

# SERVICE MANUAL

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STEREO RADIO RECEIVER

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This Service Manual is the "Revision Publishing" and replaces "Simple Manual"  
CR-LA15(YZ)(S/MCode 09-025-360-5T1).

**aiwa**

S/M Code No. 09-025-360-5R1

REVISION

DATA

## SPECIFICATIONS -1/1

<b>Frequency range</b>	FM: 87.5 ~108 MHz
<b>Maximum output</b>	4 mW + 4 mW (EIAJ 32 ohms)
<b>Power source</b>	DC 1.5 V using an R03 (size AAA) battery
<b>Output</b>	Headphones jack (Stereo mini jack)
<b>Maximum dimensions</b>	35.6 (W) × 70.6 (H) × 14.5 (D) mm (excluding projecting parts and controls)
<b>Weight</b>	Approx. 25 g (excluding battery)

- Design and specifications are subject to change without notice.

# ACCESSORIES PARTS LIST -1/1

! = SAFETY PARTS

C = Components marked

All components used on this model at the production line are shown in this service manual.

However, please note that not all components will be available as spare parts for after-sales service.

Components marked S and O are designated as spare parts for service and will be stocked at the spare parts centers.

Components marked X and R are not designated as spare parts for after sales service, and will not be stocked at the spare parts centers.

UNIT-NAME	! C	REF-NO	PARTS-NO	PARTS-NAME	SUFFIX&MODEL
					CR-LA15
					YZ1SC
	O	AS1001	8C-RL8-905-010	IB,YZ(EGFSID)GHC CR-LA15	a
	O	AS1002	8C-RL8-906-010	IB,YZ(PHC)GHC CR-LA15	a
	X	AS1003	87-B50-078-010	LIST,FACILITY(S)-0007	a

# ELECTRICAL PARTS LIST -1/2

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 C = Components marked

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UNIT-NAME	! C	REF-NO	PARTS-NO	PARTS-NAME	SUFFIX&MODEL
					CR-LA15 YZ1SC
	O	BPF0001	S4-110-011-100	BAND PASS FILTER GFMB7	a
	X C	0001	S8-055-200-532	C-CAP,20P-50	a
	X C	0002	S8-055-180-532	C-CAP,18P-50	a
	X C	0003	S8-056-390-500	C-CAP,39P-50	a
	X C	0004	S8-036-103-500	C-CAP,S 0.01-16	a
	X C	0005	S8-054-030-532	C-CAP,3P-50	a
	X C	0006	S8-036-103-500	C-CAP,S 0.01-16	a
	O C	0007	87-A10-801-080	C-CAP,S 0.022-16	a
	X C	0008	S8-020-474-529	C-CAP,0.47-10	a
	X C	0009	S8-056-561-500	C-CAP,560P-50	a
	O C	0010	87-010-073-080	CAP,E 3.3-50 4X5MM	a
	X C	0011	S8-020-474-529	C-CAP,0.47-10	a
	X C	0012	S8-030-104-500	C-CAP,0.1-16	a
	X C	0013	S8-030-104-500	C-CAP,0.1-16	a
	X C	0014	S8-056-821-500	C-CAP,820P-50	a
	X C	0015	S8-030-104-500	C-CAP,0.1-16	a
	X C	0016	S8-036-473-500	C-CAP,0.047-16	a
	X C	0017	S8-056-153-500	C-CAP,0.015-50	a
	X C	0018	S8-056-153-500	C-CAP,0.015-50	a
	X C	0020	S8-036-683-549	C-CAP,0.068-16	a
					CR-LA15 YZ1SC
	X C	0021	S8-036-683-549	C-CAP,0.068-16	a
	O C	0022	87-015-994-080	CAP,E 220-4 4V 6.3x5MM	a
	O C	0023	87-A10-801-080	C-CAP,S 0.022-16	a
	X C	0025	S8-036-473-500	C-CAP,0.047-16	a
	X C	0026	S8-036-473-500	C-CAP,0.047-16	a
	X C	0027	S8-020-474-529	C-CAP,0.47-10	a
	X C	0028	S8-020-474-529	C-CAP,0.47-10	a
	X C	0029	S8-056-222-500	C-CAP,2200P-50	a
	X C	0030	S8-056-222-500	C-CAP,2200P-50	a
	X C	0031	S8-020-474-529	C-CAP,0.47-10	a
	X C	0032	S8-020-474-529	C-CAP,0.47-10	a
	O C	0033	87-010-587-010	CAP,E 100-2	a
	O C	0034	87-010-587-010	CAP,E 100-2	a
	O C	0036	87-010-587-010	CAP,E 100-2	a
	O C	0037	87-010-587-010	CAP,E 100-2	a
	O C	0040	87-A10-801-080	C-CAP,S 0.022-16	a
	O CF	0002	S2-310-012-400	CERAMIC FILTER 10.7MHZ MA5C10	a
	O CF	0003	S2-310-010-800	DISCRMINATOR FILTER CDA 10.7	a
	S IC	0001	87-001-815-080	IC,TA7371AF	a
	S IC	0002	87-A20-076-040	IC,TA2022AFN	a
					CR-LA15 YZ1SC
	S IC	0003	87-A21-126-040	IC,NJM2096M	a
	O JK	0001	S1-210-012-900	JACK,SP ST35MM	a
	O L	0001	8A-RCE-604-010	FM SPRING COIL DIA2.5x6.5Tx0.	a
	O L	0002	S0-002-061-000	FM SPRING COIL 2x6.5x0.5MM AC	a
	O L	0003	S4-010-010-803	C-COIL,1UH	a
	O L	0004	S4-010-010-803	C-COIL,1UH	a
	O L	0005	87-003-245-080	C-COIL,22UH	a
	O L	0006	S4-010-010-803	C-COIL,1UH	a
	O PVC	0001	S2-010-014-100	FM PVC F28-A14214-1	a
	S Q	0001	89-327-143-080	C-TR, 2SC27140	a
	S Q	0002	87-A30-314-040	C-TR BC847C	a
	S Q	0003	87-A30-314-040	C-TR BC847C	a
	S Q	0004	89-115-865-080	C-TR, 2SA1586G	a
	S Q	0005	89-115-865-080	C-TR, 2SA1586G	a
	X R	0002	88-118-222-080	C-RES,2.2K-1/10W	a
	O R	0003	88-118-153-080	C-RES,15K-1/10W	a
	O R	0004	88-118-331-080	C-RES,330-1/10W	a
	O R	0005	88-118-224-080	C-RES,220K-1/10W	a
	O R	0006	88-118-224-080	C-RES,220K-1/10W	a
	O R	0007	88-118-123-080	C-RES,12K-1/10W	a
					CR-LA15 YZ1SC
	O R	0008	88-118-223-080	C-RES,22K-1/10W	a
	O R	0009	88-118-153-080	C-RES,15K-1/10W	a
	O R	0010	88-118-472-080	C-RES,4.7K-1/10W	a
	O R	0011	88-118-332-080	C-RES,3.3K-1/10W	a
	X R	0012	88-118-222-080	C-RES,2.2K-1/10W	a
	X R	0013	88-118-222-080	C-RES,2.2K-1/10W	a
	X R	0014	88-118-392-080	C-RES,3.9K-1/10W	a
	X R	0015	88-118-392-080	C-RES,3.9K-1/10W	a
	X R	0017	88-118-229-080	C-RES,2.2-1/10W	a
	X R	0018	88-118-229-080	C-RES,2.2-1/10W	a
	O R	0019	88-118-120-080	C-RES,12-1/10W	a
	O R	0020	88-118-120-080	C-RES,12-1/10W	a
	X R	0021	88-118-470-080	C-RES,47-1/10W	a
	O SW	0001	S3-110-019-701	SW,SL 2P2T SKY-22D01-G2-OA-T2	a
	O SW	0002	S3-110-019-801	SW,SL SKY-23D01-G2-OA-T2	a
	O T	0001	S3-010-012-602	FM IFT 5x5x6MM MT243-1135	a
	O TC	0001	S4-010-011-800	CERAMIC TRIMER T2Bx4Z100 AB11	a
	O TC	0002	S4-010-011-800	CERAMIC TRIMER T2Bx4Z100 AB11	a
	O VR	0001	S1-050-311-400	VOLUME,DIA=14MM XV010702GP	a
	O VR	0002	87-A92-075-080	C-SFR,15K POZ3AN-1-153N	a

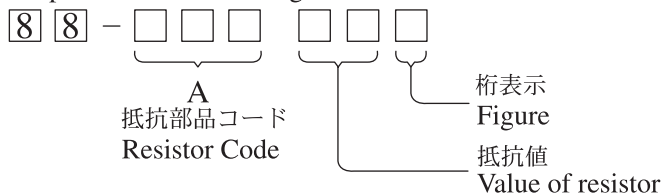
# ELECTRICAL PARTS LIST -2/2

- 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

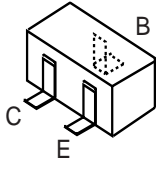
Chip Resistor Part Coding



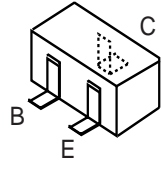
チップ抵抗  
Chip resistor

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

# TRANSISTOR ILLUSTRATION -1/1

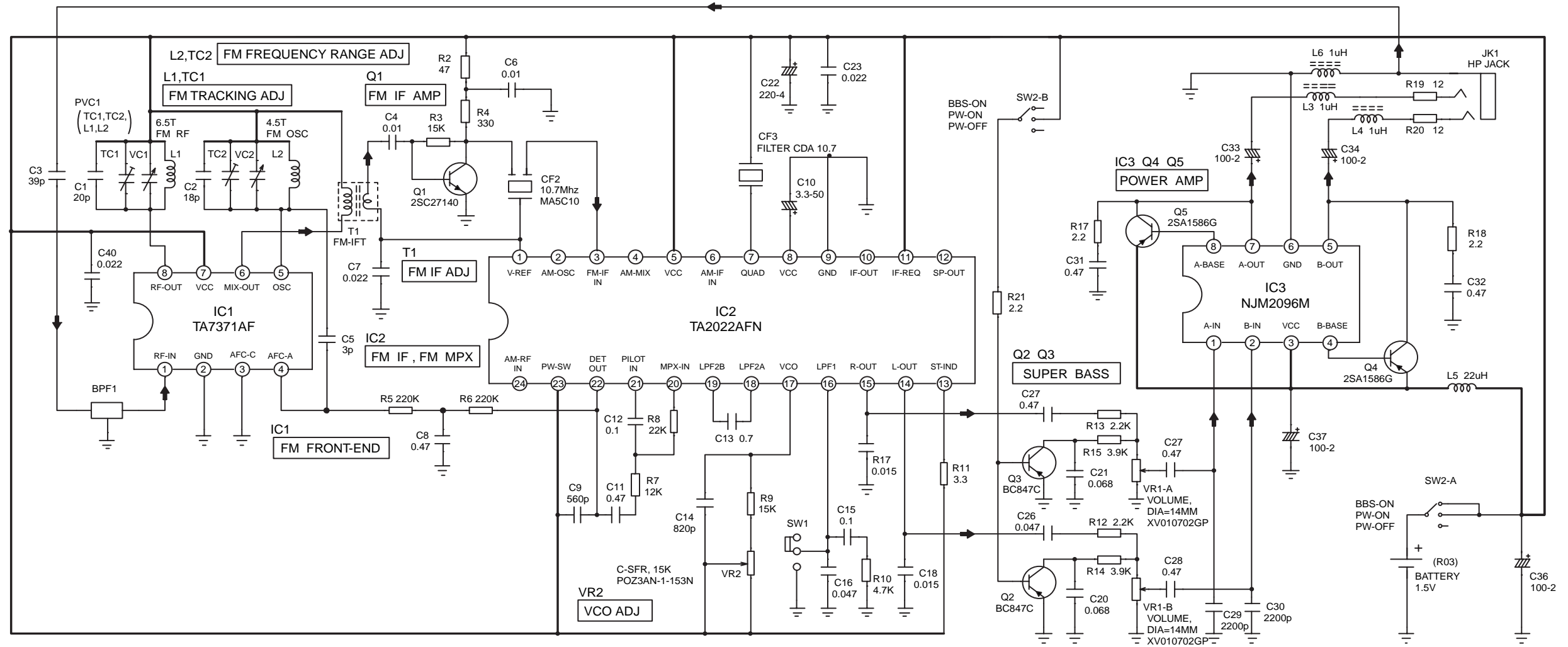


2SC27140  
BC847C



2SA1586G

# MAIN C.B



## VOLTAGE CHART

IC2 (TA2022AFN)

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12
FM	0.8	1.36	0.9	-	1.36	1.36	1.36	-	0	-	1.36	-

PIN NO.	13	14	15	16	17	18	19	20	21	22	23	24
FM	-	0.55	0.55	-	1.26	-	-	0.1	0.1	0.1	1.36	0

IC1 (TA7371AF)

PIN NO.	1	2	3	4	5	6	7	8
FM	0.7	0	0	0.8	1.36	1.36	1.36	1.36

IC3 (NJM2096M)

PIN NO.	1	2	3	4	5	6	7	8
ON	0	0	1.48	0.8	0.7	0	0.7	0.85

Q4,5 (2SA1586G)

	E	C	B
ON	1.48	0.7	0.8

Q1 (2SC27140)

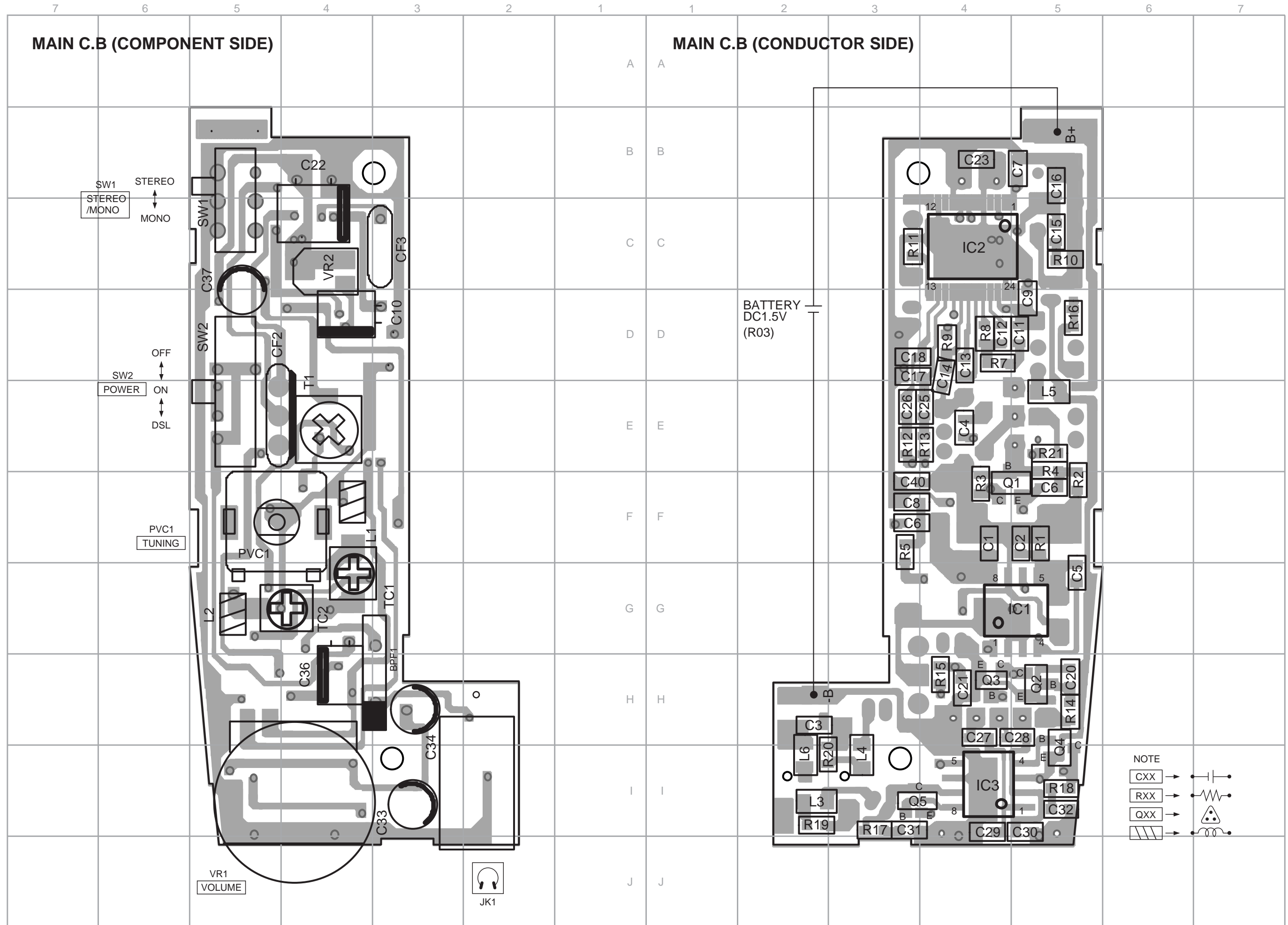
	E	C	B
FM	0	0.9	0.7

Q2,3 (BC847C)

	E	C	B
BASS OFF	0	0	0.64
BASS ON	0	0	0

SIGNAL :

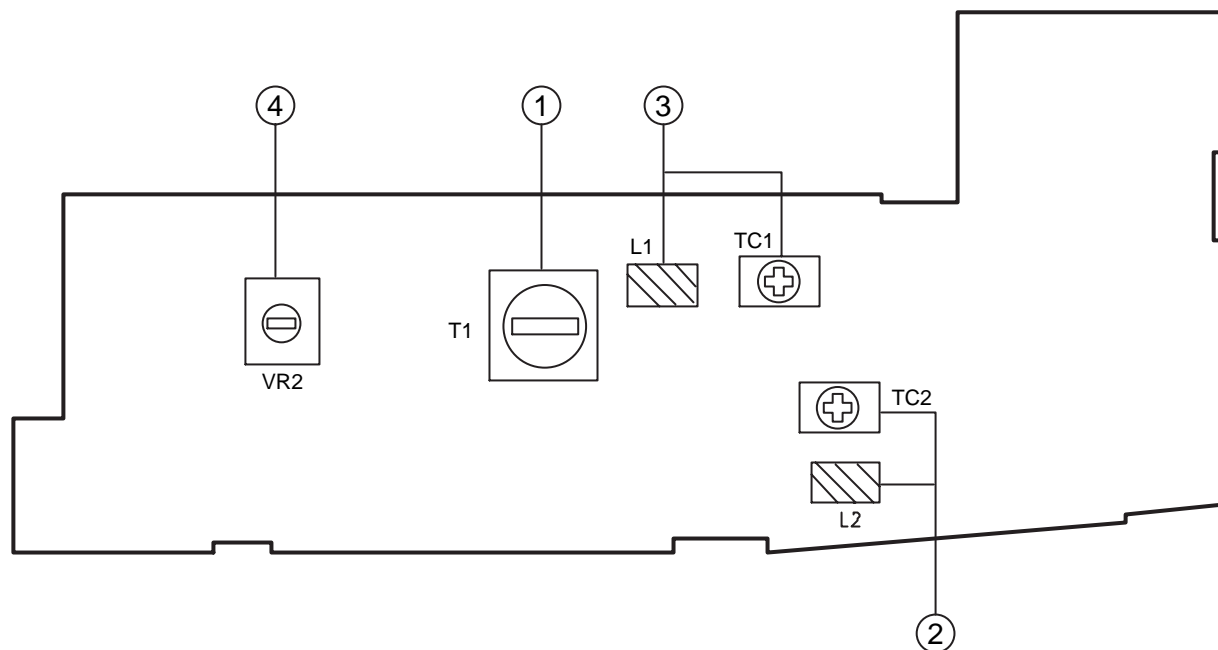
FM →





# ELECTRICAL ADJUSTMENT -1/1

## ADJUSTMENT(TUNER)



### 1. FM IF Adjustment

Settings : Test Point IC2(TA2022AFN)22PIN

Adjustment Location : T1

T1.....10.7MHz

### 2. FM Frequency Range Adjustment

Settings : Test Point IC2(TA2022AFN)22PIN

Adjustment Location : L2 TC2

L2.....87.4+0.1/-0.2MHz

TC2.....108.3+0.2/-0.2MHz

### 3. FM Tracking Adjustment

Settings : Test Point IC2(TA2022AFN)22PIN

Adjustment Location : L1 TC1

L1.....88MHz

TC1.....108MHz

### 4. VCO Adjustment

Settings : Test Point IC(TA2022AFN)12PIN

Adjustment Location : VR2

VR2.....19KHz





# MECHANICAL PARTS LIST -1/1

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UNIT-NAME	! C	REF-NO	PARTS-NO	PARTS-NAME	SUFFIX&MODEL
					CR-LA15 YZ1SC
	O	MC1001	8C-RL8-005-010	LENS ,DIAL	a
	O	MC1002	8C-RL8-003-010	PANEL, FRONT YZ	a
	O	MC1003	8C-RL8-006-010	POINTER, DIAL	a
	O	MC1004	8C-RL8-001-010	CABI, FRONT	a
	O	MC1005	8C-RL8-007-010	KNOB, SL POWER	a
	O	MC1006	8C-RL8-008-010	KNOB, SL MONO/ST	a
	O	MC1007	8C-RL8-009-010	KNOB, RTRY TUN	a
	O	MC1008	8C-RL8-010-010	CLIP, SIDE	a
	O	MC1009	8C-RL8-202-010	GEAR, PVC	a
	O	MC1010	8C-RL8-204-010	SPR-P, BATTERY(+)	a
	X	MC1011	S3-008-010-200	PWB, MAIN	a
	O	MC1012	8C-RL8-002-010	CABI, REAR YZ	a
	O	MC1013	8C-RL8-203-010	JOINT, PVC GEAR	a
	O	MC1014	8C-RL8-004-010	DOOR, BATT	a
	O	MC1015	8C-RL8-205-010	BAT-CONTACT, (+)	a
	O	MC1016	8C-RL8-206-010	BAT-CONTACT, (-)	a
	O	MC1017	8C-RL8-201-010	COVER, TUN KNOB	a
	O	MC1A	87-262-511-310	V+1.4-5 BLK (87-262-511-31J)	a
	O	MC1B	S6-517-050-200	SCREW ST1.7x5 K/B - BLACK	a
	O	MC1C	S2-117-050-000	S-SCREW, +1.7-5	a
					CR-LA15 YZ1SC
	O	MC1D	S2-502-030-000	S-SCREW, +2-3	a

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	HT	Transparent Gray
HM	Metallic Gray	NH	Champagne Gold	M	Wood Pattern

# OTHERS PARTS LIST -1/1

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					CR-LA15
					YZ1SC
	X		S3-008-121-000	CHE01-SMT-CRL8	a
	X		8C-RL8-852-010	CTN, PRINTED YZ1SC	a
	X		8C-RL8-851-010	CUSHION, WHITE	a
	X		S0-710-010-000	LABEL	a
	X		87-B40-282-010	LBL, BAR-CODE AU	a
	X		S0-400-291-000	SH, FELT 10x3.5xTHK0.6mm	a
	X		87-056-168-010	SH, INF-WARR( EC)	a
	X		S0-201-230-000	SPONGE L.D. 8x6x6mm	a
	X		S0-201-230-000	SPONGE L.D. 8x6x6mm	a

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