

JVC

SERVICE MANUAL

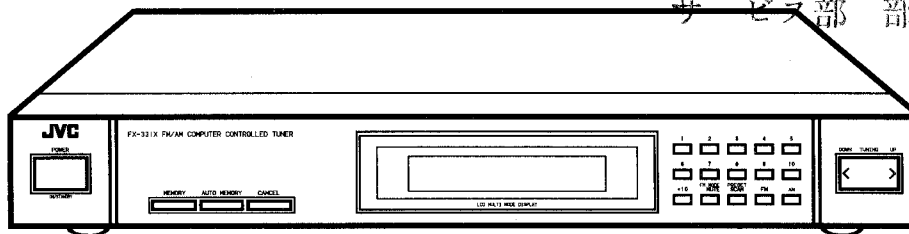
FM/AM COMPUTER CONTROLLED TUNER

FX-331XBK/FX-331XLBK

〒103東京都中央区日本橋本町4-8-14

日本ビクター株式会社

サービス部 部品管理課



COMPU LINK
Component

These models are completely the same in the structure of FX-331BK / FX-331LBK, except for the outlook color and Power transformer mainly.

Please refer also to FX-331BK / FX-331LBK Service Manual (No. 20139).

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Power Specifications

POWER SPECIFICATIONS

Area	Line Voltage & Frequency	Power Consumption
Australia	AC 240 V ~, 50 Hz	12 Watts
Continental Europe	AC 230 V ~, 50 Hz	
Other areas	AC 115 — 127 / 220 — 240 V ~ selectable, 50/60 Hz	15 Watts

SPANNUNGSVERSORGUNG UND LEISTUNGS-AUFNAHME

Länder	Netzspannung und Frequenz	Leistungsaufnahme
Australien	240 V ~, 50 Hz	12 Watt
Kontinental-Europa	230 V ~, 50 Hz	
Andere Gebiete	umschaltbar 115 — 127 / 220 — 240 V ~ 50/60 Hz	15 Watt

CARACTERISTIQUES D'ALIMENTATION

Pays	Tension d'alimentation et fréquence	Consommation
Australie	CA 240 V ~, 50 Hz	12 Watts
Europe Continentale	CA 230 V ~, 50 Hz	
Autres Pays	CA 115 — 127 / 220 — 240 V ~ commutable, 50/60 Hz	15 Watts

SPANNINGSVEREISTEN

Gebieden	Netspanning en Frekwentie	Stroomverbruik
Australië	Net 240 V ~, 50 Hz	12 Watt
Vasteland van Europa	Net 230 V ~, 50 Hz	
Overige landen	Net 115 — 127 / 220 — 240 V ~ instelbaar, 50/60 Hz	15 Watt

ESPECIFICACIONES DE ALIMENTACION

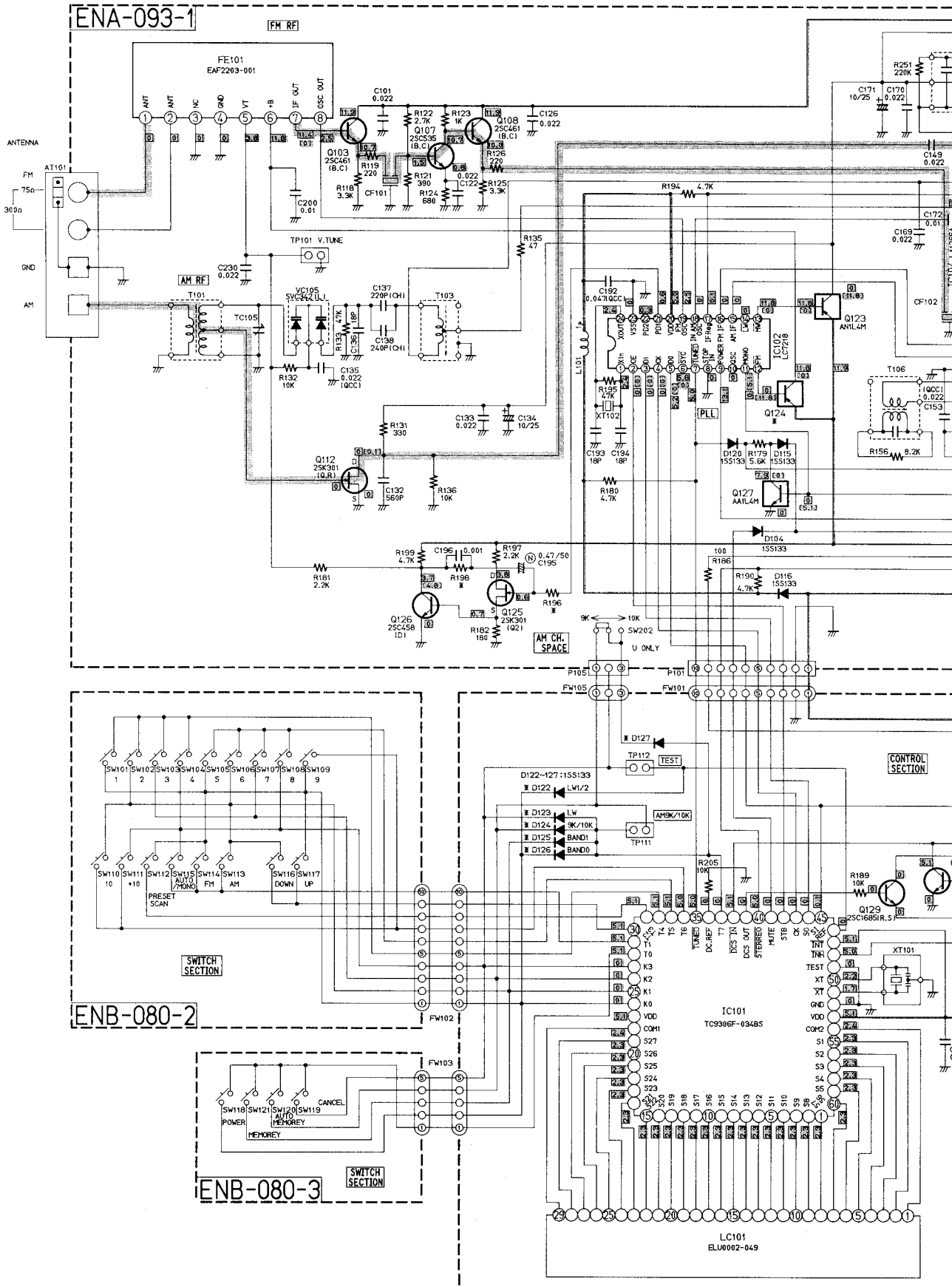
Países	Voltaje y frecuencia	Consumo
Australia	AC 240 V ~, 50 Hz	12 vatios
Europa Continental	AC 230 V ~, 50 Hz	
Otros países	AC 115 — 127 / 220 — 240 V ~ seleccionable, 50/60 Hz	15 vatios

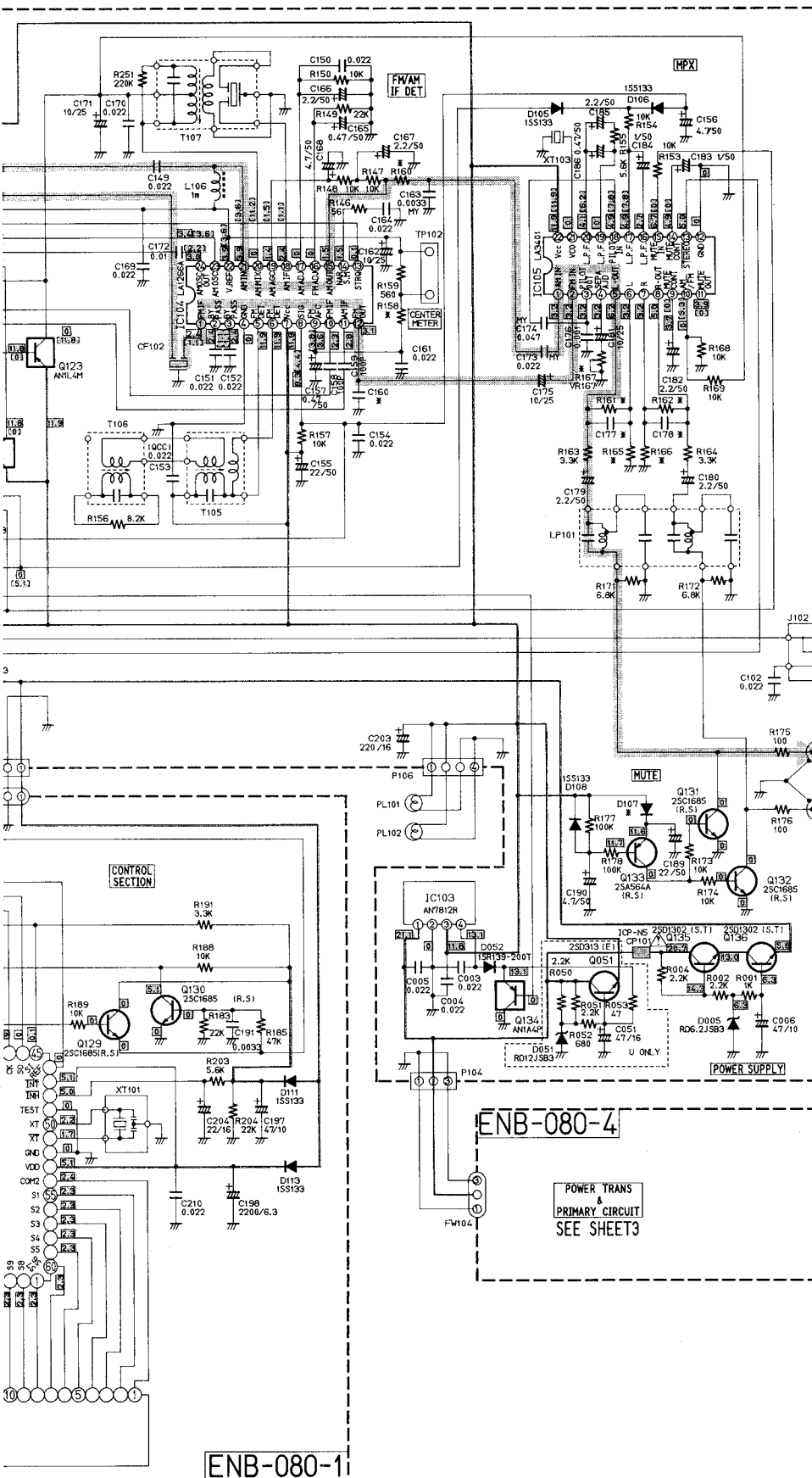
UPPGIFTER OM STRÖMFÖRSÖRJNING

Områden	Nätspänning & frekvens	Effektförbrukning
Australien	~ 240 V, 50 Hz	12 Watt
Kontinentala Europa	~ 230 V, 50 Hz	
Övriga länder	~ 115 — 127 / 220 — 240 V (omkopplingsbart), 50/60 Hz	15 Watt

Schematic Diagram

Tuner Section 1





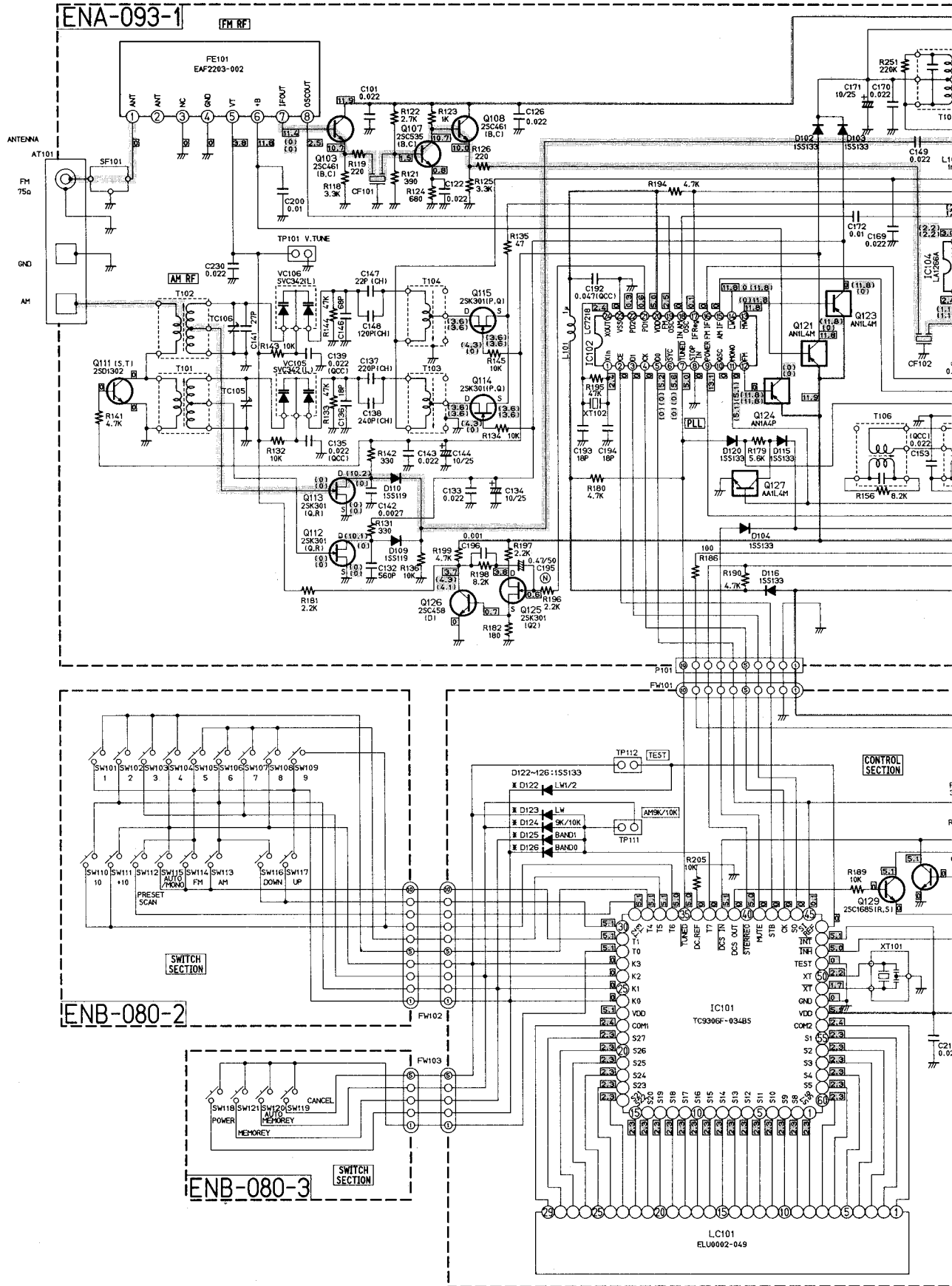
* MARK

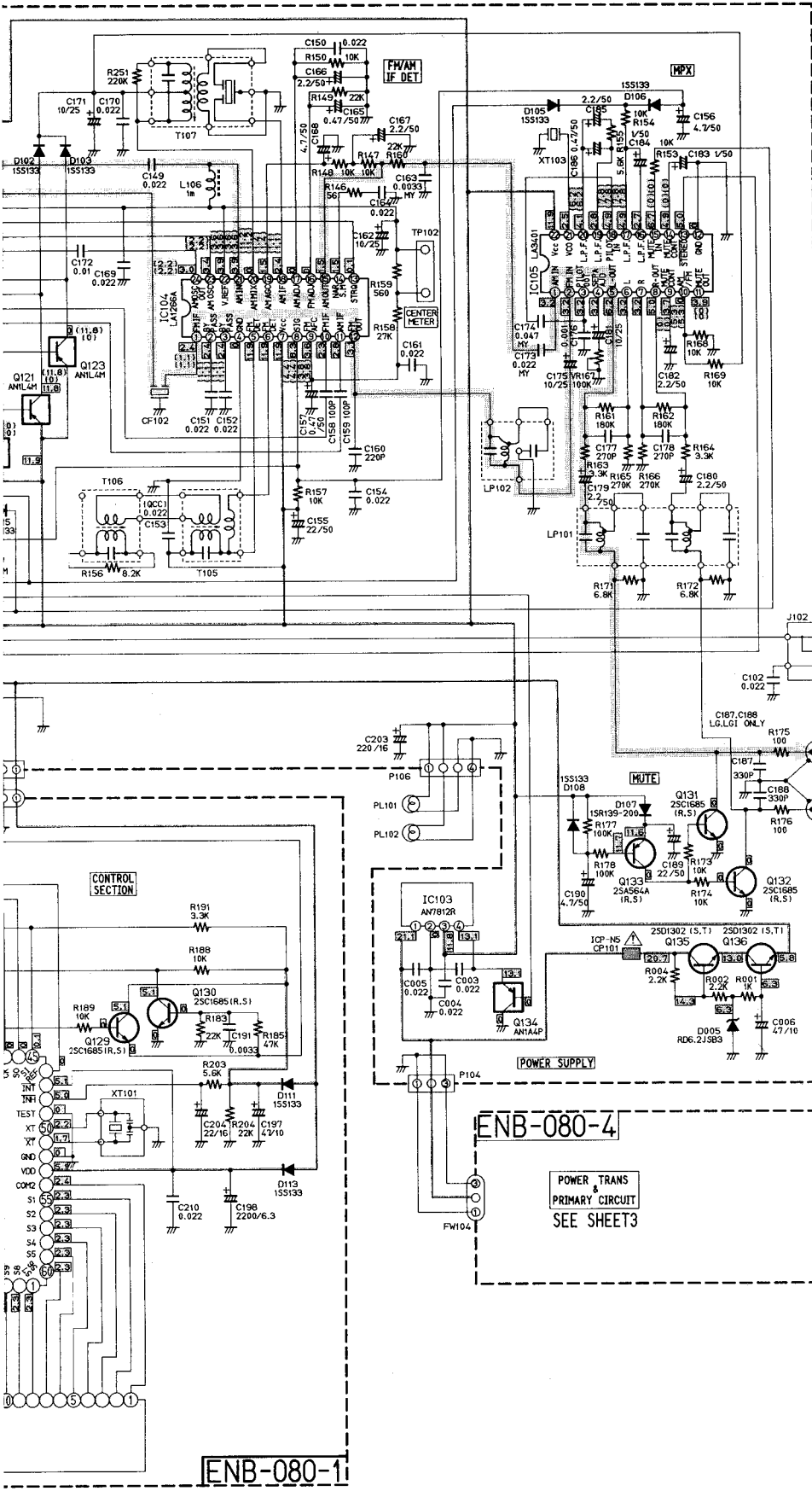
	U	A
R158	27K	27K
R160	12K	22K
R161,162	120K	180K
R165,166	180K	270K
R167,VR167	39K	100K VR
R196	10K	10K
R198	3.3K	3.3K
C160	220P	220P
C177,178	560P	270P
Q124	AN14M	AN14M
D107	1SS133	1SR139-200
D122	NONE	NONE
D123	NONE	NONE
D124	NONE	USED
D125	USED	NONE
D126	NONE	NONE
D127	USED	NONE

[] SHOWS DC VOLTAGE TO THE CLASSIS WITH NO SIGNAL INPUT
 [] : FM AUTO [] : AM

- Notes:
- indicates positive B power supply.
 - indicates signal path.
 - / [] shows DC voltage to the chassis with no signal input.
 ■FM []AM
 - When replacing the parts in the darkened area (■) and those marked with △, be sure to use the designated parts to ensure safety.
 - This is the standard circuit diagram.
 The design and contents are subject to change without notice.

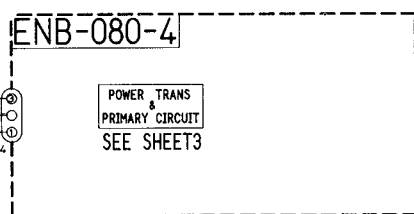
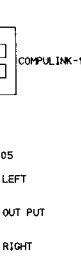
■ Tuner Section 2 (With LW)





✱ MARK

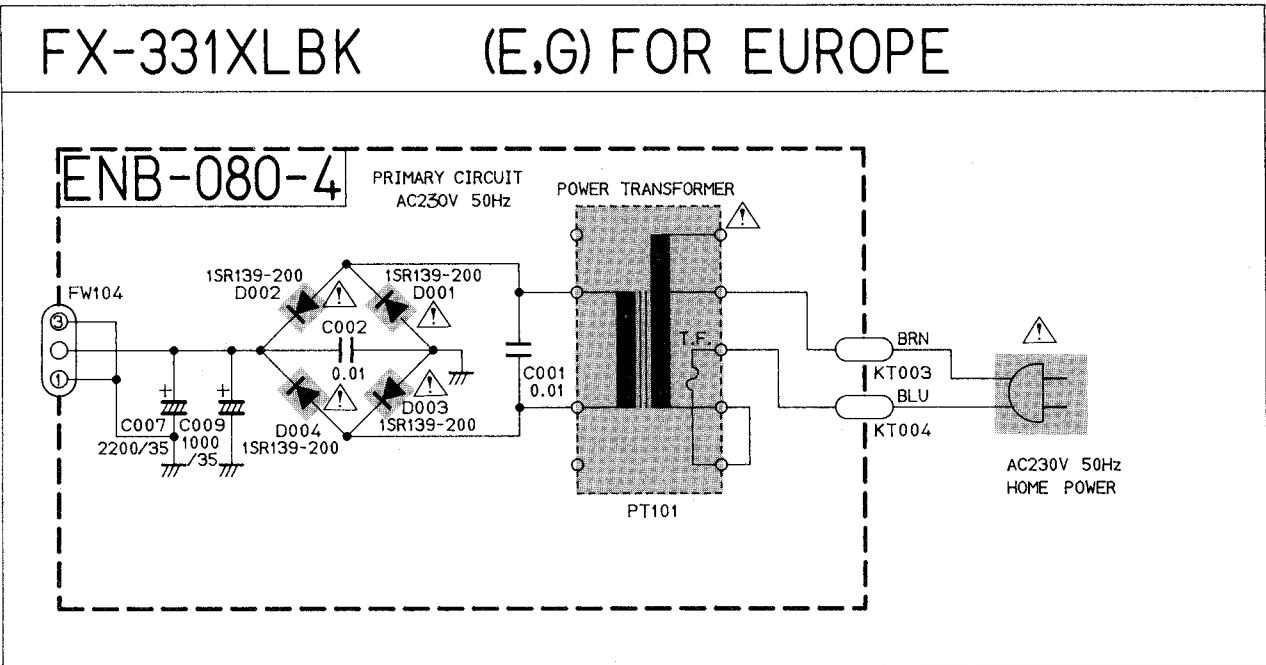
	LG1	LG LE, LEF
D122	USED	NONE
D123	USED	USED
D124	USED	USED
D125	NONE	NONE
D126	NONE	NONE
D127	NONE	NONE



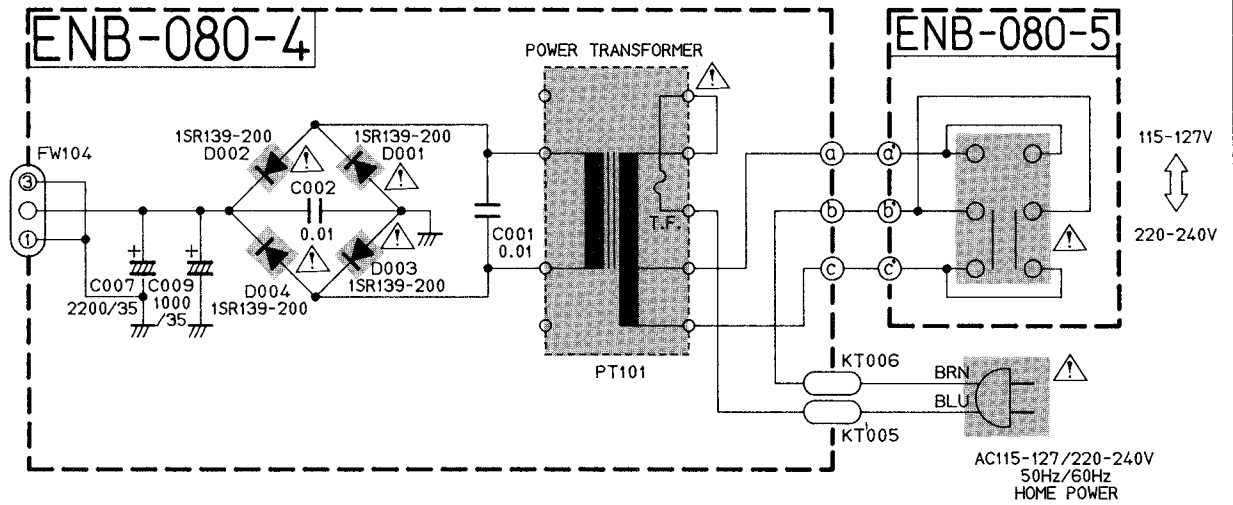
ENB-080-1

■ Power Primary Section

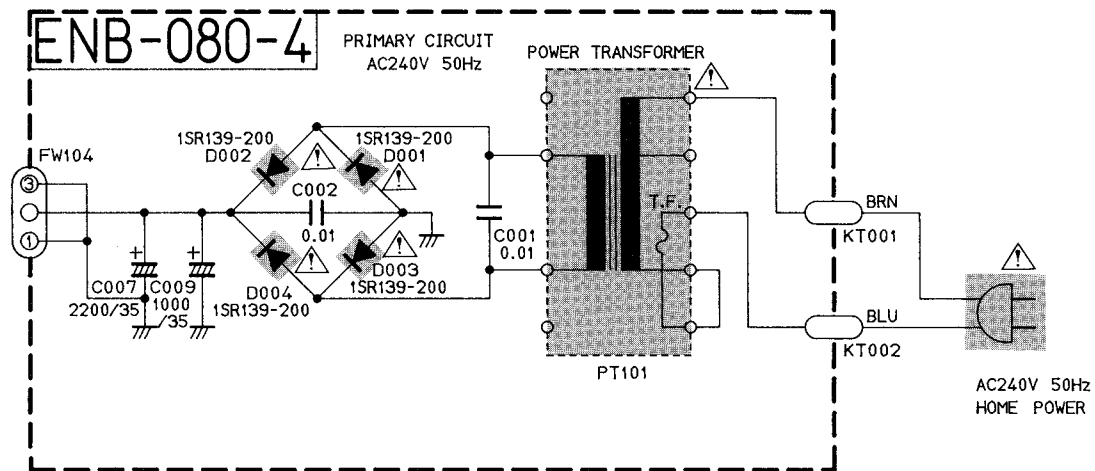
FX-331XLBK (E,G) FOR EUROPE



FX-331XBK (U) FOR OTHER AREAS

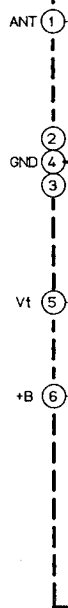
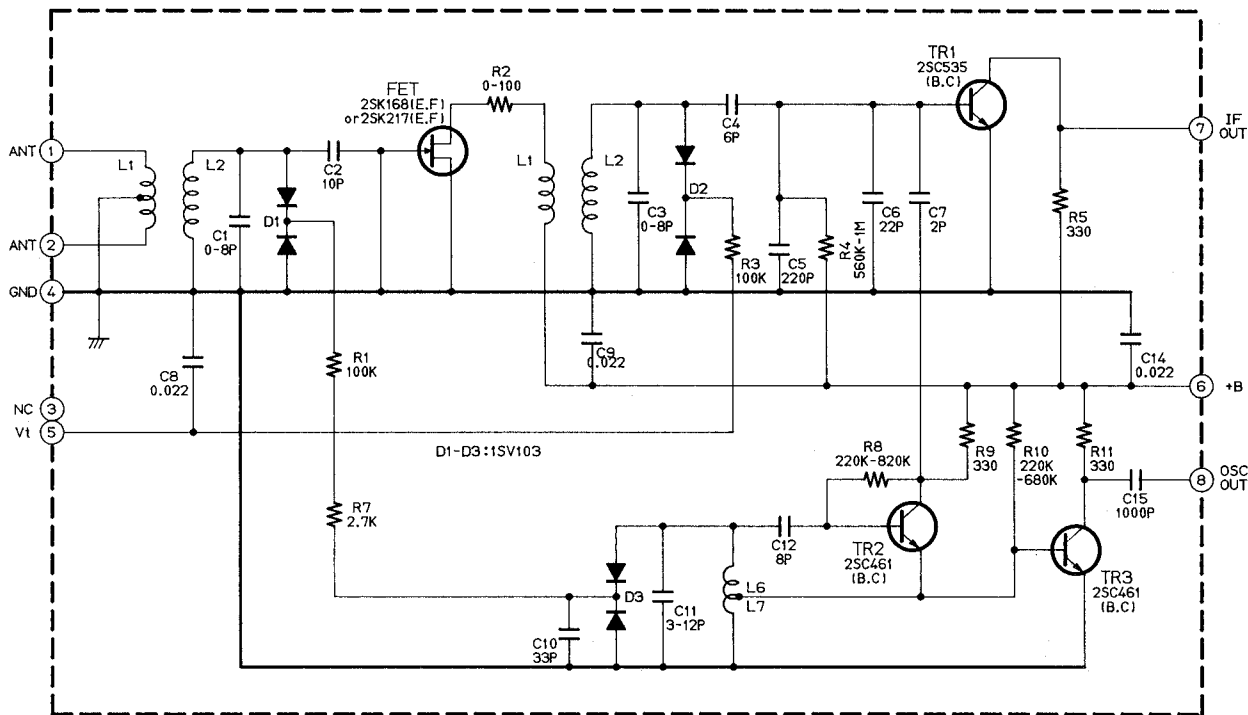


FX-331XBK (A) FOR AUSTRALIA

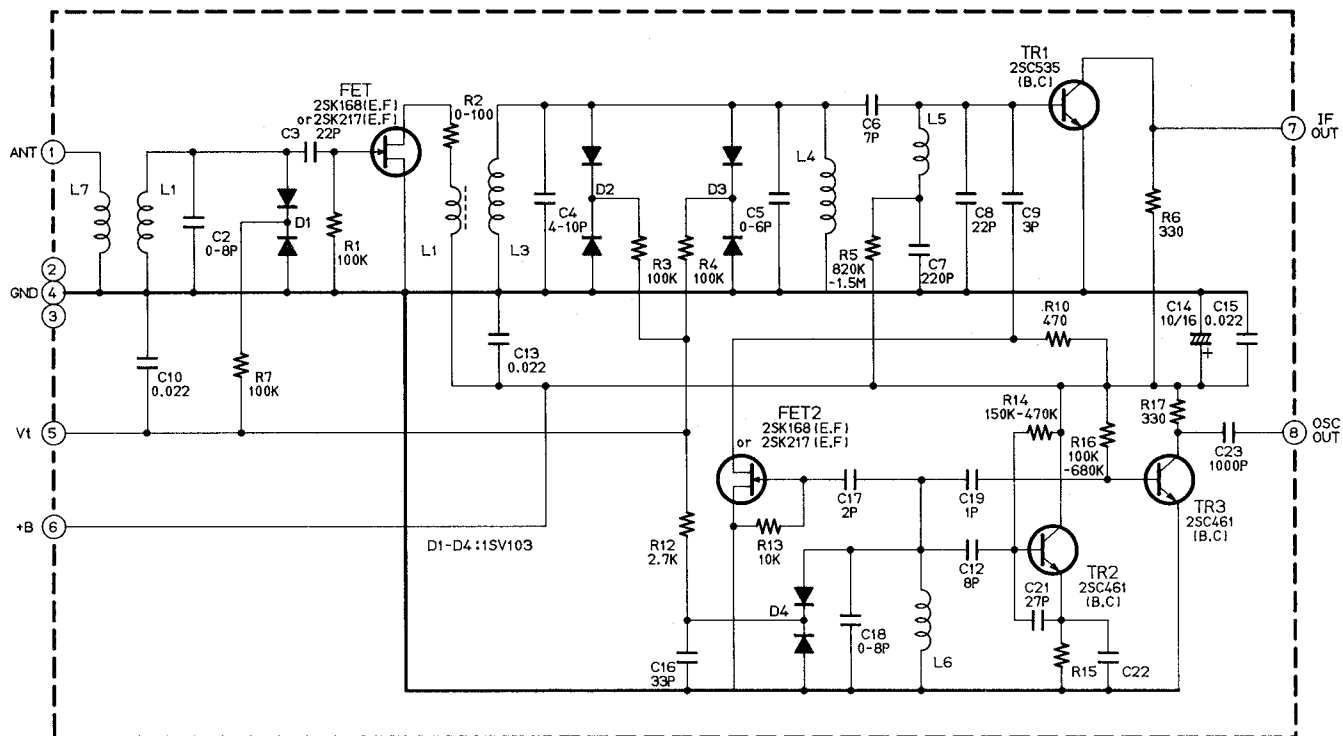


■ Front End

EAF2203-001



EMF2203-002

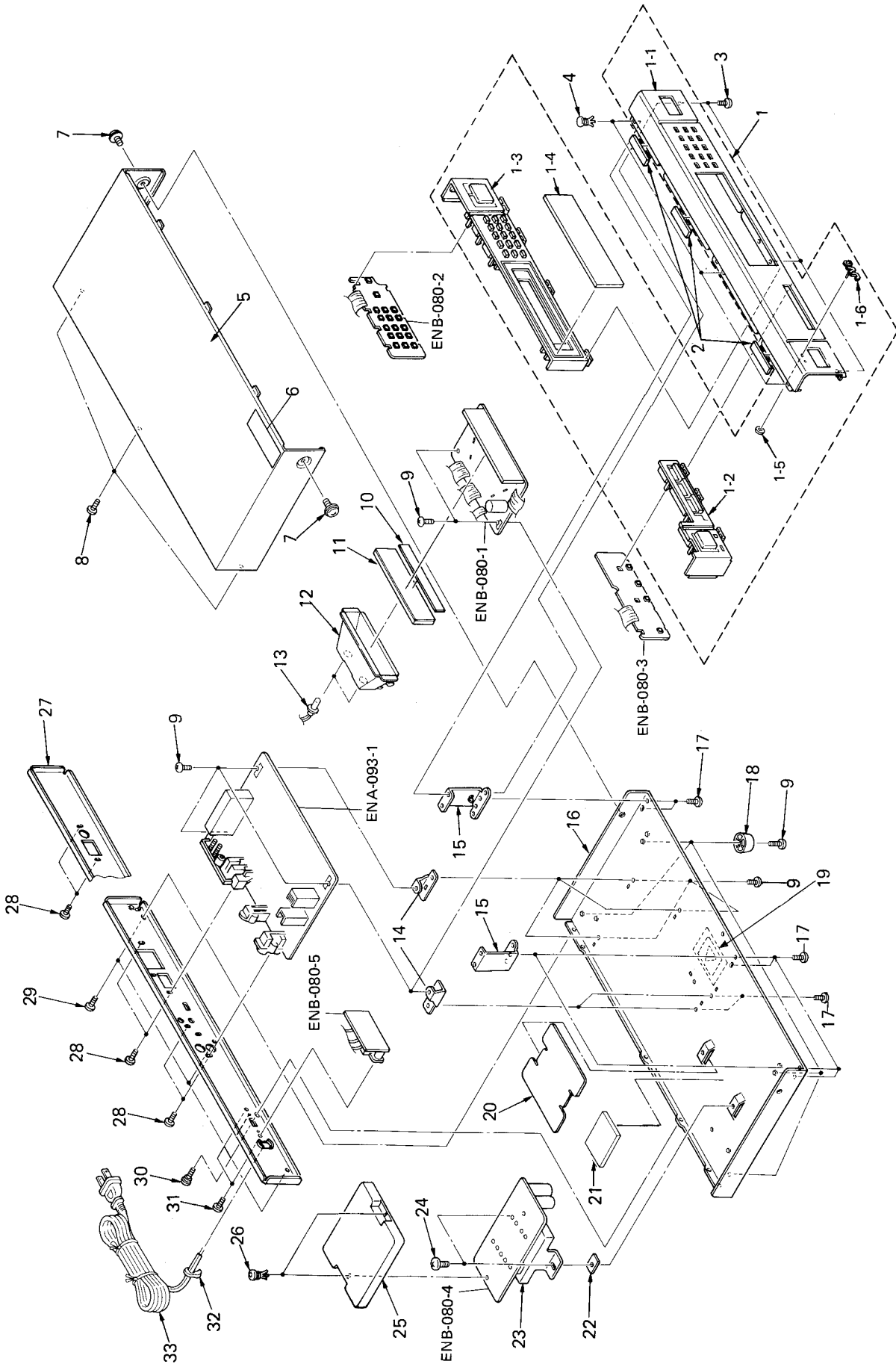


PARTS LIST

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General Exploded View and Parts List



■ Parts List

△	Item	Part Number	Part Name	Q'ty	Description	Areas
	1	EFP-FX331XBKU	Front Panel Ass'y	1		A, U
	1-1	EFP-FX331XLBKE	Front Panel Ass'y	1		LE, LEF, LG, LGI
		E26204-013	Front Panel	1		A, U
		E26204-014	Front Panel	1		LE, LEF, LG, LGI
	1-2	E26206-001SS	Push Button	1	Power	
	1-3	E26207-007SS	Push Button	1		
	1-4	E306733-004SS	Window Screen	1		
	1-5	E60912-003	Speed Nut	1		
	1-6	E72968-001	JVC Mark	1		
	2	EXO050005N40S02	Felt Spacer	3		
	3	SBSG3008M	Screw	3		
	4	E48729-009	Plastic Rivet	3		
	5	E25817-001	Metal Cover	1		
	6	E67000-007	Caution Label	1		U
	7	E61660-004	Special Screw	2		
	8	E73273-006	Screw	3		
	9	SBSG3006N	Screw	14		
	10	EXO105006A02S12	Spacer	1	for LCD	
	11	E74496-001SS	Sheet	1		
	12	E305025-001SS	Reflector	1		
	13	ELP3104-B075A	Pilot Lamp	2	PL201, PL202	
	14	E68587-005SS	Circuit Board Bracket	5		
	15	E74373-001SS	Front Bracket	3		
	16	E11856-002SS	Chassis Base	2		
	17	SBST3006N	Screw	6	for Front Bracket	
	18	E47227-011	Foot	4		
	19	E70115-002	Caution Label	1		Except A
	20	E75070-001SS	Insulator	1		
	21	EXO035035R50S10	Spacer	1		
	22	E75164-001	Sheet	2		
△	23	ETP1000-59EA	Power Transformer	1	PT001	A
△		ETP1000-59LB	Power Transformer	1	PT001	U
△		ETP1000-73EAJ	Power Transformer	1	PT001	LE, LEF, LG, LGI
	24	E65389-002	Special Screw	2	for Transformer	
	25	E26286-001SS	Circuit Board Cover	1		
	26	E48729-008	Plastic Rivet	2		
	27	E26208-026SS	Rear Panel	1		U
		E26208-027SS	Rear Panel	1		A
		E26208-028SS	Rear Panel	1		LE, LEF, LG, LGI
	—	E303260-231	Rating Label	1		U
	28	E73273-001	Special Screw	4		
	29	SBSG3006M	Screw	3		
	30	E74572-001	Special Screw	1		
	31	SBSG2608M	Screw	2	for Voltage Selector	U
△	32	QHS3876-162	Cord Stopper	1		
△	33	QMP7520-200	Power Cord	1		U
△		QMP2560-244E	Power Cord	1		A
△		QMP3900-200E	Power Cord	1		LE, LEF, LG, LGI
	—	E61029-005	Number Label	1		Except LE
	—	E70028-001	Approval Label	1		LE

△: Safety Parts

The Marks Designated Areas

A.....Australia

U.....Other Countries

LG.....Germany (With LW)

LGI.....Italy (With LW)

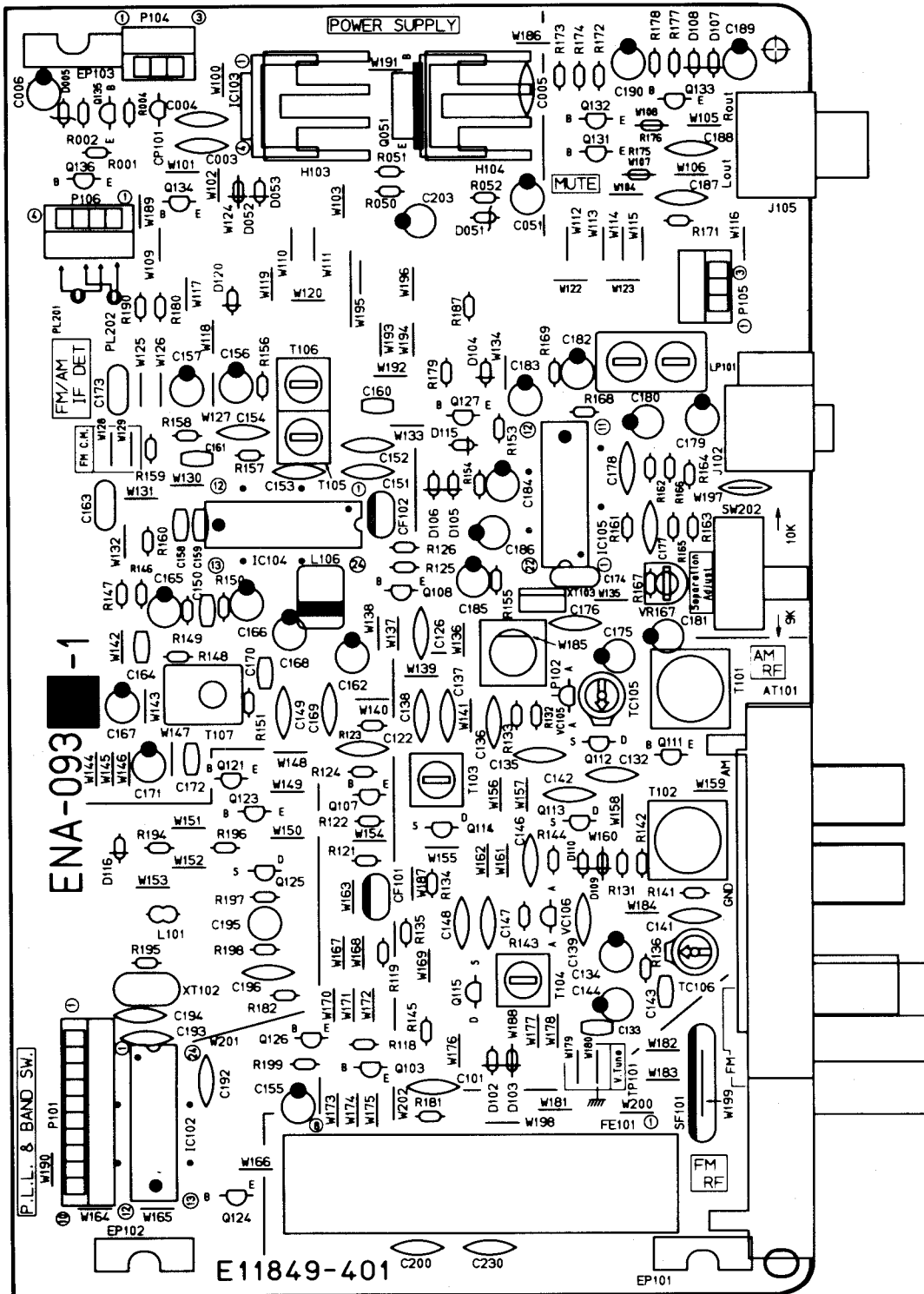
LE, LEF.....Continental Europe (With LW)

No mark indicates all areas.

Printed Circuit Board Ass'y and Parts List

■ ENA-093 □ Tuner PC Board Ass'y

Note : ENA-093 □ varies according to the areas employed. See note (1) when placing an order.



Note (1)

PC Board Ass'y	Designated Areas
ENA-093 B	Universal Type
ENA-093 C	Australia
ENA-093 E	Continental Europe (with LW) Germany (with LW)
ENA-093 G	Italy (with LW)

Transistors

ITEM	PART NUMBER	DESCRIPTION	AREA
Q051	2SD313V(E)	SILICON SANYO	B
Q103	2SC461(B,C)	SILICON HITACHI	
Q107	2SC535(B,C)	SILICON HITACHI	
Q108	2SC461(B,C)	SILICON HITACHI	
Q111	2SD1302(S,T)	SILICON MATSUSHITA	E
Q111	2SD1302(S,T)	SILICON MATSUSHITA	G
Q112	2SK301(Q,R)	F.E.T MATSUSHITA	E
Q113	2SK301(Q,R)	F.E.T MATSUSHITA	G
Q113	2SK301(Q,R)	F.E.T MATSUSHITA	E
Q114	2SK301(P,Q)	F.E.T MATSUSHITA	E
Q114	2SK301(P,Q)	F.E.T MATSUSHITA	G
Q115	2SK301(P,Q)	F.E.T MATSUSHITA	E
Q115	2SK301(P,Q)	F.E.T MATSUSHITA	G
Q121	AN1L4M	SILICON NEC	E
Q121	AN1L4M	SILICON NEC	G
Q123	AN1L4M	SILICON NEC	
Q124	AN1L4M	SILICON NEC	B
Q124	AN1L4M	SILICON NEC	C
Q124	AN1A4P	SILICON NEC	E
Q124	AN1A4P	SILICON NEC	G
Q125	2SK301(Q2)	F.E.T MATSUSHITA	
Q126	2SC1685(Q-S)	SILICON NEC	
Q127	AA1L4M	SILICON NEC	
Q131	2SC1685(R,S)	SILICON MATSUSHITA	
Q132	2SC1685(R,S)	SILICON MATSUSHITA	
Q133	2SA564A(R,S)	SILICON MATSUSHITA	
Q134	AN1A4P	SILICON NEC	
Q135	2SD1302(S,T)	SILICON MATSUSHITA	
Q136	2SD1302(S,T)	SILICON MATSUSHITA	

A: DISAPPEARING PARTS

I.C.s

ITEM	PART NUMBER	DESCRIPTION	AREA
IC102	LC7218	I.C. SANYO	
IC103	AN7812R	I.C. MATSUSHITA	
IC104	LA1266A	I.C. SANYO	
IC105	LA3401	I.C. SANYO	

A: DISAPPEARING PARTS

Diodes

ITEM	PART NUMBER	DESCRIPTION	AREA
D005	RD6.2JSB3	ZENER NEC	B
D051	RD12JSB3	ZENER NEC	B
D052	1SS133	SILICON ROHM	B
D053	1SS133	SILICON ROHM	B
D102	1SS133	SILICON ROHM	E
D102	1SS133	SILICON ROHM	G
D103	1SS133	SILICON ROHM	E
D103	1SS133	SILICON ROHM	G
D104	1SS133	SILICON ROHM	
D105	1SS133	SILICON ROHM	
D106	1SS133	SILICON ROHM	
D107	1SR139-200	SILICON ROHM	
D108	1SS133	SILICON ROHM	
D109	1SS133	SILICON ROHM	E
D109	1SS133	SILICON ROHM	G
D109	1SS133	SILICON ROHM	E
D110	1SS133	SILICON ROHM	E
D110	1SS133	SILICON ROHM	G
D115	1SS133	SILICON ROHM	
D116	1SS133	SILICON ROHM	
D120	1SS133	SILICON ROHM	
VC105	SVC342(L)	VARICAP SANYO	
VC106	SVC342(L)	VARICAP SANYO	E
VC106	SVC342(L)	VARICAP SANYO	G

A: DISAPPEARING PARTS

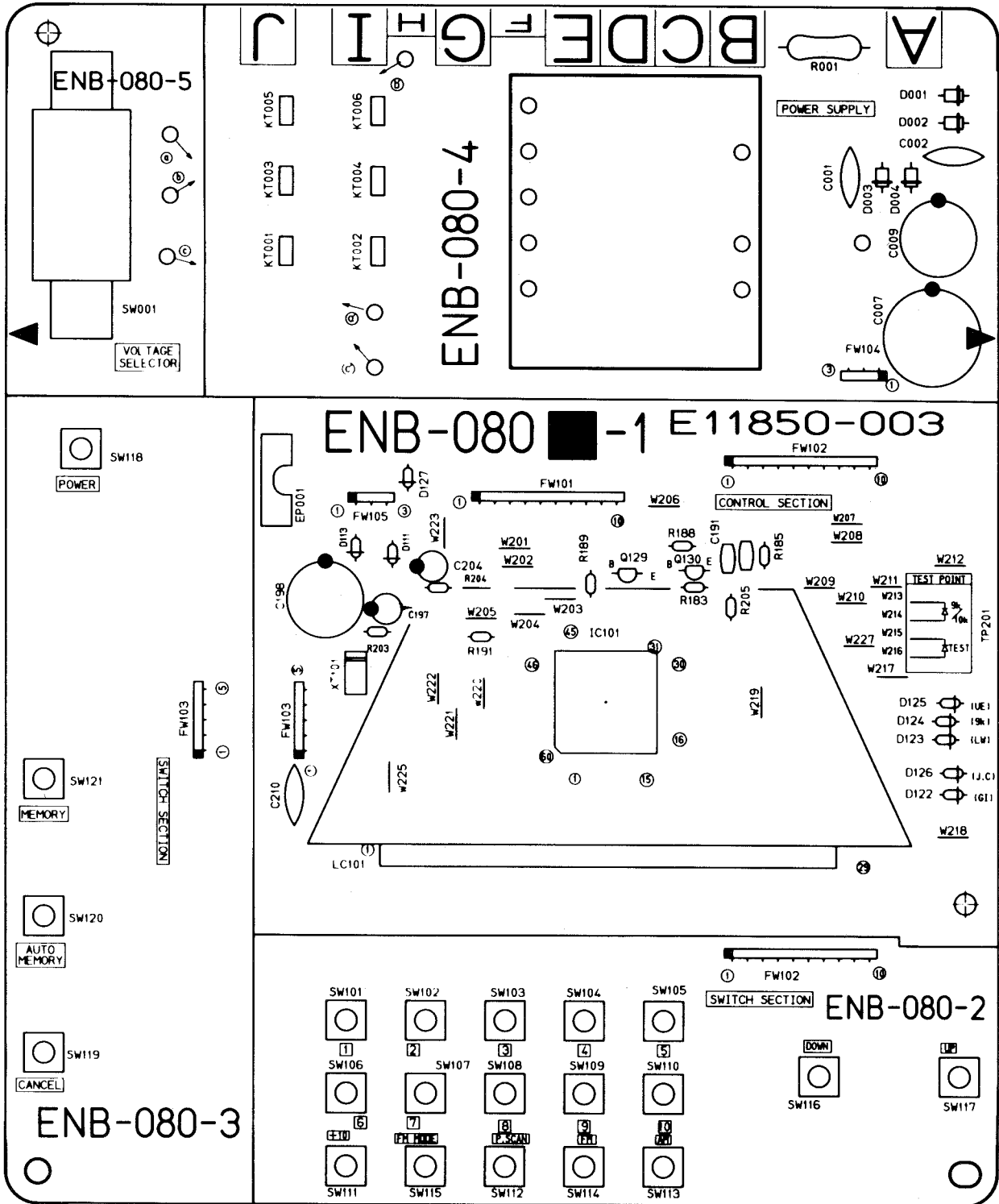
Capacitors

ITEM	PART NUMBER	DESCRIPTION	AREA
C003	QCF21HP-223	0.022MF 50V CERAMIC	
C004	QCF21HP-223	0.022MF 50V CERAMIC	
C005	QCF21HP-223	0.022MF 50V CERAMIC	
C006	QETB1AM-476	47MF 10V ELECTRO	
C051	QETB1CM-476	47MF 16V ELECTRO	B
C101	QCF21HP-223	0.022MF 50V CERAMIC	
C102	QCF21HP-223	0.022MF 50V CERAMIC	
C122	QCF21HP-223	0.022MF 50V CERAMIC	
C126	QCF21HP-223	0.022MF 50V CERAMIC	
C132	QCS21HJ-561	560PF 50V CERAMIC	
C133	QCHB1EZ-223	0.022MF 25V CERAMIC	
C134	QETB1EM-106	10MF 25V ELECTRO	
C135	QCC21EM-223	0.022MF 25V CERAMIC	
C136	QCT26CH-180	18PF 50V CERAMIC	
C137	QCT26CH-221	220PF 50V CERAMIC	
C138	QCT26CH-241	240PF 50V CERAMIC	
C139	QCC21EM-223	0.022MF 25V CERAMIC	E
C139	QCC21EM-223	0.022MF 25V CERAMIC	G
C141	QCS21HJ-270	27PF 50V CERAMIC	E
C141	QCS21HJ-270	27PF 50V CERAMIC	G
C142	QCY21HK-272	2700PF 50V CERAMIC	E
C142	QCY21HK-272	2700PF 50V CERAMIC	G
C143	QCHB1EZ-223	0.022MF 25V CERAMIC	E
C143	QCHB1EZ-223	0.022MF 25V CERAMIC	G
C144	QETB1EM-106	10MF 25V ELECTRO	E
C144	QETB1EM-106	10MF 25V ELECTRO	G
C146	QCT26CH-680	68PF 50V CERAMIC	E
C146	QCT26CH-680	68PF 50V CERAMIC	G
C147	QCT26CH-220	22PF 50V CERAMIC	E
C147	QCT26CH-220	22PF 50V CERAMIC	G
C148	QCT26CH-121	120PF 50V CERAMIC	E
C148	QCT26CH-121	120PF 50V CERAMIC	G
C149	QCF21HP-223	0.022MF 50V CERAMIC	
C150	QCHB1EZ-223	0.022MF 25V CERAMIC	
C151	QCF21HP-223	0.022MF 50V CERAMIC	
C152	QCF21HP-223	0.022MF 50V CERAMIC	
C153	QCC21EM-223	0.022MF 25V CERAMIC	
C154	QCF21HP-223	0.022MF 50V CERAMIC	
C155	QETB1EM-226	22MF 25V ELECTRO	
C156	QETB1HM-475	4.7MF 50V ELECTRO	
C157	QETB1HM-474	0.47MF 50V ELECTRO	
C158	QCB1HK-101	100PF 50V CERAMIC	
C159	QCB1HK-101	100PF 50V CERAMIC	
C160	QCB1HK-221	220PF 50V CERAMIC	
C161	QCHB1EZ-223	0.022MF 25V CERAMIC	
C162	QETB1EM-106	10MF 25V ELECTRO	
C163	QFN81HJ-332	3300PF 50V MYLAR	
C164	QCHB1EZ-223	0.022MF 25V CERAMIC	
C165	QETB1HM-474	0.47MF 50V ELECTRO	
C166	QETB1HM-225	2.2MF 50V ELECTRO	
C167	QETB1HM-225	2.2MF 50V ELECTRO	
C168	QETB1HM-475	4.7MF 50V ELECTRO	
C169	QCF21HP-223	0.022MF 50V CERAMIC	
C170	QCHB1EZ-223	0.022MF 25V CERAMIC	
C171	QETB1EM-106	10MF 25V ELECTRO	
C172	QCVB1CM-103	0.01MF 16V CERAMIC	
C173	QFN81HK-223	0.022MF 50V MYLAR	
C174	QFN81HK-473	0.047MF 50V MYLAR	
C175	QETB1EM-106	10MF 25V ELECTRO	
C176	QCY21HK-102	1000PF 50V CERAMIC	
C177	QCS21HJ-561	560PF 50V CERAMIC	B
C177	QCS21HJ-271	270PF 50V CERAMIC	C
C177	QCS21HJ-271	270PF 50V CERAMIC	E
C177	QCS21HJ-271	270PF 50V CERAMIC	G
C178	QCS21HJ-561	560PF 50V CERAMIC	B
C178	QCS21HJ-271	270PF 50V CERAMIC	C
C178	QCS21HJ-271	270PF 50V CERAMIC	E
C178	QCS21HJ-271	270PF 50V CERAMIC	G
C179	QETB1HM-225	2.2MF 50V ELECTRO	
C180	QETB1HM-225	2.2MF 50V ELECTRO	
C181	QETB1EM-106	10MF 25V ELECTRO	
C182	QETB1HM-225	2.2MF 50V ELECTRO	
C183	QETB1HM-105	1MF 50V ELECTRO	
C184	QETB1HM-105	1MF 50V ELECTRO	
C185	QETB1HM-225	2.2MF 50V ELECTRO	
C186	QETB1HM-474	0.47MF 50V ELECTRO	
C187	QCS21HJ-331	330PF 50V CERAMIC	E
C187	QCS21HJ-331	330PF 50V CERAMIC	G
C188	QCS21HJ-331	330PF 50V CERAMIC	E
C188	QCS21HJ-331	330PF 50V CERAMIC	G
C189	QETB1HM-226	22MF 50V ELECTRO	
C190	QETB1HM-475	4.7MF 50V ELECTRO	
C192	QCC21EM-473	0.047MF 25V CERAMIC	
C193	QCS21HJ-180	18PF 50V CERAMIC	
C194	QCS21HJ-180	18PF 50V CERAMIC	
C195	QEN51HM-474	0.47MF 50V NON POLE	
C196	QCY21HK-102	1000PF 50V CERAMIC	
C200	QCF21HP-103	0.01MF 50V CERAMIC	
C203	QETB1CM-227	220MF 16V ELECTRO	
C230	QCF21HP-103	0.01MF 50V CERAMIC	

A: DISAPPEARING PARTS

■ ENB-080 □ Logic PC Board Ass'y

Note : ENB-080 □ varies according to the areas employed. See note (1) when placing an order.



Note (1)

PC Board Ass'y	Designated Areas
ENB-080 B	Universal Type
ENB-080 C	Australia
ENB-080 D	Continental Europe (with LW)
ENB-080 E	Germany (with LW)
ENB-080 G	Italy (with LW)

Transistors

ITEM	PART NUMBER	DESCRIPTION	AREA
Q129	2SC1685(R,S)	SILICON MATSUSHITA	
Q130	2SC1685(R,S)	SILICON MATSUSHITA	

I.C.s

ITEM	PART NUMBER	DESCRIPTION	AREA
IC101	TC9306F-034BS	I.C. TOSHIBA	

Diodes

ITEM	PART NUMBER	DESCRIPTION	AREA
D001	1SR139-200	SILICON ROHM	
D002	1SR139-200	SILICON ROHM	
D003	1SR139-200	SILICON ROHM	
D004	1SR139-200	SILICON ROHM	
D111	1SS119	SILICON HITACHI	
D113	1SS119	SILICON HITACHI	
D122	1SS119	SILICON HITACHI	G
D123	1SS119	SILICON HITACHI	D
D123	1SS119	SILICON HITACHI	E
D123	1SS119	SILICON HITACHI	G
D124	1SS119	SILICON HITACHI	C
D124	1SS119	SILICON HITACHI	D
D124	1SS119	SILICON HITACHI	E
D124	1SS119	SILICON HITACHI	G
D125	1SS119	SILICON HITACHI	B
D127	1SS119	SILICON HITACHI	B

Capacitors

ITEM	PART NUMBER	DESCRIPTION	AREA
C001	QCF21HP-103	0.01MF 50V CERAMIC	
C002	QCF21HP-103	0.01MF 50V CERAMIC	
C007	QETB1VM-228N	2200MF 35V ELECTRO	
C009	QETB1VM-108	1000MF 35V ELECTRO	
C191	QCB1CM-332	3300PF 16V CERAMIC	
C197	QETB1AM-476	47MF 10V ELECTRO	
C198	QETB0JM-228	2200MF 6.3V ELECTRO	
C204	QETB1CM-226	22MF 16V ELECTRO	
C210	QCHB1EZ-223	0.022MF 25V CERAMIC	

Resistors

ITEM	PART NUMBER	DESCRIPTION	AREA
R183	QRD167J-223	22K 1/6W CARBON	
R185	QRD167J-473	47K 1/6W CARBON	
R188	QRD167J-103	10K 1/6W CARBON	
R189	QRD167J-103	10K 1/6W CARBON	
R191	QRD167J-332	3.3K 1/6W CARBON	
R203	QRD167J-562	5.6K 1/6W CARBON	
R204	QRD167J-223	22K 1/6W CARBON	
R205	QRD167J-103	10K 1/6W CARBON	

Others

ITEM	PART NUMBER	DESCRIPTION	AREA
EP001	E11850-003	PRINTED BOARD	
FW101	E70859-001	EARTH PLATE	
FW102	EWR3AB-20KST	FLAT WIRE(10PIN)	
FW103	EWR3AB-25SST	FLAT WIRE(10PIN)	
FW104	EWR35B-20SST	FLAT WIRE(5PIN)	
FW105	EWR33B-10KST	FLAT WIRE(3PIN)	
KT001	EWR33B-20KST	FLAT WIRE(3PIN)	B
KT002	E65508-002	TAB	C
KT003	E65508-002	TAB	C
KT003	E65508-002	TAB	D
KT003	E65508-002	TAB	E
KT003	E65508-002	TAB	G
KT004	E65508-002	TAB	D
KT004	E65508-002	TAB	E
KT004	E65508-002	TAB	G
KT005	E65508-002	TAB	B
KT006	E65508-002	TAB	B
LC101	ELU0002-049	LCD PANEL	
SW001	QSS1L22-E01	SLIDE SWITCH(VOL. SELECTOR)	B
SW101	ESP0001-007	TACT SWITCH(1)	
SW102	ESP0001-007	TACT SWITCH(2)	
SW103	ESP0001-007	TACT SWITCH(3)	
SW104	ESP0001-007	TACT SWITCH(4)	
SW105	ESP0001-007	TACT SWITCH(5)	
SW106	ESP0001-007	TACT SWITCH(6)	
SW107	ESP0001-007	TACT SWITCH(7)	
SW108	ESP0001-007	TACT SWITCH(8)	
SW109	ESP0001-007	TACT SWITCH(9)	
SW110	ESP0001-007	TACT SWITCH(10)	
SW111	ESP0001-007	TACT SWITCH(11)	
SW112	ESP0001-007	TACT SWITCH(PRESET SCAN)	
SW113	ESP0001-007	TACT SWITCH(AM)	
SW114	ESP0001-007	TACT SWITCH(FM)	
SW115	ESP0001-007	TACT SWITCH(AUTO/MONO)	
SW116	ESP0001-007	TACT SWITCH(DOWN)	
SW117	ESP0001-007	TACT SWITCH(UP)	
SW118	ESP0001-007	TACT SWITCH(POWER)	
SW119	ESP0001-007	TACT SWITCH(CANCEL)	
SW120	ESP0001-007	TACT SWITCH(AUTO MEMORY)	
SW121	ESP0001-007	TACT SWITCH(MEMORY)	
XT101	ECX0072-000EM	RESONATOR	

Accessories List

△	Part Number	Part Name	Q'ty	Description	Areas
	E30580-1714A E30580-1715A BT-20117 BT-20122 BT-20122-1	Instruction Book Instruction Book Warranty Card Warranty Card Sticker	1 1 1 1 1		Except LGI LGI LG A A
△	EWP302-011 EWP805-001 EQB4001-015 EWP502-001 EMZ2001-011	Signal Cord 1P Plug Cord AM Loop Antenna Built in Antenna Adapter	1 1 1 1 1		Except LG LE , LEF , LGI
△	E67007-001 QZL1008-001 E04056 E35497-022 QPGA025-03505	Wire Antenna FTZ Information Sheet Siemens Plug Caution Sheet Envelope	1 1 1 1 1	220V	LG LG U U

△ : Safety Parts

The Marks Designated Areas

A.....Australia

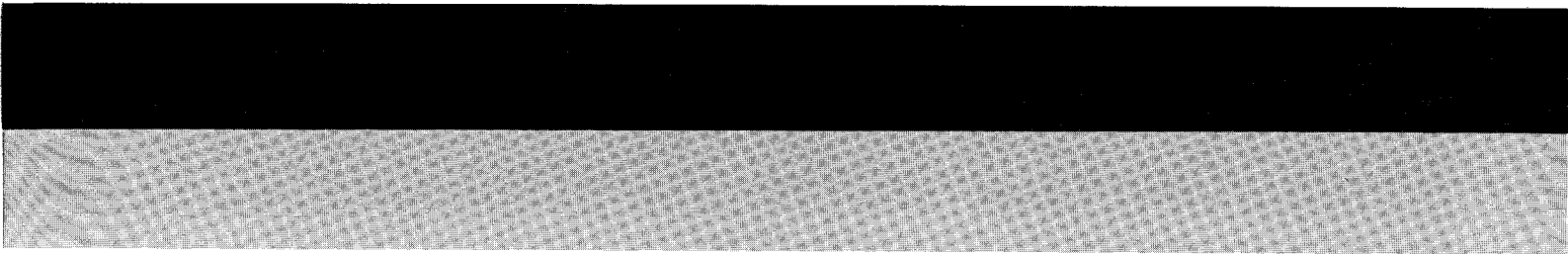
U.....Other Countries

LG.....Germany (With LW)

LGI.....Italy (With LW)

LE , LEF.....Continental Europe (With LW)

No mark indicates all areas.



JVC

VICTOR COMPANY OF JAPAN, LIMITED
AUDIO PRODUCTS DIVISION, 1644, SHIMOTSURUMA, YAMATO-SHI, KANAGAWA-KEN, 242, JAPAN

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