

# JVC

## SERVICE MANUAL

### FM/AM COMPUTER CONTROLLED RECEIVER

## MODEL RX-3BK/RX-3LBK



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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 (  $\Delta$  ) 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 product (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.

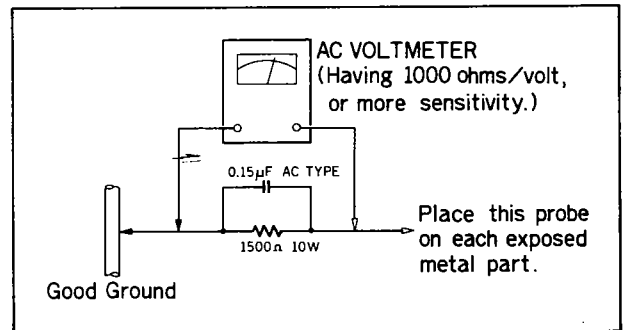
- Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good ground. Any leakage current must not exceed 0.5 mA AC (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  $\Omega$  10 W resistor paralleled by a 0.15  $\mu$ F AC-type capacitor between an exposed metal part and a known good 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 bottom board.

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



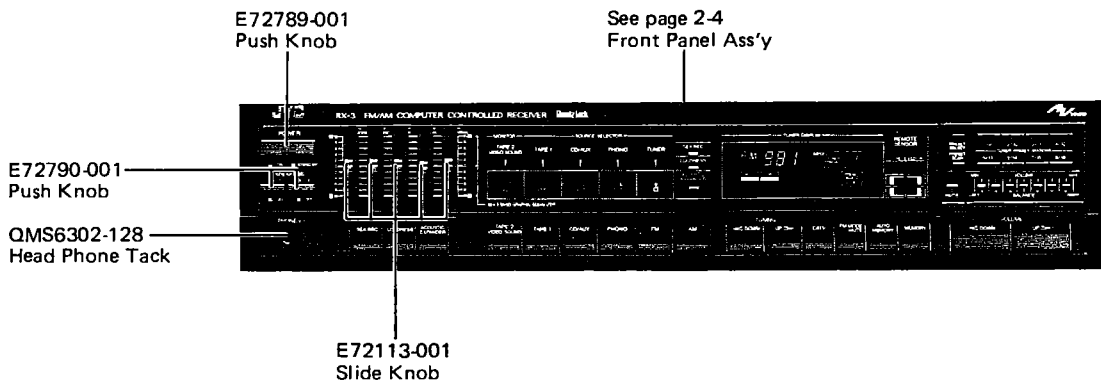
# PARTS LIST

## Contents

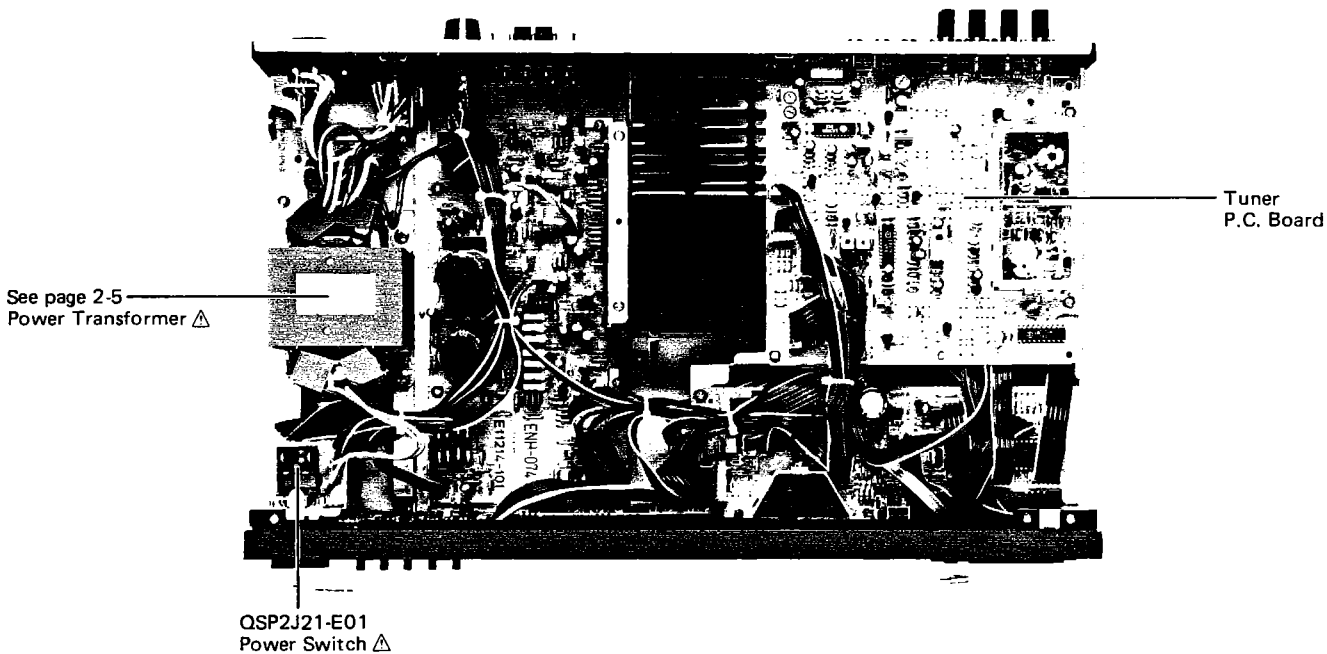
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# Main Parts Locations

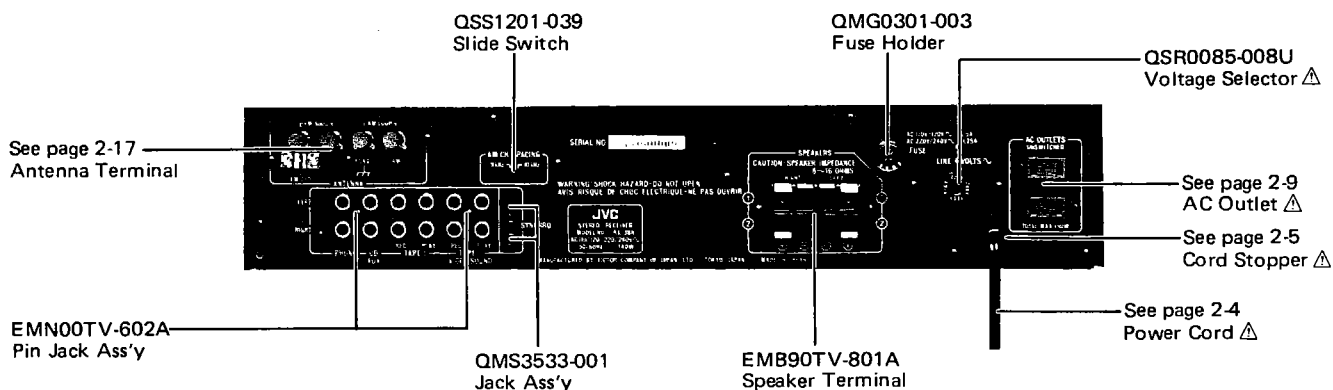
## Front View



## Top View

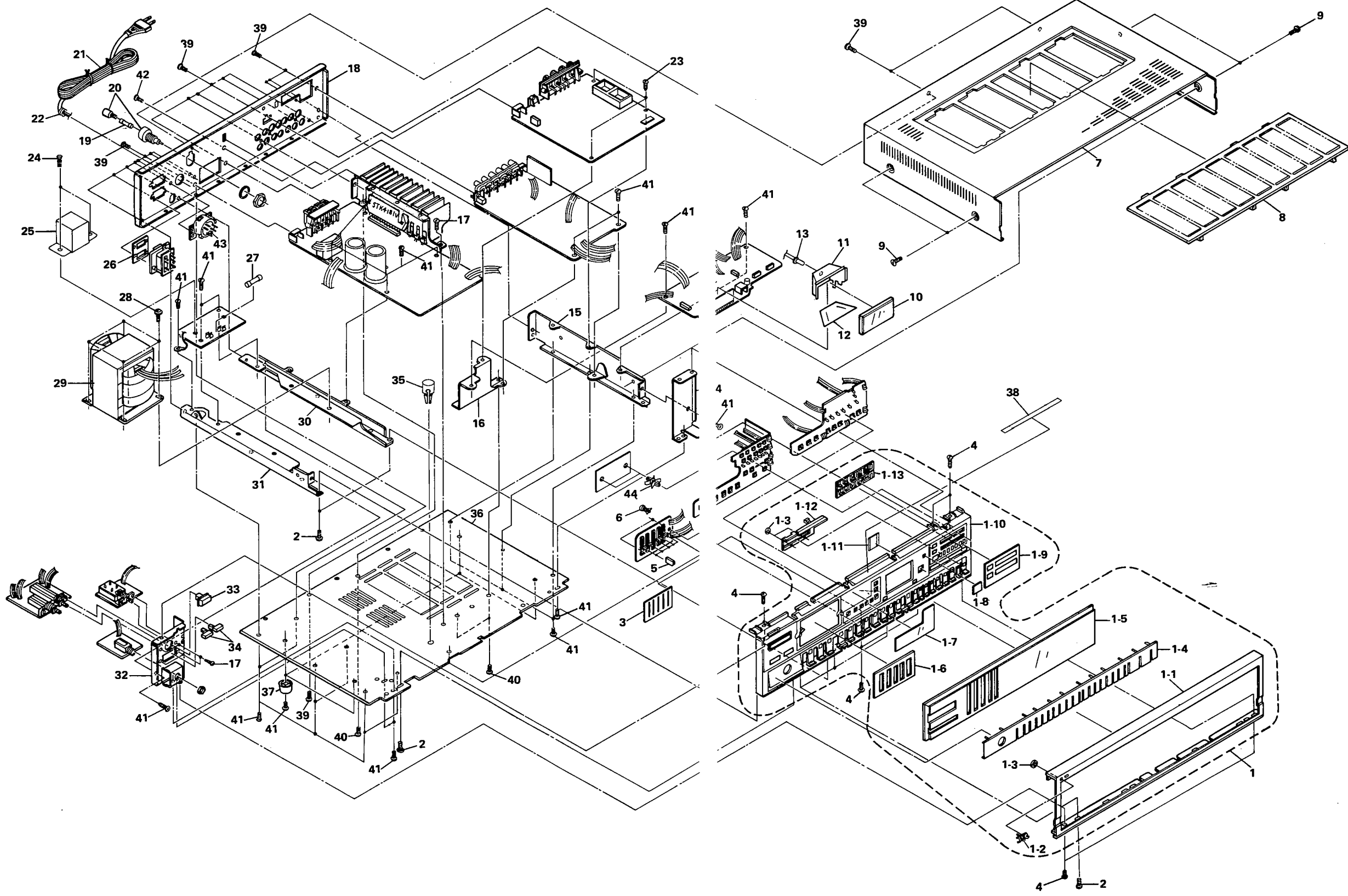


## Rear View



⚠ : Safety Parts

# Exploded View and Parts List



△	No.	Part Number	Part Name	Q'ty	Description	Areas
	1	EFP-RX3BKE	Front Panel Ass'y	1		J, C, P, PG, E, A, G, U
		EFP-RX3LBKE	Front Panel Ass'y	1		LE, LBS
	1-1	E25242-003	Front Panel	1		J, C, P, PG, E, A, G, U
		E25242-004	Front Panel	1		LE, LBS
	1-2	E72968-001	JVC Mark	1		
	1-3	E60912-003	Speed Nut	3		
	1-4	E25268-004	Front Plate	1		J, C
		E25268-005	Front Plate	1		P, PG, E, A, G, U
		E25268-006	Front Plate	1		LE, LBS
	1-5	E304114-002	Window Screen	1		
	1-6	E304076-001	SEA Escutcheon	1		
	1-7	E304082-001	Sheet	1		
	1-8	E72437-002	Sheet	1		
	1-9	E304132-002	Plate	1		
	1-10	E11235-003	Front Base	1		J, C
		E11235-004	Front Base	1		P, PG, E, A, G, LE, LBS, U
	1-11	E72436-001	Screen	1		
	1-12	E304137-001	Balance Knob	1		
	1-13	E304074-001	Preset Knob	1		
	2	SBSF3008M	Screw	4		
	3	E72794-001	Spacer	1		
	4	SBSB3008Z	Screw	6		
	5	E72113-001	Slide Knob	5		
	6	E48729-007	Plastic Rivet	2		
	7	E25244-001	Metal Cover	1		J, C, P, PG, E, A, G, U
		E25252-001	Metal Cover	1		E, LE, LBS
	8	E24134-007	Grill	1		
	9	E61660-004	Screw	4		
	10	E73005-001	Sheet	1		
	11	E304083-001	Reflector	1		
	12	E73051-001	Sheet	1		
	13	ELP3014-B100V	Pilot Lamp	1		
	14	E72792-001	Bracket	1		
	15	E304080-001	Side Bracket	1		
	16	E72791-001	Bracket	1		
	17	SBST3006Z	Screw	5		
	18	E25249-009	Rear Panel	1	Made in Japan	J, C
		E25249-010	Rear Panel	1	Made in Japan	P, PG, U
		E25249-011	Rear Panel	1	Made in Japan	E, A, LE, LBS
		E25249-012	Rear Panel	1	Made in Japan	G
		E25249-013	Rear Panel	1	Made in Singapore	J, C
		E25249-014	Rear Panel	1	Made in Singapore	P, PG, U
		E25249-015	Rear Panel	1	Made in Singapore	E, A, LE, LBS
		E25249-016	Rear Panel	1	Made in Singapore	G
△	19	QMF51A2-1R25S	Fuse	1		PG, U
△		QMF51A2-2R5S	Fuse	1		P
	20	QMG0301-003	Fuse Holder	1		P, PG, U
△	21	QMP1900-200	Power Cord	1		J
△		QMP1480-200H	Power Cord	1		C
△		QMP7600-200	Power Cord	1		P, PG, U
△		QMP3900-200	Power Cord	1		E, G, LE
△		QMP2560-244	Power Cord	1		A
△		QMP9017-008BS	Power Cord	1		LBS

△	No.	Part Number	Part Name	Q'ty	Description	Areas
△	22	QHS3876-162	Cord Stopper	1		LBS
△		QHS3876-162BS	Cord Stopper	1		J, C, P, PG, E, A, G, LE, U
	23	GBSB3008Z	Screw	3		J, C, P, PG, U
	24	E48729-008	Plastic Rivet	2		E, A, G, LE, LBS
	25	E304144-001	Primary Cover	1		E, A, G, LE, LBS
	26	E69589-008	Spacer	1		J
△	27	QMF51U1-3R15S	Fuse	1		J, C
△		QMF51A2-1R25S	Fuse	1		E, G, A, LE
		QMF51E2-R25SBS	Fuse	1		LBS
	28	E65389-002	Ass'y Screw	4		
△	29	ETP1100-12JA	Power Transformer	1		J
△		ETP1100-12CA	Power Transformer	1		C
△		ETP1100-12FA	Power Transformer	1		P, PG, U
△		ETP1100-12EA	Power Transformer	1		E, A, G, LE
△		ETP1100-12EABS	Power Transformer	1		LBS
	30	E304081-001	Center Bracket	1		
	31	E304079-001	Side Bracket	1		
	32	E304077-001	Bracket	1		
	33	E72789-001	Push Knob	1		
	34	E72790-001	Push Knob	2		
	35	E71335-002	Fastener	1		
	36	E25248-001	Bottom Board	1		
	37	E47227-023	Foot	4		
	38	EXO100004H10S04	Spacer	1		
	39	SBSB3008M	Screw	20		
	40	SDSB3006N	Screw	3		
	41	SBSB3008N	Screw	28		
	42	E66052-004	Screw	1		
	43	QSR0085-008U	Voltage Selector	1		P, PG, U
	44	E73092-001	Fastener	2		

△: Safety Parts

The Marks for Designated Areas

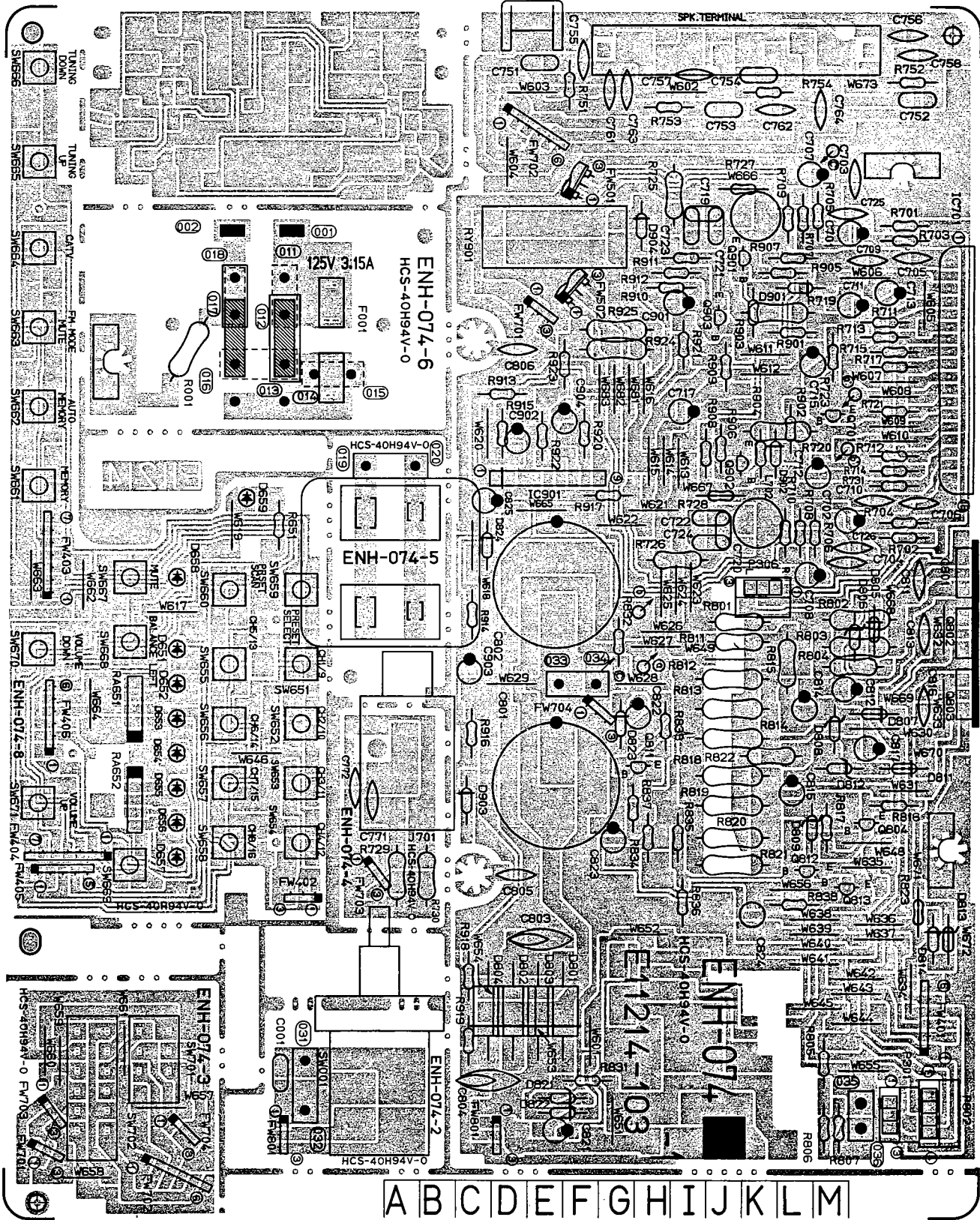
- J . . . . . U.S.A.
- C . . . . . Canada
- P, PG . . . . . U.S. Military Market
- A . . . . . Australia
- E, LE . . . . . Europe
- G . . . . . West Germany
- LBS . . . . . U.K.
- U . . . . . Other Countries

No mark indicates all area.

# Printed Circuit Board Ass'y and Parts List

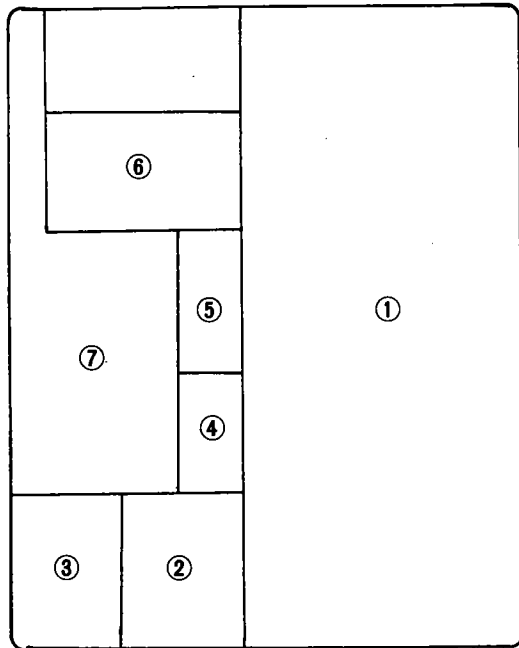
ENH-074  Power Amplifier P.C. Board Ass'y

Note: ENH-074  varies according to the areas employed. See note (1) when placing an order.



A B C D E F G H I J K L M

**Each Individual P.C. Board Location**



- ① ENH-074-1  
Power Amplifier P.C. Board
- ② ENH-074-2  
Power Switch P.C. Board
- ③ ENH-074-3  
Speaker Select P.C. Board
- ④ ENH-074-4  
Headphone P.C. Board
- ⑤ ENH-074-5  
AC Outlet P.C. Board
- ⑥ ENH-074-6  
AC Primary P.C. Board
- ⑦ ENH-074-8  
Preset & Operation P.C. Board

**Note (1)**

P.C. Board Ass'y	Designated Areas
ENH-074 [A]	U.S.A.
ENH-074 [B]	Canada
ENH-074 [C]	U.S. Military Market & Other Countries
ENH-074 [D]	Europe, Australia
ENH-074 [EBS]	U.K.
ENH-074 [F]	West Germany

**Transistors**

ITEM	PART NUMBER	DESCRIPTION		AREA
			MAKER	
Q701	2SC945A(P,Q)	SILICON	NEC	
Q801	2SB941A(P,Q)	SILICON	MATSUSHITA	
Q802	2SD1266(P,Q)	SILICON	MATSUSHITA	
Q803	2SD1266(P,Q)	SILICON	MATSUSHITA	
Q804	2SC2235(O,Y)	SILICON	TOSHIBA	
Q811	2SC458(C,D)	SILICON	HITACHI	
Q812	2SC458(C,D)	SILICON	HITACHI	
Q901	2SC1775AV(E,F)	SILICON	HITACHI	
Q902	2SC1775AV(E,F)	SILICON	HITACHI	
Q903	2SA733A(P,Q)	SILICON	NEC	

**I.C.S.**

ITEM	PART NUMBER	DESCRIPTION		AREA
			MAKER	
IC701	STK4181MK5	I.C.	SANYO	
IC901	TA7317P	I.C.	TOSHIBA	

**Diodes**

ITEM	PART NUMBER	DESCRIPTION		AREA
			MAKER	
D651	SLH-34DC3F	L.E.D.	ROHM	
D652	SLH-34DC3F	L.E.D.	ROHM	
D653	SLH-34DC3F	L.E.D.	ROHM	
D654	SLH-34DC3F	L.E.D.	ROHM	
D655	SLH-34DC3F	L.E.D.	ROHM	
D656	SLH-34DC3F	L.E.D.	ROHM	
D657	SLH-34DC3F	L.E.D.	ROHM	
D658	SLH-34VC3F	L.E.D.	ROHM	
D659	SLH-34VC3F	L.E.D.	ROHM	
D801	S3V20F	SILICON		
D802	S3V20F	SILICON		
D803	S3V20F	SILICON		
D804	S3V20F	SILICON		
D805	1S2473	SILICON	ROHM	D
D805	1S2473	SILICON	ROHM	EBS
D805	1S2473	SILICON	ROHM	F
D806	RD16EB3	ZENER	NEC	
D807	1S2473	SILICON	ROHM	D
D807	1S2473	SILICON	ROHM	EBS
D807	1S2473	SILICON	ROHM	F
D808	RD16EB3	ZENER	NEC	
D809	RD12EB3	ZENER	NEC	
D811	1S2473	SILICON	ROHM	D
D811	1S2473	SILICON	ROHM	EBS
D811	1S2473	SILICON	ROHM	F
D812	RD6.2EB3	ZENER	NEC	A
D812	RD6.2EB3	ZENER	NEC	B
D812	RD6.2EB3	ZENER	NEC	C
D812	RD8.2EB3	ZENER	NEC	D
D812	RD8.2EB3	ZENER	NEC	EBS
D812	RD8.2EB3	ZENER	NEC	F
D813	RD2.0EB1	ZENER	NEC	D
D813	RD2.0EB1	ZENER	NEC	EBS
D813	RD2.0EB1	ZENER	NEC	F
D814	1S2473	SILICON	ROHM	A
D814	1S2473	SILICON	ROHM	B
D814	1S2473	SILICON	ROHM	C
D821	RD5.6EB3	ZENER	NEC	
D822	1S2473	SILICON	ROHM	
D823	1S2473	SILICON	ROHM	
D824	1S2473	SILICON	ROHM	
D901	1S2473	SILICON	ROHM	
D902	1S2473	SILICON	ROHM	
D903	1S2473	SILICON	ROHM	
D904	1S2473	SILICON	ROHM	



Capacitors

ITEM	PART NUMBER	DESCRIPTION	AREA
C001	QFM82AK-104	0.1MF 100V MYLAR	D
C001	QFM82AK-104	0.1MF 100V MYLAR	EBS
C701	QETB1HM-225	2.2MF 50V ELECTRO	
C702	QETB1HM-225	2.2MF 50V ELECTRO	
C703	QCS21HJ-680	68PF 50V CERAMIC	
C704	QCS21HJ-680	68PF 50V CERAMIC	
C705	QCS21HJ-471	470PF 50V CERAMIC	
C706	QCS21HJ-471	470PF 50V CERAMIC	
C707	QETB1AM-476	47MF 10V ELECTRO	
C708	QETB1AM-476	47MF 10V ELECTRO	
C709	QCS21HJ-100	10PF 50V CERAMIC	
C710	QCS21HJ-100	10PF 50V CERAMIC	
C711	QEH61HM-225	2.2MF 50V ELECTRO	
C712	QETB1HM-225	2.2MF 50V ELECTRO	
C713	QEH61HM-106	10MF 50V ELECTRO	
C715	QETB1HM-106	10MF 50V ELECTRO	
C717	QETB1HM-475	4.7MF 50V ELECTRO	
C719	QFN81HK-223	0.022MF 50V MYLAR	A
C719	QFN81HK-223	0.022MF 50V MYLAR	C
C720	QFN81HK-223	0.022MF 50V MYLAR	A
C720	QFN81HK-223	0.022MF 50V MYLAR	C
C721	QFN81HK-473	0.047MF 50V MYLAR	B
C721	QFN81HK-473	0.047MF 50V MYLAR	D
C721	QFN81HK-473	0.047MF 50V MYLAR	EBS
C721	QFN81HK-473	0.047MF 50V MYLAR	F
C722	QFN81HK-473	0.047MF 50V MYLAR	B
C722	QFN81HK-473	0.047MF 50V MYLAR	D
C722	QFN81HK-473	0.047MF 50V MYLAR	EBS
C722	QFN81HK-473	0.047MF 50V MYLAR	F
C722	QFN81HK-473	0.047MF 50V MYLAR	F
C723	QFN81HK-473	0.047MF 50V MYLAR	B
C723	QFN81HK-473	0.047MF 50V MYLAR	D
C723	QFN81HK-473	0.047MF 50V MYLAR	EBS
C723	QFN81HK-473	0.047MF 50V MYLAR	F
C724	QFN81HK-473	0.047MF 50V MYLAR	B
C724	QFN81HK-473	0.047MF 50V MYLAR	D
C724	QFN81HK-473	0.047MF 50V MYLAR	EBS
C724	QFN81HK-473	0.047MF 50V MYLAR	F
C751	QFN81HK-473	0.047MF 50V MYLAR	F
C752	QFN81HK-473	0.047MF 50V MYLAR	F
C753	QFN81HK-473	0.047MF 50V MYLAR	F
C754	QFN81HK-473	0.047MF 50V MYLAR	F
C755	QCS21HJ-681	680PF 50V CERAMIC	F
C756	QCS21HJ-681	680PF 50V CERAMIC	F
C757	QCS21HJ-331	330PF 50V CERAMIC	F
C758	QCS21HJ-331	330PF 50V CERAMIC	F
C761	QCS21HJ-101	100PF 50V CERAMIC	F
C762	QCS21HJ-101	100PF 50V CERAMIC	F
C763	QCS21HJ-101	100PF 50V CERAMIC	F
C764	QCS21HJ-101	100PF 50V CERAMIC	F
C771	QCS21HJ-101	100PF 50V CERAMIC	F
C772	QCS21HJ-101	100PF 50V CERAMIC	F
C801	QEZO086-688	6800MF NON POLE	
C802	QEZO086-688	6800MF NON POLE	
C803	QCE22HP-103	0.01MF 500V CERAMIC	
C804	QCE22HP-103	0.01MF 500V CERAMIC	
C811	QCF21HP-103	0.01MF 50V CERAMIC	
C812	QEH61EM-107	100MF 25V ELECTRO	
C813	QCF21HP-103	0.01MF 50V CERAMIC	
C814	QETB1EM-107	100MF 25V ELECTRO	
C815	QEH61EM-107	100MF 25V ELECTRO	
C816	QCF21HP-103	0.01MF 50V CERAMIC	
C817	QEH61EM-107	100MF 25V ELECTRO	
C821	QETB1EM-476	47MF 25V ELECTRO	
C822	QETB1EM-226	22MF 25V ELECTRO	
C823	QETB1EM-106	10MF 25V ELECTRO	
C825	QETB1EM-106	10MF 25V ELECTRO	
C901	QETB1HM-226	22MF 50V ELECTRO	
C902	QETB1AM-107	100MF 10V ELECTRO	
C903	QETB1HM-106	10MF 50V ELECTRO	
C904	QETB1CM-226	22MF 16V ELECTRO	

Resistors

ITEM	PART NUMBER	DESCRIPTION	AREA
R001	QRC128K-275EM	2.7M 1/2W COMPOSI	A
R001	QRC128K-275EM	2.7M 1/2W COMPOSI	B
R651	QRD148J-271S	270 1/4W CARBON	
R701	QRD148J-222S	2.2K 1/4W CARBON	
R702	QRD148J-222S	2.2K 1/4W CARBON	
R703	QRD148J-104S	100K 1/4W CARBON	
R704	QRD148J-104S	100K 1/4W CARBON	
R705	QRD148J-132S	1.3K 1/4W CARBON	
R706	QRD148J-132S	1.3K 1/4W CARBON	
R707	QRD148J-133S	13K 1/4W CARBON	
R708	QRD148J-133S	13K 1/4W CARBON	
R709	QRD148J-823S	82K 1/4W CARBON	
R710	QRD148J-823S	82K 1/4W CARBON	
R711	QRD148J-472S	4.7K 1/4W CARBON	
R712	QRD148J-472S	4.7K 1/4W CARBON	
R713	QRD148J-272S	2.7K 1/4W CARBON	
R714	QRD148J-272S	2.7K 1/4W CARBON	
R715	QRD148J-272S	2.7K 1/4W CARBON	
R717	QRD148J-272S	2.7K 1/4W CARBON	
R719	QRX022J-R22AM	0.22 2W M.FILM	
R720	QRX022J-R22AM	0.22 2W M.FILM	
R721	QRD145J-100S	10 1/4W UNF.CARBON	
R723	QRD148J-472S	4.7K 1/4W CARBON	
R725	QRD125J-100	10 1/2W UNF.CARBON	
R726	QRD125J-100	10 1/2W UNF.CARBON	
R727	QRD145J-470S	47 1/4W UNF.CARBON	F
R728	QRD145J-470S	47 1/4W UNF.CARBON	F
R729	QRG012J-221AM	220 1W O.M.FILM	
R730	QRG012J-221AM	220 1W O.M.FILM	
R731	QRD145J-100S	10 1/4W UNF.CARBON	A
R731	QRD145J-100S	10 1/4W UNF.CARBON	B
R731	QRD145J-100S	10 1/4W UNF.CARBON	C
R731	QRZ0062-100	10 1/4W FUSIBLE	D
R731	QRZ0062-100	10 1/4W FUSIBLE	EBS
R731	QRZ0062-100	10 1/4W FUSIBLE	F
R751	QRZ0062-100	10 1/4W FUSIBLE	F
R752	QRZ0062-100	10 1/4W FUSIBLE	F
R753	QRZ0062-100	10 1/4W FUSIBLE	F
R754	QRZ0062-100	10 1/4W FUSIBLE	F
R801	QRD125J-2R2	2.2 1/2W UNF.CARBON	
R802	QRG022J-560AM	56 2W O.M.FILM	
R804	QRD125J-332	3.3K 1/2W UNF.CARBON	
R805	QRD145J-180S	18 1/4W UNF.CARBON	A
R805	QRD145J-180S	18 1/4W UNF.CARBON	B
R805	QRD145J-180S	18 1/4W UNF.CARBON	C
R805	QRZ0062-180	18 1/4W FUSIBLE	D
R805	QRZ0062-180	18 1/4W FUSIBLE	EBS
R805	QRZ0062-180	18 1/4W FUSIBLE	F
R806	QRD148J-180S	18 1/4W CARBON	
R807	QRD148J-100S	10 1/4W CARBON	
R811	QRD125J-2R2	2.2 1/2W UNF.CARBON	
R812	QRG022J-181AM	180 2W O.M.FILM	A
R812	QRG022J-181AM	180 2W O.M.FILM	B
R812	QRG022J-181AM	180 2W O.M.FILM	C
R812	QRG026J-181AF	180 2W O.M.FILM	D
R812	QRG026J-181AF	180 2W O.M.FILM	EBS
R812	QRG026J-181AF	180 2W O.M.FILM	F
R813	QRG022J-181AM	180 2W O.M.FILM	A
R813	QRG022J-181AM	180 2W O.M.FILM	B
R813	QRG022J-181AM	180 2W O.M.FILM	C
R813	QRG022J-181AM	180 2W O.M.FILM	D
R813	QRG026J-181AF	180 2W O.M.FILM	EBS
R813	QRG026J-181AF	180 2W O.M.FILM	F
R814	QRG022J-181AM	180 2W O.M.FILM	A
R814	QRG022J-181AM	180 2W O.M.FILM	B
R814	QRG022J-181AM	180 2W O.M.FILM	C
R814	QRG026J-181AF	180 2W O.M.FILM	D
R814	QRG026J-181AF	180 2W O.M.FILM	EBS
R814	QRG026J-181AF	180 2W O.M.FILM	F
R815	QRD125J-332	3.3K 1/2W UNF.CARBON	

△ : Safety Parts

Resistors

ITEM	PART NUMBER	DESCRIPTION	AREA
R816	QRD148J-2R7S	2.7 1/4W CARBON	A
R817	QRD148J-121S	120 1/4W CARBON	B
R817	QRD148J-121S	120 1/4W CARBON	B
R817	QRD148J-121S	120 1/4W CARBON	C
R817	QRD148J-121S	120 1/4W CARBON	D
△ R817	QRZ0062-121	120 1/4W FUSIBLE	EBS
△ R817	QRZ0062-121	120 1/4W FUSIBLE	F
△ R817	QRZ0062-121	120 1/4W FUSIBLE	F
△ R818	QRG022J-471AM	470 2W O.M.FILM	A
△ R818	QRG022J-471AM	470 2W O.M.FILM	B
△ R818	QRG022J-471AM	470 2W O.M.FILM	C
△ R818	QRG022J-471AM	470 2W O.M.FILM	D
△ R818	QRG026J-471AF	470 2W O.M.FILM	EBS
△ R818	QRG026J-471AF	470 2W O.M.FILM	F
△ R819	QRG022J-471AM	470 2W O.M.FILM	A
△ R819	QRG022J-471AM	470 2W O.M.FILM	B
△ R819	QRG022J-471AM	470 2W O.M.FILM	C
△ R819	QRG026J-471AF	470 2W O.M.FILM	EBS
△ R819	QRG026J-471AF	470 2W O.M.FILM	F
△ R820	QRG022J-471AM	470 2W O.M.FILM	A
△ R820	QRG022J-471AM	470 2W O.M.FILM	B
△ R820	QRG022J-471AM	470 2W O.M.FILM	C
△ R820	QRG026J-471AF	470 2W O.M.FILM	D
△ R820	QRG026J-471AF	470 2W O.M.FILM	EBS
△ R820	QRG026J-471AF	470 2W O.M.FILM	F
△ R821	QRG022J-471AM	470 2W O.M.FILM	A
△ R821	QRG022J-471AM	470 2W O.M.FILM	B
△ R821	QRG022J-471AM	470 2W O.M.FILM	C
△ R821	QRG026J-391AF	390 2W O.M.FILM	D
△ R821	QRG026J-391AF	390 2W O.M.FILM	EBS
△ R821	QRG026J-391AF	390 2W O.M.FILM	F
△ R822	QRD125J-472	4.7K 1/2W UNF.CARBON	
△ R823	QRZ0062-470	47 1/4W FUSIBLE	D
△ R823	QRZ0062-470	47 1/4W FUSIBLE	EBS
△ R823	QRZ0062-470	47 1/4W FUSIBLE	F
R831	QRD148J-473S	47K 1/4W CARBON	
R832	QRD148J-273S	27K 1/4W CARBON	
R833	QRD148J-223S	22K 1/4W CARBON	
R834	QRD148J-102S	1K 1/4W CARBON	
R835	QRD148J-103S	10K 1/4W CARBON	
R836	QRD148J-103S	10K 1/4W CARBON	
R901	QRD148J-152S	1.5K 1/4W CARBON	
R902	QRD148J-152S	1.5K 1/4W CARBON	
R903	QRD148J-562S	5.6K 1/4W CARBON	
R904	QRD148J-562S	5.6K 1/4W CARBON	
R905	QRD148J-123S	12K 1/4W CARBON	
R906	QRD148J-123S	12K 1/4W CARBON	
R907	QRD148J-104S	100K 1/4W CARBON	
R908	QRD148J-823S	82K 1/4W CARBON	
△ R909	QRD145J-470S	47 1/4W UNF.CARBON	
R910	QRD148J-103S	10K 1/4W CARBON	
R911	QRD148J-332S	3.3K 1/4W CARBON	
R912	QRD148J-473S	47K 1/4W CARBON	
R913	QRD148J-683S	68K 1/4W CARBON	
R914	QRD148J-563S	56K 1/4W CARBON	
R915	QRD148J-104S	100K 1/4W CARBON	
R916	QRD148J-152S	1.5K 1/4W CARBON	
R917	QRD148J-153S	15K 1/4W CARBON	
R919	QRD148J-152S	1.5K 1/4W CARBON	
R920	QRD148J-224S	220K 1/4W CARBON	
R921	QRD148J-223S	22K 1/4W CARBON	
R922	QRD148J-101S	100 1/4W CARBON	D
R922	QRD148J-101S	100 1/4W CARBON	EBS-
R922	QRD148J-101S	100 1/4W CARBON	F
R922	QRD148J-101S	100 1/4W CARBON	A
R922	QRD148J-680S	68 1/4W CARBON	B
R922	QRD148J-680S	68 1/4W CARBON	C
R923	QRD148J-101S	100 1/4W CARBON	D
R923	QRD148J-101S	100 1/4W CARBON	EBS
R923	QRD148J-101S	100 1/4W CARBON	F
R923	QRD148J-680S	68 1/4W CARBON	A
R923	QRD148J-680S	68 1/4W CARBON	B
R923	QRD148J-680S	68 1/4W CARBON	C
△ R924	QRG022J-681AM	680 2W O.M.FILM	D
△ R924	QRG022J-681AM	680 2W O.M.FILM	EBS
△ R924	QRG022J-681AM	680 2W O.M.FILM	F
△ R924	QRG022J-821AM	820 2W O.M.FILM	A
△ R924	QRG022J-821AM	820 2W O.M.FILM	B
△ R924	QRG022J-821AM	820 2W O.M.FILM	C
RA651	QRB045J-271	270 4W ARRAY	
RA652	QRB045J-271	270 4W ARRAY	

△: Safety Parts

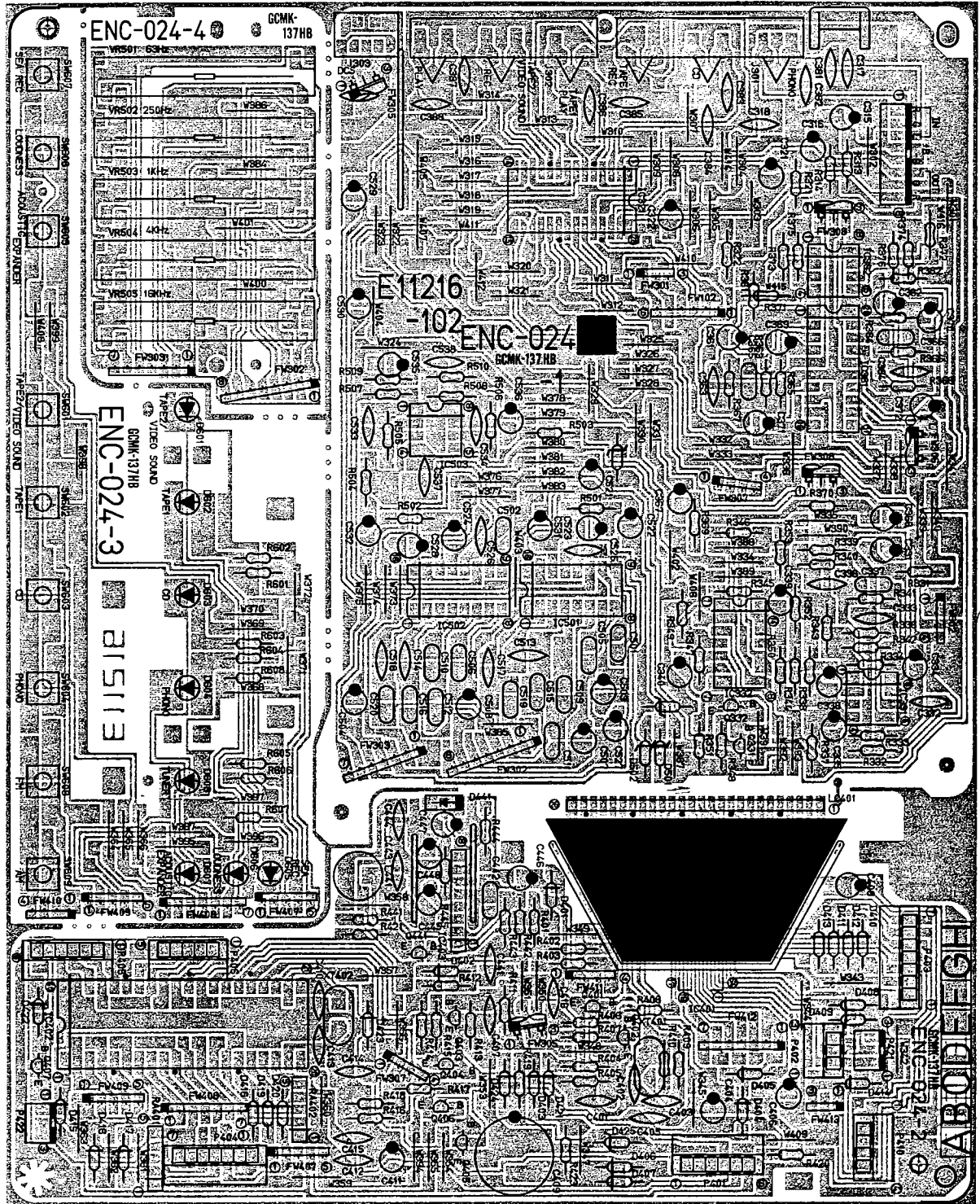
Others

ITEM	PART NUMBER	DESCRIPTION	AREA
	EMB90TV-801A	SPEAKER 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
	EWH23A-16RR		
	E11214-103	CIRCUIT BOARD	A
	E11214-103	CIRCUIT BOARD	B
	E11214-103	CIRCUIT BOARD	C
	E11214-103	CIRCUIT BOARD	D
	E11214-103	CIRCUIT BOARD	F
	E11214-103BS	CIRCUIT BOARD	EBS
	E303213-003	HEAT SINK	
	E65508-002	TAB	
	E65654-001	SPACER	D
	E65654-001	SPACER	EBS
	E65654-001	SPACER	F
	E67132-T1R25	FUSE LABEL	D
	E67132-T1R25	FUSE LABEL	EBS
	E67132-T1R25	FUSE LABEL	F
	E67764-002	TERMINAL ASSY	
	E67764-102	TERMINAL ASSY	
	E67764-102	TERMINAL ASSY	A
	E67764-102	TERMINAL ASSY	B
	E67764-102	TERMINAL ASSY	C
	E67764-202	TERMINAL	
	E67764-202	TERMINAL	
	E67764-302	TERMINAL	A
	E67764-302	TERMINAL	B
	E67764-302	TERMINAL	C
	E70225-001	EARTH PLATE	F
	E70859-001	EARTH PLATE	
	E70859-001	EARTH PLATE	
	E70859-001	EARTH PLATE	A
	E70859-001	EARTH PLATE	B
	E71140-001	SPRING	
△	QMC0437-002	AC SOCKET	A
△	QMC0437-002	AC SOCKET	C
△	QMC0440-001	AC SOCKET	B
	SBSB3008N	SCREW	
	SBSE3008Z	SCREW	
	J701	QMS6302-12B	
	L701	EQL0001-R45	F
	L702	EQL0001-R45	F
	P301	EMV7112-003	
	P306	EMV7112-003	
	P802	EMV7112-004	
	RY901	ESK5D24-218	
△	SW001	QSP2J21-E01	
	SW651	ESP0001-007	
	SW652	ESP0001-007	
	SW653	ESP0001-007	
	SW654	ESP0001-007	
	SW655	ESP0001-007	
	SW656	ESP0001-007	
	SW657	ESP0001-007	
	SW658	ESP0001-007	
	SW659	ESP0001-007	
	SW660	ESP0001-007	
	SW661	ESP0001-007	
	SW662	ESP0001-007	
	SW663	ESP0001-007	
	SW664	ESP0001-007	
	SW664	ESP0001-007	A
	SW664	ESP0001-007	B
	SW665	ESP0001-007	
	SW666	ESP0001-007	
	SW667	ESP0001-007	
	SW668	ESP0001-007	
	SW669	ESP0001-007	
	SW670	ESP0001-007	
	SW671	ESP0001-007	
	SW701	QST8231-E01	
	SW702	QST8231-E01	

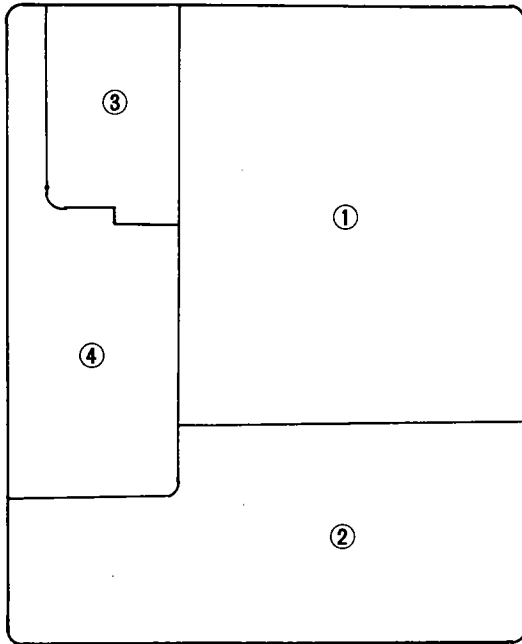
△: Safety Parts

ENC-024 □ Switch & Control P.C. Board Ass'y

Note: ENC-024 □ varies according to the areas employed. See note (1) when placing an order.



Each Individual P.C. Board Location



- ① ENC-024-1  
Pin-Jack P.C. Board
- ② ENC-024-2  
LCD Display P.C. Board
- ③ ENC-024-3  
Source Select P.C. Board
- ④ ENC-024-4  
SEA Control P.C. Board

Note (1)

P.C. Board Ass'y	Designated Areas
ENC-024 [A]	U.S.A., Canada
ENC-024 [B]	U.S. Military Market & Other Countries
ENC-024 [C]	Europe, Australia
ENC-024 [D]	Europe (with LW), U.K.
ENC-024 [E]	West Germany

Transistors

ITEM	PART NUMBER	DESCRIPTION		AREA
			MAKER	
Q331	DTA114YN	SILICON	ROHM	
Q332	DTC144EN	SILICON	ROHM	
Q401	2SC458(C,D)	SILICON	HITACHI	
Q402	2SC458(C,D)	SILICON	HITACHI	
Q403	2SC458(C,D)	SILICON	HITACHI	
Q404	DTA144EN	SILICON	ROHM	
Q405	DTC144EN	SILICON	ROHM	
Q406	DTA144EN	SILICON	ROHM	
Q407	DTA114YN	SILICON	ROHM	
Q441	2SC458(C,D)	SILICON	HITACHI	

I.C.S.

ITEM	PART NUMBER	DESCRIPTION		AREA
			MAKER	
IC321	TC9164N	I.C.	TOSHIBA	
IC331	M5218P	I.C.	MITSUBISHI	
IC332	LC4966	I.C.	SANYO	
IC361	TC9177P	I.C.	TOSHIBA	
IC362	NJM4560DD	I.C.		
IC401	LC5813H-246	I.C.	SANYO	
IC402	UPD7508HC-074	I.C.	NEC	
IC403	UPC1473HA	I.C.	NEC	
IC501	LA3600S	I.C.	SANYO	
IC502	LA3600S	I.C.	SANYO	
IC503	NJM4558D-D	I.C.		

Diodes

ITEM	PART NUMBER	DESCRIPTION		AREA
			MAKER	
D401	1S2473	SILICON	ROHM	
D402	1S2473	SILICON	ROHM	
D403	1S2473	SILICON	ROHM	
D404	1S2473	SILICON	ROHM	
D405	1S2473	SILICON	ROHM	
D406	1S2473	SILICON	ROHM	
D407	1S2473	SILICON	ROHM	
D410	1S2473	SILICON	ROHM	D
D411	1S2473	SILICON	ROHM	B
D411	1S2473	SILICON	ROHM	C
D411	1S2473	SILICON	ROHM	D
D411	1S2473	SILICON	ROHM	E
D412	1S2473	SILICON	ROHM	C
D412	1S2473	SILICON	ROHM	D
D412	1S2473	SILICON	ROHM	E
D412	1S2473	SILICON	ROHM	A
D413	1S2473	SILICON	ROHM	B
D414	1S2473	SILICON	ROHM	
D416	1S2473	SILICON	ROHM	
D417	1S2473	SILICON	ROHM	
D418	1S2473	SILICON	ROHM	
D419	1S2473	SILICON	ROHM	
D420	1S2473	SILICON	ROHM	
D421	1S2473	SILICON	ROHM	
D422	1S2473	SILICON	ROHM	
D423	1S2473	SILICON	ROHM	
D424	1S2473	SILICON	ROHM	
D425	RD5.6EB3	ZENER	NEC	C
D425	RD5.6EB3	ZENER	NEC	D
D425	RD5.6EB3	ZENER	NEC	E
D441	PH302C	SILICON	NEC	
D485	1S2076-31	SILICON	HITACHI	
D501	RD4.7EB2	ZENER	NEC	
D502	RD4.7EB2	ZENER	NEC	
D601	SLR-55VC70F124	L.E.D.		
D602	SLR-55DC70F124	L.E.D.		
D603	SLR-55DC70F124	L.E.D.		
D604	SLR-55DC70F124	L.E.D.		
D605	SLR-55VC70F124	L.E.D.		
D606	SLR-55DC70F124	L.E.D.		
D607	SLR-55MC70F124	L.E.D.		
D608	SLR-55DC70F124	L.E.D.		

Capacitors

ITEM	PART NUMBER	DESCRIPTION	AREA
C315	QETB1CM-476	47MF 16V ELECTRO	
C316	QETB1CM-476	47MF 16V ELECTRO	
C317	QCF21HP-223	0.022MF 50V CERAMIC	
C318	QCF21HP-223	0.022MF 50V CERAMIC	
C321	QETB1EM-476	47MF 25V ELECTRO	
C322	QETB1EM-476	47MF 25V ELECTRO	
C331	QETB1EM-476	47MF 25V ELECTRO	
C332	QCS21HJ-271	270PF 50V CERAMIC	
C333	QCY21HK-272	2700PF 50V CERAMIC	
C334	QETB1HM-105	1MF 50V ELECTRO	
C335	QETB1EM-476	47MF 25V ELECTRO	
C336	QCY21HK-182	1800PF 50V CERAMIC	
C337	QFN81HK-563	0.056MF 50V MYLAR	
C338	QETB1HM-105	1MF 50V ELECTRO	
C339	QETB1EM-476	47MF 25V ELECTRO	
C340	QETB1EM-476	47MF 25V ELECTRO	
C361	QETB1EM-476	47MF 25V ELECTRO	
C362	QETB1EM-476	47MF 25V ELECTRO	
C363	QCS21HJ-181	180PF 50V CERAMIC	
C364	QCS21HJ-181	180PF 50V CERAMIC	
C365	QFN81HK-333	0.033MF 50V MYLAR	
C366	QFN81HK-333	0.033MF 50V MYLAR	
C367	QETB1HM-475	4.7MF 50V ELECTRO	
C368	QETB1HM-475	4.7MF 50V ELECTRO	
C369	QETB1HM-105	1MF 50V ELECTRO	
C370	QETB1HM-105	1MF 50V ELECTRO	
C371	QETB1EM-106	10MF 25V ELECTRO	
C372	QETB1EM-106	10MF 25V ELECTRO	
C391	QCF21HP-223	0.022MF 50V CERAMIC	
C401	QCY21HK-472	4700PF 50V CERAMIC	
C402	QCS21HJ-331	330PF 50V CERAMIC	
C403	QCS21HJ-331	330PF 50V CERAMIC	
C404	QETB1AM-476	47MF 10V ELECTRO	A
C404	QETB1AM-476	47MF 10V ELECTRO	B
C404	QETB1EM-476	47MF 25V ELECTRO	C
C404	QETB1EM-476	47MF 25V ELECTRO	D
C404	QETB1EM-476	47MF 25V ELECTRO	E
C405	QCF21HP-223	0.022MF 50V CERAMIC	
C406	QETB1HM-475	4.7MF 50V ELECTRO	
C407	QCY21HK-332	3300PF 50V CERAMIC	
C408	QETB1HM-105	1MF 50V ELECTRO	
C409	QETBOJM-478	4700MF 6.3V ELECTRO	
C410	QCS21HJ-330	33PF 50V CERAMIC	
C411	QETB1AM-476	47MF 10V ELECTRO	A
C411	QETB1AM-476	47MF 10V ELECTRO	B
C411	QETB1EM-476	47MF 25V ELECTRO	C
C411	QETB1EM-476	47MF 25V ELECTRO	D
C411	QETB1EM-476	47MF 25V ELECTRO	E
C412	QCF21HP-223	0.022MF 50V CERAMIC	
C413	QCS21HJ-330	33PF 50V CERAMIC	
C414	QCF21HP-223	0.022MF 50V CERAMIC	
C415	QCF21HP-223	0.022MF 50V CERAMIC	
C442	QFN81HK-333	0.033MF 50V MYLAR	
C443	QCY21HK-332	3300PF 50V CERAMIC	
C445	QETB1EM-106	10MF 25V ELECTRO	
C446	QETB1HM-475	4.7MF 50V ELECTRO	
C447	QETB1AM-476	47MF 10V ELECTRO	A
C447	QETB1AM-476	47MF 10V ELECTRO	B
C447	QETB1EM-476	47MF 25V ELECTRO	C
C447	QETB1EM-476	47MF 25V ELECTRO	D
C447	QETB1EM-476	47MF 25V ELECTRO	E
C448	QETB1EM-106	10MF 25V ELECTRO	
C451	QETB1EM-476	47MF 25V ELECTRO	
C452	QETB1EM-227	220MF 25V ELECTRO	
C501	QFN81HJ-223	0.022MF 50V MYLAR	
C502	QFN81HJ-223	0.022MF 50V MYLAR	
C503	QETB1HM-225	2.2MF 50V ELECTRO	
C504	QETB1HM-225	2.2MF 50V ELECTRO	
C505	QFN81HJ-822	8200PF 50V MYLAR	
C506	QFN81HJ-822	8200PF 50V MYLAR	
C507	QETB1HM-474	0.47MF 50V ELECTRO	
C508	QETB1HM-474	0.47MF 50V ELECTRO	
C509	QFN81HJ-182	1800PF 50V MYLAR	
C510	QFN81HJ-182	1800PF 50V MYLAR	
C511	QFN81HJ-124	0.12MF 50V MYLAR	
C512	QFN81HJ-124	0.12MF 50V MYLAR	
C513	QCS21HJ-471	470PF 50V CERAMIC	
C514	QCS21HJ-471	470PF 50V CERAMIC	
C515	QFN81HJ-333	0.033MF 50V MYLAR	
C516	QFN81HJ-333	0.033MF 50V MYLAR	
C517	QCS21HJ-101	100PF 50V CERAMIC	
C518	QCS21HJ-101	100PF 50V CERAMIC	
C519	QFN81HJ-822	8200PF 50V MYLAR	
C520	QFN81HJ-822	8200PF 50V MYLAR	
C521	QETB1CM-226	22MF 16V ELECTRO	
C522	QETB1CM-226	22MF 16V ELECTRO	
C523	QETB1CM-226	22MF 16V ELECTRO	

Capacitors

ITEM	PART NUMBER	DESCRIPTION	AREA
C524	QETB1CM-226	22MF 16V ELECTRO	
C525	QCS21HJ-101	100PF 50V CERAMIC	
C526	QCS21HJ-101	100PF 50V CERAMIC	
C527	QETB1CM-226	22MF 16V ELECTRO	
C528	QETB1CM-226	22MF 16V ELECTRO	
C529	QETB1HM-475	4.7MF 50V ELECTRO	
C530	QETB1HM-475	4.7MF 50V ELECTRO	
C531	QETB1EM-106	10MF 25V ELECTRO	
C532	QETB1EM-106	10MF 25V ELECTRO	
C533	QCS21HJ-100	10PF 50V CERAMIC	
C534	QCS21HJ-100	10PF 50V CERAMIC	
C535	QETB1EM-106	10MF 25V ELECTRO	
C536	QETB1EM-106	10MF 25V ELECTRO	
C537	QCF21HP-223	0.022MF 50V CERAMIC	
C538	QCF21HP-223	0.022MF 50V CERAMIC	

Resistors

ITEM	PART NUMBER	DESCRIPTION	AREA
R313	QRD148J-331S	330 1/4W CARBON	
R314	QRD148J-331S	330 1/4W CARBON	
R321	QRD145J-680S	68 1/4W UNF. CARBON	
R322	QRD145J-680S	68 1/4W UNF. CARBON	
R331	QRD145J-680S	68 1/4W UNF. CARBON	
R332	QRD148J-154S	150K 1/4W CARBON	
R333	QRD148J-394S	390K 1/4W CARBON	
R334	QRD148J-104S	100K 1/4W CARBON	
R336	QRD148J-223S	22K 1/4W CARBON	
R337	QRD145J-680S	68 1/4W UNF. CARBON	
R338	QRD148J-273S	27K 1/4W CARBON	
R339	QRD148J-153S	15K 1/4W CARBON	
R340	QRD148J-183S	18K 1/4W CARBON	
R341	QRD148J-104S	100K 1/4W CARBON	
R342	QRD148J-273S	27K 1/4W CARBON	
R343	QRD148J-474S	470K 1/4W CARBON	
R344	QRD148J-223S	22K 1/4W CARBON	
R345	QRD148J-103S	10K 1/4W CARBON	
R346	QRD148J-104S	100K 1/4W CARBON	
R347	QRD148J-103S	10K 1/4W CARBON	
R348	QRD148J-103S	10K 1/4W CARBON	
R349	QRD148J-103S	10K 1/4W CARBON	
R350	QRD145J-680S	68 1/4W UNF. CARBON	
R351	QRD145J-680S	68 1/4W UNF. CARBON	
R352	QRD148J-104S	100K 1/4W CARBON	
R353	QRD148J-104S	100K 1/4W CARBON	
R361	QRD145J-680S	68 1/4W UNF. CARBON	
R362	QRD145J-680S	68 1/4W UNF. CARBON	
R363	QRD148J-105S	1M 1/4W CARBON	
R364	QRD148J-105S	1M 1/4W CARBON	
R365	QRD148J-563S	56K 1/4W CARBON	
R366	QRD148J-563S	56K 1/4W CARBON	
R367	QRD148J-563S	56K 1/4W CARBON	
R368	QRD148J-563S	56K 1/4W CARBON	
R369	QRD148J-104S	100K 1/4W CARBON	
R370	QRD148J-104S	100K 1/4W CARBON	
R371	QRD148J-512S	5.1K 1/4W CARBON	
R372	QRD148J-512S	5.1K 1/4W CARBON	
R373	QRD148J-103S	10K 1/4W CARBON	
R374	QRD148J-103S	10K 1/4W CARBON	
R375	QRD148J-105S	1M 1/4W CARBON	
R376	QRD148J-105S	1M 1/4W CARBON	
R401	QRD148J-104S	100K 1/4W CARBON	
R402	QRD148J-472S	4.7K 1/4W CARBON	
R403	QRD148J-472S	4.7K 1/4W CARBON	
R404	QRD148J-103S	10K 1/4W CARBON	
R405	QRD148J-223S	22K 1/4W CARBON	
R406	QRD148J-473S	47K 1/4W CARBON	
R407	QRD148J-471S	470 1/4W CARBON	
R408	QRD148J-103S	10K 1/4W CARBON	
R409	QRD148J-222S	2.2K 1/4W CARBON	
R410	QRD148J-105S	1M 1/4W CARBON	
R411	QRD148J-473S	47K 1/4W CARBON	
R412	QRD148J-471S	470 1/4W CARBON	
R413	QRD148J-223S	22K 1/4W CARBON	
R414	QRD148J-104S	100K 1/4W CARBON	
R415	QRD148J-104S	100K 1/4W CARBON	
R416	QRD148J-103S	10K 1/4W CARBON	
R417	QRD148J-103S	10K 1/4W CARBON	
R418	QRD148J-104S	100K 1/4W CARBON	
R419	QRD148J-103S	10K 1/4W CARBON	
R420	QRD148J-473S	47K 1/4W CARBON	
R421	QRD148J-104S	100K 1/4W CARBON	
R423	QRD148J-331S	330 1/4W CARBON	
R441	QRD148J-104S	100K 1/4W CARBON	

△: Safety Parts

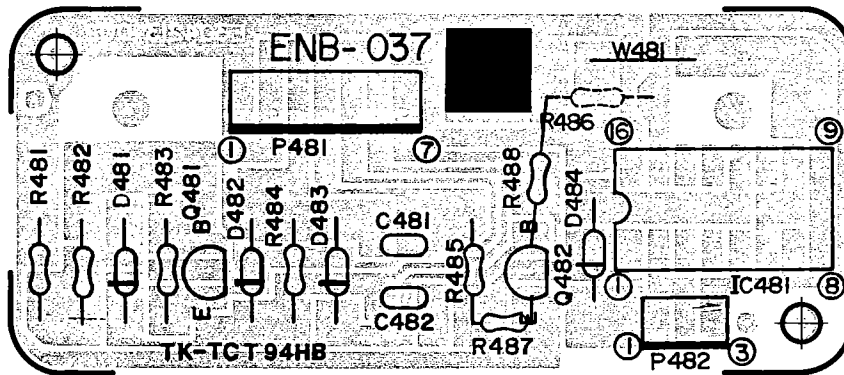
**Resistors**

△	ITEM	PART NUMBER	DESCRIPTION			AREA
	R442	QRD148J-104S	100K	1/4W	CARBON	
	R443	QRD148J-223S	22K	1/4W	CARBON	
	R444	QRD148J-220S	22	1/4W	CARBON	
	R445	QRD148J-102S	1K	1/4W	CARBON	
	R451	QRD148J-121S	120	1/4W	CARBON	
	R501	QRD148J-562S	5.6K	1/4W	CARBON	
	R502	QRD148J-562S	5.6K	1/4W	CARBON	
	R503	QRD148J-102S	1K	1/4W	CARBON	
	R504	QRD148J-102S	1K	1/4W	CARBON	
	R505	QRD148J-473S	47K	1/4W	CARBON	
	R506	QRD148J-473S	47K	1/4W	CARBON	
	R507	QRD148J-104S	100K	1/4W	CARBON	
	R508	QRD148J-104S	100K	1/4W	CARBON	
	R509	QRD148J-104S	100K	1/4W	CARBON	
	R510	QRD148J-104S	100K	1/4W	CARBON	
	R601	QRD148J-391S	390	1/4W	CARBON	
	R602	QRD148J-391S	390	1/4W	CARBON	
	R603	QRD148J-391S	390	1/4W	CARBON	
	R604	QRD148J-391S	390	1/4W	CARBON	
	R605	QRD148J-391S	390	1/4W	CARBON	
	R606	QRD148J-391S	390	1/4W	CARBON	
	R607	QRD148J-391S	390	1/4W	CARBON	
	R608	QRD148J-391S	390	1/4W	CARBON	
	RA401	QRB045J-104	100K	4W	ARRAY	
	RA402	QRB045J-104	100K	4W	ARRAY	
	VR501	QVUB01W-EF5C			VARIABLE	
	VR502	QVUB01W-EF5C			VARIABLE	
	VR503	QVUB01W-EF5C			VARIABLE	
	VR504	QVUB01W-EF5C			VARIABLE	
	VR505	QVUB01W-EF5C			VARIABLE	

**Others**

△	ITEM	PART NUMBER	DESCRIPTION			AREA
		E11216-102	CIRCUIT BOARD			
		E67883-001	SHIELD PLATE			
		E70225-001	EARTH PLATE			
		E71504-001	SHIELD COVER			
	J301	EMN00TV-602A	PIN JACK ASSY			
	J302	EMN00TV-602A	PIN JACK ASSY			
	J303	QMS3533-001	JACK ASSY			
	L441	EQL2103-562	INDUCTOR			
	P401	EMV7112-006	SOCKET WIRE			
	P402	EMV7112-003	SOCKET WIRE			
	P403	EMV7112-007	SOCKET WIRE			
	P404	EMV7112-007	SOCKET WIRE			
	P405	EMV7112-005	SOCKET WIRE			
	P406	EMV7112-006	SOCKET WIRE			
	P410	EMV7112-004	SOCKET WIRE			
	P421	QMV5005-003K	PULAG ASSY			
	P422	QMV5005-003K	PULAG ASSY			
	LC401	ELU0002-010	LCD PANEL			
	SW601	ESP0001-011	PUSH SWITCH			
	SW602	ESP0001-011	PUSH SWITCH			
	SW603	ESP0001-011	PUSH SWITCH			
	SW604	ESP0001-011	PUSH SWITCH			
	SW605	ESP0001-011	PUSH SWITCH			
	SW606	ESP0001-011	PUSH SWITCH			
	SW607	ESP0001-011	PUSH SWITCH			
	SW608	ESP0001-011	PUSH SWITCH			
	SW609	ESP0001-011	PUSH SWITCH			
	XT401	ECX0000-400KS	RESONATOR			
	XT402	ECX0004-190KU	RESONATOR			

**ENB-037 B Sub Control P.C. Board Ass'y**



**Transistors**

△	ITEM	PART NUMBER	DESCRIPTION		AREA
				MAKER	
	Q481	2SC458(C,D)	SILICON	HITACHI	
	Q482	DTC114YN	SILICON	ROHM	

**Capacitors**

△	ITEM	PART NUMBER	DESCRIPTION			AREA
	C481	QFN81HJ-473	0.047MF	50V	MYLAR	
	C482	QFV81HJ-105	1MF			B

**I.C.S.**

△	ITEM	PART NUMBER	DESCRIPTION		AREA
				MAKER	
	IC481	TC4520BP	I.C.	TOSHIBA	

**Resistors**

△	ITEM	PART NUMBER	DESCRIPTION			AREA
	R481	QRD148J-103S	10K	1/4W	CARBON	
	R482	QRD148J-473S	47K	1/4W	CARBON	
	R483	QRD148J-103S	10K	1/4W	CARBON	
	R484	QRD148J-103S	10K	1/4W	CARBON	
	R487	QRD148J-103S	10K	1/4W	CARBON	
	R488	QRD148J-104S	100K	1/4W	CARBON	

**Diodes**

△	ITEM	PART NUMBER	DESCRIPTION		AREA
				MAKER	
	D481	1S2473HX	SILICON	ROHM	
	D482	1S2473HX	SILICON	ROHM	
	D483	1S2473HX	SILICON	ROHM	
	D484	1S2473HX	SILICON	ROHM	

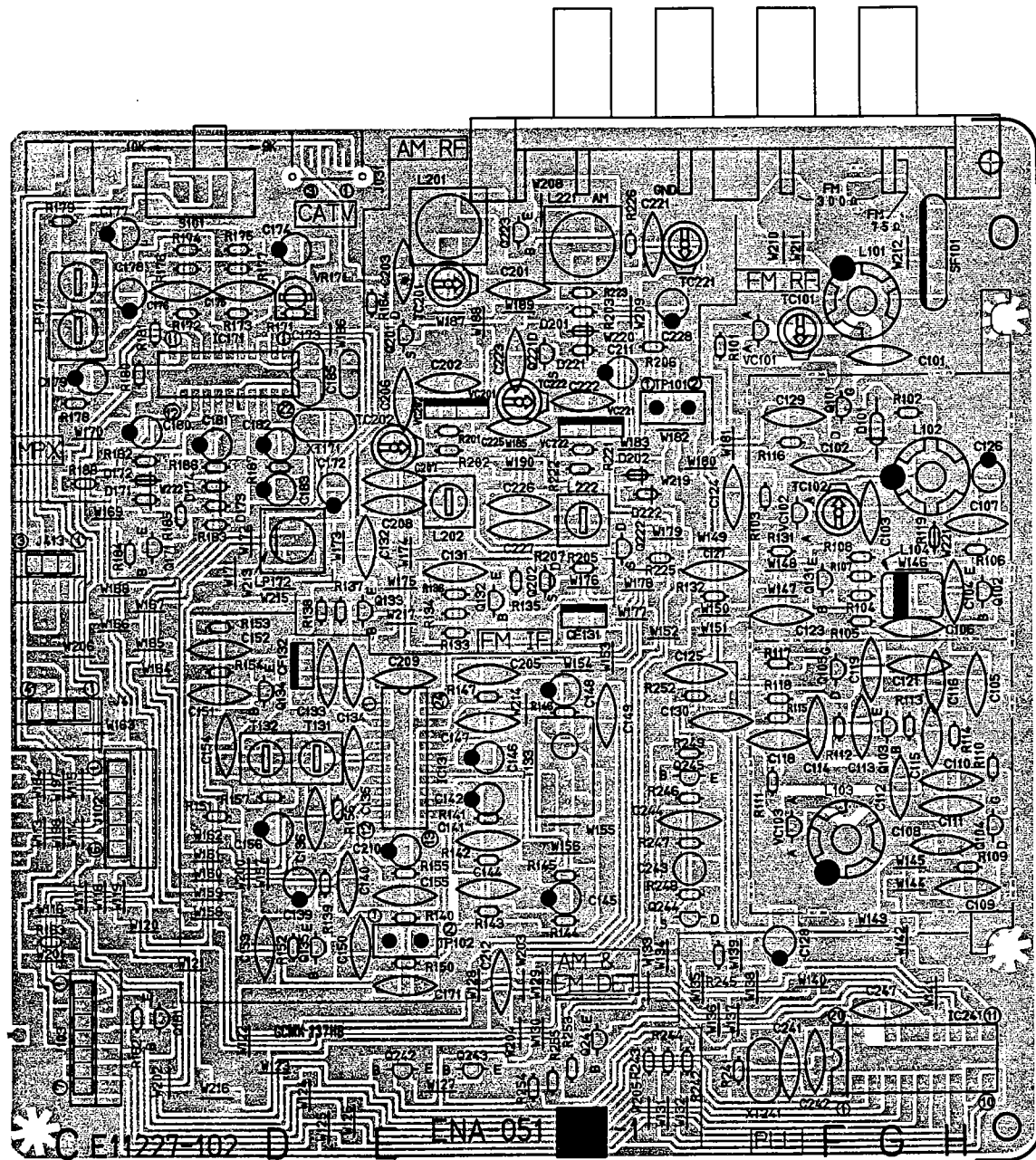
**Others**

△	ITEM	PART NUMBER	DESCRIPTION			AREA
	P481	E304213-002	CIRCUIT BOARD			
	P482	QMV5005-007K	PULAG ASSY			
		QMV5005-003K	PULAG ASSY			



ENA-051 Tuner P.C. Board Ass'y

Note: ENA-051 varies according to the areas employed. See note (1) when placing an order.



Note (1)

P.C. Board Ass'y	Designated Areas
ENA-051 [A]	U.S.A., Canada
ENA-051 [C]	U.S. Military Market & Other Countries
ENA-051 [D]	Europe, Australia
ENA-051 [E]	Europe (with LW), U.K.
ENA-051 [F]	West Germany

Transistors

ITEM	PART NUMBER	DESCRIPTION	AREA	
			MAKER	
Q101	2SK606(Q,R)	F.E.T	MATSUSHITA	F
Q101	2SK606(Q,R,S)	F.E.T		A
Q101	2SK606(Q,R,S)	F.E.T		C
Q101	2SK606(Q,R,S)	F.E.T		D
Q101	2SK606(Q,R,S)	F.E.T		E
Q102	2SC535(B,C)	SILICON	HITACHI	
Q103	2SC461(C)	SILICON	HITACHI	
Q104	2SK606(Q,R)	F.E.T	MATSUSHITA	F
Q104	2SK606(Q,R,S)	F.E.T		A
Q104	2SK606(Q,R,S)	F.E.T		C
Q104	2SK606(Q,R,S)	F.E.T		D
Q104	2SK606(Q,R,S)	F.E.T		E
Q105	2SK606(Q,R)	F.E.T	MATSUSHITA	F
Q131	2SC461(B,C)	SILICON	HITACHI	
Q132	2SC535(B,C)	SILICON	HITACHI	
Q133	2SC461(B,C)	SILICON	HITACHI	
Q134	2SC535(B,C)	SILICON	HITACHI	
Q135	2SC461(B,C)	SILICON	HITACHI	
Q161	2SC1685(R,S)	SILICON	MATSUSHITA	A
Q171	2SC1685(R,S)	SILICON	MATSUSHITA	
Q201	2SK301(Q,R)	F.E.T	MATSUSHITA	E
Q202	2SK301(P,Q)	F.E.T	MATSUSHITA	E
Q221	2SK301(Q,R)	F.E.T	MATSUSHITA	E
Q222	2SK301(P,Q)	F.E.T	MATSUSHITA	E
Q223	2SD1302(S,T)	SILICON	MATSUSHITA	E
Q241	2SA564A(R,S)	SILICON	MATSUSHITA	
Q242	2SA564A(R,S)	SILICON	MATSUSHITA	E
Q243	2SA564A(R,S)	SILICON	MATSUSHITA	
Q244	2SK301(Q)	F.E.T	MATSUSHITA	
Q245	2SC458(D)	SILICON	HITACHI	

I.C.S.

ITEM	PART NUMBER	DESCRIPTION	AREA	
			MAKER	
IC131	LA1267S	I.C.	SANYO	
IC171	LA3401	I.C.	SANYO	
IC241	LM7000N	I.C.	SANYO	

Diodes

ITEM	PART NUMBER	DESCRIPTION	AREA	
			MAKER	
D171	1SS119	SILICON	HITACHI	
D173	1SS119	SILICON	HITACHI	
D174	1SS119	SILICON	HITACHI	
D201	1SS119	SILICON	HITACHI	E
D202	1SS119	SILICON	HITACHI	E
D221	1SS119	SILICON	HITACHI	E
D222	1SS119	SILICON	HITACHI	E
VC101	SVC202(AB)	VALICAP	SANYO	
VC102	SVC202(AB)	VALICAP	SANYO	
VC103	SVC202(AB)	VALICAP	SANYO	
VC201	KV1236Z	VALICAP	TOKO	
VC202	KV1236Z	VALICAP	TOKO	
VC221	KV1236Z	VALICAP	TOKO	E
VC222	KV1236Z	VALICAP	TOKO	E

Capacitors

ITEM	PART NUMBER	DESCRIPTION	AREA	
			MAKER	
C102	QCF21HP-103	0.01MF 50V	CERAMIC	
C103	QCS21HJ-5R0	5.0PF 50V	CERAMIC	
C104	QCS21HJ-2R0	2.0PF 50V	CERAMIC	
C105	QCS21HJ-2R0	2.0PF 50V	CERAMIC	A
C105	QCS21HJ-2R0	2.0PF 50V	CERAMIC	C
C105	QCS21HJ-2R0	2.0PF 50V	CERAMIC	D
C105	QCS21HJ-2R0	2.0PF 50V	CERAMIC	E
C106	QCS21HJ-151	150PF 50V	CERAMIC	
C107	QCF21HP-103	0.01MF 50V	CERAMIC	
C108	QCF21HP-103	0.01MF 50V	CERAMIC	
C109	QCF21HP-103	0.01MF 50V	CERAMIC	
C110	QCT26CH-2R0	2.0PF 50V	CERAMIC	
C111	QCT26TH-7R0	7.0PF 50V	CERAMIC	
C112	QCT26CH-7R0	7.0PF 50V	CERAMIC	
C113	QCT26CH-220	22PF 50V	CERAMIC	
C114	QCF21HP-103	0.01MF 50V	CERAMIC	
C115	QCT26CH-100	10PF 50V	CERAMIC	
C116	QCS21HJ-2R0	2.0PF 50V	CERAMIC	A
C116	QCS21HJ-2R0	2.0PF 50V	CERAMIC	C
C116	QCS21HJ-2R0	2.0PF 50V	CERAMIC	D

Capacitors

ITEM	PART NUMBER	DESCRIPTION	AREA	
			MAKER	
C116	QCS21HJ-2R0	2.0PF 50V	CERAMIC	E
C118	QCF21HP-223	0.022MF 50V	CERAMIC	
C119	QCT26CH-2R0	2.0PF 50V	CERAMIC	F
C121	QCS21HJ-3R0	3.0PF 50V	CERAMIC	
C123	QCF21HP-223	0.022MF 50V	CERAMIC	
C124	QCF21HP-223	0.022MF 50V	CERAMIC	
C125	QCF21HP-223	0.022MF 50V	CERAMIC	
C127	QCS21HJ-220	22PF 50V	CERAMIC	
C128	QETB1EM-226	22MF 25V	ELECTRO	
C131	QCF21HP-223	0.022MF 50V	CERAMIC	
C132	QCF21HP-223	0.022MF 50V	CERAMIC	
C133	QCF21HP-223	0.022MF 50V	CERAMIC	
C134	QCF21HP-223	0.022MF 50V	CERAMIC	
C135	QCC21EM-223	0.022MF 25V	CERAMIC	
C136	QCF21HP-223	0.022MF 50V	CERAMIC	
C139	QETB1HM-105	1MF 50V	ELECTRO	
C140	QCS21HJ-101	100PF 50V	CERAMIC	C
C140	QCS21HJ-101	100PF 50V	CERAMIC	D
C140	QCS21HJ-101	100PF 50V	CERAMIC	E
C140	QCS21HJ-101	100PF 50V	CERAMIC	F
C140	QCS21HJ-221	220PF 50V	CERAMIC	A
C141	QCF21HP-223	0.022MF 50V	CERAMIC	
C142	QETB1EM-106	10MF 25V	ELECTRO	
C144	QFN81HK-352	3500PF 50V	MYLAR	
C145	QETB1HM-225	2.2MF 50V	ELECTRO	
C146	QETB1HM-475	4.7MF 50V	ELECTRO	
C147	QCF21HP-223	0.022MF 50V	CERAMIC	
C148	QETB1EM-106	10MF 25V	ELECTRO	
C149	QCF21HP-223	0.022MF 50V	CERAMIC	
C150	QCY21HK-102	1000PF 50V	CERAMIC	
C151	QCS21HJ-101	100PF 50V	CERAMIC	
C152	QCF21HP-103	0.01MF 50V	CERAMIC	
C153	QCS21HJ-101	100PF 50V	CERAMIC	
C154	QCS21HJ-470	47PF 50V	CERAMIC	
C155	QCF21HP-223	0.022MF 50V	CERAMIC	
C156	QETB1HM-475	4.7MF 50V	ELECTRO	
C161	QCF21HP-223	0.022MF 50V	CERAMIC	A
C171	QFN81HK-103	0.01MF 50V	MYLAR	D
C171	QFN81HK-103	0.01MF 50V	MYLAR	E
C171	QFN81HK-103	0.01MF 50V	MYLAR	F
C171	QFN81HK-223	0.022MF 50V	MYLAR	A
C171	QFN81HK-223	0.022MF 50V	MYLAR	C
C172	QETB1EM-106	10MF 25V	ELECTRO	
C173	QFN81HK-473	0.047MF 50V	MYLAR	
C174	QETB1EM-106	10MF 25V	ELECTRO	
C175	QCS21HJ-181	180PF 50V	CERAMIC	D
C175	QCS21HJ-181	180PF 50V	CERAMIC	E
C175	QCS21HJ-181	180PF 50V	CERAMIC	F
C175	QCS21HJ-561	560PF 50V	CERAMIC	A
C175	QCS21HJ-561	560PF 50V	CERAMIC	C
C176	QCS21HJ-181	180PF 50V	CERAMIC	D
C176	QCS21HJ-181	180PF 50V	CERAMIC	E
C176	QCS21HJ-181	180PF 50V	CERAMIC	F
C176	QCS21HJ-561	560PF 50V	CERAMIC	A
C176	QCS21HJ-561	560PF 50V	CERAMIC	C
C177	QETB1HM-225	2.2MF 50V	ELECTRO	
C178	QETB1HM-225	2.2MF 50V	ELECTRO	
C179	QETB1HM-225	2.2MF 50V	ELECTRO	
C180	QETB1HM-105	1MF 50V	ELECTRO	
C181	QETB1HM-105	1MF 50V	ELECTRO	
C182	QETB1HM-474	0.47MF 50V	ELECTRO	
C183	QETB1HM-225	2.2MF 50V	ELECTRO	
C185	QCY21HK-102	1000PF 50V	CERAMIC	
C191	QETB1EM-107	100MF 25V	ELECTRO	
C202	QCC21EM-223	0.022MF 25V	CERAMIC	
C203	QCS21HJ-561	560PF 50V	CERAMIC	
C205	QCF21HP-223	0.022MF 50V	CERAMIC	
C206	QCT26CH-100	10PF 50V	CERAMIC	
C207	QCT26CH-221	220PF 50V	CERAMIC	
C208	QCT26CH-271	270PF 50V	CERAMIC	
C209	QCF21HP-223	0.022MF 50V	CERAMIC	
C210	QETB1EM-106	10MF 25V	ELECTRO	
C211	QETB1EM-106	10MF 25V	ELECTRO	
C212	QCF21HP-103	0.01MF 50V	CERAMIC	
C213	QCT26CH-100	10PF 50V	CERAMIC	
C221	QCS21HJ-330	33PF 50V	CERAMIC	E
C222	QCC21EM-473	0.047MF 25V	CERAMIC	E
C223	QCY21HK-272	2700PF 50V	CERAMIC	E
C225	QCT26CH-680	68PF 50V	CERAMIC	E
C226	QCT26CH-151	150PF 50V	CERAMIC	E
C227	QCT26CH-150	15PF 50V	CERAMIC	E
C228	QETB1EM-106	10MF 25V	ELECTRO	E
C229	QCT26CH-7R0	7.0PF 50V	CERAMIC	E
C241	QCS21HJ-180	18PF 50V	CERAMIC	
C242	QCS21HJ-180	18PF 50V	CERAMIC	

Capacitors

ITEM	PART NUMBER	DESCRIPTION	AREA
C243	QEN51HM-474	0.47MF 50V NON POLE	
C244	QCY21HK-102	1000PF 50V CERAMIC	
C247	QCC21EM-473	0.047MF 25V CERAMIC	
TC101	ENZ1003-003	TRIMMER	
TC102	ENZ1003-003	TRIMMER	
TC201	ENZ1003-006	TRIMMER	
TC221	ENZ1003-006	TRIMMER	E

Resistors

ITEM	PART NUMBER	DESCRIPTION	AREA
R101	QRD161J-473	47K 1/6W CARBON	
R102	QRD161J-330	33 1/6W CARBON	
R103	QRD161J-473	47K 1/6W CARBON	
R104	QRD161J-223	22K 1/6W CARBON	
R105	QRD161J-332	3.3K 1/6W CARBON	
R106	QRD161J-102	1K 1/6W CARBON	
R107	QRD161J-102	1K 1/6W CARBON	
R108	QRD161J-330	33 1/6W CARBON	
R109	QRD161J-331	330 1/6W CARBON	
R110	QRD161J-224	220K 1/6W CARBON	
R111	QRD161J-472	4.7K 1/6W CARBON	
R112	QRD161J-103	10K 1/6W CARBON	
R113	QRD161J-682	6.8K 1/6W CARBON	
R114	QRD161J-222	2.2K 1/6W CARBON	
R115	QRD161J-561	560 1/6W CARBON	
R116	QRD161J-221	220 1/6W CARBON	
R117	QRD161J-224	220K 1/6W CARBON	F
R118	QRD161J-331	330 1/6W CARBON	F
R131	QRD161J-332	3.3K 1/6W CARBON	
R132	QRD161J-221	220 1/6W CARBON	
R133	QRD161J-391	390 1/6W CARBON	
R134	QRD161J-272	2.7K 1/6W CARBON	
R135	QRD161J-681	680 1/6W CARBON	
R136	QRD161J-102	1K 1/6W CARBON	
R137	QRD161J-332	3.3K 1/6W CARBON	
R138	QRD161J-221	220 1/6W CARBON	
R139	QRD161J-183	18K 1/6W CARBON	A
R139	QRD161J-333	33K 1/6W CARBON	C
R139	QRD161J-333	33K 1/6W CARBON	D
R139	QRD161J-333	33K 1/6W CARBON	E
R139	QRD161J-333	33K 1/6W CARBON	F
R140	QRD161J-561	560 1/6W CARBON	
R141	QRD161J-473	47K 1/6W CARBON	
R142	QRD161J-123	12K 1/6W CARBON	
R143	QRD161J-103	10K 1/6W CARBON	A
R143	QRD161J-103	10K 1/6W CARBON	C
R143	QRD161J-473	47K 1/6W CARBON	D
R143	QRD161J-473	47K 1/6W CARBON	E
R144	QRD161J-103	10K 1/6W CARBON	F
R145	QRD161J-103	10K 1/6W CARBON	
R146	QRD161J-224	220K 1/6W CARBON	
R147	QRD161J-391	390 1/6W CARBON	
R150	QRD161J-152	1.5K 1/6W CARBON	
R151	QRD161J-154	150K 1/6W CARBON	
R152	QRD161J-562	5.6K 1/6W CARBON	
R153	QRD161J-332	3.3K 1/6W CARBON	
R154	QRD161J-561	560 1/6W CARBON	
R155	QRD161J-221	220 1/6W CARBON	
R156	QRD161J-102	1K 1/6W CARBON	
R157	QRD161J-822	8.2K 1/6W CARBON	
R162	QRD161J-103	10K 1/6W CARBON	A
R163	QRD161J-101	100 1/6W CARBON	A
R164	QRD161J-221	220 1/6W CARBON	A
R171	QRD161J-393	39K 1/6W CARBON	A
R171	QRD161J-393	39K 1/6W CARBON	C
R171	QRD161J-393	39K 1/6W CARBON	D
R172	QRD161J-124	120K 1/6W CARBON	A
R172	QRD161J-124	120K 1/6W CARBON	C
R172	QRD161J-274	270K 1/6W CARBON	D
R172	QRD161J-274	270K 1/6W CARBON	E
R172	QRD161J-274	270K 1/6W CARBON	F
R173	QRD161J-124	120K 1/6W CARBON	A
R173	QRD161J-124	120K 1/6W CARBON	C
R173	QRD161J-274	270K 1/6W CARBON	D

Resistors

ITEM	PART NUMBER	DESCRIPTION	AREA
R173	QRD161J-274	270K 1/6W CARBON	E
R173	QRD161J-274	270K 1/6W CARBON	F
R174	QRD161J-332	3.3K 1/6W CARBON	
R175	QRD161J-332	3.3K 1/6W CARBON	
R176	QRD161J-184	180K 1/6W CARBON	A
R176	QRD161J-184	180K 1/6W CARBON	C
R176	QRD161J-334	330K 1/6W CARBON	D
R176	QRD161J-334	330K 1/6W CARBON	E
R176	QRD161J-334	330K 1/6W CARBON	F
R177	QRD161J-184	180K 1/6W CARBON	A
R177	QRD161J-334	330K 1/6W CARBON	C
R177	QRD161J-334	330K 1/6W CARBON	D
R177	QRD161J-334	330K 1/6W CARBON	E
R177	QRD161J-334	330K 1/6W CARBON	F
R178	QRD161J-332	3.3K 1/6W CARBON	D
R178	QRD161J-682	6.8K 1/6W CARBON	A
R178	QRD161J-682	6.8K 1/6W CARBON	C
R178	QRD161J-682	6.8K 1/6W CARBON	E
R178	QRD161J-682	6.8K 1/6W CARBON	F
R179	QRD161J-332	3.3K 1/6W CARBON	D
R179	QRD161J-682	6.8K 1/6W CARBON	A
R179	QRD161J-682	6.8K 1/6W CARBON	C
R179	QRD161J-682	6.8K 1/6W CARBON	E
R180	QRD161J-472	4.7K 1/6W CARBON	F
R181	QRD161J-472	4.7K 1/6W CARBON	
R182	QRD161J-103	10K 1/6W CARBON	
R183	QRD161J-473	47K 1/6W CARBON	
R184	QRD161J-473	47K 1/6W CARBON	
R185	QRD161J-562	5.6K 1/6W CARBON	
R186	QRD161J-103	10K 1/6W CARBON	
R187	QRD161J-562	5.6K 1/6W CARBON	
R201	QRD161J-103	10K 1/6W CARBON	
R202	QRD161J-473	47K 1/6W CARBON	
R203	QRD161J-471	470 1/6W CARBON	
R205	QRD161J-103	10K 1/6W CARBON	E
R206	QRD161J-103	10K 1/6W CARBON	E
R207	QRD161J-330	33 1/6W CARBON	A
R207	QRD161J-330	33 1/6W CARBON	C
R207	QRD161J-330	33 1/6W CARBON	D
R207	QRD161J-330	33 1/6W CARBON	F
R221	QRD161J-103	10K 1/6W CARBON	E
R222	QRD161J-473	47K 1/6W CARBON	E
R223	QRD161J-471	470 1/6W CARBON	E
R225	QRD161J-103	10K 1/6W CARBON	E
R226	QRD161J-472	4.7K 1/6W CARBON	E
R241	QRD161J-473	47K 1/6W CARBON	
R242	QRD161J-103	10K 1/6W CARBON	
R243	QRD161J-103	10K 1/6W CARBON	
R244	QRD161J-103	10K 1/6W CARBON	E
R245	QRD161J-103	10K 1/6W CARBON	A
R245	QRD161J-103	10K 1/6W CARBON	C
R245	QRD161J-103	10K 1/6W CARBON	D
R245	QRD161J-103	10K 1/6W CARBON	E
R245	QRD161J-222	2.2K 1/6W CARBON	F
R245	QRD161J-222	2.2K 1/6W CARBON	F
R246	QRD161J-271	270 1/6W CARBON	
R247	QRD161J-332	3.3K 1/6W CARBON	A
R247	QRD161J-332	3.3K 1/6W CARBON	C
R247	QRD161J-332	3.3K 1/6W CARBON	D
R247	QRD161J-332	3.3K 1/6W CARBON	E
R247	QRD161J-822	8.2K 1/6W CARBON	F
R248	QRD161J-222	2.2K 1/6W CARBON	
R249	QRD161J-472	4.7K 1/6W CARBON	
R252	QRD161J-222	2.2K 1/6W CARBON	
R253	QRD161J-473	47K 1/6W CARBON	
R254	QRD161J-473	47K 1/6W CARBON	
R255	QRD161J-473	47K 1/6W CARBON	
VR171	QVZ3518-104	VARIABLE	E
VR171	QVZ3518-104	VARIABLE	F

Others

ITEM	PART NUMBER	DESCRIPTION	AREA
	EMBO1YV-401K	ANTENNA TERMINAL	A
	EMBO1YV-401K	ANTENNA TERMINAL	C
	EMBO1YV-401K	ANTENNA TERMINAL	D
	EMBO1YV-401K	ANTENNA TERMINAL	E
	EMBO1YV-402K	ANTENNA TERMINAL	F
	E11227-102	CIRCUIT BOARD	
	E304180-001	SHIELD CASE	
	E70225-001	EARTH PLATE	
J031	EMZ1004-001	SOCKET	A
J102	EMV7112-006	SOCKET WIRE	
J103	EMV7112-007	SOCKET WIRE	
J411	EMV7112-004	SOCKET WIRE	
J413	EMV7112-003	SOCKET WIRE	C
L101	EQR2306-014	RF COIL	A
L101	EQR2306-014	RF COIL	C
L101	EQR2306-014	RF COIL	D
L101	EQR2306-014	RF COIL	E
L101	EQR2306-016	ANT.COIL	F
L102	EQR2106-014	RF COIL	
L103	EQR2406-004	RF COIL	
L104	EQL3001-1R5KY	INDUCTOR	
L201	EQR1111-006	RF COIL	
L202	EQR1207-009	RF COIL	
L221	EQR1111-005	RF COIL	E
L222	EQR1307-002	RF COIL	E

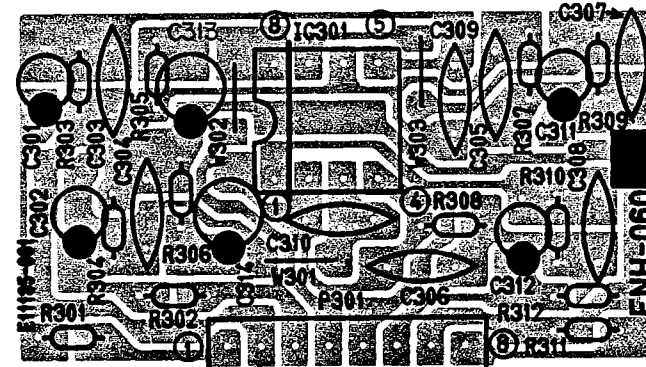
Others

ITEM	PART NUMBER	DESCRIPTION	AREA
S101	QSS1201-039	SLIDE SWITCH	C
T131	EQT2140-012	I.F.TRANSFORMER	
T132	EQT2140-013	I.F.TRANSFORMER	
T133	ECB1560-002	CERAMIC FILTER	
CF131	ECB2118-001R	CERAMIC FILTER	C
CF131	ECB2118-001R	CERAMIC FILTER	D
CF131	ECB2118-001R	CERAMIC FILTER	E
CF131	ECB2118-001R	CERAMIC FILTER	F
CF131	ECB2123-001R	CERAMIC FILTER	A
CF132	ECB2118-001R	CERAMIC FILTER	C
CF132	ECB2118-001R	CERAMIC FILTER	D
CF132	ECB2118-001R	CERAMIC FILTER	E
CF132	ECB2118-001R	CERAMIC FILTER	F
CF132	ECB2123-001R	CERAMIC FILTER	A
CP101	ICP-N5	I.C.PROTECTOR	D
CP101	ICP-N5	I.C.PROTECTOR	E
CP101	ICP-N5	I.C.PROTECTOR	F
LP171	EQF0101-002	FILTER	
LP172	EQF0102-001	FILTER	F
SF101	EQF0201-004	B.P.FILTER	F
TP101	E67764-002	TERMINAL ASSY	
TP102	E67764-002	TERMINAL ASSY	
XT171	ECX0000-456KR	RESONATOR	
XT241	ECX0007-200KC	CRYSTAL	

△: Safety Parts

ENH-060 Equalizer Module P.C. Board Ass'y

Note: ENH-060 varies according to the areas employed. See note (1) when placing an order.



Note (1)

P.C. Board Ass'y	Designated Areas
ENH-060 [C]	U.S.A., Canada, Europe, Australia, U.K., U.S. Military Market & Other Countries
ENH-060 [D]	West Germany

I.C.S.

ITEM	PART NUMBER	DESCRIPTION	AREA
		MAKER	
IC301	NJM4558D-D	I.C.	

Capacitors

ITEM	PART NUMBER	DESCRIPTION	AREA
C301	QETB1HM-475	4.7MF 50V ELECTRO	
C302	QETB1HM-475	4.7MF 50V ELECTRO	
C303	QCY21HK-101	100PF 50V CERAMIC	C
C303	QCY21HK-471	470PF 50V CERAMIC	D
C304	QCY21HK-101	100PF 50V CERAMIC	C
C304	QCY21HK-471	470PF 50V CERAMIC	D
C305	QCY21HK-182	1800PF 50V CERAMIC	
C306	QCY21HK-182	1800PF 50V CERAMIC	
C307	QCY21HK-682	6800PF 50V CERAMIC	
C308	QCY21HK-682	6800PF 50V CERAMIC	
C309	QCY21HK-101	100PF 50V CERAMIC	
C310	QCY21HK-101	100PF 50V CERAMIC	
C311	QETB1HM-475	4.7MF 50V ELECTRO	
C312	QETB1HM-475	4.7MF 50V ELECTRO	
C313	QETB1AM-476	47MF 10V ELECTRO	
C314	QETB1AM-476	47MF 10V ELECTRO	

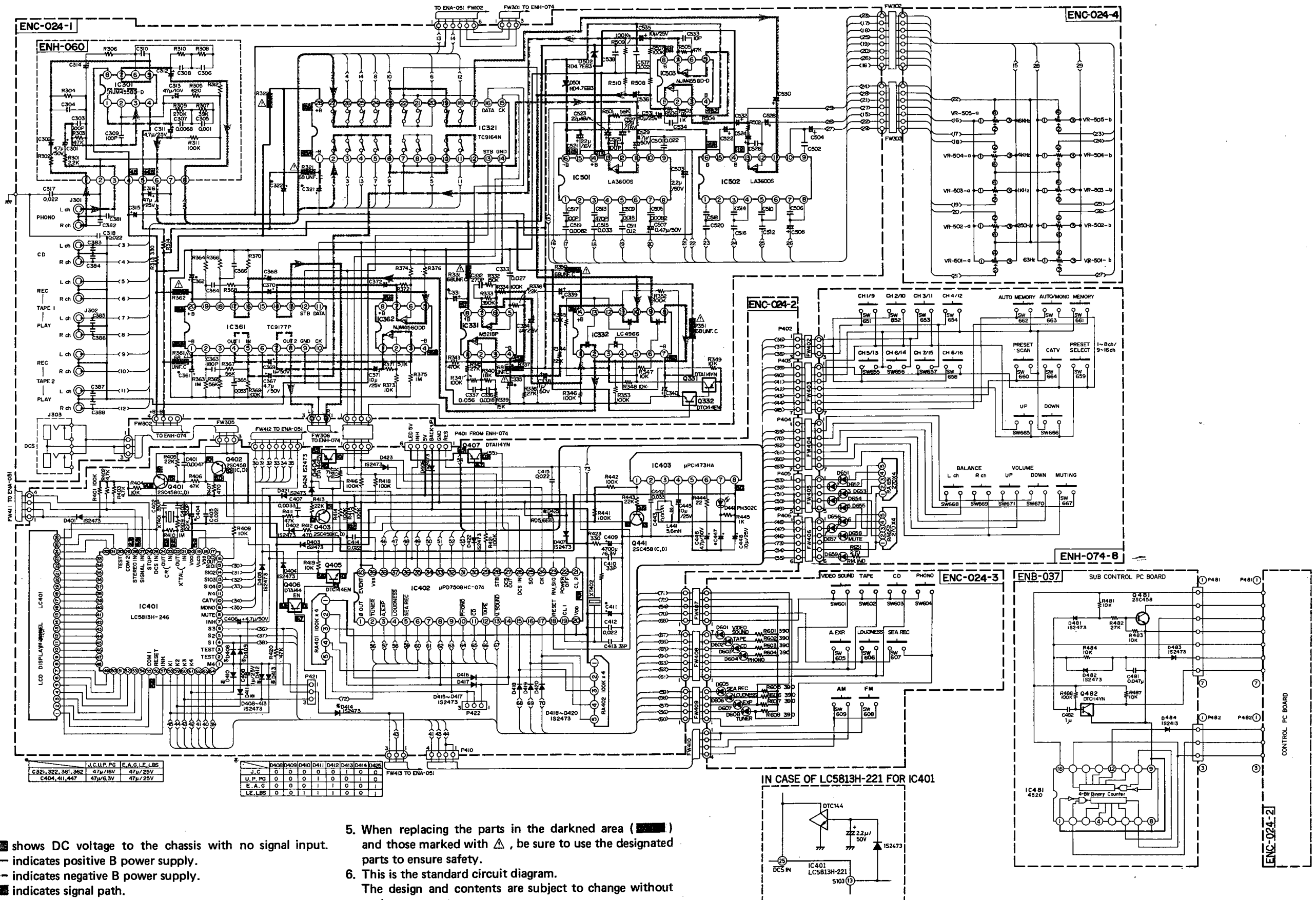
Resistors

ITEM	PART NUMBER	DESCRIPTION	AREA
R301	QRD161J-222	2.2K 1/6W CARBON	
R302	QRD161J-222	2.2K 1/6W CARBON	
R303	QRD161J-473	47K 1/6W CARBON	
R304	QRD161J-473	47K 1/6W CARBON	
R305	QRD161J-621	620 1/6W CARBON	
R306	QRD161J-621	620 1/6W CARBON	C
R306	QRD161J-621	620 1/6W CARBON	D
R307	QRD161J-393	39K 1/6W CARBON	
R308	QRD161J-393	39K 1/6W CARBON	
R309	QRD161J-474	470K 1/6W CARBON	
R310	QRD161J-474	470K 1/6W CARBON	
R311	QRD161J-104	100K 1/6W CARBON	
R312	QRD161J-104	100K 1/6W CARBON	

ITEM	PART NUMBER	DESCRIPTION	AREA
	E11135-001	CIRCUIT BOARD	
P301	EMV5101-008B	PLUG ASSY	



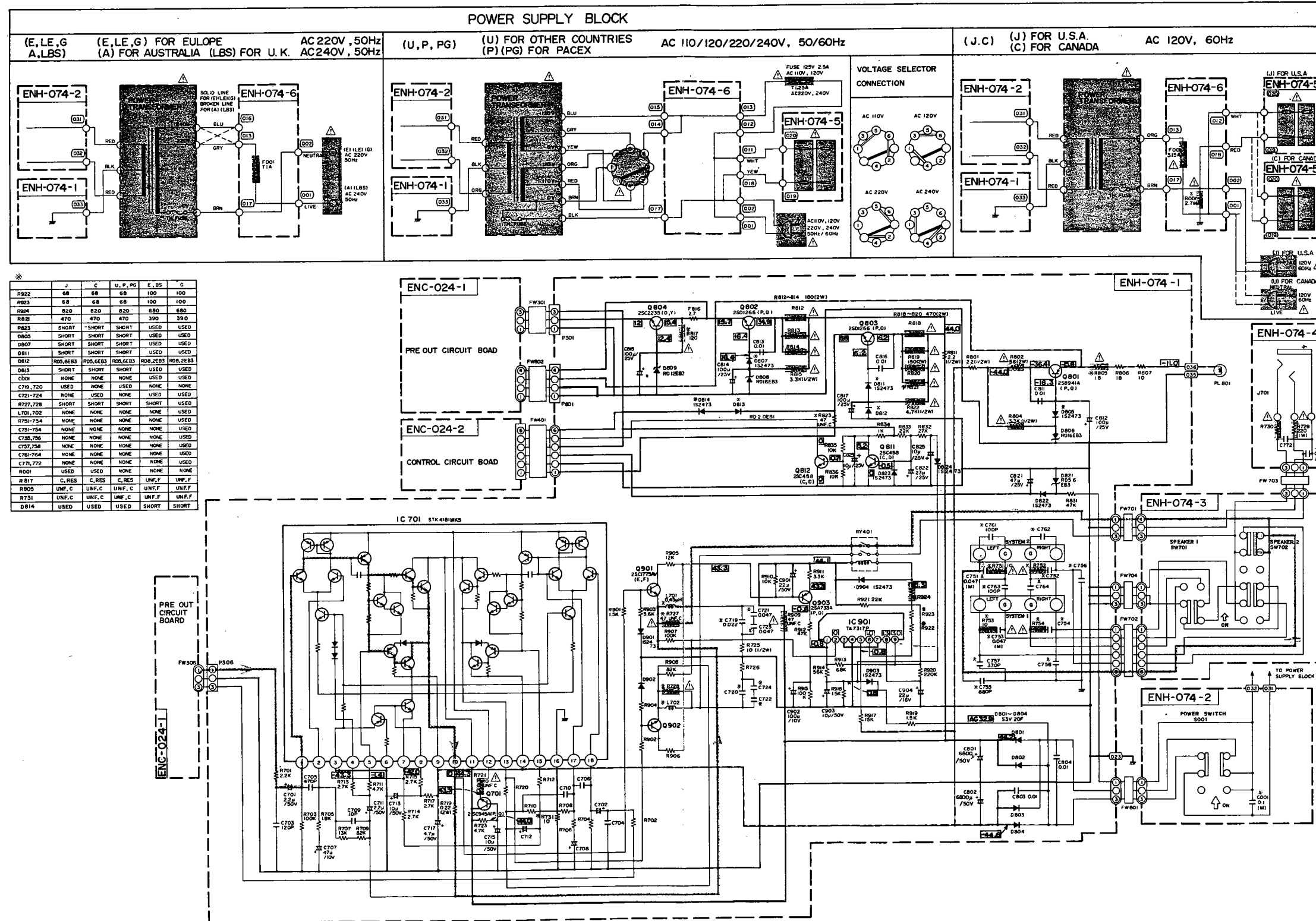
(3) Control Section



- Notes:**
1. shows DC voltage to the chassis with no signal input.
  2. indicates positive B power supply.
  3. indicates negative B power supply.
  4. indicates signal path.

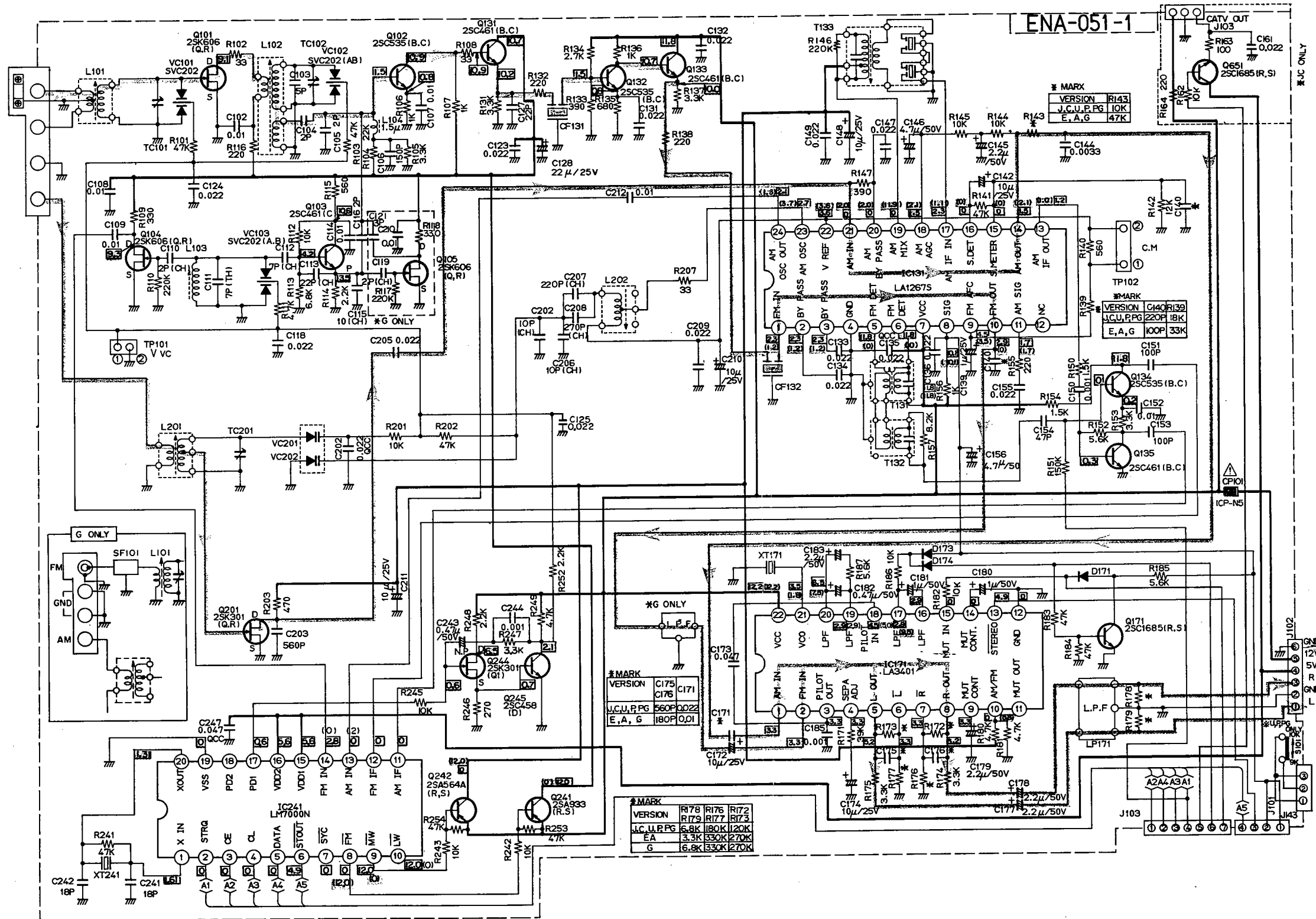
5. When replacing the parts in the darkened area () and those marked with , be sure to use the designated parts to ensure safety.
6. This is the standard circuit diagram. The design and contents are subject to change without notice.

(4) Amplifier and Power Supply Section



# Schematic Diagrams

## (1) RX-3BK FM/AM Tuner Section

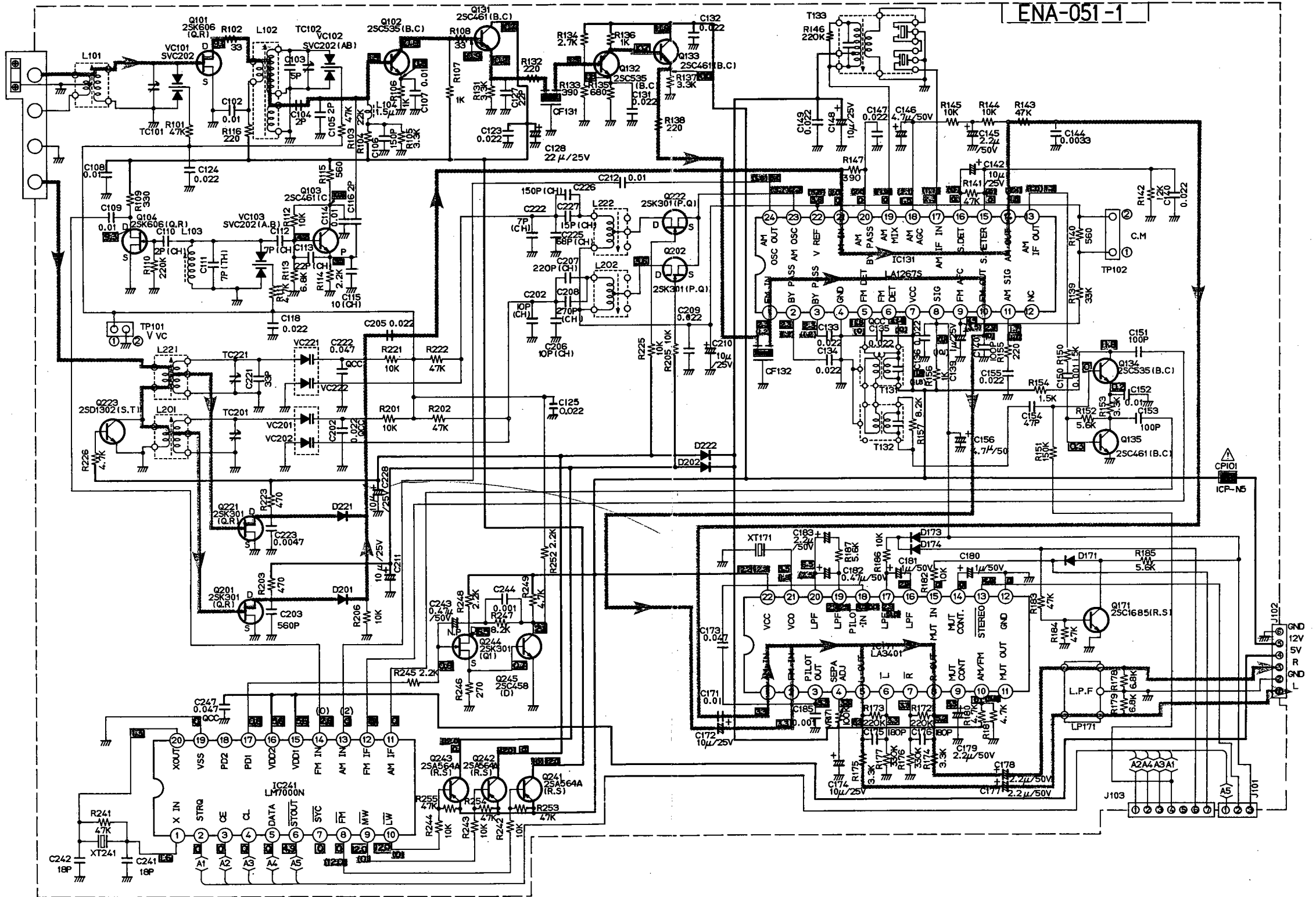


**Notes:**

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

5. When replacing the parts in the darkened area ( ) and those marked with , be sure to use the designated parts to ensure safety.
6. This is the standard circuit diagram.  
The design and contents are subject to change without notice.

(2) RX-3LBK FM/MW/LW Tuner Section



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

# Accessories List

△	Part Number	Part Name	Q'ty	Description	Areas
	E30580-1325A	Instruction Book	1		J, C, P, PG, E, A, G, LE, U
	E30580-1325ABS	Instruction Book	1		LBS
	BT20025H	Warranty Card	1		C
	BT20048B	Warranty Card	1		J, P, PG
	BT20029C	Warranty Card	1		A
	BT20064	Warranty Card	1		G
	BT20060	Warranty Card	1		LBS
	BT20046B	Service Information Card	1		J, P, PG
	BT20071A	Service Center List	1		C
	BT20066	EEC Agency	1		G, LBS
	BT20054-009A	FTZ Information Sheet	1		G
	BT20044E	Safety Instruction Sheet	1		J
	E41202-2	Envelope	1	for Instruction Book	J, C, P, PG, E, A, G, LE, U
	E41202-2B	Envelope	1	for Instruction Book	LBS
	UM-3	Battery	2		
	EWP502-001	Built-in Antenna	1		J, C, P, PG, E, A, LE, LBS, U
	E304084-001	Loop Stand	1		
	EQB4001-012	Loop Antenna	1		
	E67007-001	Antenna Wire Ass'y	1		G
△	QMF51A2-1R25S	Fuse	1		P
△	QMF51A2-2R5S	Fuse	1		PG, U
	QPGA005-00703	Envelope	1		P, PG, U
	E66416-003	Envelope	1	for Warranty Card	J
	RM-S3	Remote Control Unit	1		

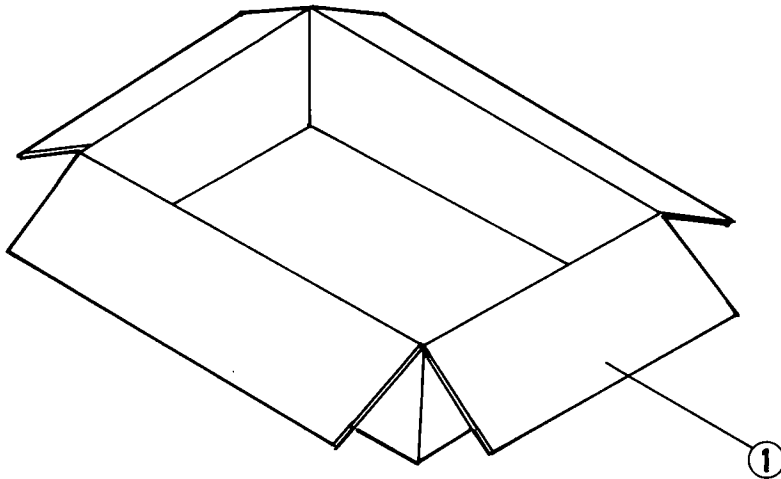
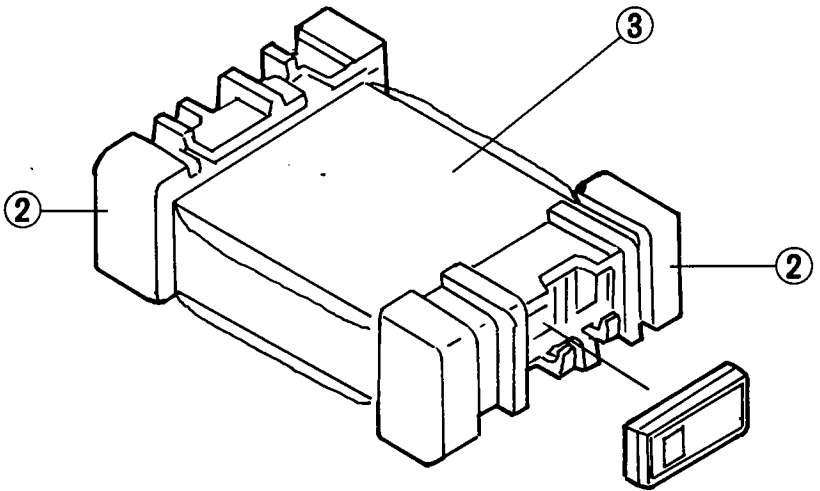
△: Safety Parts

## The Marks for Designated Areas

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

No mark indicates all areas.

# Packing Materials and Parts List



### The Marks for Designated Areas

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

No mark indicates all areas.

△	Item	Part Number	Part Name	Q'ty	Description	Areas
	1	PK-RX3BKE PK-RX3BKESJ PK-RX3BKESE PK-RX3LBKE PK-RX3LBKES	Packing Case	1	E300382-645 (Made in Japan) E300382-618 (Made in Singapore) E300382-619 (Made in Singapore)	J, C, P, PG, E, A, G, U J, C E, G, A, U
	2	NZ-RX3	Fillers	1	E25251-001 E25251-002	
	3	E302688-014 E302688-014B	Envelope Envelope	1 1		J, C, P, PG, E, A, G, LE, U LBS

Signal to Noise Ratio		
PHONO	: 70 dB (66 IHF) 78 dB (78 IHF Rec out)	66 dB(DIN)
TAPE 1, CD/AUX TAPE 2/VIDEO SOUND PLAY	: 91 dB (66 IHF) 80 dB (78 IHF)	67 dB (DIN)

**FM TUNER SECTION**

	'78 IHF	DIN (For Europe)
Tuning Range	: 87.5 MHz — 108.0 MHz	87.5 MHz — 108.0 MHz
Usable Sensitivity	: Mono 10.8 dBf 0.95 μV/ 75 ohms 1.9 μV/ 300 ohms	(S/N 26 dB) 1.5 μV/ 75 ohms
50 dB Quieting Sensitivity	: Mono 16.3 dBf (1.8 μV/ 75 ohms) (3.6 μV/300 ohms) Stereo 38.3 dBf (22.5 μV/75 ohms) (45 μV/300 ohms)	—
S/N 46 dB Stereo Sensitivity	: —	Stereo 23 μV/ 75 ohms
Signal to Noise Ratio (at 98 MHz, 80 dBf)	: Mono 80 dB Stereo 73 dB (A-net.)	Mono 72 dB Stereo 64 dB (weighted)
Total Harmonic Distortion (1 kHz)	: Mono 0.15 % Stereo 0.3 %	Mono 0.1 % Stereo 0.3 %
Frequency Response	: 30 Hz — 15 kHz. +0.5 dB, -5 dB	1.0 dB
Capture Ratio	: 1.5 dB	1.0 dB
Alternate Channel Selectivity	: 60 dB, ±400 kHz	55 dB, ±300 kHz
Image Response Ratio	: 55 dB at 98 MHz	
IF Response Ratio	: 85 dB at 98 MHz	
Stereo Separation	: 40 dB at 1 kHz	

**AM TUNER SECTION**

	'78 IHF	DIN (For Europe)
Tuning Range		
Channel space: 522 kHz — 9 kHz	522 kHz — 1629 kHz	522 kHz — 1629 kHz
Channel space: 530 kHz 10 kHz for U.S.A. & CANADA	530 kHz ~ 1710 kHz	
Sensitivity	: 300 μV/m at 1000 kHz 30 μV at 1000 kHz	300 μV/m at 999 kHz 30 μV at 999 kHz
Signal to Noise Ratio (100 mV/m)	: 50 dB at 1000 kHz	50 dB at 999 kHz
Selectivity	: 38 dB, ±10 kHz at 1000 kHz	35 dB, ±9 kHz at 999 kHz

Rapport signal/bruit		
PHONO	: 70 dB (66 IHF) 78 dB (78 IHF Sortie d'enregistrement)	66 dB(DIN)
TAPE 1, CD/AUX TAPE 2 VIDEO SOUND	: 91 dB (66 IHF) 80 dB (78 IHF)	67 dB (DIN)

**SECTION DU SYNTONISEUR FM**

	'78 IHF	DIN (Pour l'Europe)
Gamme d'accord	: 87.5 MHz — 108.0 MHz	87.5 MHz — 108.0 MHz
Sensibilité utilisable	: Mono 10.8 dBf 0.95 μV/ 75 ohms 1.9 μV/ 300 ohms	(S/B 26 dB) 1.5 μV/ 75 ohms
Seuil de sensibilité 50 dB	: Mono 16.3 dBf (1.8 μV/ 75 ohms) (3.6 μV/300 ohms) Steréo 38,3 dBf (22.5 μV/75 ohms) (45 μV/300 ohms)	—
Sensibilité stéréo	: —	Steréo 23 μV/ 75 ohms
S/B 46 dB	: —	
Rapport signal/bruit (à 98 MHz, 80 dBf)	: Mono 80 dB Steréo 73 dB (réseau A)	Mono 72 dB Steréo 64 dB (pondéré)
Distorsion harmonique totale (1 kHz)	: Mono 0,15 % Steréo 0,3 %	Mono 0,1 % Steréo 0,3 %
Réponse en fréquence	: 30 Hz — 15 kHz, +0,5 dB, -5 dB	1,0 dB
Rapport de capture	: 1,5 dB	1,0 dB
Sélectivité	: 60 dB, ±400 kHz	55 dB, ±300 kHz
Rapport de sélectivité	: 55 dB à 98 MHz	
Rapport de réponse FI	: 85 dB à 98 MHz	
Séparation stéréo	: 40 dB à 1 kHz	

**SECTION DU SYNTONISEUR AM**

	'78 IHF	DIN (Pour l'Europe)
Gamme d'accord		
Espacement de canal 9 kHz	522 kHz — 1629 kHz	522 kHz — 1629 kHz
Espacement de canal 10 kHz	530 kHz	1630 kHz
Pour les ETATS-UNIS	530 kHz — 1710 kHz	
Sensibilité	: 300 μV/m à 1000 kHz 30 μV à 1000 kHz	300 μV/m à 999 kHz 30 μV à 999 kHz
Rapport signal/bruit (100 mV/m)	: 50 dB à 1000 kHz	50 dB à 999 kHz
Sélectivité	: 38 dB, ±10 kHz à 1000 kHz	35 dB, ±9 kHz à 999 kHz

**LW (RX-3LBK only)**

Tuning Range : 144 kHz — 353 kHz  
 Sensitivity : 600  $\mu$ V/m at 245 kHz  
 100  $\mu$ V at 245 kHz  
 Signal to Noise : 50 dB at 245 kHz  
 Ratio  
 (100 mV/m)  
 Selectivity : 40 dB  $\pm$ 9 kHz at 245 kHz  
 Dimensions : 435 (W) x 92 (H) x 288 (D)  
 mm  
 (17-3/16" x 3-5/8" x 11-  
 3/8")  
 Weight : 4.7 kg (10.4 lbs.)

Design and specifications subject to change without notice.

**GO (RX-3LBK seulement)**

Gamme d'accord : 144 kHz — 353 kHz  
 Sensibilité : 600  $\mu$ V/m à 245 kHz  
 100  $\mu$ V à 245 kHz  
 Rapport signal/ : 50 dB à 245 kHz  
 bruit  
 (100 mV/m)  
 Sélectivité : 40 dB  $\pm$ 9 kHz à 245 kHz  
 Dimensions : 435 (L) x 92 (H) x 288 (P)  
 mm  
 Poids : 4.7 kg

Présentation et caractéristiques modifiables sans préavis.

**POWER SPECIFICATIONS**

Areas	Line Voltage & Frequency	Power Consumption
U.S.A	AC 120 V $\sim$ , 60 Hz	180 watts , 220 VA
Canada		
Continental Europe	AC 220 V $\sim$ , 50 Hz	140 watts
U.K.	AC 240 V $\sim$ , 50 Hz	
Australia		
Other areas	AC /110/120/220/240 V $\sim$ selectable, 50/60 Hz	

**CARACTERISTIQUES TECHNIQUES D'ALIMENTATION**

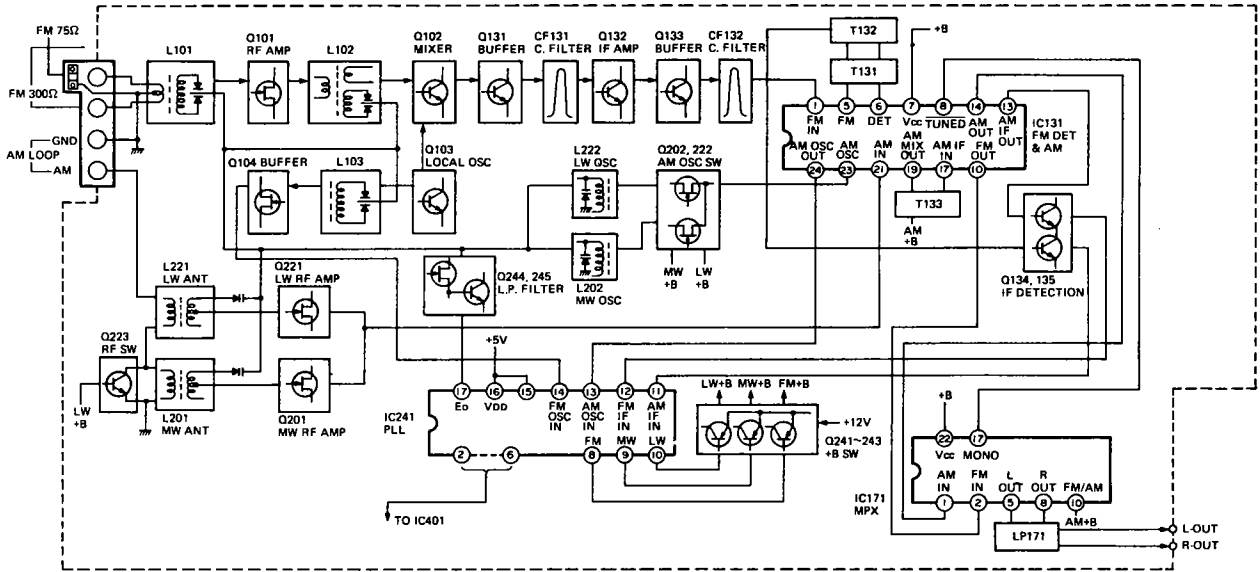
Pays	Tensions de ligne et fréquence	Consommation
Etats-Unis	CA 120 V $\sim$ , 60 Hz	180 watts , 220 VA
Canada		
Europe Continental	CA 220 V $\sim$ , 50 Hz	140 watts
Royaume-Uni	CA 240 V $\sim$ , 50 Hz	
Australie		
Autres pays	CA /110/120/220/240 V $\sim$ sélectionnable, 50/60 Hz	

**JVC**  
 VICTOR COMPANY OF JAPAN, LIMITED

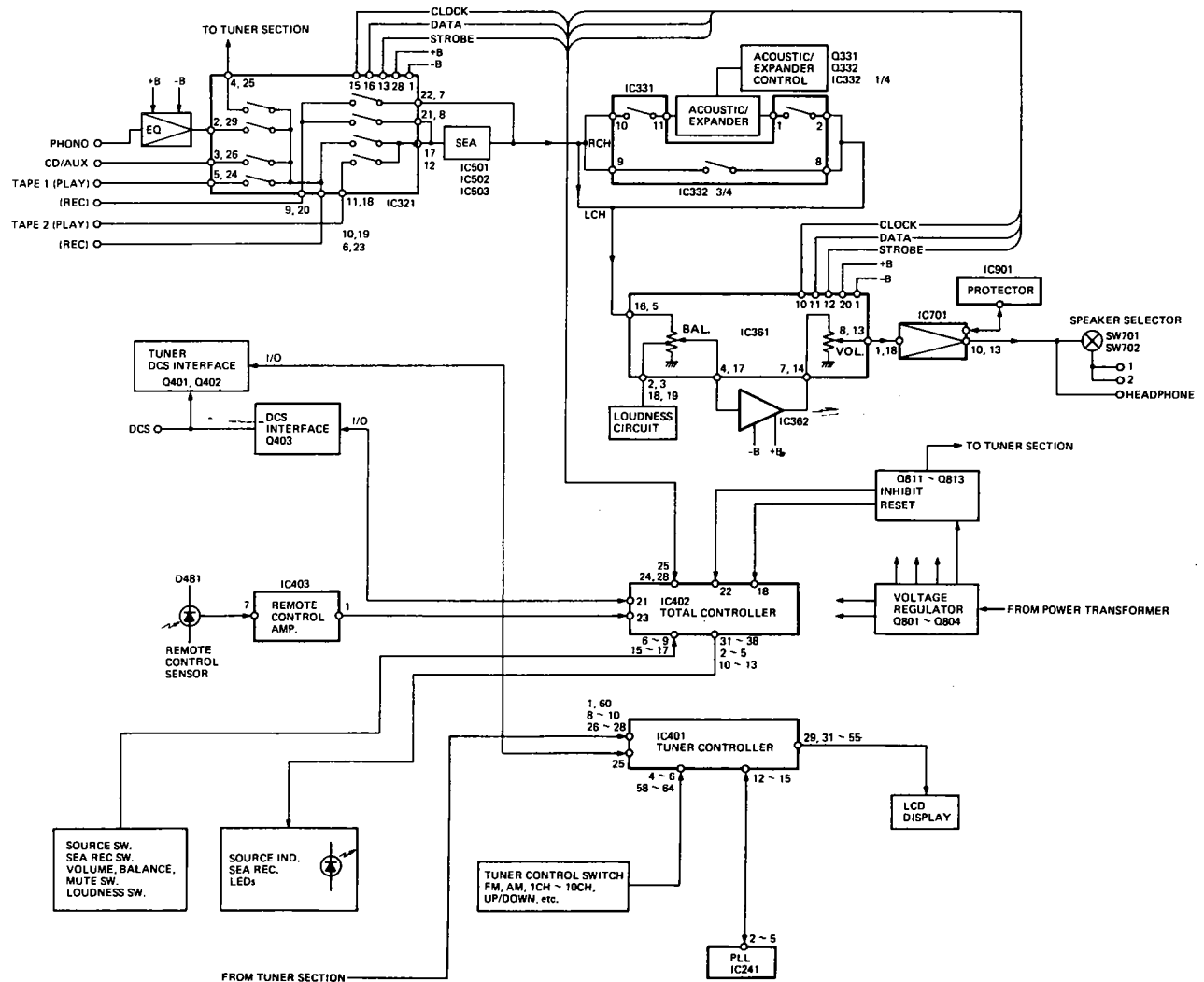


# 1. Block Diagram

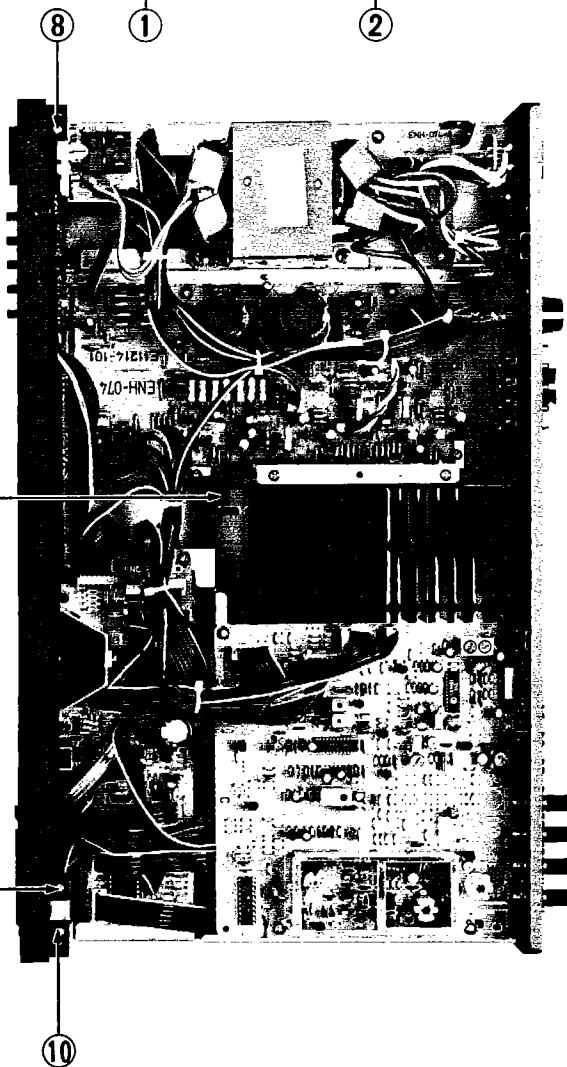
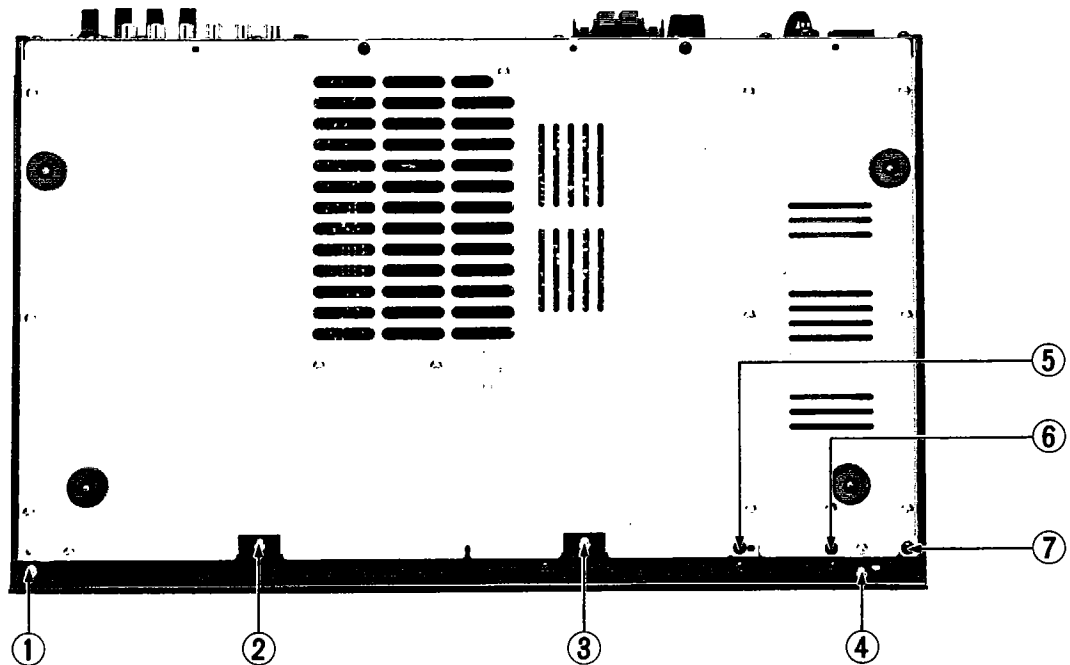
## ■ Tuner Section



## ■ Control and Amplifier Section



## 2. Removal Procedures



### 2-(1) Removal of Top Cover

1. Remove the four screws on both sides.
2. Remove the two screws on the rear panel.
3. Lift up the rear-end of the top cover and take it out.

### 2-(2) Removal of Front Panel

1. Remove the top cover. (Refer to above items.)
2. Remove the seven screws (from ① to ⑦) fixing the front panel from the bottom side.
3. Remove the three screws (from ⑧ to ⑩) fixing the front panel from the top side.
4. Remove the three P.C. Boards from the click points on the front panel.

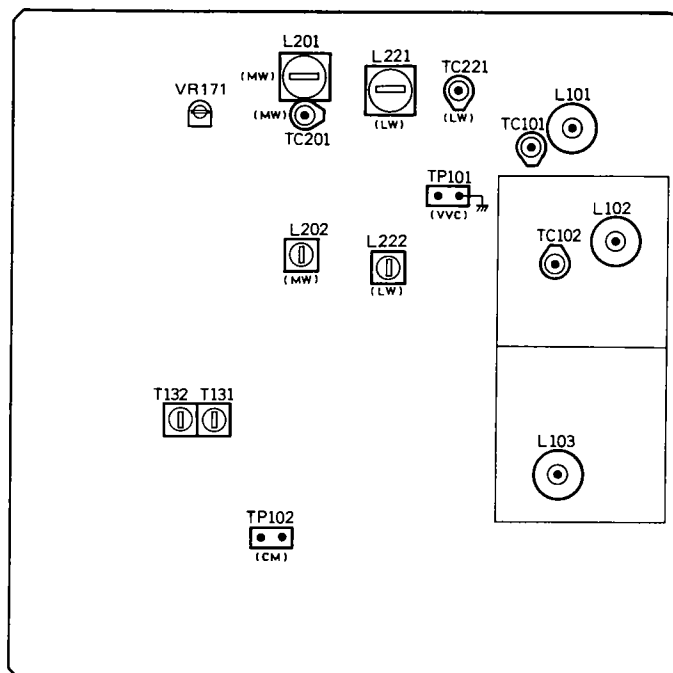
**Notes** (1) : Screws ① to ④ are tapping screws, exclusively for use with metal.

(2) : Screws ⑤ to ⑦ are double route screws, exclusively for use with plastic.

### 2-(3) How to Check the PC Board

1. Remove the top cover. (Refer to above items.)
2. Remove the twenty screws securing the bottom cover.
3. Remove one screw A from the heat-sink bracket.

### 3. FM/MW/LW Tuner Alignment Procedures



#### 3-(1) Front-End Section

##### FM oscillator coil: L103

1. Set the frequency display to "108.0 MHz" and the FM MODE switch to the "MONO" position.
2. Confirm that FM inter-station noise is received.
3. Adjust L103 so that the voltage of test point "TP101" becomes  $9.0\text{ V} \pm 0.1\text{ V}$ .
4. Set the frequency display to "87.5 MHz" and confirm that the output of test point "TP101" is  $1.6\text{ V} \pm 0.5\text{ V}$ .

##### FM antenna coil: L101, L102

5. Adjust L101 and L102 to obtain the maximum sensitivity at 89.9 MHz.

##### FM antenna trimmer: TC101, TC102

6. Adjust TC101 and TC102 to obtain the maximum sensitivity at 105.9 MHz.
7. Repeat the above adjustments of L101, L102, TC101 and TC102.

**Note:** After adjustment, confirm that the Band Cover is in the following range (for West Germany only).  
 Lower edge: 87.5 MHz (+0 Hz, -300 kHz)  
 Higher edge: 108.0 MHz (+500 kHz, -0 Hz)

#### 3-(2) IF Detection

##### FM detector coil: T131, T132

1. Connect a center-meter or a digital voltmeter to test point "TP102", and receive to 100.1 MHz signal in the condition of SSG ATT 70 dB.
2. Adjust T131 so that the center-meter indicates "0" or the digital voltmeter reads 0 mV.
3. At the same time, adjust T132 so that the distortion is minimized.

##### Stereo separation (for Continental Europe, U.K. and Australia): VR171

Tune in to 98.1 MHz. Adjust VR171 so that the channel separation becomes maximum.

#### 3-(3) MW Section

**Note:** ( ) ; 9 kHz step, [ ] ; 10 kHz step

##### MW oscillator coil: L202

1. Set the frequency display to (522 kHz) [530 kHz] and confirm that the output of test point "TP101" is ( $1.1\text{ V} \pm 0.3\text{ V}$ ) [ $1.1\text{ V} \pm 0.3\text{ V}$ ].
2. Set the frequency display to (1629 kHz) [1630 kHz or 1710 kHz] and confirm that the output of test point "TP101" is ( $7.5\text{ V} \pm 0.8\text{ V}$ ) [ $7.5\text{ V} \pm 0.8\text{ V}$  or  $8.2\text{ V} \pm 0.8\text{ V}$ ].
3. If its output is over 9 V at [1710 kHz], adjust L202 to obtain [9.0 V].

##### MW antenna coil: L201

4. Connect a loop antenna to the "AM LOOP" terminal on the rear panel.
5. Adjust L201 to obtain the best receiving sensitivity on (603 kHz) [600 kHz].

##### MW antenna trimmer: TC201

6. Adjust TC201 to obtain the best receiving sensitivity on (1404 kHz) [1400 kHz].

#### 3-(4) LW Section

##### LW oscillator coil: L222

1. Set the frequency display to 144 kHz.
2. Adjust L222 to obtain 1.0 V at test point "TP101".
3. Set the frequency display to 353 kHz and confirm that the voltage at test point "TP101" is  $7.2\text{ V} \pm 1.2\text{ V}$ .

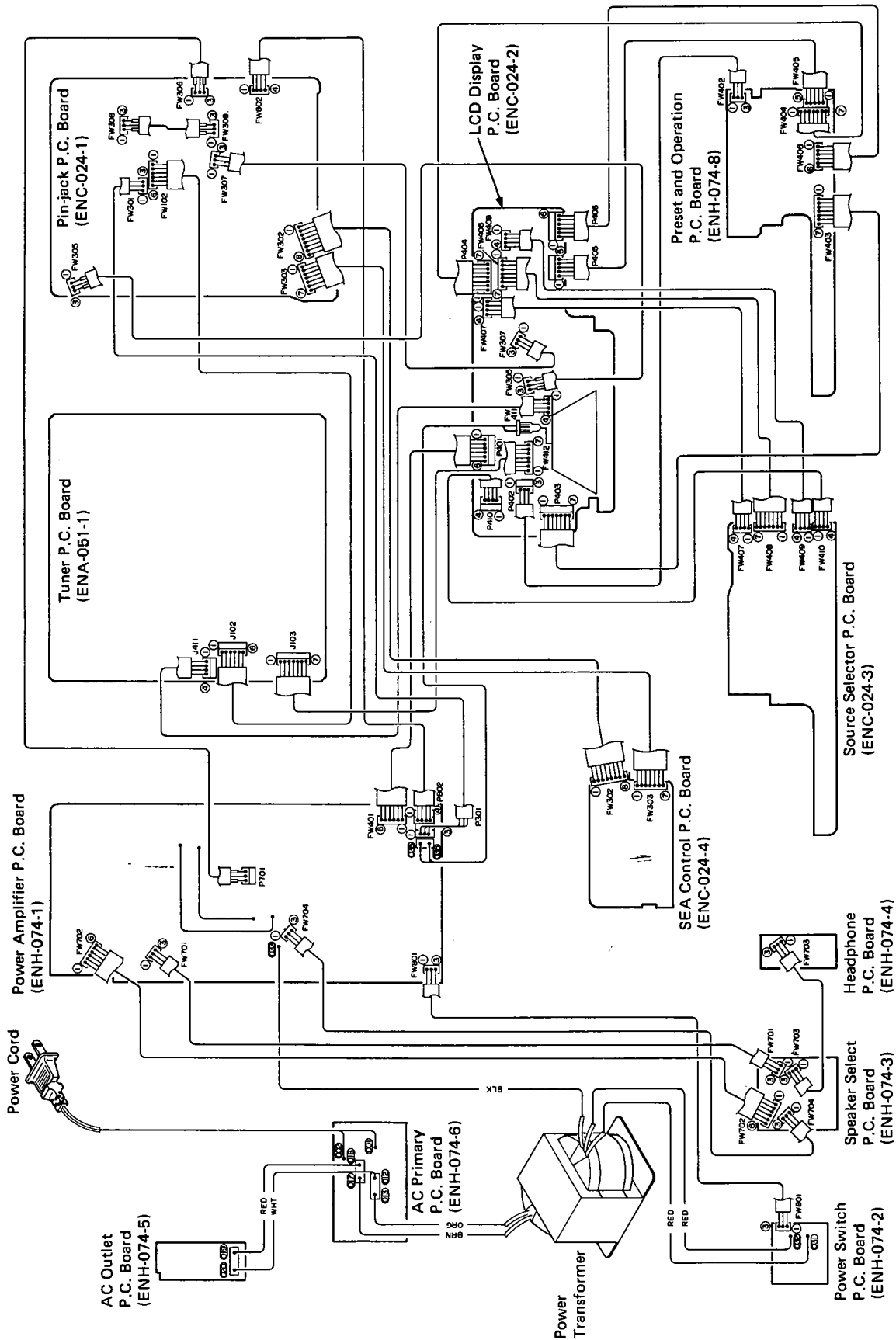
##### LW antenna coil: L221

4. Connect a loop antenna to the "AM LOOP" terminal on the rear panel.
5. Adjust L221 to obtain the best receiving sensitivity on 164 kHz.

##### LW antenna trimmer: TC221

6. Adjust TC221 to obtain the best receiving sensitivity on 353 kHz.

# 4. Connection Diagram



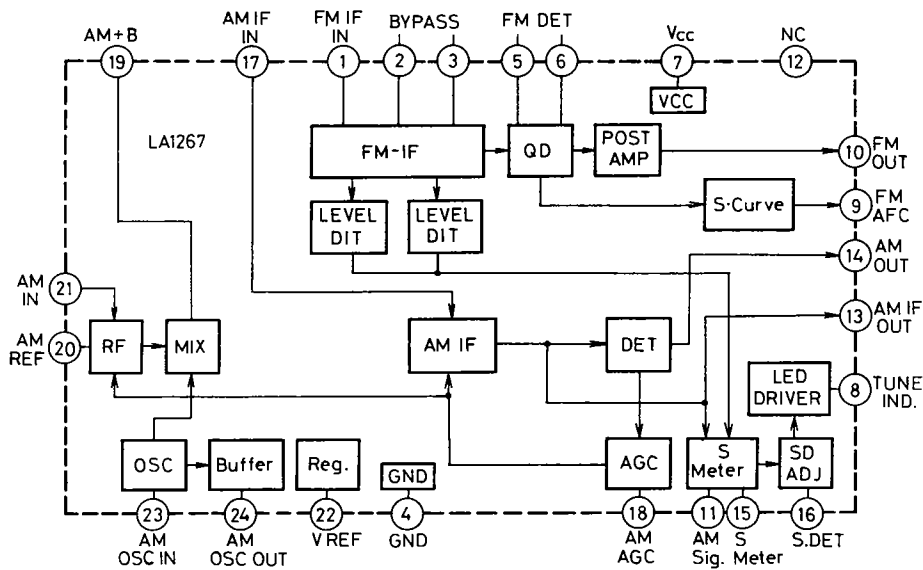
## 5. Terminal Functions of Micro-Processor

### IC401:LC5813H-221

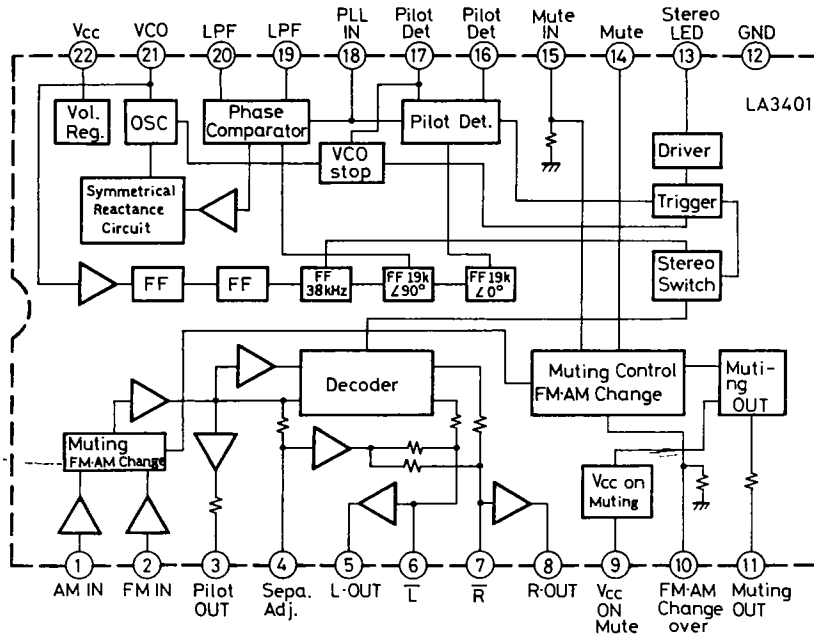
Pin No.	Symbol	Name	I/O	Terminal Function
1	M4	M4	0	Key output
2	TEST 1	TEST 1	---	Not use.
3	TEST 2	TEST 2	---	Not use.
4	S1	S1	I	Port for key input;Compose the key matrix with M1~M4.
5	S2	S2	I	Port for key input;Compose the key matrix with M1~M4.
6	S3	S3	I	Port for key input;Compose the key matrix with M1~M4.
7	S4	INH	I	Back-up detection
8	N1	MUTE	0	When Muting ON ,output is "H".
9	N2	MONO	0	When MONO ,output is "H".
10	N3	CATV	0	Display input of CATV
11	N4	POWER	0	When POWER ON ,output is "L".
12	SI04	STRQ	0	Connect the STRQ of LM7000N.
13	SI03	CLK	0	Connect the CLK of LM7000N.
14	SI02	DATA	0	Connect the DATA of LM7000N.
15	SI01	CE	0	Connect the CE of LM7000N.
16	ALARM	DCS OUT	0	Line data output of DCS.(Positive Logic)
17	T4	T4	---	Not use.
18	V ss2	V ss2	---	GND
19	V LCD	V LCD	---	Voltage reference of LCD.(Light at 0V)
20	V DD	V DD	---	+5V
21	X'tal IN	X'tal IN	---	Not use.
22	X'tal OUT	X'tal OUT	---	Not use.
23	CR IN	CR IN	---	Connect the ceramic oscillator.
24	CR OUT	CR OUT	---	Connect the ceramic oscillator.
25	P1	DCS IN	I	Line data input of DCS.(Negative Logic)
26	P2	STOP IN	I	Input of "AUTO STOP"
27	P3	SIGNAL IN	I	Input of "TUNED" display
28	P4	STEREO IN	I	Input of "STEREO" display
29	COM2	COM2	0	Common 2 of LCD
30	TEST	TEST	---	Not use.
31~54	SEG1~24	SEG1~24	0	1~24 segments of LCD
55	COM1	COM1	0	Common 1 of LCD
56	RES	RES	I	Input of RESET
57	INT	INT	I	Input of Interrupt
58	K1	K1	I	Key input;Compose the key matrix with M1~M4.
59	K2	K2	I	Key input;Compose the key matrix with M1~M4.
60	K3	K3	I	Key input;Compose the key matrix with M1~M4.
61	K4	K4	I	Key input;Compose the key matrix with M1~M4.
62	M1	M1	0	Key output
63	M2	M2	0	Key output
64	M3	M3	0	Key output

## 6. Internal Block Diagrams of Major ICs

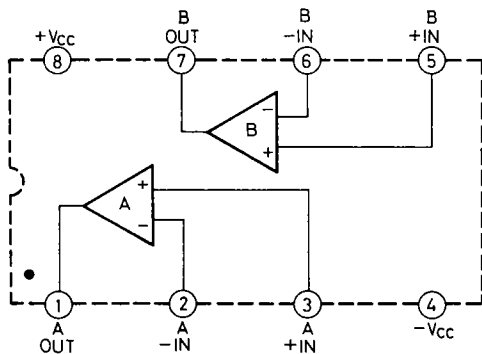
IC131 : LA1267



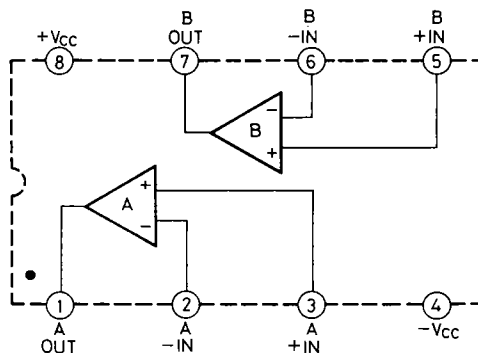
IC171 : LA3401



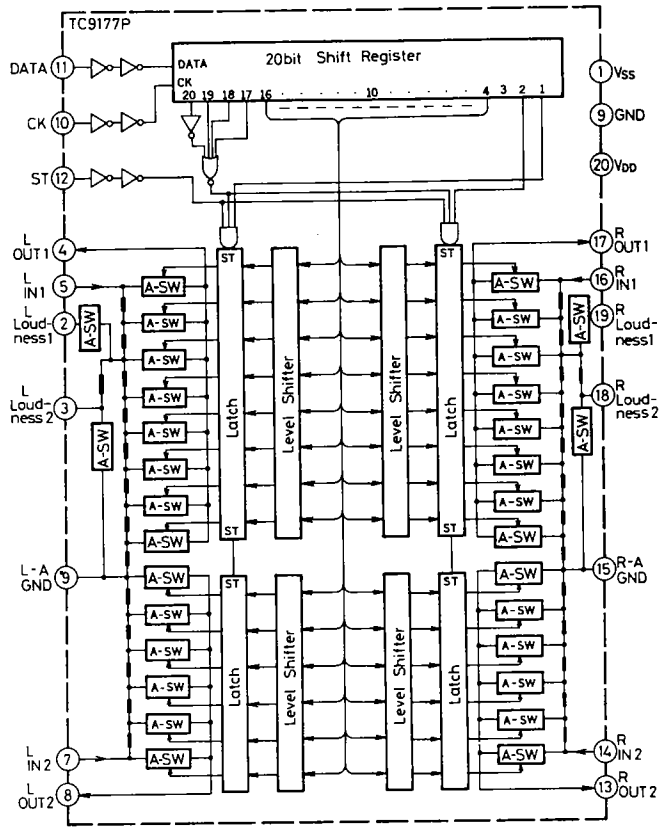
IC331 : M5218P



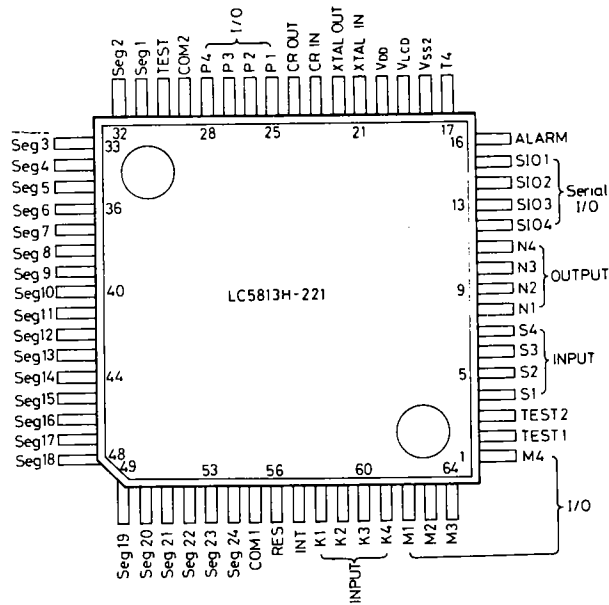
IC301 : NJM4558D  
IC362 : NJM4560D



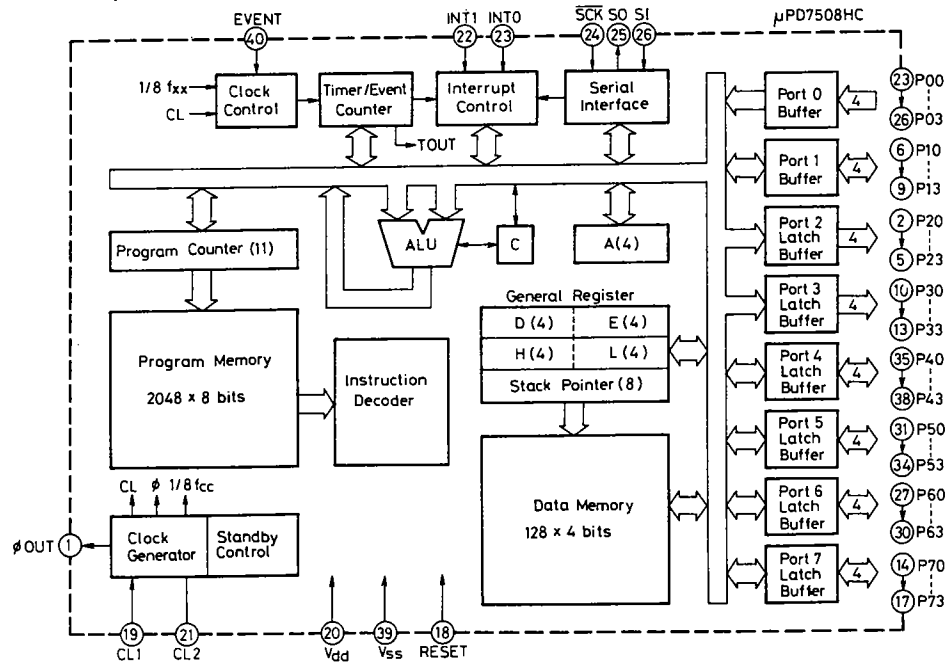
IC361 : TC9177P



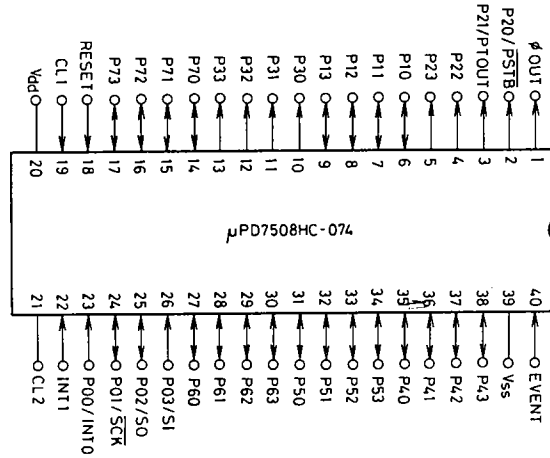
IC401 : LC5813H-221



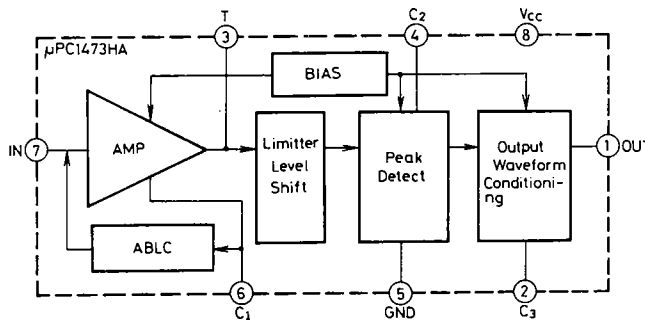
IC402 :  $\mu$ PD7508HC-074



IC402 :  $\mu$ PD7508HC-074

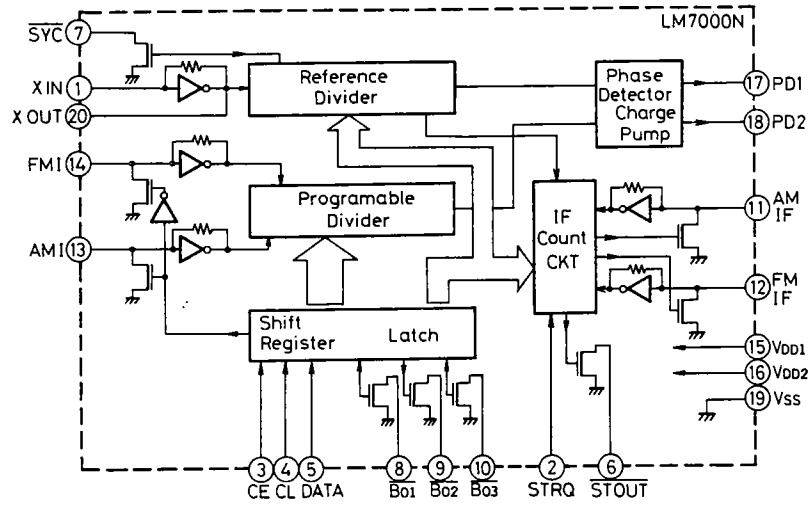


IC403 :  $\mu$ PC1473HA





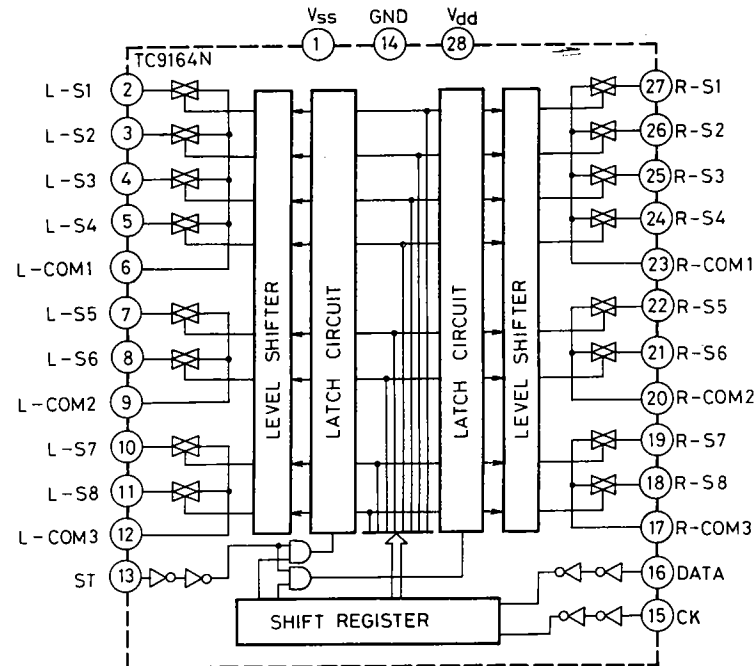
IC241 : LM7000N



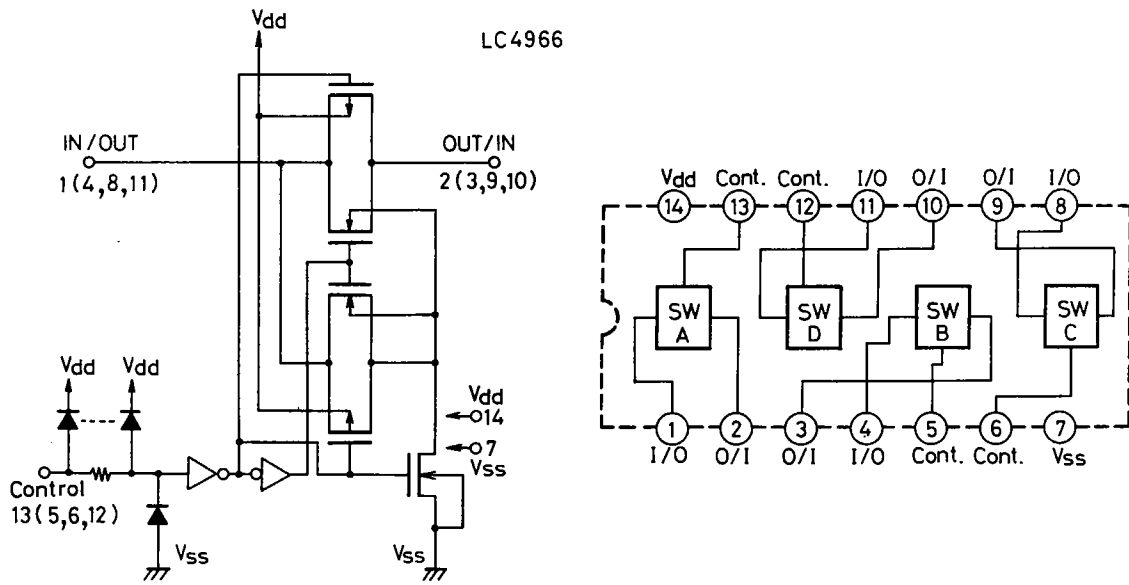
IC241 : LM7000N

Terminal Name	Function
SYC	Clock(400kHz) for controller
XIN,XOUT	Crystal oscillator(3.6MHz) Included the feedback resistor.
FMI,AMI	Local oscillator signal input
CE,CL,DATA	Data input
B01,B02,B03	Band data output
STRQ	Request of IF counter input
STOUT	Auto-search stop signal output
V dd1, V dd2, V ss	Power supply(V dd2:for back-up)
AMIF,FMIF	IF signal input
PD1,PD2	Charge pump output

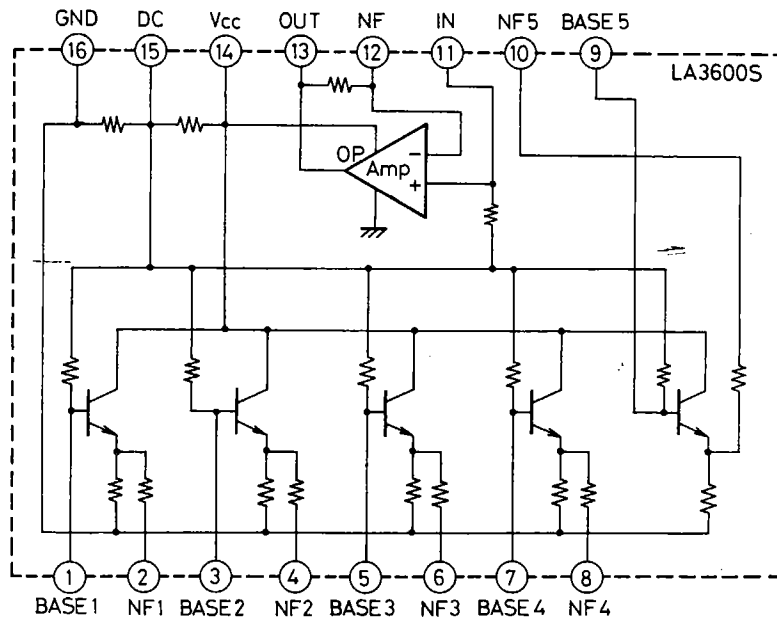
IC321 : TC9164N



IC332 : LC4966



IC501, 502 : LA3600S

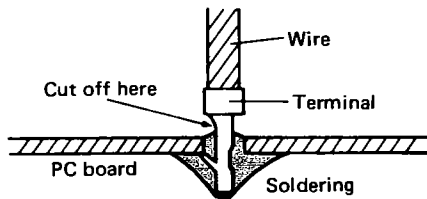


# 7. Servicing Method for AWG #20 Wires with Clamping Terminals

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

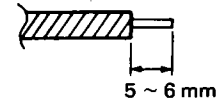
- (2) Type of wire used  
 ① 1015 AWG-#20 (single-coated)  
 ② 1672 AWG-#20 (double-coated)

(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.

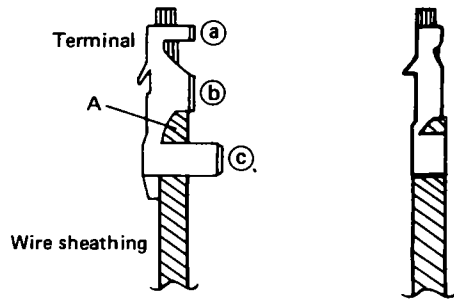


② Prior to soldering the wire onto the PC board, ensure its safety by pressure-fitting the terminal to the wire by observing the following procedures.

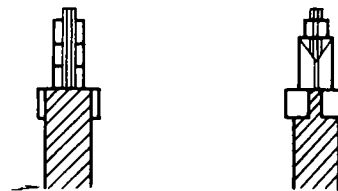
1. Strip off the wire 5 ~ 6 mm from its end.



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

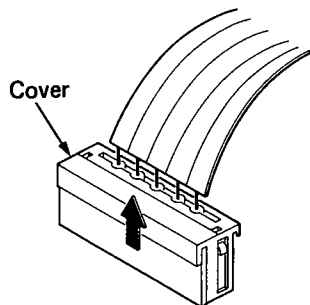


- ③ Part No., and name  
 Part No. : 5298T  
 Name : CRIMP PIN

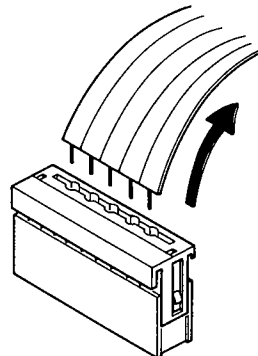


## Use of new-type connector

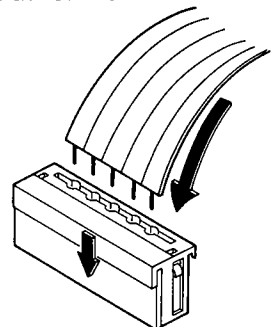
(1) Slide the cover upward.



(2) Extract the wires.



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

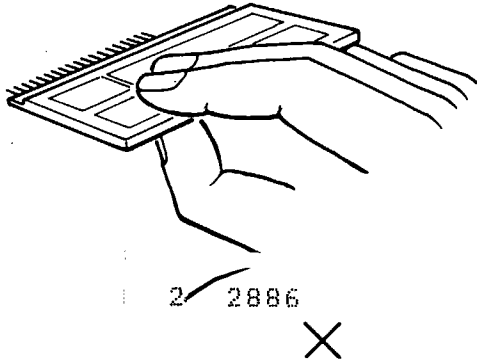


## 8. LCD Panel Handling Precautions

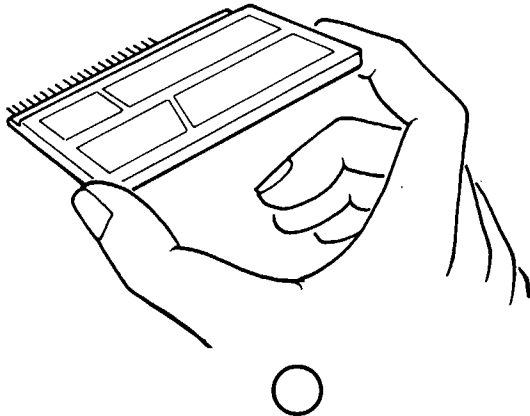
The LCD (Liquid Crystal Display) panel employed in this device requires the following handling precautions.

1. Since the LCD is made of plate glass, never apply strong mechanical force 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 wetted with isopropyl alcohol to gently wipe it clean. As for the silk-printed areas, use a soft cloth to gently wipe it clean.

**Note:** The light-polarizing plate attached to the LCD's surface and the silk-printed areas are made of soft material.

4. As much as possible, avoid exposing the LCD to harmful light (direct sunlight or ultraviolet rays), especially when the device is not in use.
5. Do not apply DC voltage to the pins of the LCD (its characteristics will be degraded).
6. When the LCD is damaged, resulting in leakage of liquid crystal, be very cautious to keep it out of one's mouth and avoid swallowing it. Should liquid crystal contact the hands or clothing, immediately wash with water, using soap or another appropriate cleanser.

# JVC

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