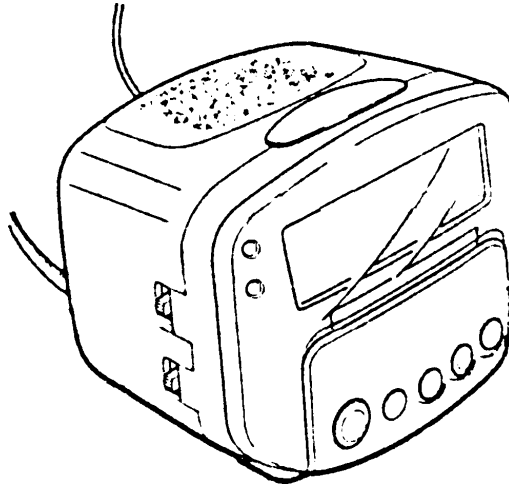


FR-A270 U(H),EZ(L,H)

FR-A275 U(H),HRJ(L),K(H)
EZ(H)



SERVICE MANUAL

RADIO RECEIVER

aiwa

S/M Code No. 09-015-356-7N1



ACCESSORIES/PACKAGE LIST-1/1

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8B-RUB-905-010		IB,EZ (EGF) C 270<A270 EZLC,A270 EZHC>
1	8B-RUA-905-010		IB,EZ (EGF) C 275<A275 EZHC>
1	8B-RUB-907-010		IB,EZ (PHNCZ) C 270<A270 EZLC,A270 EZHC>
1	8B-RUA-907-010		IB,EZ (PHNCZ) C 275<A275 EZHC>
1	8B-RUB-906-010		IB,EZ (SID) C 270<A270 EZLC,A270 EZHC>
1	8B-RUA-906-010		IB,EZ (SID) C 275<A275 EZHC>
1	8B-RUA-902-010		IB,HR (ECC) C 275<A275 HRJLC>
1	8B-RUA-908-010		IB,K (E) C 277<A275 KHC>
1	8B-RUB-901-010		IB,U (3L) C 270<A270 UHC>
1	8B-RUA-901-010		IB,U (3L) C 275<A275 UHC>

SPECIFICATIONS

FRA270U MODEL

Power source	AC 120 V, 60 Hz
Output	280 mW (EIAJ)
Power consumption	4 W
Speaker	57 mm, 8 ohms
Frequency range	FM: 87.5 – 108 MHz AM: 530 – 1,710 kHz
Antennas	FM wire antenna Ferrite bar antenna for AM
Maximum outside dimensions (W × H × D)	136.5 × 112.5 × 120.5 mm (5 ³ / ₈ × 4 ¹ / ₂ × 4 ³ / ₄ in.)
Weight	Approx. 590 g (1.3 lbs.)

- Design and specifications are subject to change without notice.

FRA270EZ MODEL

Power source	AC 230 V, 50 Hz
Output	280 mW (EIAJ)
Power consumption	4 W
Speaker	57 mm, 8 ohms
Frequency range	FM: 87.5 – 108 MHz AM: 530 – 1,605 kHz
Antennas	FM wire antenna Ferrite bar antenna for AM
Maximum outside dimensions (W × H × D)	136.5 × 112.5 × 120.5 mm
Weight	Approx. 610 g

- Design and specifications are subject to change without notice.

FRA275U MODEL

Power source	AC 120 V, 60 Hz
Output	280 mW (EIAJ)
Power consumption	4 W
Speaker	57 mm, 8 ohms
Frequency range	FM: 87.5 – 108 MHz AM: 530 – 1,710 kHz
Antennas	FM wire antenna Ferrite bar antenna for AM
Maximum outside dimensions (W × H × D)	136.5 × 112.5 × 120.5 mm (5 ³ / ₈ × 4 ¹ / ₂ × 4 ³ / ₄ in.)
Weight	Approx. 600 g (1.3 lbs.)

- Design and specifications are subject to change without notice.

FRA275HRJ MODEL

Power source	AC 110 – 120 V/220 – 240 V 50/60 Hz, selectable
Output	280 mW (EIAJ)
Power consumption	4 W
Speaker	57 mm, 8 ohms
Frequency range	FM: 87.5 – 108 MHz AM: 530 – 1,605 kHz
Antennas	FM wire antenna Ferrite bar antenna for AM
Maximum outside dimensions (W × H × D)	136.5 × 112.5 × 120.5 mm
Weight	Approx. 620 g

- Design and specifications are subject to change without notice.

FRA275K, EZ MODEL

Power source	AC 230 V, 50 Hz
Output	280 mW (EIAJ)
Power consumption	4 W
Speaker	57 mm, 8 ohms
Frequency range	FM: 87.5 – 108 MHz AM: 530 – 1,605 kHz
Antennas	FM wire antenna Ferrite bar antenna for AM
Maximum outside dimensions (W × H × D)	136.5 × 112.5 × 120.5 mm
Weight	Approx. 620 g

- Design and specifications are subject to change without notice.

ELECTRICAL MAIN PARTS LIST-1/2

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC				C33	87-010-391-010		CAP,E 10-35 M SM
	87-A21-200-010	IC LM8562	<EXCEPT A270 UHC,A270 EZLC,A270 EZHC>	C36	87-012-348-080		CAP,CER 0.1-50 F
	87-A21-201-010	IC,LM8560N	<A270 UHC,A270 EZLC,A270 EZHC>	C37	87-A10-576-080		CAP,CER 0.01-50 Z YF
	8B-RUA-611-010	IC,KA22426D					<A270 UHC,A270 EZLC,A270 EZHC>
TRANSISTOR				C37	87-012-348-080		CAP,CER 0.1-50 F
	89-318-155-010	TR,2SC1815GR					<EXCEPT A270 UHC,A270 EZLC,A270 EZHC>
	89-110-155-080	TR,1015GR		C38	87-012-348-080		CAP,CER 0.1-50 F
DIODE				C39	87-A10-576-080		CAP,CER 0.01-50 Z YF
	87-070-345-080	DIODE,IN4148					<A270 UHC,A270 EZLC,A270 EZHC>
	87-A40-398-080	DIODE,IN4001		C43	87-A10-576-080		CAP,CER 0.01-50 Z YF
MAIN C.B							<A275 UHC,A275 EZHC>
C4	87-010-196-080	C-CAP,S 0.1-25 Z F C2012		C43	87-012-372-080		CAP,CER 1000P-2K<A275 KHC,A275 HRJLC>
C5	87-A11-827-080	CAP,CER 22P-50 J RH		C44	87-010-545-010		CAP,E 0.22-50 M SME
C7	87-A11-075-080	CAP,TC U 27P-50 C CH<A275 UHC,A270 UHC>					<EXCEPT A270 UHC,A270 EZLC,A270 EZHC>
C8	87-A10-292-080	CAP,M 5600P-50 J		C45	87-012-348-080		CAP,CER 0.1-50 F
		<EXCEPT A270 UHC,A270 EZLC,A270 EZHC>		CF1	87-A91-162-010		FLTR,PFS450A7
C8	87-A10-293-080	CAP,M 6800P-50 J		CF2	87-A90-991-010		FLTR,SFE10.7 MS239-A
		<A270 UHC,A270 EZLC,A270 EZHC>		CN1	8A-RUA-634-010		SOCKET,2P BATTERY
C10	87-012-348-080	CAP,CER 0.1-50 F		L1	8B-RUA-608-010		COIL,FM RF 3T5
		<EXCEPT A270 UHC,A270 EZLC,A270 EZHC>		L2	8B-RUA-608-010		COIL,FM RF 3T5
C10	87-012-372-080	CAP,CER 1000P-2K		L3	8B-RUA-607-010		COIL,FM OSC 2T5
		<A270 UHC,A270 EZLC,A270 EZHC>		L5	8B-RUA-603-010		COIL,AM ANT
C11	87-A10-577-080	CAP,CER 0.022-50 Z YF		L6	8B-RUA-605-010		COIL,AM OSC
C12	87-010-401-010	CAP,E 1-50 M SME		L7	87-003-136-010		COIL,100UH K LAL04
C13	87-010-377-010	CAP,E 3300-10 M SME		LD1	8B-RUA-602-010		LED,DISPLAY0.9 INCH 12H GREEN
C14	87-012-348-080	CAP,CER 0.1-50 F					<A275 UHC,A275 HRJLC,A270 UHC>
C15	87-010-404-010	CAP,E 4.7-50 M SME		LD1	8B-RUA-622-010		LED,DISPLAY0.9 INCH 24H GREEN
		<A270 UHC,A270 EZLC,A270 EZHC>					<EXCEPT A275 UHC,A275 HRJLC,A270 UHC>
C16	87-010-267-080	CAP,E 47-10 105 KM		LED1	8B-RUA-601-010		LED,DIA 3 RED
C18	87-010-391-010	CAP,E 10-35 M SME		LED2	8B-RUA-601-010		LED,DIA 3 RED
		<EXCEPT A270 UHC,A270 EZLC,A270 EZHC>					<EXCEPT A270 UHC,A270 EZLC,A270 EZHC>
C19	87-010-131-080	CAP,E 0.47-50 BP		△PT	8B-RUA-615-010		PT,EZ 230V W/AC CORD
C20	87-A10-576-080	CAP,CER 0.01-50 Z YF					<EXCEPT A275 UHC,A275 HRJLC,A270 UHC>
C22	87-012-348-080	CAP,CER 0.1-50 F		△PT	8B-RUA-616-010		PT,HL 115/230V W/O ACCORD<A275 HRJLC>
		<EXCEPT A270 UHC,A270 EZLC,A270 EZHC>					
C22	87-010-401-010	CAP,E 1-50 M SME		△PT	8B-RUA-614-010		PT,U 120V W/AC CORD<A275 UHC,A270 UHC>
		<A270 UHC,A270 EZLC,A270 EZHC>		PVC1	8B-RUA-621-010		TUN-CAP,20P-126P-126P TONG TAT
C23	87-A10-577-080	CAP,CER 0.022-50 Z YF					<EXCEPT A275 UHC,A270 UHC>
C25	87-012-348-080	CAP,CER 0.1-50 F		PVC1	8B-RUA-620-010		TUN-CAP,20P-160P-82P TONG TAT
		<EXCEPT A270 UHC,A270 EZLC,A270 EZHC>					<A275 UHC,A270 UHC>
C26	87-010-064-080	CAP,E 100-10		SW1	8B-RUA-610-010		SW,SLIDE 2P2T SK22F10G8
C27	87-A10-576-080	CAP,CER 0.01-50 Z YF		SW2	8B-RUA-625-010		SW,TACT TS-1150HV
C28	87-A10-576-080	CAP,CER 0.01-50 Z YF		SW3	8B-RUA-626-010		SW,TACT DOME8-TDWA-300
C29	87-A10-576-080	CAP,CER 0.01-50 Z YF		SW4	8B-RUA-626-010		SW,TACT DOME8-TDWA-300
C30	87-012-348-080	CAP,CER 0.1-50 F		SW5	8B-RUA-626-010		SW,TACT DOME8-TDWA-300
		<EXCEPT A270 UHC,A270 EZLC,A270 EZHC>		SW6	8B-RUA-626-010		SW,TACT DOME8-TDWA-300
C31	87-010-377-010	CAP,E 3300-10 M SME		SW7	8B-RUA-626-010		SW,TACT DOME8-TDWA-300
C32	87-010-101-080	CAP, ELECT 220-16		SW8	8B-RUA-612-010		SW,SLIDE 2P4T SK24D01G8
				SW9	8B-RUA-611-010		SW,SLIDE 4P3T SK43D03G6
							<A270 UHC,A270 EZLC,A270 EZHC>
				△SW10	8B-RUA-623-010		SW,SL SS-12F16G4<A275 HRJLC>
				SW11	8B-RUA-624-010		SW,SL SS-12J01<A275 HRJLC>
				T2	8B-RUA-604-010		COIL,IFT FM DES
				T3	8B-RUA-606-010		COIL,AM IFT 450
				VR1	8B-RUA-609-010		VR,RTRY 50K-BF-12NPD

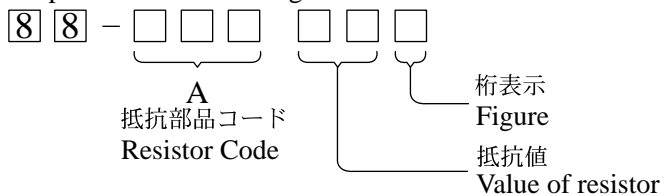
ELECTRICAL MAIN PARTS LIST-2/2

- Regarding connectors, they are not stocked as they are not the initial order items.
The connectors are available after they are supplied from connector manufacturers upon the order is received.

○チップ抵抗部品コード／CHIP RESISTOR PART CODE

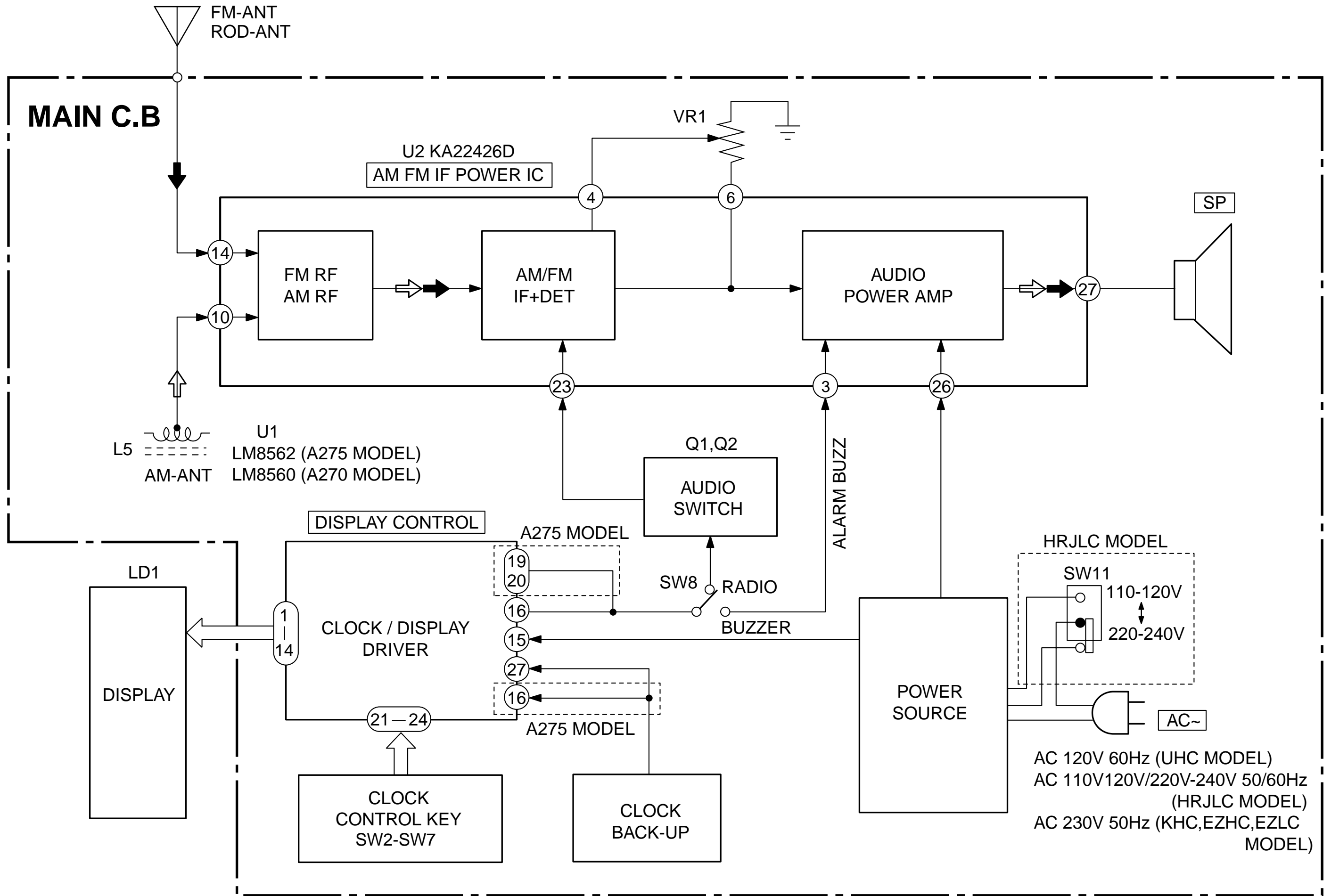
チップ抵抗部品コードの成り立ち

Chip Resistor Part Coding



チップ抵抗 Chip resistor

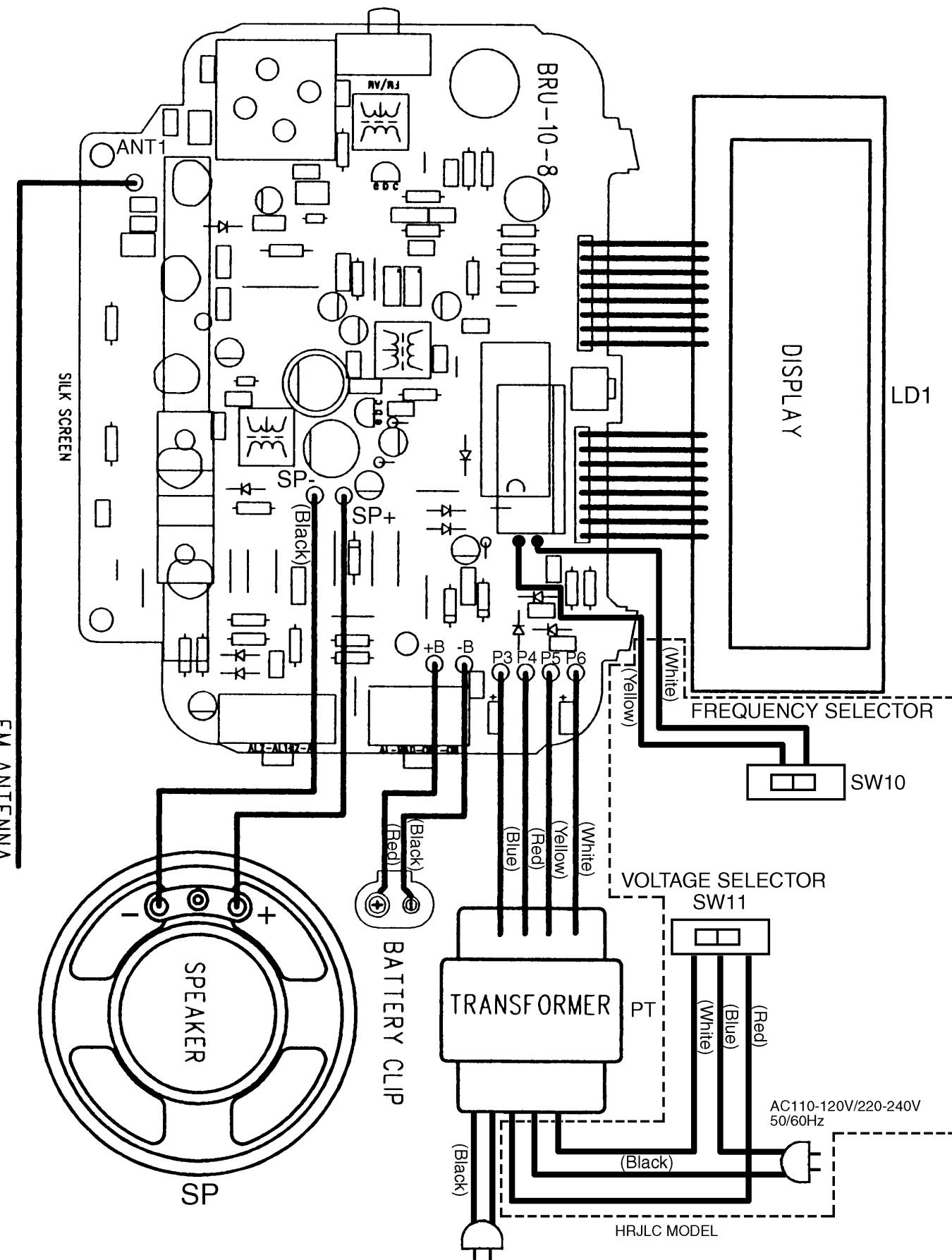
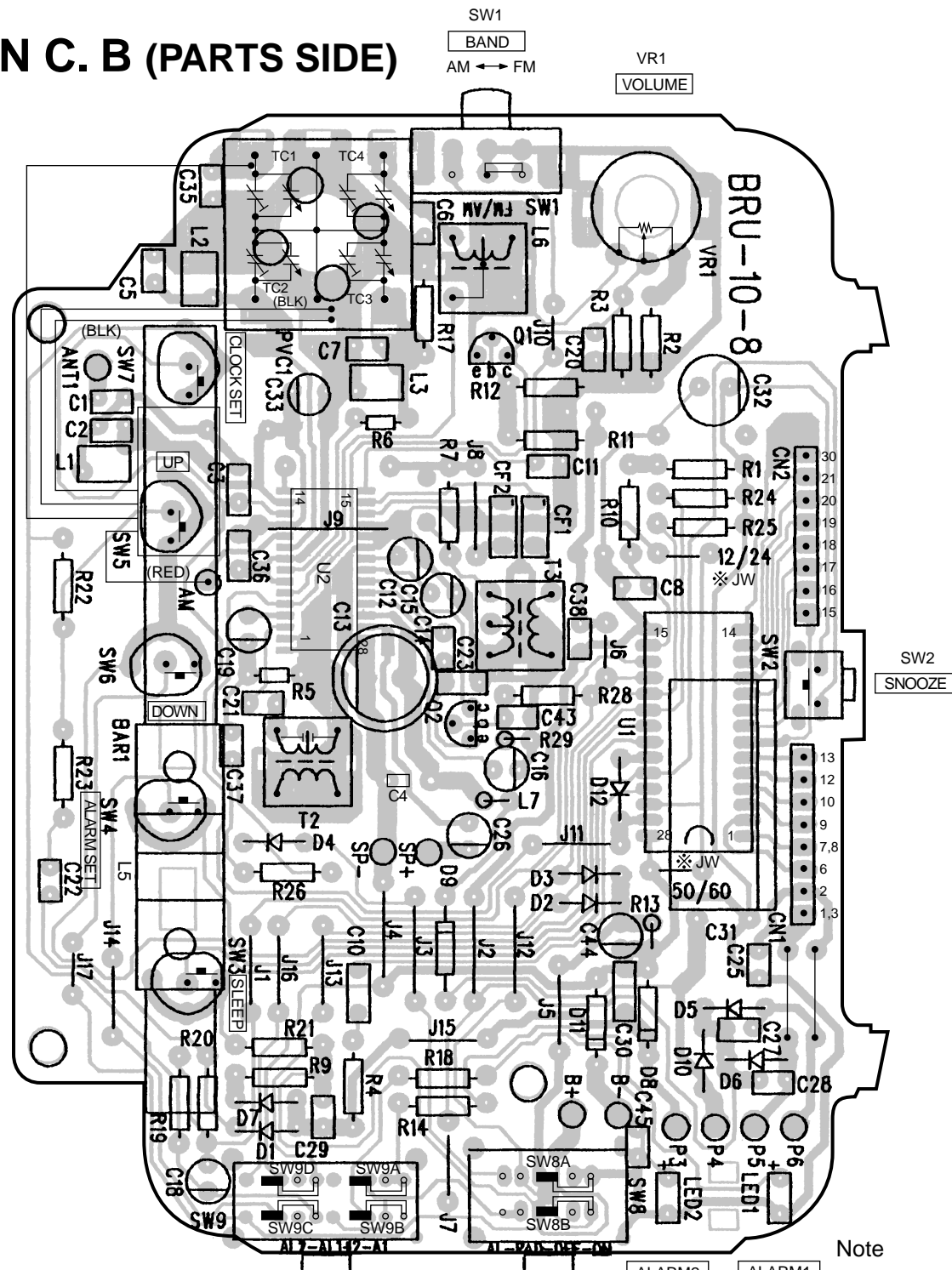
容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法/Dimensions (mm)			抵抗コード : A Resistor Code : A	
				外形/Form	L	W		t
1/16W	1005	± 5%	CJ		1.0	0.5	0.35	104
1/16W	1608	± 5%	CJ		1.6	0.8	0.45	108
1/10W	2125	± 5%	CJ		2	1.25	0.45	118
1/8W	3216	± 5%	CJ		3.2	1.6	0.55	128



SIGNAL FM → AM ⇄

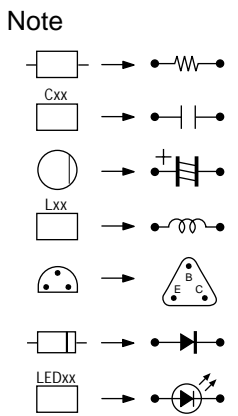
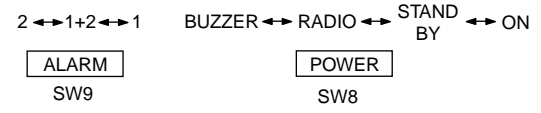
MAIN C. B (PARTS SIDE)

MAIN C.B (PARTS SIDE)



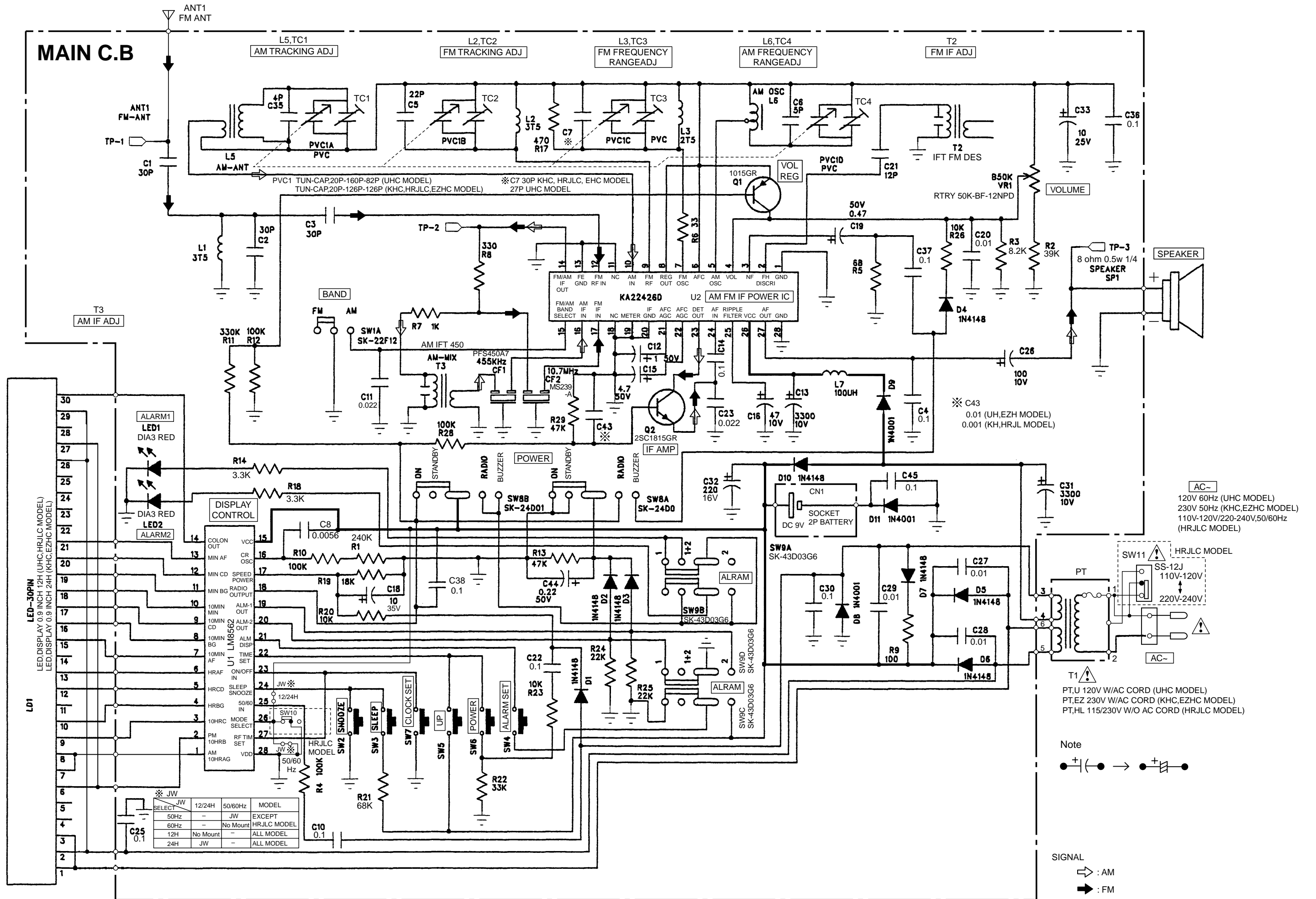
※ JW

SELECT	JW	12/24H	50/60Hz	MODEL
50Hz	-	JW	-	EXCEPT HRJLC MODEL
60Hz	-	No Mount	-	ALL MODEL
12H	No Mount	-	-	ALL MODEL
24H	JW	-	-	ALL MODEL

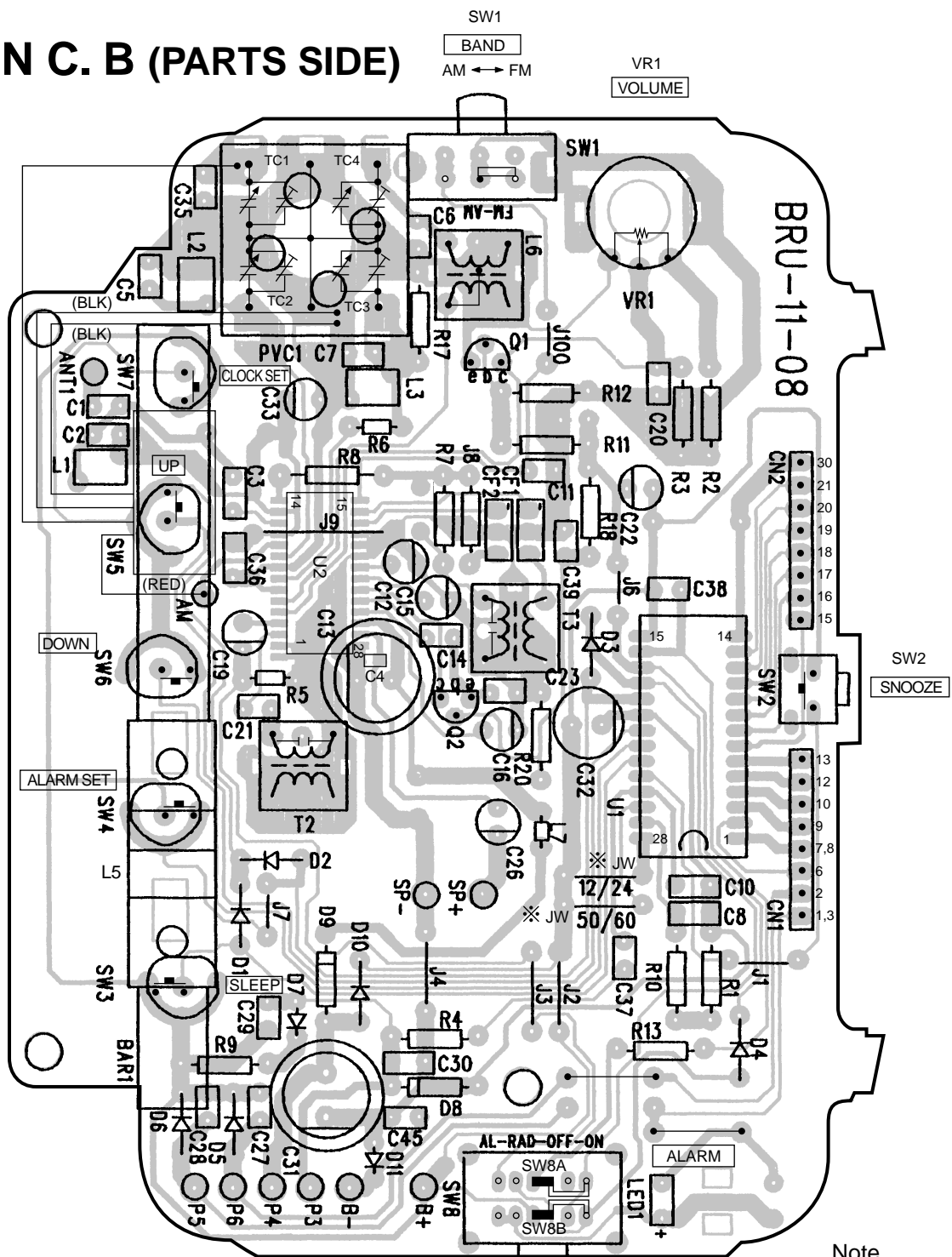


AC120V 60Hz (UHC MODEL)
AC230V 50Hz (KHC, EZHC, EZLC MODEL)

SCHEMATIC DIAGRAM-1/2 (A275 MODEL)

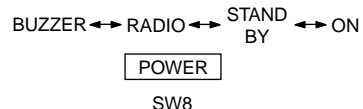


MAIN C. B (PARTS SIDE)

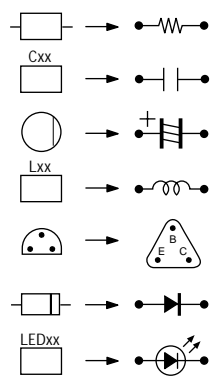


※ JW

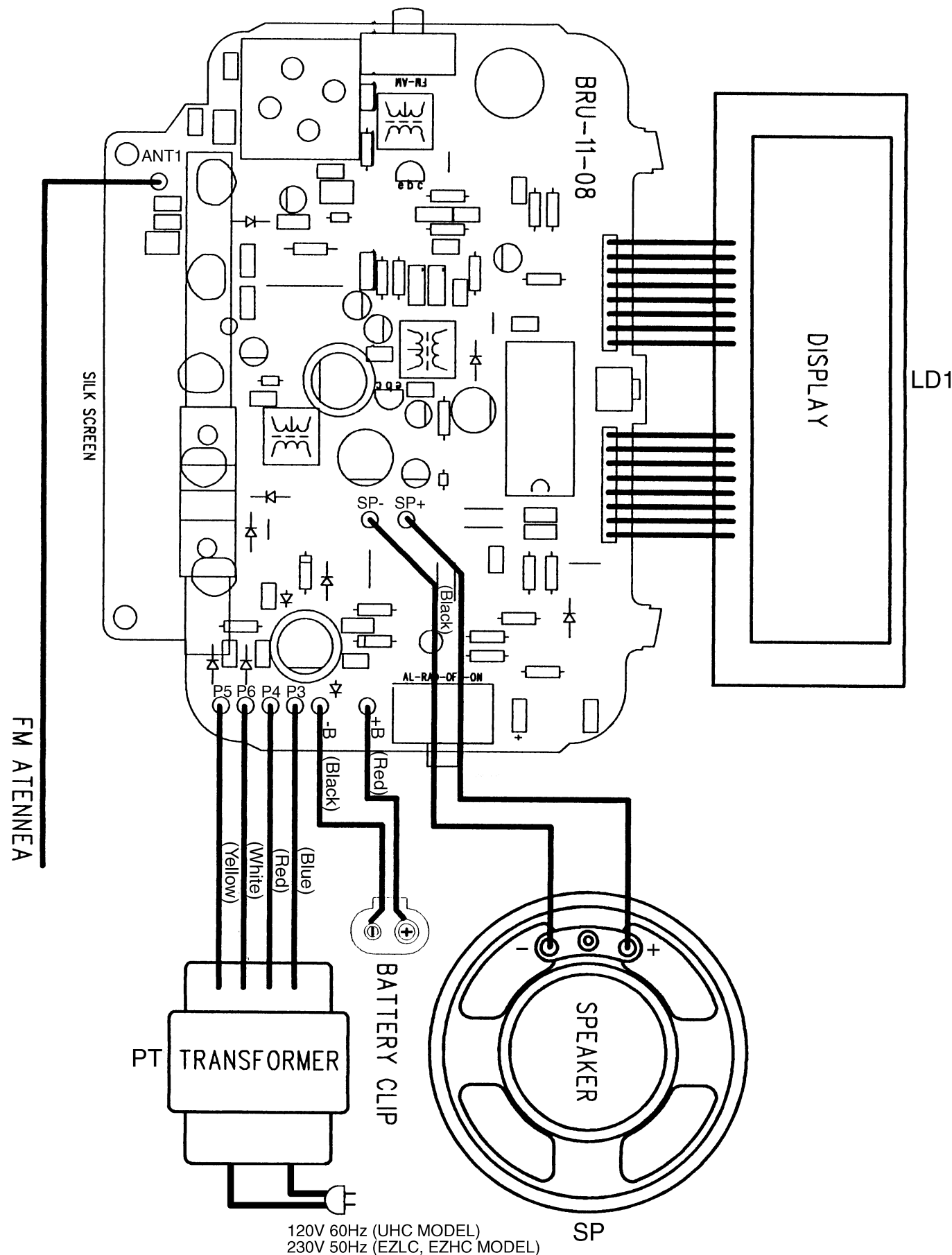
SELECT	JW	12/24	50/60
50Hz	-	-	JW
60Hz	-	-	No Mount
12H	No Mount	-	-
24H	JW	-	-



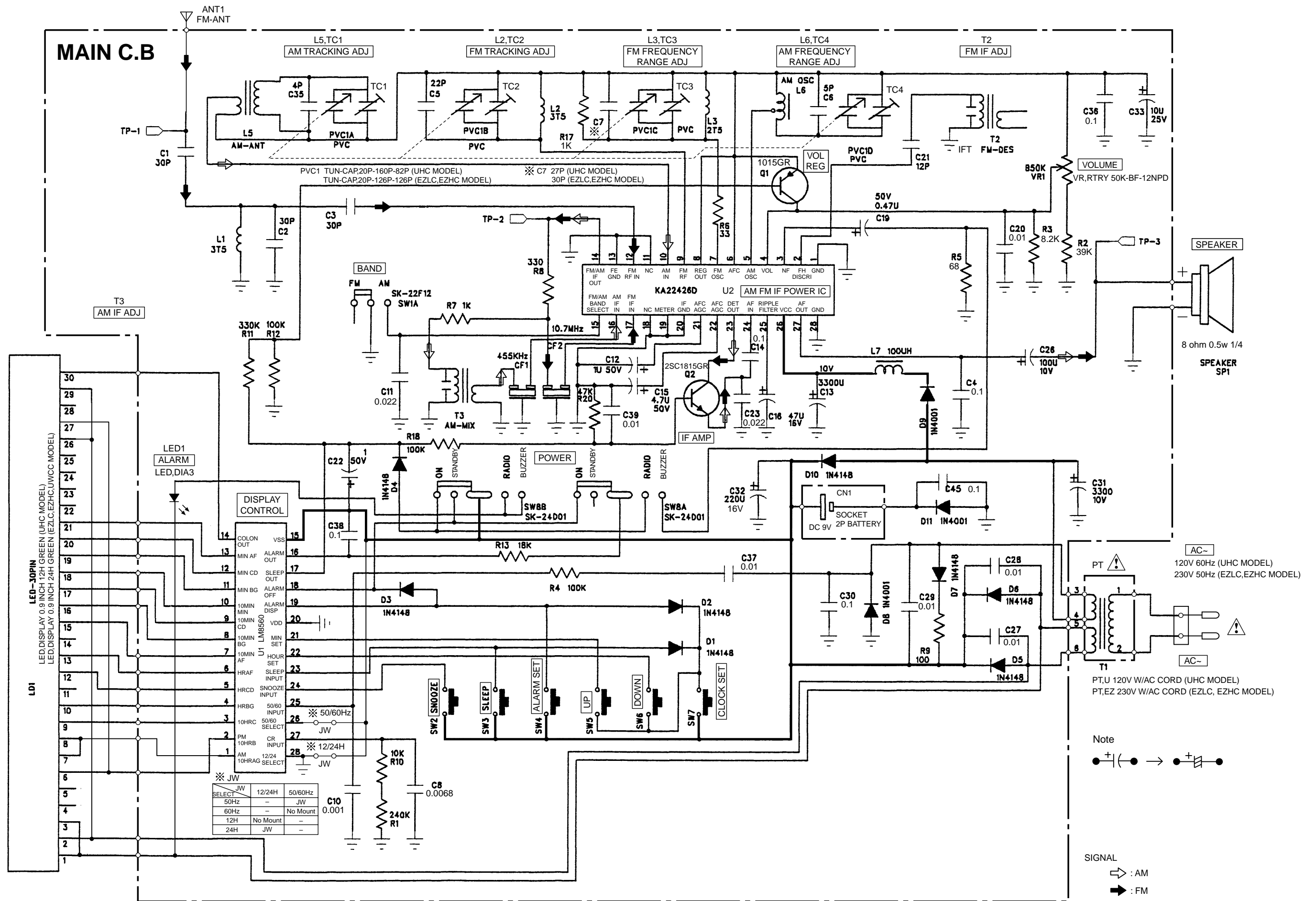
Note



MAIN C.B (PARTS SIDE)



120V 60Hz (UHC MODEL)
230V 50Hz (EZLC, EZHC MODEL)



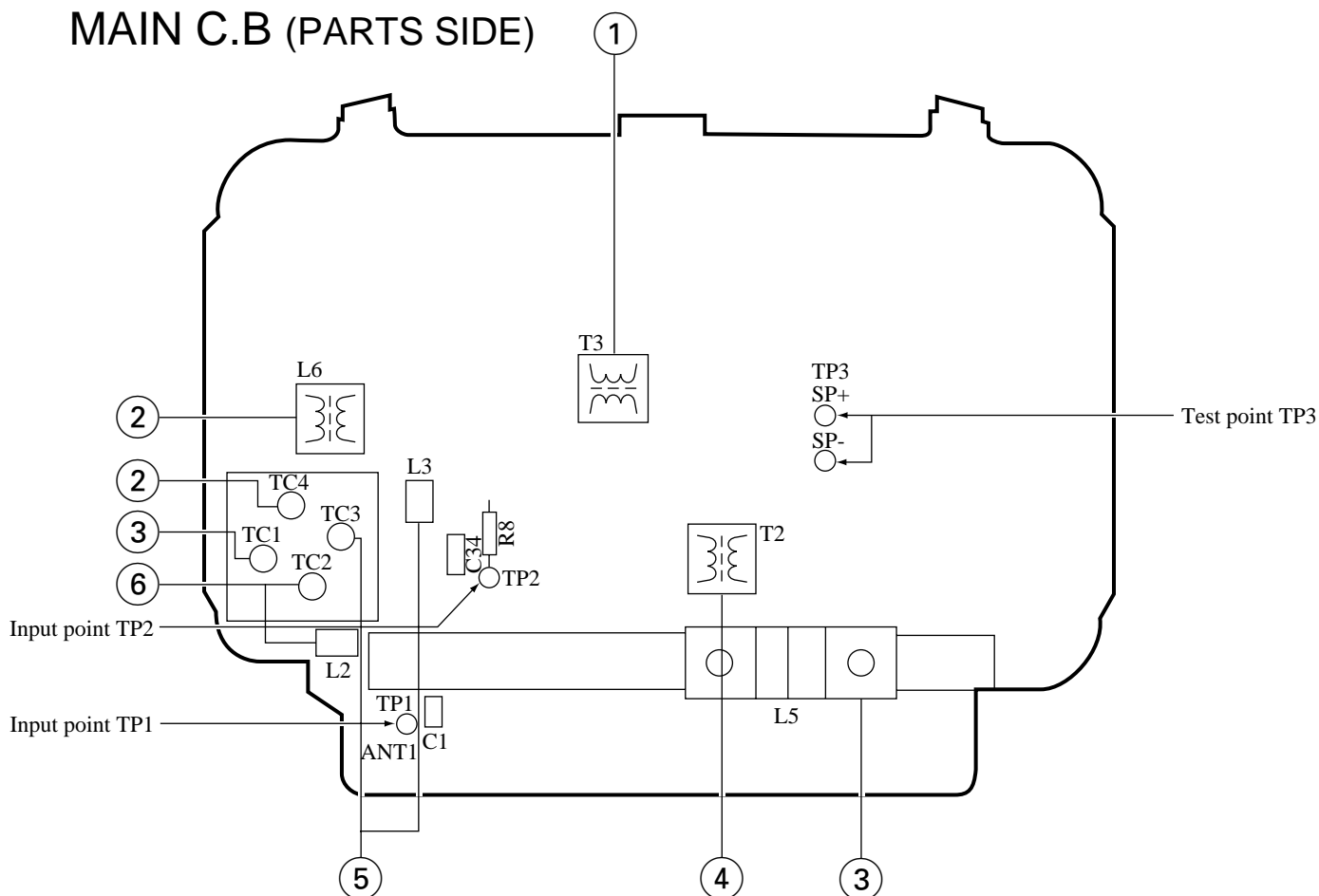


EBC

2SC1815GR

1015GR

MAIN C.B (PARTS SIDE)



< TUNER SECTION >

1. AM IF Adjustment
 - Settings: • Test point TP3
 - Adjustment location: T3

T3 450kHz
2. AM Frequency Range Adjustment
 - Settings: • Test point TP3
 - Adjustment location: L6, TC4

TC4 1635kHz (EXCEPT UHC MODEL)

TC4 1750kHz (UHC MODEL)

L6 515kHz
3. AM Tracking Adjustment
 - Settings: • Test point TP3
 - Adjustment location: TC1, L5

TC1 1400kHz (EXCEPT UHC MODEL)

TC1 1500kHz (UHC MODEL)

L5 600kHz
4. FM IF Adjustment
 - Settings: • Input point TP2
 - Test point TP3
 - Adjustment location: T2

T2 10.7MHz
5. FM Frequency Range Adjustment
 - Settings: • Input point TP1
 - Test point TP3
 - Adjustment location: TC3, L3

TC3 109MHz (EXCEPT EZHC MODEL)

TC3 108.3MHz (EZHC MODEL)

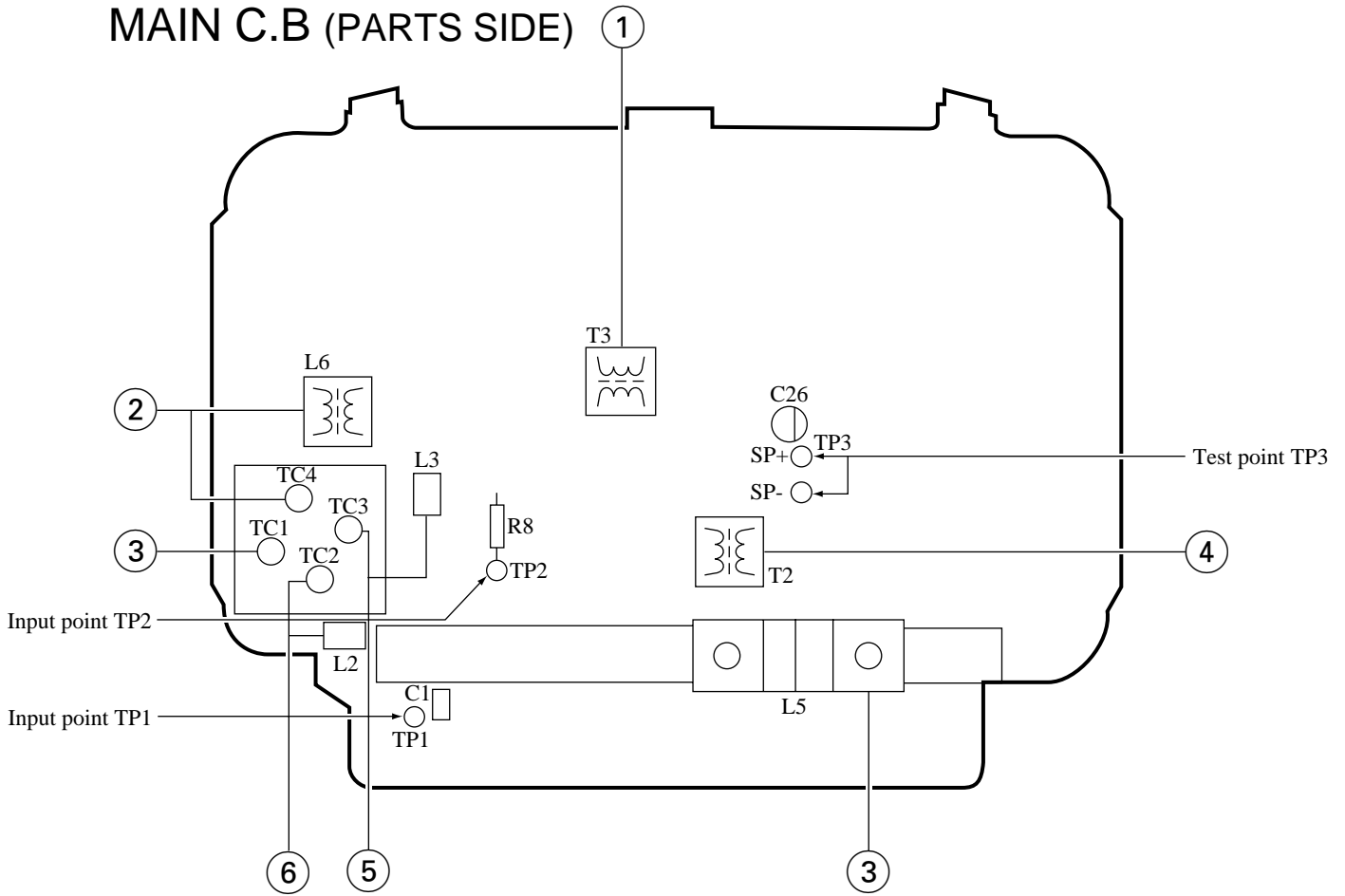
L3 87MHz (EXCEPT EZHC MODEL)

L3 87.4MHz (EZHC MODEL)
6. FM Tracking Adjustment
 - Settings: • Input point TP1
 - Test point TP3
 - Adjustment location: TC2, L2

TC2 106MHz

L2 90 MHz

MAIN C.B (PARTS SIDE) ①



< TUNER SECTION >

1. AM IF Adjustment

- Settings: • Test point TP3
- Adjustment location: T3

T3 450kHz

2. AM Frequency Range Adjustment

- Settings: • Test point TP3
- Adjustment location: TC4, L6

TC4 1635kHz (EXCEPT UHC MODEL)

TC4 1750kHz (UHC MODEL)

L6 515kHz

3. AM Tracking Adjustment

- Settings: • Test point TP3
- Adjustment location: TC1, L5

TC1 1400kHz (EXCEPT UHC MODEL)

TC1 1500kHz (UHC MODEL)

L5 600kHz

4. FM IF Adjustment

- Settings: • Input point TP2
- Test point TP3
- Adjustment location: T2

T2 10.7MHz

5. FM Frequency Range Adjustment

- Settings: • Input point TP1
- Test point TP3
- Adjustment location: TC3, L3

TC3 109MHz (UHC MODEL)

TC3 108.3MHz (EZLC, EZHC MODEL)

L3 87MHz (UHC MODEL)

L3 87.4MHz (EZLC, EZHC MODEL)

6. FM Tracking Adjustment

- Settings: • Input point TP1
- Test point TP3
- Adjustment location: TC2, L2

TC2 106MHz

L2 90MHz

IC & TRANSISTOR DC VOLTAGE

U1 LM8560N (A270MODEL)

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
VOLT.	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC

PIN NO.	15	16	17	18	19	20	21	22	23	24	25	26	27	28
VOLT.	10.5	10.5	5.2	0.1	0	0	3	3	3	3	1.2	10.5	4	0

U1 LM8562 (A275MODEL)

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
VOLT.	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC

PIN NO.	15	16	17	18	19	20	21	22	23	24	25	26	27	28
VOLT.	10	9.8	0	0	0	0	0	0	0	0	0.6	0	7.4	0

U2 KA22426D (ALL MODEL)

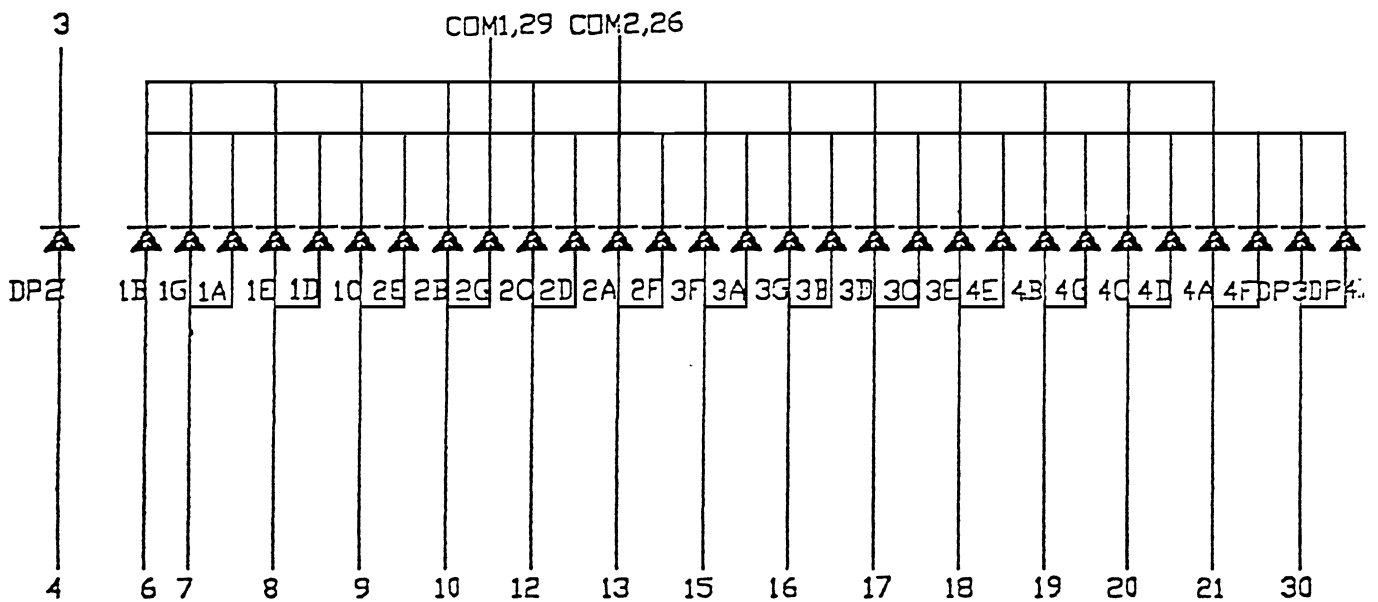
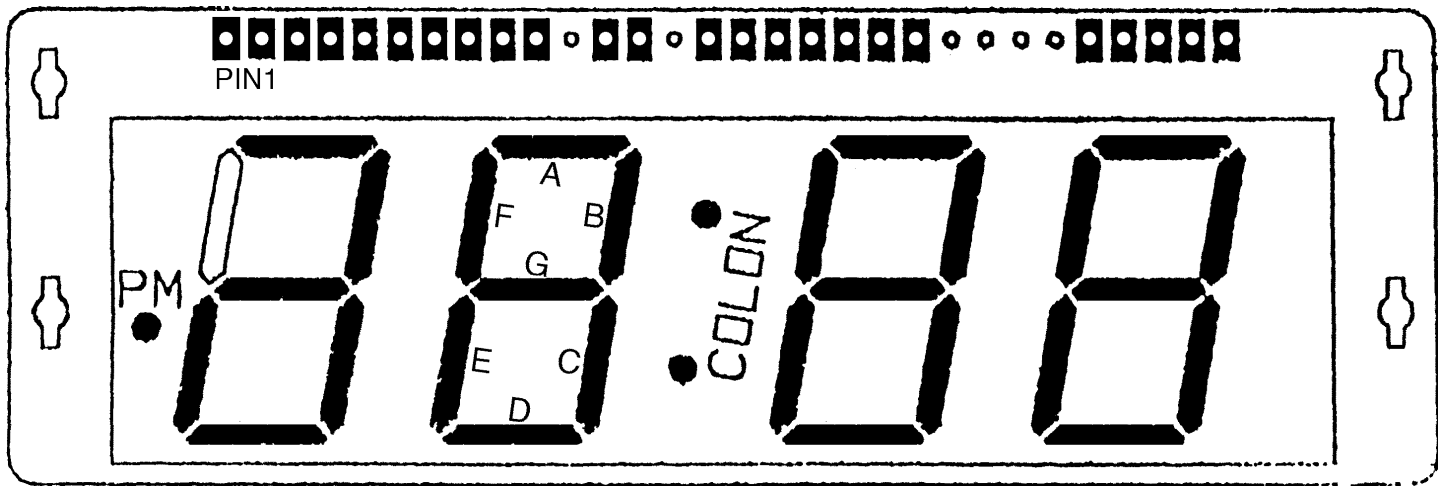
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
AM	0	5.7	3.1	1.2	1.25	1.25	1.25	1.25	1.25	1.25	0	0	0	0.05
FM	0	5.2	3.1	1.2	1.25	1.25	1.25	1.25	1.25	1.25	0	0.65	0	0.8

PIN NO.	15	16	17	18	19	20	21	22	23	24	25	26	27	28
AM	0	0	0	0	0	0	1	0.8	1.1	0	5.4	6.4	3.2	0
FM	1	0	1	0	0	0	0.8	1	1.1	0	5.3	6.2	3.1	0

TRANSISTOR (ALL MODEL)

PIN NO.	E	B	C
Q1 (1015GR)	1.25	0.7	1.2
Q2 (2SC1815GR)	1.3	1.8	1.3

FL (LED, DISPLAY 0.9 INCH 12H/24H GREEN) GRID ASSIGNMENT/ANODE CONNECTION-1/1
 GRID ASSIGNMENT

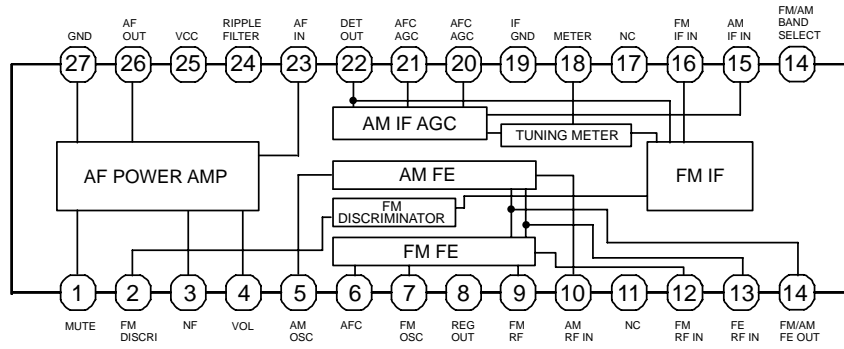


NC: 5,11,14,22,23,24,25,27,28

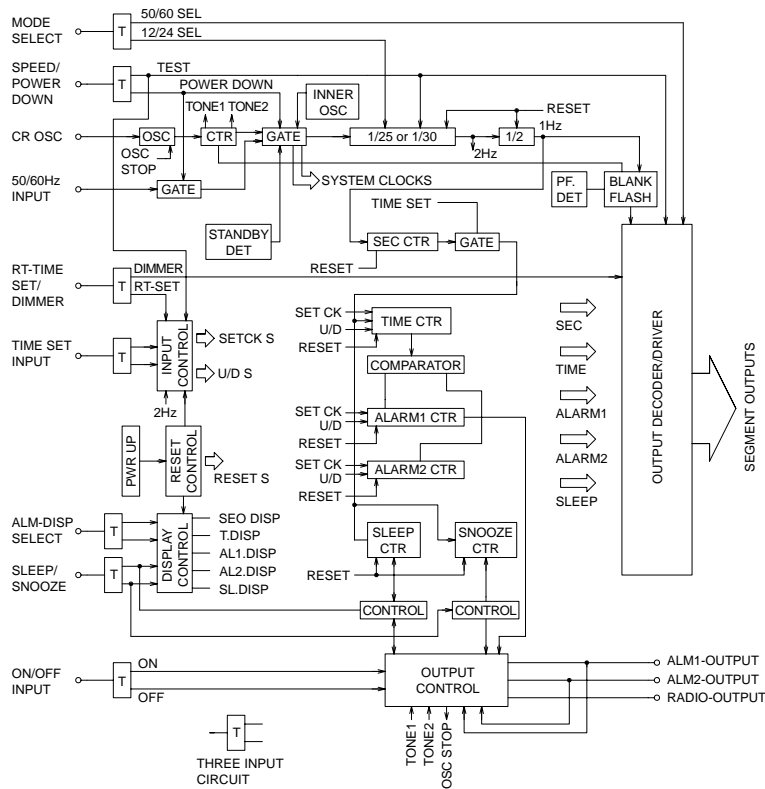
ANODE CONNECTION

PIN NO.	Command	PIN NO.	Command	PIN NO.	Command	PIN NO.	Command
COM1	Common Cathode	9	Anode 1C,2E	17	Anode 3C,3D	25	NC
COM2	Common Cathode	10	Anode 2B,2G	18	Anode 3E,4E	26	Common Cathode
3	Cathode PM	11	NC	19	Anode 4B,4G	27	NC
4	Anode PM	12	Anode 2C,2D	20	Anode 4C,4D	28	NC
5	NC	13	Anode 2A,2F	21	Anode 4A,4F	29	Common Cathode
6	Anode 1B	14	NC	22	NC	30	Anode COLON
7	Anode 1A,1G	15	Anode 3A,3F	23	NC		
8	Anode 1D,1E	16	Anode 3B,3G	24	NC		

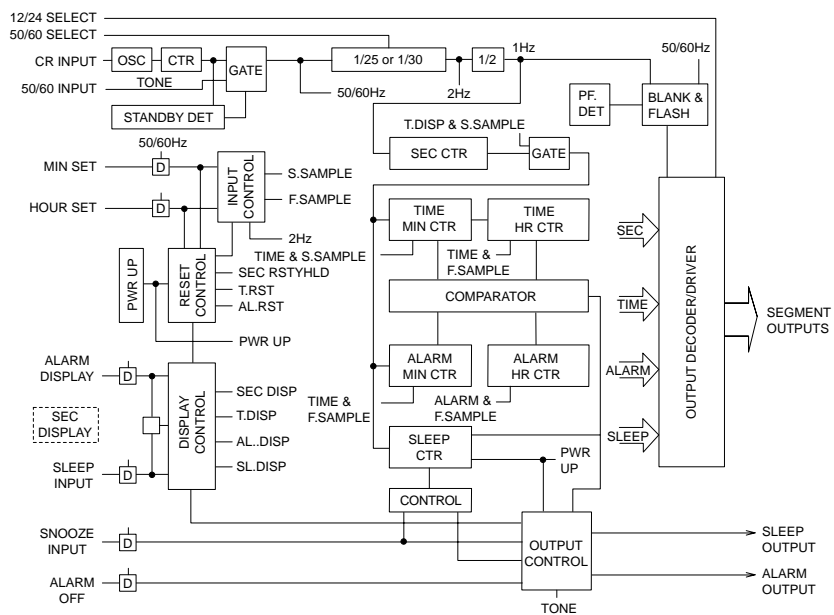
IC BLOCK DIAGRAM-1/1
IC, KA22426D

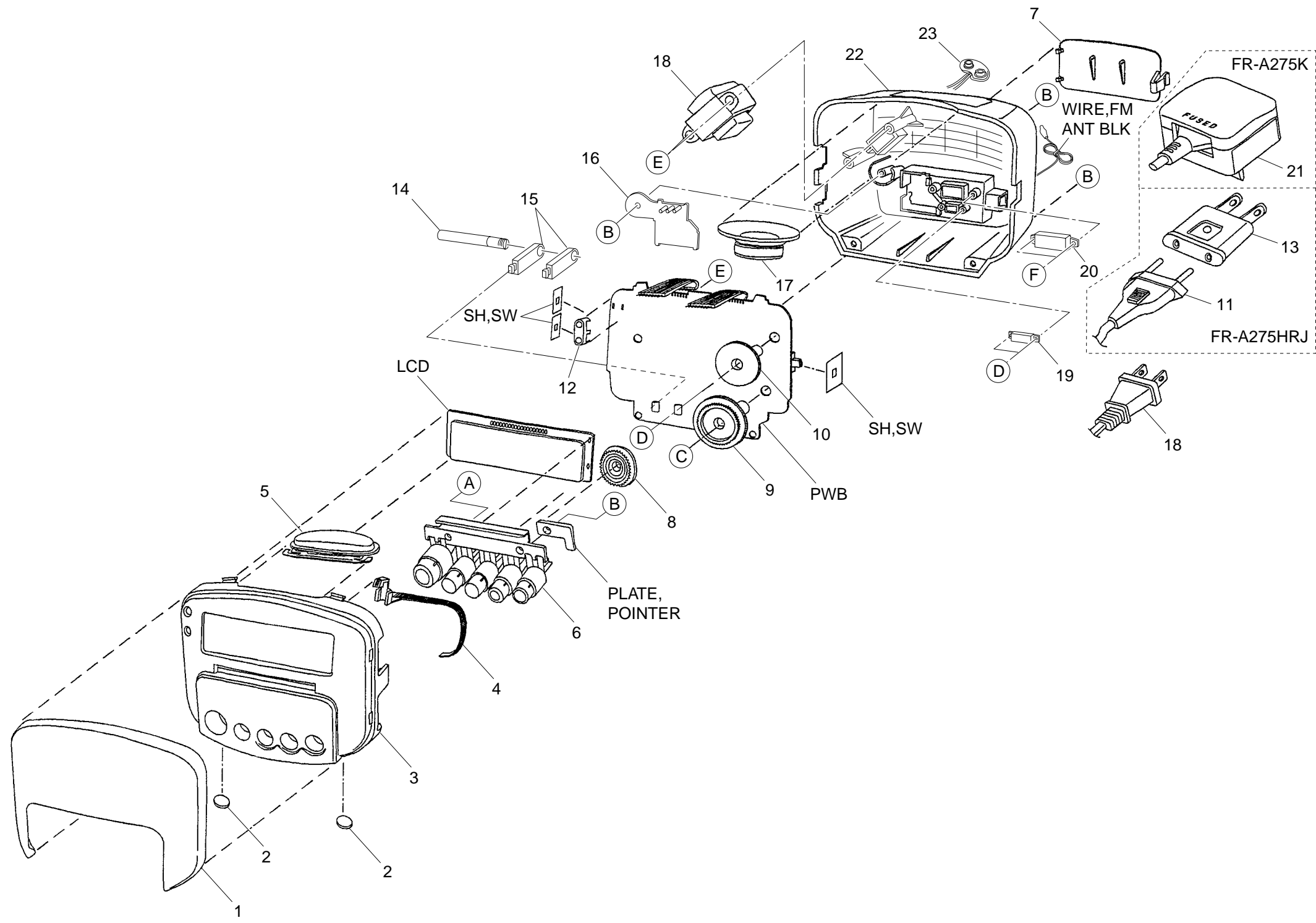


IC, LM8562



IC, LM8560N





MECHANICAL PARTS LIST-1/1

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8B-RUB-006-010		PANEL,FRONT EZ L<FR-A270 EZLC>	15	8B-RUA-101-010		HLDL,BER ANT
1	8B-RUB-005-010		PANEL,FRONT U H <FR-A270 UHC,FR-A270 EZHC>	16	8B-RUA-102-010		COVER, POWER CORD
1	8B-RUA-003-010		PANEL,FRONT U H <FR-A275 UHC,FR-A275 KHC,FR-A275 EZHC>	17	8B-RUA-613-010		SPKR,57 8OHM 0.5W
1	8B-RUA-051-010		WINDOW,FRONT HR L<FR-A275 HRJLC>	18	8B-RUA-615-010		PT,EZ 230V W/AC CORD <EXCEPT FR-A275 UHC,FR-A275 HRJLC, FR-A270 UHC>
2	8B-RUE-034-010		FOOT,RUBBER	18	8B-RUA-616-010		PT,HL 115/230V W/O ACCORD <FR-A275 HRJLC>
3	8B-RUA-041-010		CABI,FRONT EZ H<FR-A275 EZHC>	18	8B-RUA-614-010		PT,U 120V W/AC CORD <FR-A275 UHC,FR-A270 UHC>
3	8B-RUB-030-010		CABI,FRONT EZ H<FR-A270 EZHC>	19	8B-RUA-623-010		SW,SL SS-12F16G4
3	8B-RUA-042-010		CABI,FRONT HRJL<FR-A275 HRJLC>	20	8B-RUA-624-010		SW,SL SS-12J01
3	8B-RUA-039-010		CABI,FRONT K H<FR-A275 KHC>	21	87-099-811-010		PLUG,ADPTR CONV(K)<FR-A275 KHC>
3	8B-RUB-001-010		CABI,FRONT U H <FR-A270 UHC,FR-A270 EZLC>	22	8B-RUB-003-010		CABI,REAR EZ L <FR-A270 EZLC,FR-A270 EZHC>
3	8B-RUA-001-010		CABI,FRONT U H<FR-A275 UHC>	22	8B-RUA-043-010		CABI,REAR HRJL<FR-A275 HRJLC>
4	8B-RUA-013-010		POINTER,DIAL	22	8B-RUA-040-010		CABI,REAR K H<FR-A275 KHC>
5	8B-RUA-009-010		BTN,SNOOZE<EXCEPT FR-A270 UHC, FR-A270 EZLC,FR-A270 EZHC>	22	8B-RUA-002-010		CABI,REAR U H<FR-A275 UHC,FR-A275 EZHC>
5	8B-RUB-008-010		BTN,SNOOZE U H <FR-A270 UHC,FR-A270 EZLC,FR-A270 EZHC>	22	8B-RUB-002-010		CABI,REAR U H<FR-A270 UHC>
6	8B-RUA-054-010		BTN,FUNCTION	23	8A-RUA-634-010		SOCKET,2P BATTERY
7	8B-RUA-008-010		COVER,BATTERY	A	87-751-095-410		VT+2+3-8 W/O SLOT
8	8B-RUA-103-010		GEAR,DIAL	B	87-751-097-410		VT2+3-12 W/O SLOT
9	8B-RUA-011-010		KNOB,RTRY TUNING	C	87-751-073-410		VT+2+2.6-6 W/O SLOT
10	8B-RUA-010-010		KNOB,RTRY VOLUME	D	87-264-529-310		V+1.7-4
11	8A-RUA-644-010		CORD,AC POWERVDE KENIC<FR-A275 HRJLC>	E	87-751-095-410		VT2+3-8 W/O SLOT
12	8B-RUA-012-010		HLDL,LED	F	87-B10-368-010		V+2.6-5.5 W/O CR
13	87-A91-017-010		PLUG,CONVERSION JT-0476<FR-A275 HRJLC>				
14	8B-RUA-603-010		COIL,AM ANT				

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange	GM	Metallic Green
YM	Metallic Yellow	DM	Metallic Orange	PT	Transparent Pink
LA	Aqua Blue	GL	Light Green		

アイワ株式会社 〒110-8710 東京都台東区池之端1-2-11 ☎03(3827)3111 (代表)
AIWA CO.,LTD. 2-11, IKENOHATA 1-CHOME, TAITO-KU, TOKYO 110-8710, JAPAN TEL:03 (3827) 3111