6W CARBON	
R743	QRD161J-471	470 1/6W CARBON	
R744	QRD161J-391	390 1/6W CARBON	
R745	ORG012J-182AF	1.8K 1W O.M FILM	
R747	QRD161J-471	470 1/6W CARBON	
R748	QRD161J-471	470 1/6W CARBON	

△ Safety Parts

Others

ITEM	PART NUMBER	DESCRIPTION	AREA
P701	E11219-002 EMV5101-012B	CIRCUIT BOARD PLUG ASSY	

■ ENB-039 ▢ Sub Control PC Board Ass'y



Transistors

ITEM	PART NUMBER	DESCRIPTION	AREA
Q411	2SC1740LN(R,S)	SILICON ROHM	
Q412	2SC1740LN(R,S)	SILICON ROHM	
Q413	2SC1740LN(R,S)	SILICON ROHM	

Diodes

ITEM	PART NUMBER	DESCRIPTION	AREA
D411	1S2473HX	SILICON ROHM	
D412	1S2473HX	SILICON ROHM	
D413	1S2473HX	SILICON ROHM	
D414	1S2473HX	SILICON ROHM	
D415	1S2473HX	SILICON ROHM	
D416	1S2473HX	SILICON ROHM	

Capacitors

ITEM	PART NUMBER	DESCRIPTION	AREA
C415	QETB1HM-474	0.47MF 50V ELECTRO	

Resistors

ITEM	PART NUMBER	DESCRIPTION	AREA
R411	QRD148J-471S	470 1/4W CARBON	
R412	QRD148J-471S	470 1/4W CARBON	
R413	QRD148J-471S	470 1/4W CARBON	
R414	QRD148J-223S	22K 1/4W CARBON	
R415	QRD148J-474S	470K 1/4W CARBON	
R416	QRD148J-473S	47K 1/4W CARBON	

Others

ITEM	PART NUMBER	DESCRIPTION	AREA
P411	E304243-001 QMV5004-003K	CIRCUIT BOARD PULAG ASSY	
P444	EMV7112-006	SOCKET WIRE	