

SERVICE MANUAL

STEREO RADIO RECEIVER

SPECIFICATIONS

Frequency range	FM: 87.5 – 108 MHz AM: 530 – 1,605 kHz
Speaker	Diameter 36 mm, 8 ohms
Maximum output	11 mW + 11 mW (EIAJ 32 ohms) 55 mW (EIAJ 8 ohms)
Power source	DC 3 V using two R03 (size AAA) batteries
Output	Headphones jack (Stereo mini jack)
Maximum outside dimensions	54.3 (W) × 90.4 (H) × 18.9 (D) mm
Weight	Approx. 60 g (excluding batteries)

- Design and specifications are subject to change without notice.

ACCESSORIES/PACKAGE LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8A-RCF-902-010	IB, YH1(ECC)C<YJ1SC>	
1	8A-RCF-904-010	IB, YL(3L)C<YL1SC>	
2	87-B30-145-210	HEADPHONE, HP-M029(T)	

ELECTRICAL MAIN PARTS LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

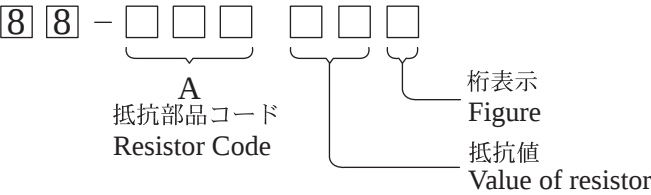
REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC				C120	87-A10-463-080		C-CAP,U 0.47-10 Z F
	87-A21-232-040	C-IC, TA2111FN		C121	87-010-829-080		CAP, U 0.047-16
	87-002-232-080	IC,NJM2073M		C123	87-A10-047-080		C-CAP,U 1-10 Z F
				C124	87-010-787-080		C-CAP,U 0.022-25 K B
				C125	87-012-285-080		C-CAP,U 8200P-50 K B GRM
TRANSISTOR				C126	87-012-166-080		C-CAP,U 4P-50 C CH
	89-508-824-080	C-FET, 2SK882Y		C128	87-012-181-080		C-CAP,U 24P-50 J CH
	89-113-625-080	C-TR, 2SA1362GR		C201	87-010-831-080		C-CAP,U,0.1-16F
	89-341-165-080	CHIP TRANSISTOR 2SC4116GR		C202	87-010-831-080		C-CAP,U,0.1-16F
				C203	87-010-076-040		CAP,E 22-6.3 5L
DIODE				C204	87-010-076-040		CAP,E 22-6.3 5L
	87-070-345-080	DIODE, IN4148		C205	87-012-281-080		C-CAP,U 3900P-50 B
				C206	87-012-281-080		C-CAP,U 3900P-50 B
				C207	87-010-503-040		CAP,E 220-4 GAS
				C208	87-010-267-080		CAP,E 47-10 M 105 KM
MAIN C.B				C209	87-A10-463-080		C-CAP,U 0.47-10 Z F
C101	87-012-167-080	C-CAP,U 5P-50 CH		C210	87-A10-463-080		C-CAP,U 0.47-10 Z F
C102	87-012-176-080	C-CAP,U 15P-50 J CH		C211	87-010-588-010		CAP,E 220-2 M 5L MA
C103	87-012-181-080	C-CAP,U 24P-50 J CH		C212	87-010-588-010		CAP,E 220-2 M 5L MA
C104	87-012-166-080	C-CAP,U 4P-50 C CH		C215	87-010-831-080		C-CAP,U,0.1-16F
C105	87-012-286-080	CAP, U 0.01-25		CD101	87-A90-739-010		FLTR,KIT
C106	87-012-286-080	CAP, U 0.01-25		CF101	8A-RCF-611-010		FLTR,CFAL 455
C107	87-A10-047-080	C-CAP,U 1-10 Z F		CF102	87-A90-739-010		FLTR,KIT
C108	87-012-274-080	CHIP CAP,U 1000P-50B		J101	8A-RCF-607-010		JACK,3.5 ST W/O SW
C109	87-A10-047-080	C-CAP,U 1-10 Z F		L1	ST-RCO-041-200		FERRITE BEAD INDUCTOR 120UH
C110	87-010-831-080	C-CAP,U,0.1-16F		L2	8A-RCF-606-010		COIL,1UH*3
C111	87-010-831-080	C-CAP,U,0.1-16F		L3	8A-RCF-602-010		COIL,BPF
C112	87-012-286-080	CAP, U 0.01-25		L101	8A-RCF-609-010		BAR-ANT,ARC-F
C113	87-012-286-080	CAP, U 0.01-25		L102	8A-RCF-603-010		COIL,FM RF
C114	87-012-178-080	C-CAP,U 18P-50 J CH		L103	8A-RCF-604-010		COIL,FM OSC
C115	87-012-180-080	C-CAP,U 22P-50 J CH		L104	8A-RCF-601-010		COIL,AM OSC
C116	87-010-503-040	CAP,E 220-4 GAS		L105	87-A90-177-010		IFT,AM IF 5P
C118	87-010-501-040	CAP,E 47-4 M 5L SRE		PVC1	8A-RCF-605-010		TUN-CAP,20P-160P 16*16
C119	87-010-178-080	CHIP CAP 1000P		SP1	8A-RCF-608-010		SPKR,36 80HM
				SW1	87-A90-863-010		SW,SL 1-1-2 SSSS21
				SW2	87-A90-778-010		SW,SL 2-2-3 SS-337-B23
				SW3	87-A90-863-010		SW,SL 1-1-2 SSSS21
				VR1	87-A90-835-010		VR,RTRY 20KCX2 H

- 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

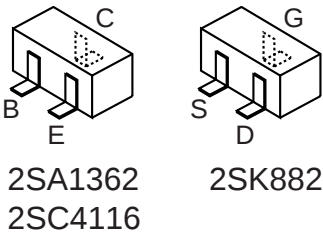
Chip Resistor Part Coding



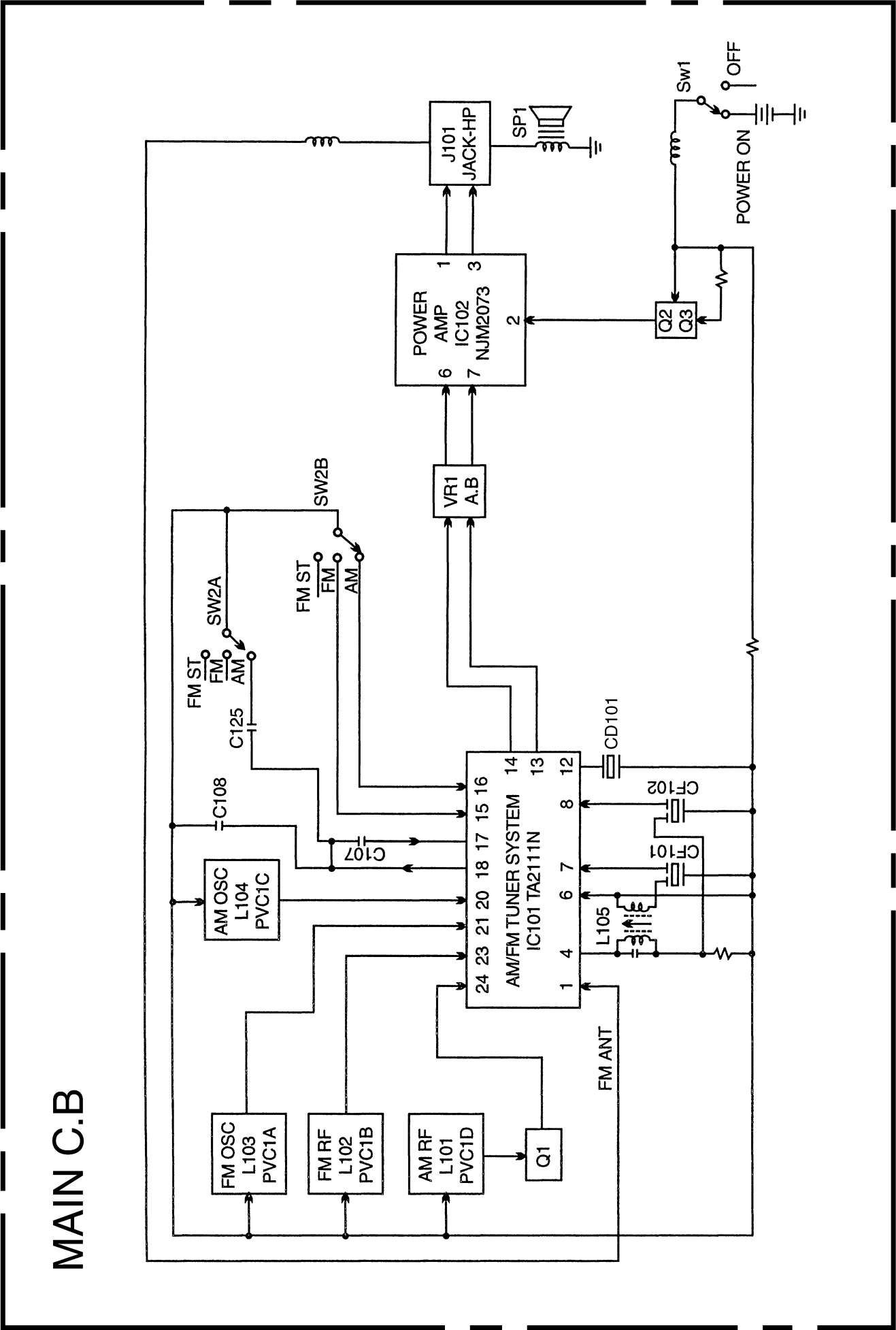
チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm)				抵抗コード : A
				外形／Form	L	W	t	Resistor Code : A
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

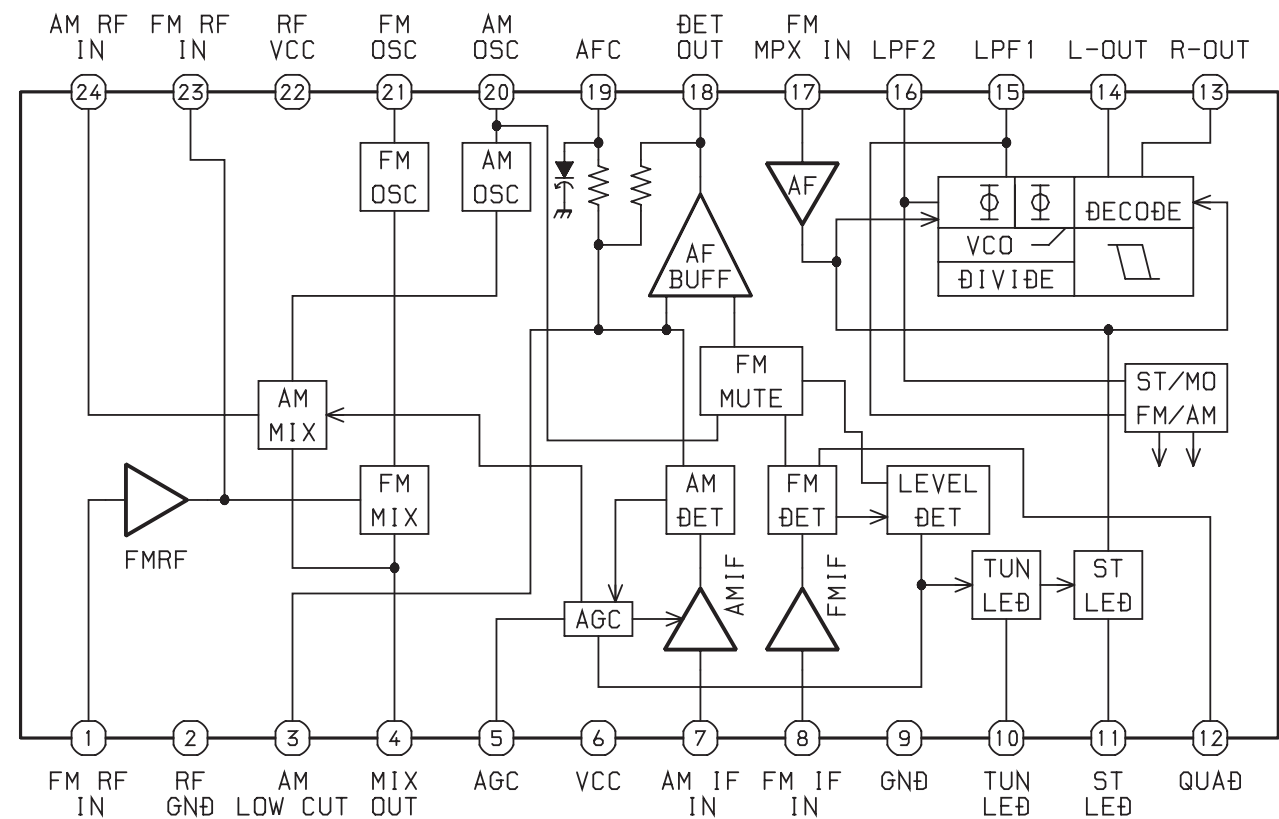
TRANSISTOR ILLUSTRATION



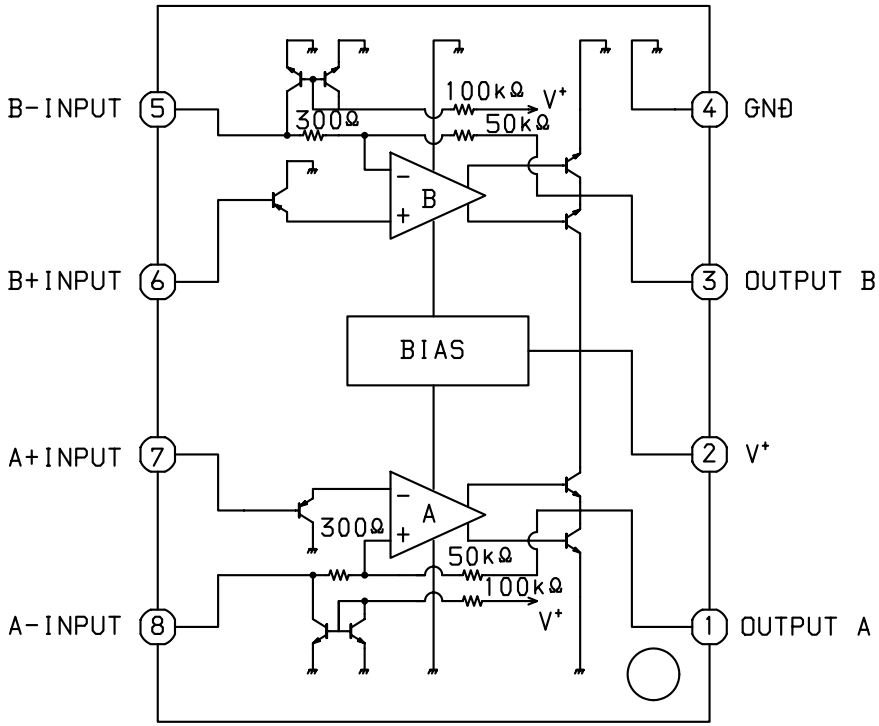
BLOCK DIAGRAM



IC BLOCK DIAGRAM
IC, TA2111FN

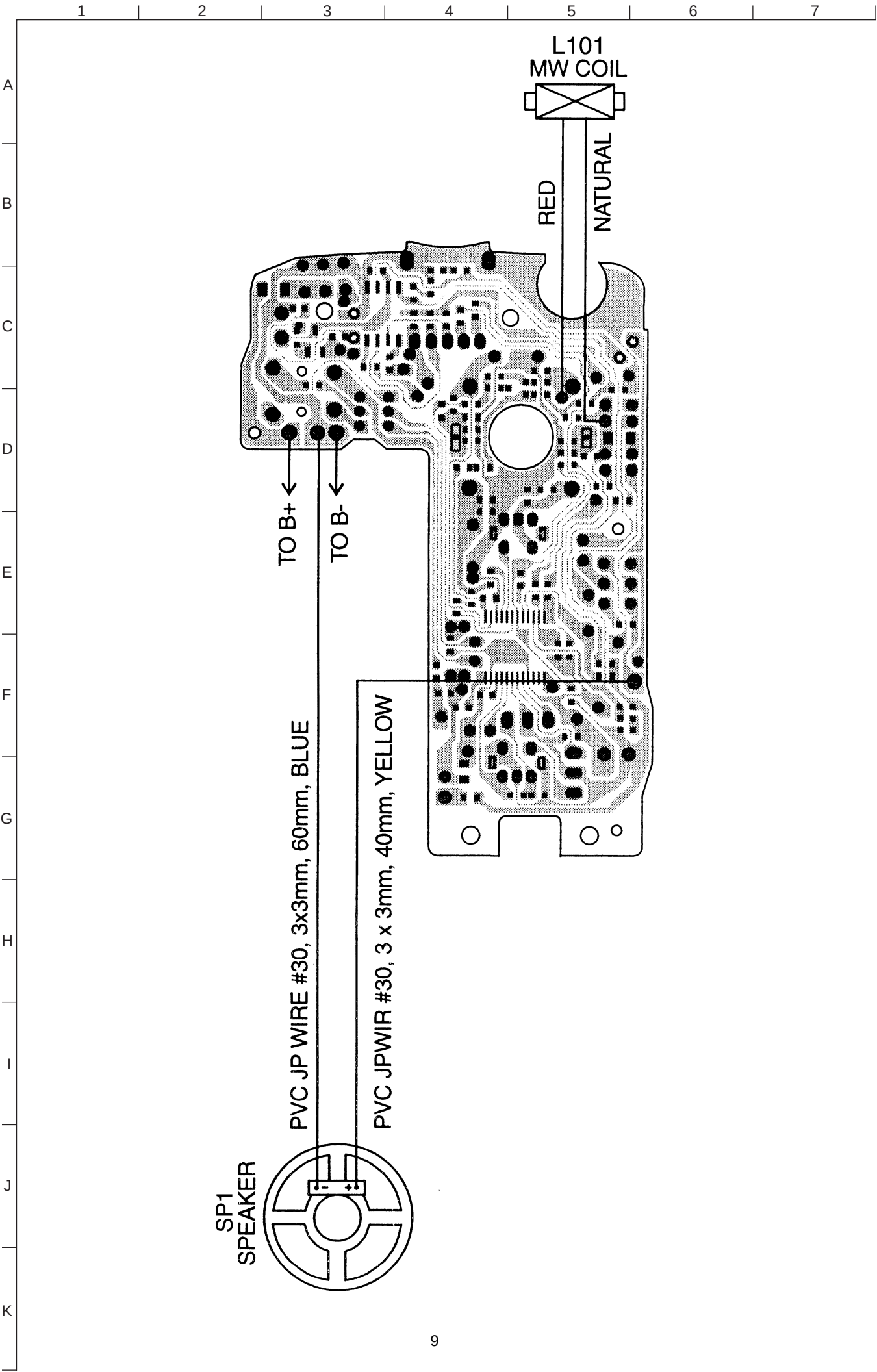


IC, NJM2073



A —
B —
C —
D —
E —
F —
G —
H —
I —
J —
K





TUNER SECTION
TEST CNDITION: SET AM/FM TUNER ON A STATION
IC101 (TA2111FN)

PIN'S NUMBER	1	2	3	4	5	6	7	8	9	10	11	12
AM	0	0	1.15	2.82	0.43	2.94	2.26	2.94	0	0	0.19	0.02
FM	0.79	0	0.68	2.37	0.46	2.90	2.38	2.90	0	0	0.35	2.10
PIN'S NUMBER	13	14	15	16	17	18	19	20	21	22	23	24
AM	1.25	1.25	2.22	2.94	0.70	1.04	1.15	2.94	2.94	2.94	2.94	2.94
FM	1.25	1.25	2.90	2.12	0.70	0.62	0.80	2.89	2.89	2.89	2.89	2.89

TRANSISTOR	Q1(2SK882Y)		
	S	G	D
AM	0.34	0	2.30

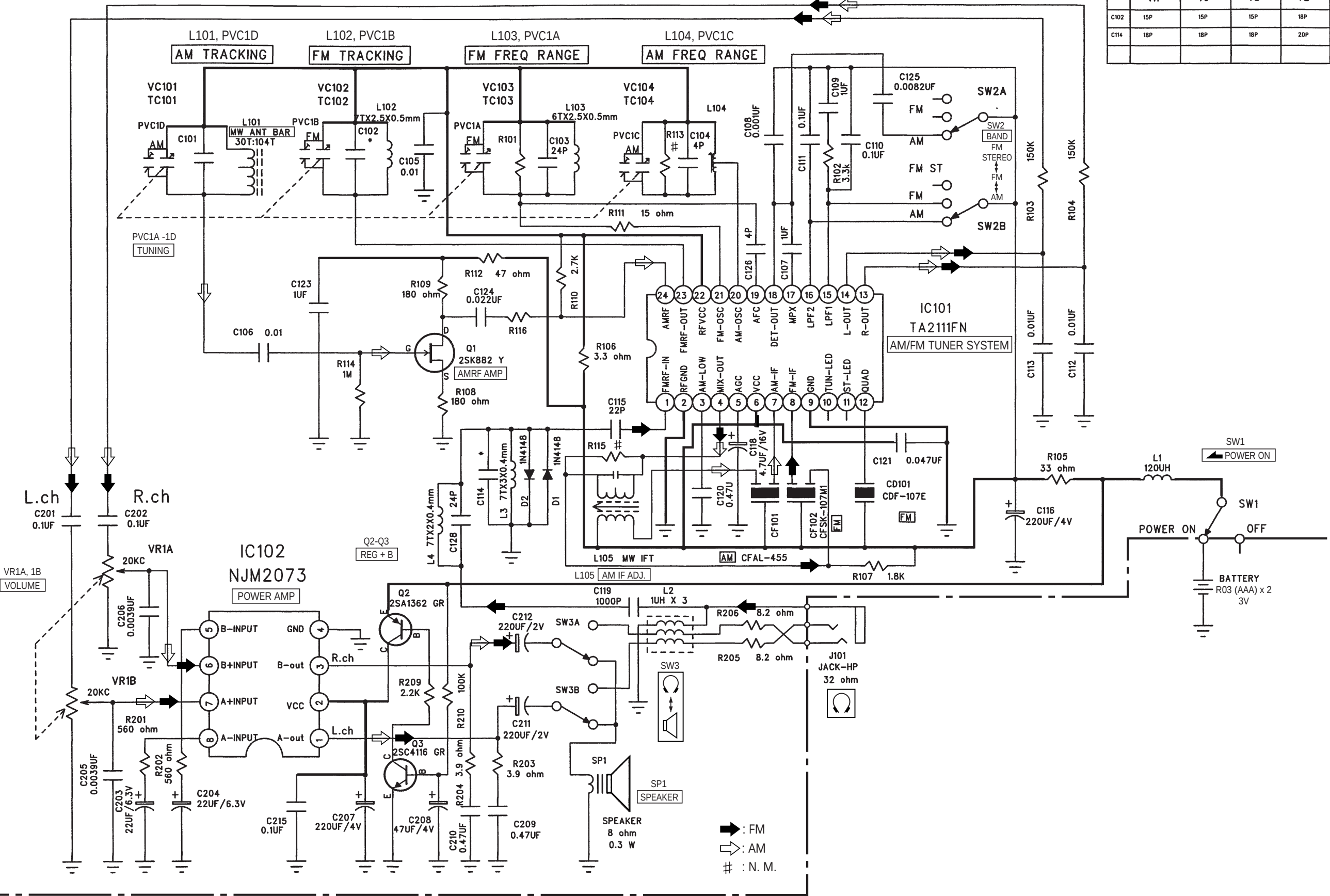
POWER AMP. SECTION
TEST CONDITION: TUNER
IC102 (NJM2073)

PIN'S NUMBER	1	2	3	4	5	6	7	8
FM	1.22	2.99	1.22	0	0.60	0	0	0.60

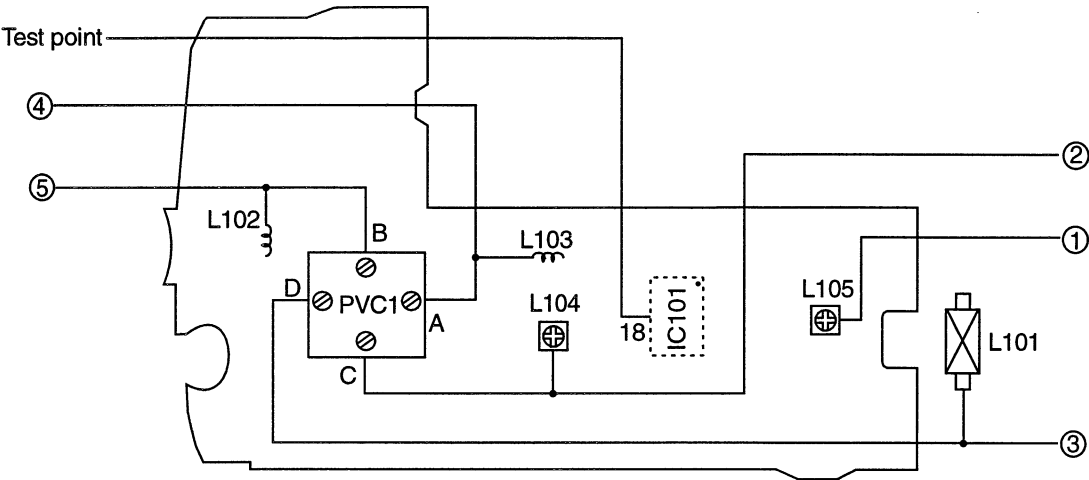
TRANSISTOR	Q2(2SA1362)			Q3(2SC4116GR)		
	E	C	B	E	C	B
	2.98	2.98	2.27	0	0.07	0.63

MAIN C. B

TC101-104 } PVC1
VC101-104 }



TUNER SECTION



1. AM IF Adjustment
Test point: IC101(TA2111FN) 18PIN
Adjustment location: L105
L105 ----- 455KHz

3. AM Tracking Adjustment
Test point: IC101(TA2111FN) 18PIN
Adjustment location: L101,PVC1D
L101----- 600KHz waveform max.
PVC1D ----- 1400KHz waveform max.

5. FM Tracking Adjustment
Test point: IC101(TA2111FN) 18PIN
Adjustment Location: L102,PVC1B
L102----- 90MHz waveform max.
PVC1B----- 106MHz waveform max.
2. AM Frequency Range Adjustment
Test point: IC101(TA2111FN) 18PIN
Adjustment location: L104,PVC1C
L104----- 515KHz
PVC1C----- 1635KHz(YH,YZ,YJ,YL)

4. FM Frequency Range Adjustment
Test point: IC101(TA2111N) 18PIN
Adjustment Location: L103,PVC1A
L103----- 87MHz(YH,YJ,YL)
87.4MHz(YZ)
PVC1A----- 109MHz(YH,YJ,YL)
108.3MHz(YZ)

PRACTICAL SERVICE FIGURE

< TUNER SECTION >

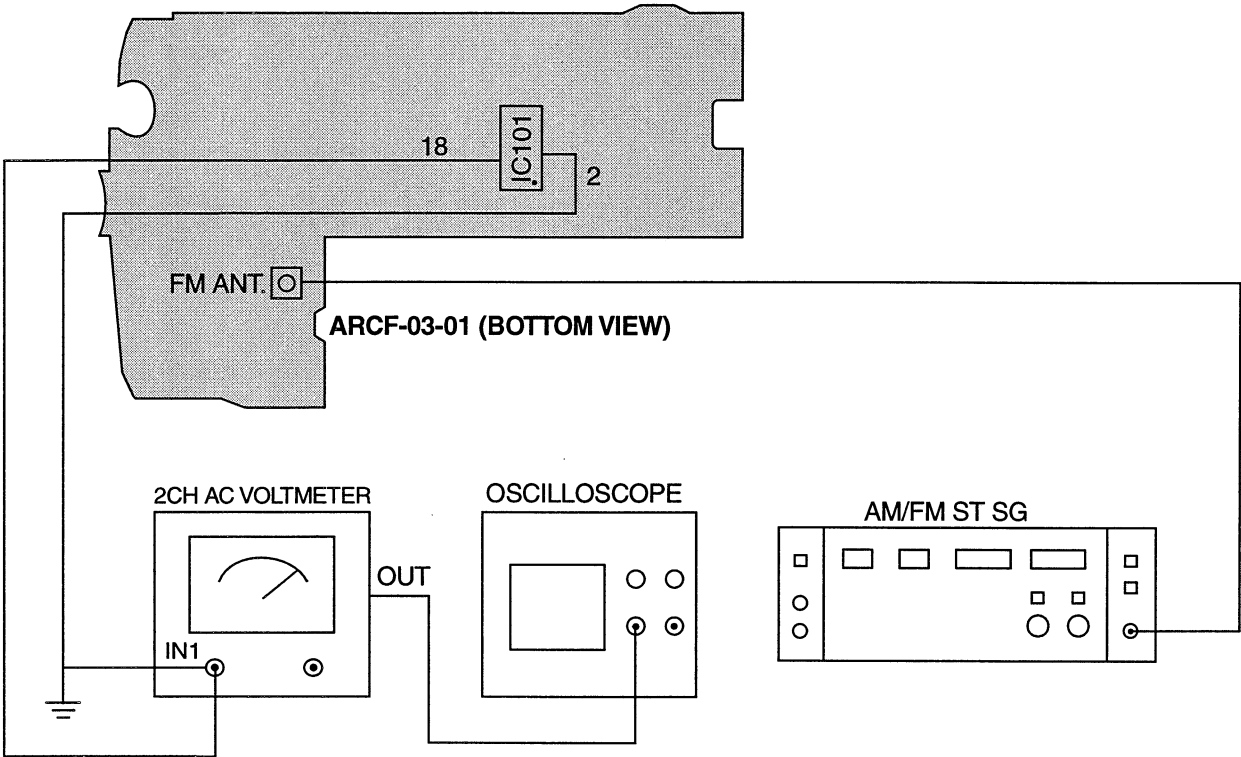
< FM SECTION >

Sensitivity:	Less than 15dB (88MHz)
(THD 3%)	Less than 15dB (98MHz)
	Less than 15dB (108MHz)
Distortion:	Less than 2% (at 98.0MHz)
Intermediate frequency:	10.7MHz
Stereo separation:	More than 20dB

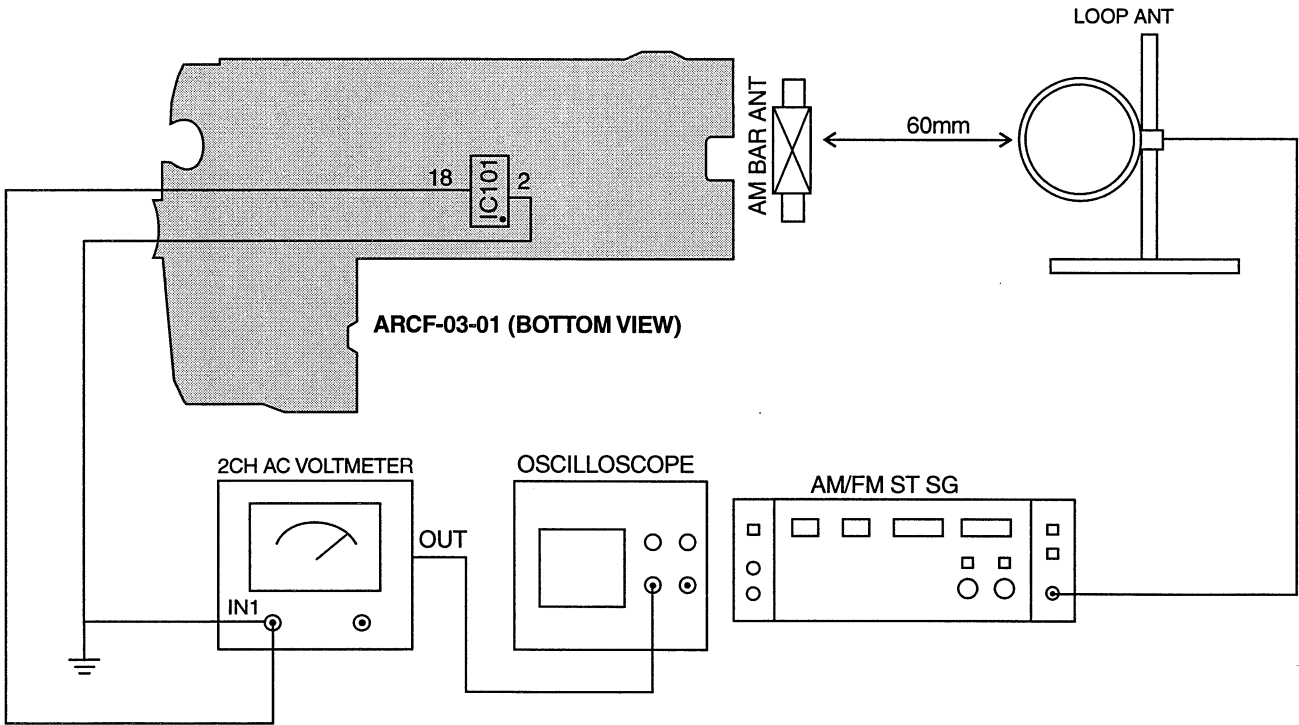
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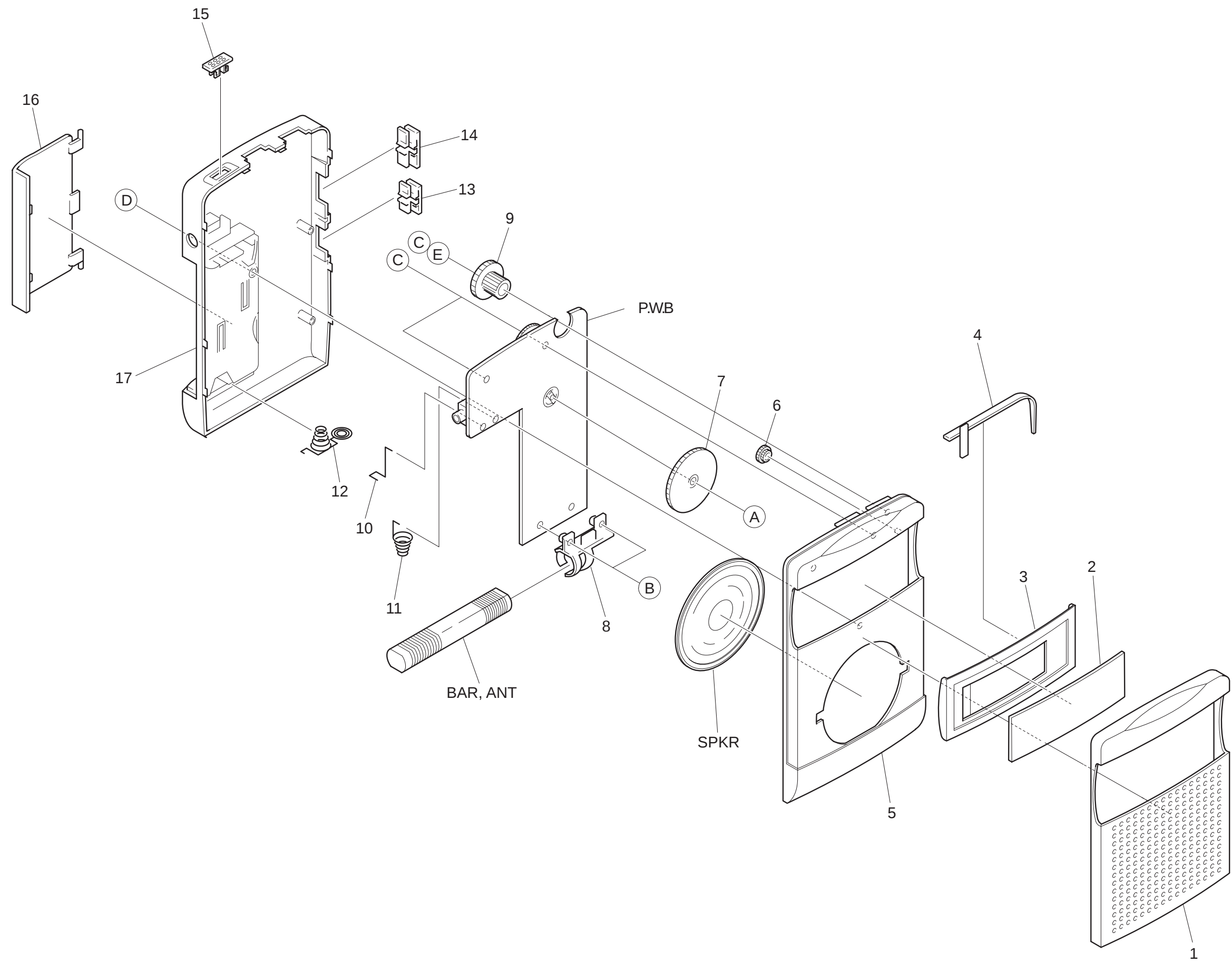
Sensitivity:	Less than 50dB (at 600kHz)
(S/N 10dB)	Less than 48dB (at 1000kHz)
	Less than 47dB (at 1400kHz)
Distortion:	Less than 3%
(Input 74dB)	
Intermediate frequency:	455kHz

FM SECTION



AM SECTION





MECHANICAL PARTS LIST 1/1

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
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REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8A-RCF-003-010		COVER, FRONT	16	8A-RCF-005-010		LID, BATT
2	8A-RCF-006-010		WINDOW, DIAL	17	8A-RCF-012-010		CABI, REAR L YZ<YJ1SC>
3	8A-RCF-004-010		PANEL, WINDOW	17	8A-RCF-013-010		CABI, REAR Y<YL1SCC>
4	8A-RCF-007-010		POINTER, DIAL	A	87-264-527-310		V+1.7-3.0 CR
5	8A-RCF-001-010		CABI, FRONT	B	87-351-549-310		VT2+2-4
6	8A-RCF-202-010		GEAR, MIDDLE	C	87-352-529-310		VT2+1.7-4.0 BLK
7	8A-RCF-203-010		GEAR, PVC	D	87-B10-302-010		QT2+2-4 W/O BLACK
8	8A-RCF-201-010		HLDR, AM ANT	E	S5-017-040-300		PVC WASHER 01.7X4X0.3MM
9	8A-RCF-008-010		KNOB, RTRY TUN				
10	8A-RCF-204-010		BAT-CONTACT, (+)				
11	8A-RCF-205-010		BAT-CONTACT, (-)				
12	8A-RCF-206-010		BAT-CONTACT, (+/-)				
13	8A-RCF-011-010		KNOB, SL SP/EAR				
14	8A-RCF-010-010		KNOB, SL BAND				
15	8A-RCF-009-010		KNOB, SL POWER				

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		



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