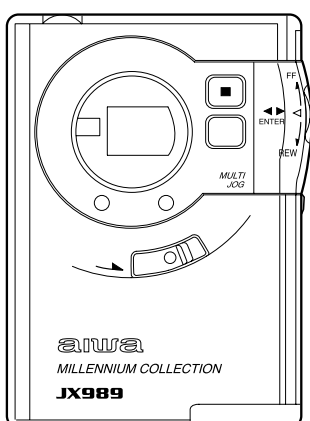




SERVICE MANUAL

STEREO RADIO
CASSETTE RECORDER

BASIC TAPE MECHANISM : 7ZM-1 R1NF

SPECIFICATIONS

Frequency range:	AM 531 – 1,602 kHz (9 kHz steps)
Reception area EU	FM1, FM2 87.5 – 108 MHz (50 kHz steps)
Reception area USA	AM 530 – 1,710 kHz (10 kHz steps)
	FM1, FM2 87.5 – 108.1 MHz (200 kHz steps)
Reception area JPN	AM 531 – 1,629 kHz (9 kHz steps)
	FM1, FM2 76 – 108 MHz
	(100 kHz steps in 76 – 90 MHz, 50 kHz steps in 90 – 108 MHz)
Maximum output:	4 mW + 4 mW (EIAJ 32 ohms)
Power sources:	DC 1.2 V using supplied rechargeable battery NB-5G
	DC 1.5 V using a R6 (size AA) dry cell battery
	AC house current using the optional AC adaptor
Maximum outside dimensions:	79.7 (W) x 108.5 (H) x 20.7 (D) mm
	(excluding projecting parts and controls)
Weight:	Approx.147 g (excluding batteries)

- Design and specifications are subject to change without notice.

ELECTRICAL MAIN PARTS LIST

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC				C122	87-A10-704-080		C-CAP,TN 100-2.5 M B2
	87-A21-179-040		C-IC,TA2123AF	C123	87-A10-561-080		C-CAP,V 0.01U-16 K B
	87-A21-651-030		C-IC,LA3235W	C124	87-A10-561-080		C-CAP,V 0.01U-16 K B
	87-A20-961-040		C-IC,MM1279XV	C125	87-A10-565-080		C-CAP,V 0.1U-16 Z F
	87-A20-603-140		C-IC,RN5RK241A	C126	87-A10-565-080		C-CAP,V 0.1U-16 Z F
	87-001-815-040		C-IC,TA7371AF	C127	87-A10-707-080		C-CAP,U 0.47U-16 F Z
	87-A20-076-040		C-IC,TA2022AFN	C128	87-A10-706-080		C-CAP,U 0.33U-16 F Z
	87-A20-904-080		C-IC,TK11823MTL	C129	87-A10-707-080		C-CAP,U 0.47U-16 F Z
	87-A21-747-030		C-IC,TC9327AF-507	C130	87-A10-707-080		C-CAP,U 0.47U-16 F Z
	87-A20-755-080		C-IC,AK93C45AF	C131	87-016-562-080		C-CAP,TN 4.7-10 SV A
	87-A20-757-040		C-IC,S-80815ANNP-EDC-T2	C132	87-A10-260-080		C-CAP,U 0.1-16 K B
	87-A20-902-040		C-IC,S-80809ANNP-E7Z-T2	C133	87-A11-062-080		C-CAP,S 2.2-16 Z F
				C134	87-A10-262-080		C-CAP,U 1-10 ZF
				C135	87-A10-262-080		C-CAP,U 1-10 ZF
				C136	87-A11-062-080		C-CAP,S 2.2-16 Z F
TRANSISTOR				C137	87-A10-556-080		C-CAP,V 2200P-50 K B
	87-A30-499-040		C-FET,2SK2009	C138	87-A10-556-080		C-CAP,V 2200P-50 K B
	87-A30-500-040		C-FET,2SJ344	C139	87-A11-049-080		C-CAP,U 1-6.3 K B
	89-113-625-080		TR,2SA1362GR	C140	87-A11-049-080		C-CAP,U 1-6.3 K B
	87-026-527-080		C-TR,HN1A01FU(G)	C141	87-A11-049-080		C-CAP,U 1-6.3 K B
	87-A30-228-080		C-TR,UMB3	C142	87-A11-049-080		C-CAP,U 1-6.3 K B
	87-A30-378-040		C-TR,UMG4N	C143	87-016-317-080		C-CAP,TN 2.2-6.3
	87-026-648-080		C-TR,UPA608T	C144	87-A10-703-080		C-CAP,TN 47-2.5 M A
	87-026-521-080		CHIP TR HN1CO1FU	C145	87-A10-262-080		C-CAP,U 1-10 ZF
	87-A30-336-040		C-TR,UMH4N	C146	87-010-787-080		CAP, U 0.022-25
	87-A30-085-040		C-TR,CSA1362GR	C201	87-A11-157-080		C-CAP,TN 1-16 M A F93
	89-342-132-080		TR,2SC4213B	C202	87-015-923-080		C-CAP,TN 0.22-35
	89-341-165-080		CHIP TRANSISTOR 2SC4116GR	C203	87-A11-157-080		C-CAP,TN 1-16 M A F93
	87-026-418-080		TR,RN1311	C204	87-010-746-080		CAP, TANTAL 10-4
	89-413-284-080		TR,2SD1328T	C205	87-A10-543-080		C-CAP,V 100P-50 J CH
	87-026-596-080		C-TR,UMH9	C206	87-A10-952-080		C-CAP,TN 22-4 M A MCM
	87-A30-503-040		C-TR,2SC4649P	C207	87-A10-262-080		C-CAP,U 1-10 ZF
	87-A30-502-040		C-TR,2SA1745-7	C208	87-A10-262-080		C-CAP,U 1-10 ZF
	89-115-865-080		C-TR,2SA1586GR	C209	87-016-562-080		C-CAP,TN 4.7-10 SV A
	87-026-535-080		C-TR,RN4907	C210	87-016-562-080		C-CAP,TN 4.7-10 SV A
	87-A30-504-040		C-TR,DTC144TE	C211	87-012-274-080		CHIP CAP,U 1000P-50B
	87-A30-181-040		C-TR,DTA114TEA	C212	87-012-274-080		CHIP CAP,U 1000P-50B
	89-508-804-080		CHIP FET 2SK880Y	C213	87-A11-157-080		C-CAP,TN 1-16 M A F93
	87-026-534-080		C-TR,RN4905	C214	87-A11-157-080		C-CAP,TN 1-16 M A F93
				C215	87-A10-671-080		C-CAP,V 0.022-16 K B
DIODE				C216	87-A10-671-080		C-CAP,V 0.022-16 K B
	87-001-553-080		C-DIODE 1SS322	C217	87-A10-262-080		C-CAP,U 1-10 ZF
	87-A40-655-080		C-VARI-CAP,HVU200A	C218	87-A10-262-080		C-CAP,U 1-10 ZF
	87-A40-799-040		C-VARI-CAP,KV1610S	C219	87-010-746-080		CAP, TANTAL 10-4
				C220	87-A10-952-080		C-CAP,TN 22-4 M A MCM
MAIN C.B				C221	87-016-286-080		C-CAP,TN 2.2-6.3 F93
BPF701	87-A90-601-010		FLTR,BPF GFWB7	C222	87-A11-282-080		C-CAP,S 1-16 K B
C101	87-A10-554-080		C-CAP,V 1000P-50 K B	C223	87-A10-262-080		C-CAP,U 1-10 ZF
C102	87-A10-554-080		C-CAP,V 1000P-50 K B	C224	87-A10-262-080		C-CAP,U 1-10 ZF
C103	87-A10-554-080		C-CAP,V 1000P-50 K B	C225	87-A10-262-080		C-CAP,U 1-10 ZF
C104	87-A10-554-080		C-CAP,V 1000P-50 K B	C226	87-A10-262-080		C-CAP,U 1-10 ZF
C105	87-A10-765-080		C-CAP,V 0.033-10 K B	C227	87-A10-262-080		C-CAP,U 1-10 ZF
C106	87-A10-765-080		C-CAP,V 0.033-10 K B	C228	87-A10-262-080		C-CAP,U 1-10 ZF
C107	87-A10-952-080		C-CAP,TN 22-4 M A MCM	C229	87-A10-758-080		C-CAP,V 3300P-50 K B
C108	87-A10-952-080		C-CAP,TN 22-4 M A MCM	C230	87-A10-758-080		C-CAP,V 3300P-50 K B
C109	87-012-286-080		CAP, U 0.01-25	C231	87-A10-758-080		C-CAP,V 3300P-50 K B
C110	87-012-286-080		CAP, U 0.01-25	C232	87-A10-758-080		C-CAP,V 3300P-50 K B
C111	87-A10-025-080		C-CAP,U 0.22-16Z F	C233	87-A10-262-080		C-CAP,U 1-10 ZF
C112	87-012-286-080		CAP, U 0.01-25	C234	87-A10-262-080		C-CAP,U 1-10 ZF
C113	87-010-831-080		C-CAP,U,0.1-16F	C235	87-A10-262-080		C-CAP,U 1-10 ZF
C114	87-A10-952-080		C-CAP,TN 22-4 M A MCM	C236	87-A10-262-080		C-CAP,U 1-10 ZF
C115	87-A10-952-080		C-CAP,TN 22-4 M A MCM	C401	87-012-286-080		CAP, U 0.01-25
C116	87-A10-707-080		C-CAP,U 0.47U-16 F Z	C402	87-A10-260-080		C-CAP,U 0.1-16 K B
C117	87-A10-707-080		C-CAP,U 0.47U-16 F Z	C403	87-A11-796-080		C-CAP,S 4.7-10 Z F
C118	87-A10-707-080		C-CAP,U 0.47U-16 F Z	C404	87-010-831-080		C-CAP,U,0.1-16F
C119	87-016-562-080		C-CAP,TN 4.7-10 SV A	C405	87-A10-707-080		C-CAP,U 0.47U-16 F Z
C120	87-A11-062-080		C-CAP,S 2.2-16 Z F	C406	87-A10-707-080		C-CAP,U 0.47U-16 F Z
C121	87-A10-704-080		C-CAP,TN 100-2.5 M B2	C407	87-012-286-080		CAP, U 0.01-25
				C408	87-012-286-080		CAP, U 0.01-25
				C409	87-012-286-080		CAP, U 0.01-25

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C601	87-012-286-080	CAP, U 0.01-25	
C602	87-012-282-080	CAP, U 4700P-50	
C603	87-010-787-080	C-CAP, U 0.22-25 KB	
C604	87-A10-952-080	C-CAP,TN 22-4 M A MCM	
C605	87-012-278-080	C-CAP,U 2200P-50 B	
C606	87-012-267-080	C-CAP,U 270P-50 B	
C607	87-012-267-080	C-CAP,U 270P-50 B	
C608	87-012-270-080	CAP, U 470P-50	
C609	87-012-270-080	CAP, U 470P-50	
C651	87-A11-813-080	C-CAP,E 100-4 MVS (4.6MAX)	
C652	87-010-831-080	C-CAP,U,0.1-16F	
C653	87-010-831-080	C-CAP,U,0.1-16F	
C701	87-012-195-080	C-CAP,U 100P-50CH	
C702	87-A10-561-080	C-CAP,V 0.01U-16 K B	
C703	87-A10-561-080	C-CAP,V 0.01U-16 K B	
C704	87-012-273-080	C-CAP,U 820P-50 B	
C705	87-012-191-080	CHIP CAP 68 PF	
C706	87-012-268-080	C-CAP,U 330P-50 B	
C708	87-A10-561-080	C-CAP,V 0.01U-16 K B	
C710	87-A10-952-080	C-CAP,TN 22-4 M A MCM	
C711	87-A10-561-080	C-CAP,V 0.01U-16 K B	
C712	87-012-165-080	CAP U 3P-50 CH	
C713	87-A10-561-080	C-CAP,V 0.01U-16 K B	
C714	87-A10-561-080	C-CAP,V 0.01U-16 K B	
C715	87-012-286-080	CAP, U 0.01-25	
C716	87-A10-561-080	C-CAP,V 0.01U-16 K B	
C717	87-A10-561-080	C-CAP,V 0.01U-16 K B	
C720	87-012-199-080	CAP 220P-50 J CH	
C721	87-012-274-080	CHIP CAP,U 1000P-50B	
C723	87-A10-565-080	C-CAP,V 0.1U-16 Z F	
C801	87-A10-565-080	C-CAP,V 0.1U-16 Z F	
C802	87-A12-348-080	C-CAP,U 560P-25 J CH	
C804	87-A10-531-080	C-CAP,V 10P-50 D CH	
C805	87-012-247-080	C-CAP,U 18P-50 UJ	
C806	87-A10-671-080	C-CAP,V 0.022-16 K B	
C807	87-A10-553-080	C-CAP,V 820P-50 K B	
C808	87-A10-561-080	C-CAP,V 0.01U-16 K B	
C809	87-A10-952-080	C-CAP,TN 22-4 M A MCM	
C810	87-A10-262-080	C-CAP,U 1-10 ZF	
C811	87-010-746-080	CAP, TANTAL 10-4	
C812	87-A10-554-080	C-CAP,V 1000P-50 K B	
C813	87-A10-561-080	C-CAP,V 0.01U-16 K B	
C816	87-A10-560-080	C-CAP,V 8200P-25 K B	
C817	87-A10-560-080	C-CAP,V 8200P-25 K B	
C819	87-A10-565-080	C-CAP,V 0.1U-16 Z F	
C820	87-A10-766-080	C-CAP,V 0.047-10 K B	
C821	87-A10-915-080	C-CAP,U 1000P-25 J CH	
C822	87-A10-262-080	C-CAP,U 1-10 ZF	
C823	87-A10-565-080	C-CAP,V 0.1U-16 Z F	
C824	87-A10-025-080	C-CAP,U 0.22-16Z F	
C825	87-A10-554-080	C-CAP,V 1000P-50 K B	
C826	87-A10-561-080	C-CAP,V 0.01U-16 K B	
C829	87-A10-558-080	C-CAP,V 4700P-25 K B	
C831	87-A10-262-080	C-CAP,U 1-10 ZF	
C832	87-012-286-080	CAP, U 0.01-25	
C901	87-A10-671-080	C-CAP,V 0.022-16 K B	
C902	87-A11-282-080	C-CAP,S 1-16 K B	
C903	87-A10-561-080	C-CAP,V 0.01U-16 K B	
C904	87-A10-703-080	C-CAP,TN 47-2.5 M A	
C905	87-A11-282-080	C-CAP,S 1-16 K B	
C906	87-A10-539-080	C-CAP,V 47P-50 J CH	
C907	87-A10-528-080	C-CAP,V 7.0P-50 D CH	
C908	87-A10-526-080	C-CAP,V 5.0P-50 C CH	
C951	87-A10-565-080	C-CAP,V 0.1U-16 Z F	
C952	87-A10-565-080	C-CAP,V 0.1U-16 Z F	
C953	87-A10-565-080	C-CAP,V 0.1U-16 Z F	
C954	87-A10-025-080	C-CAP,U 0.22-16Z F	
C955	87-A10-535-080	C-CAP,V 22P-50 J CH	
C956	87-A10-534-080	C-CAP,V 18P-50 J CH	
C957	87-A10-565-080	C-CAP,V 0.1U-16 Z F	

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C958	87-A10-561-080	C-CAP,V 0.01U-16 K B	
C959	87-016-296-080	C-CAP,TN 22-4SV(A)	
C960	87-A10-565-080	C-CAP,V 0.1U-16 Z F	
C970	87-A10-262-080	C-CAP,U 1-10 ZF	
CF801	87-A91-321-080	C-FLTR,SFECV10.7 MA-5-A-TC	
CN101	87-A61-132-080	C-CONN,10P H FLZ-SM1-TB	
FB101	87-A91-763-080	C-F-BEAD, BK1608LM252	
FB102	87-A91-763-080	C-F-BEAD, BK1608LM252	
FB103	87-A91-763-080	C-F-BEAD, BK1608LM252	
FB108	87-A91-763-080	C-F-BEAD, BK1608LM252	
IFT801	87-005-788-080	C-IFT,AM (450K)	
J101	87-A60-272-010	JACK,3.5 ST 4P	
J201	87-A60-272-010	JACK,3.5 ST 4P	
L101	87-HJ2-613-010	COIL,LOADING3.3UH	
L601	8A-HJ2-605-080	C-COIL,OSC BIAS	
L602	87-A50-012-080	C-COIL,100UH LQH3C	
L651	87-003-089-110	COIL,47UH FL5R200F	
L701	87-A50-511-080	C-COIL,82NH G LQN21A	
L702	87-A50-583-080	C-COIL,S 2.2UH K FCI2012H	
L703	87-A50-510-080	C-COIL,68NH G LQN21A	
L801	88-HR4-614-010	BAR-ANT,MW	
L802	87-A50-363-080	C-COIL, 100UH J NLV25T	
L901	87-A50-037-080	C-COIL,D-D 5CDLU	
L902	87-A50-583-080	C-COIL,S 2.2UH K FCI2012H	
LCD951	8A-HJ2-606-010	LCD,AIW4223	
PS501	87-A91-803-040	C-SNSR,5197K-F25	
R415	87-A00-695-080	M-RES,M/F 3.9K-1/8W J 3000PPM	
S601	87-A90-419-080	C-SW,SL 1-1-3	
S951	8A-HJ2-608-010	SW,LEAF 7ZM-1R1	
S952	8A-HJ2-607-010	SW,LEAF 7ZM-1REC	
S954	87-A90-665-380	C-SW,TACT LS7A2M	
S955	87-A91-758-080	C-SW,LVR 1-1-3 SLLB310300	
S956	87-A90-665-280	C-SW,TACT LS7A2M	
S957	87-A90-665-280	C-SW,TACT LS7A2M	
S958	87-A90-665-280	C-SW,TACT LS7A2M	
S959	87-036-237-080	CHIP SWICH PUSH	
S960	87-036-237-080	CHIP SWICH PUSH	
SFR401	87-A91-465-040	C-SFR,K 6.8K H RH03AEC	
SFR801	87-A91-466-040	C-SFR,K 22K H RH03AEC	
TC701	87-A91-762-080	C-TRIMMER,10P TZVY2Z100A	
TC702	87-A91-761-080	C-TRIMMER,25P TZVY2R250A	
TC801	87-011-189-180	C-TRIMMER,CER 10P 4.5X3.2 CTZ	
VR101	87-A91-757-010	VR,RTRY 20KAX2 V RK10J12E0	
X801	87-A91-441-080	C-FLTR,CDACV10.7 MG50-A-TC	
X951	87-A70-187-010	VIB,XTAL 75KHZ CFV206	

SW C.B

S953

D.D C.B

C551

C552

C553

L551

L552

L553

FLEX C.B

87-ZM1-604-010

HEAD ASSY,7ZM-1 J

C-SW,SL1-1-2 SS350

C-CAP,TN 47-10 F95E

C-CAP,TN 47-6.3 MCR

C-CAP,TN 47-10 F95E

C-COIL, 82UH 7004-2

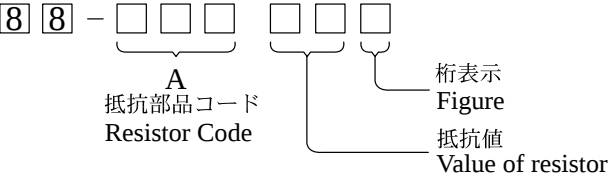
C-COIL,100UH LQH3C

C-COIL,22UH LQH3C

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

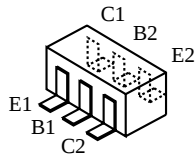
Chip Resistor Part Coding



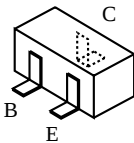
チップ抵抗
Chip resistor

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

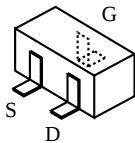
TRANSISTOR ILLUSTRATION



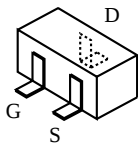
HN1A01FU UMG4N
HN1C01FU UMH4N
RN4905 UMH9
RN4907 UPA608T
UMB3



2SA1362 2SD1328
2SA1586 CSA1362
2SA1745-7 DTA114
2SC4116 DTC144
2SC4213 RN1311
2SC4649

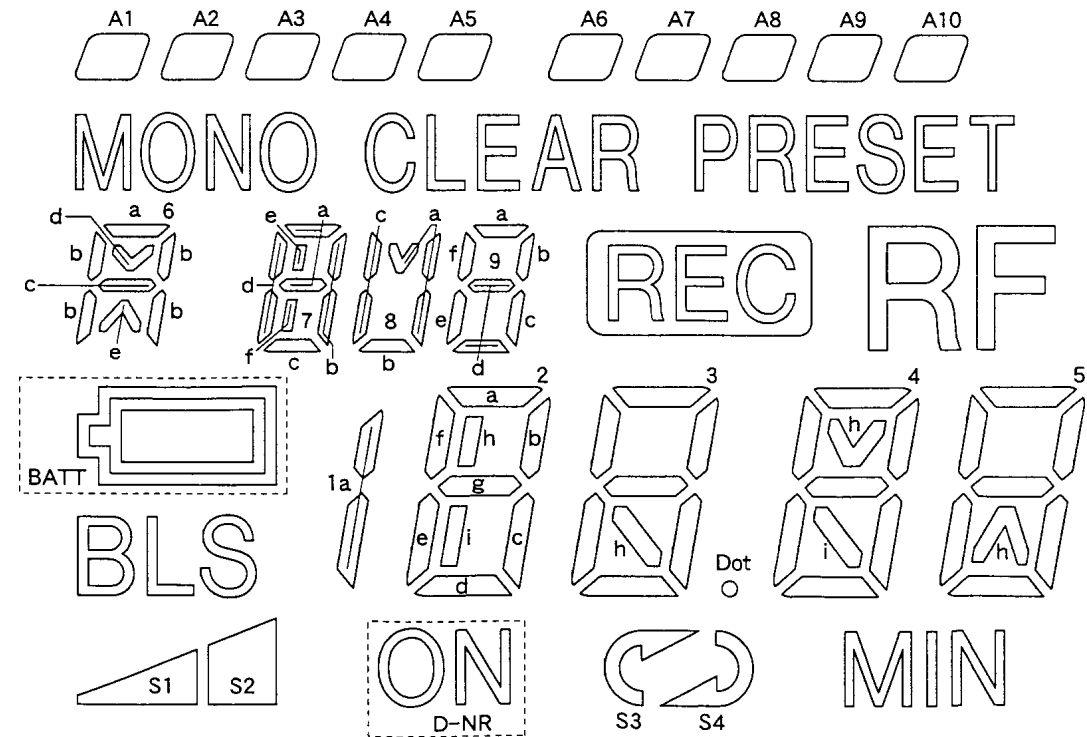


2SK880



2SJ344
2SK2009

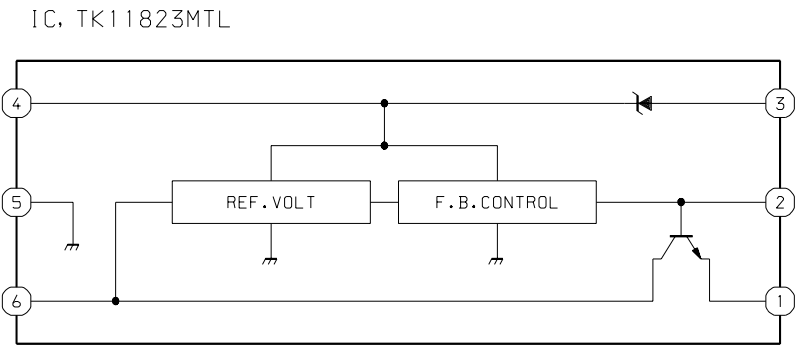
LCD DIAGRAM
LCD, AIW4223
GRID ASSIGNMENT



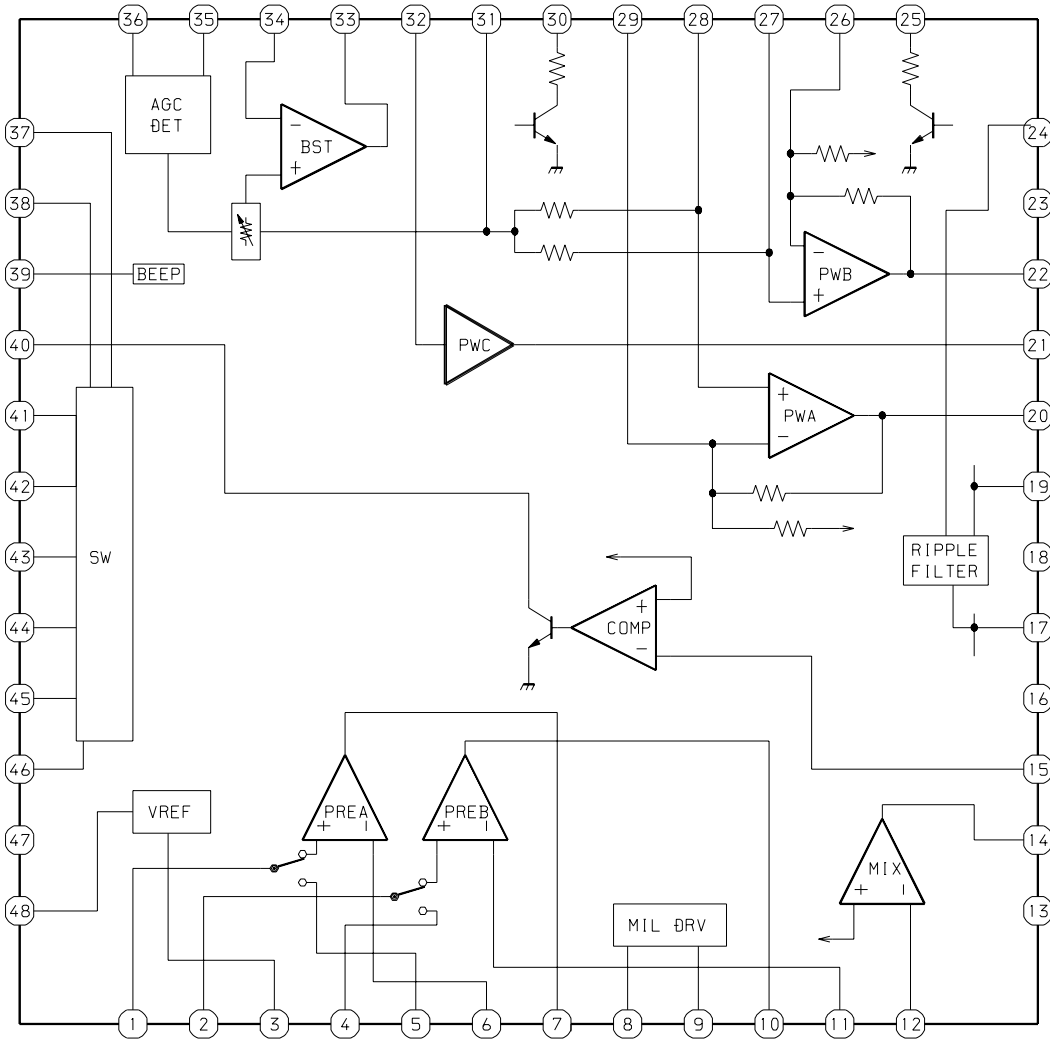
ANODE CONNECTION

NO	COM1	COM2	COM3	COM4
1	A1	A3	7b	8c
2	A2	MONO	7e	7a
3	6a	6b	7f	7d
4	6d	6c	6e	7c
5	CLEAR	BATT	8b	8a
6	9f	S1	BLS	9e
7	9a	S2	1a	9d
8	9b	2e	2f	9c
9	2d	2i	2g	2h
10	D-NR	2c	2b	2a
11	A5	3e	3f	REC
12	3d	3h	3g	3a
13	A6	3c	3b	PRESET
14	A10	S3	Dot	R
15	S4	4e	4f	F
16	4d	4i	4g	4h
17	MIN	4c	4b	4a
18	A7	5e	5f	A9
19	5d	5h	5g	5a
20	A4	5c	5b	A8
21	COM1	---	---	---
22	---	COM2	---	---
23	---	---	COM3	---
24	---	---	---	COM4

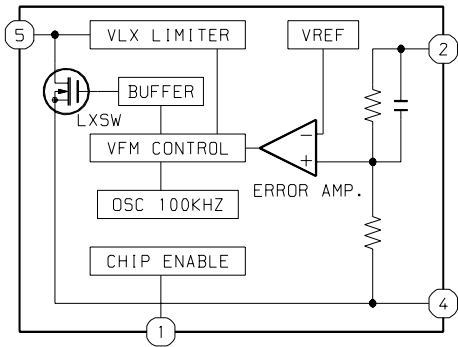
IC BLOCK DIAGRAM



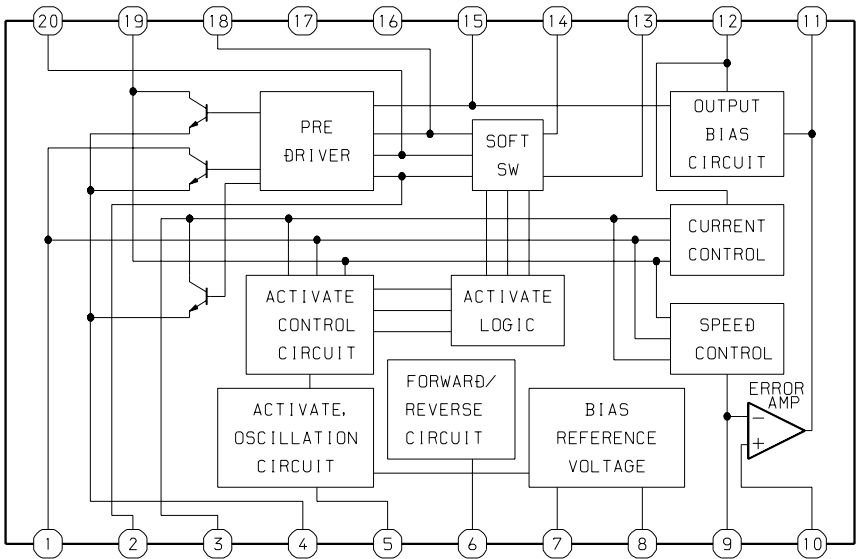
IC, TA2123AF



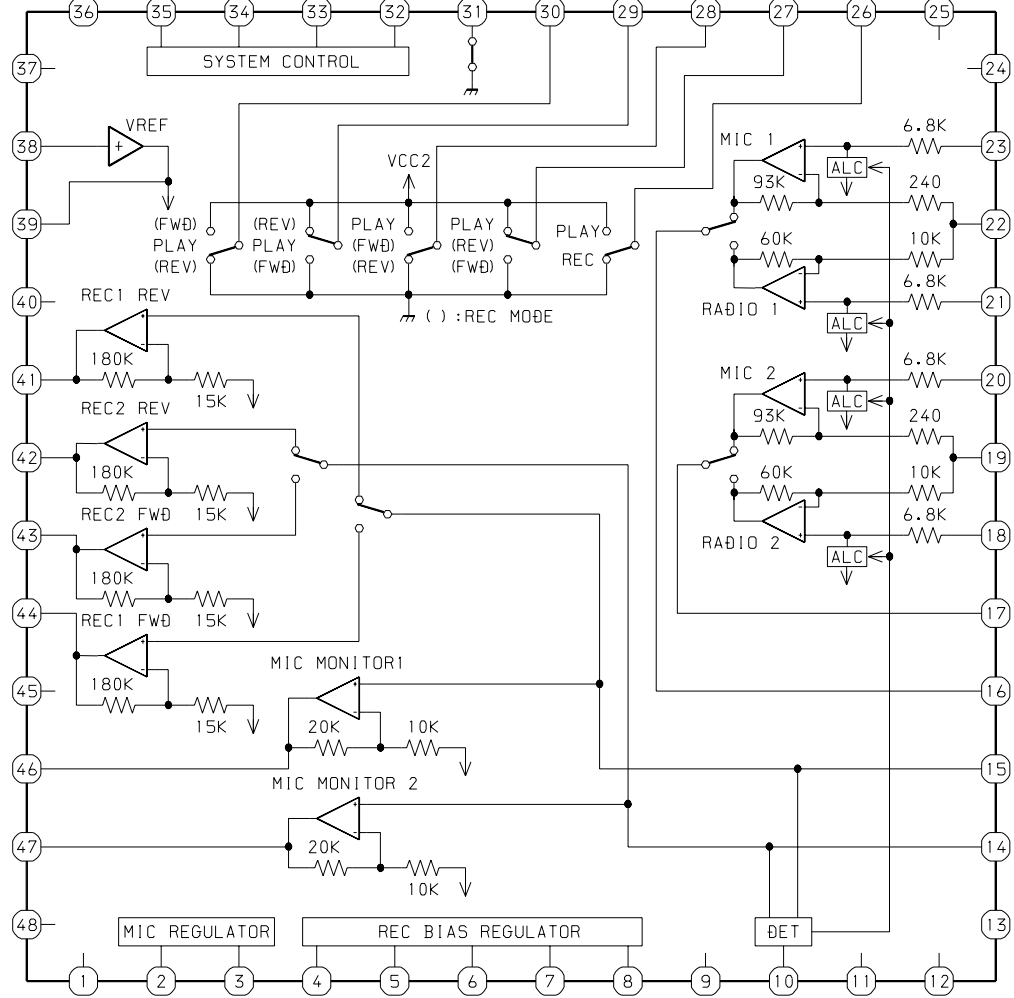
IC, RN5RK241A



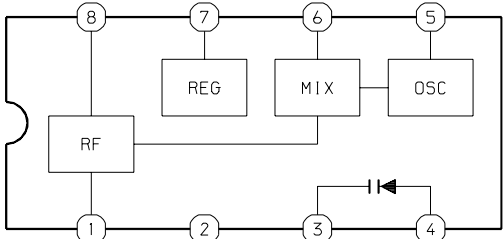
IC, MM1279XV



IC, LA3235W

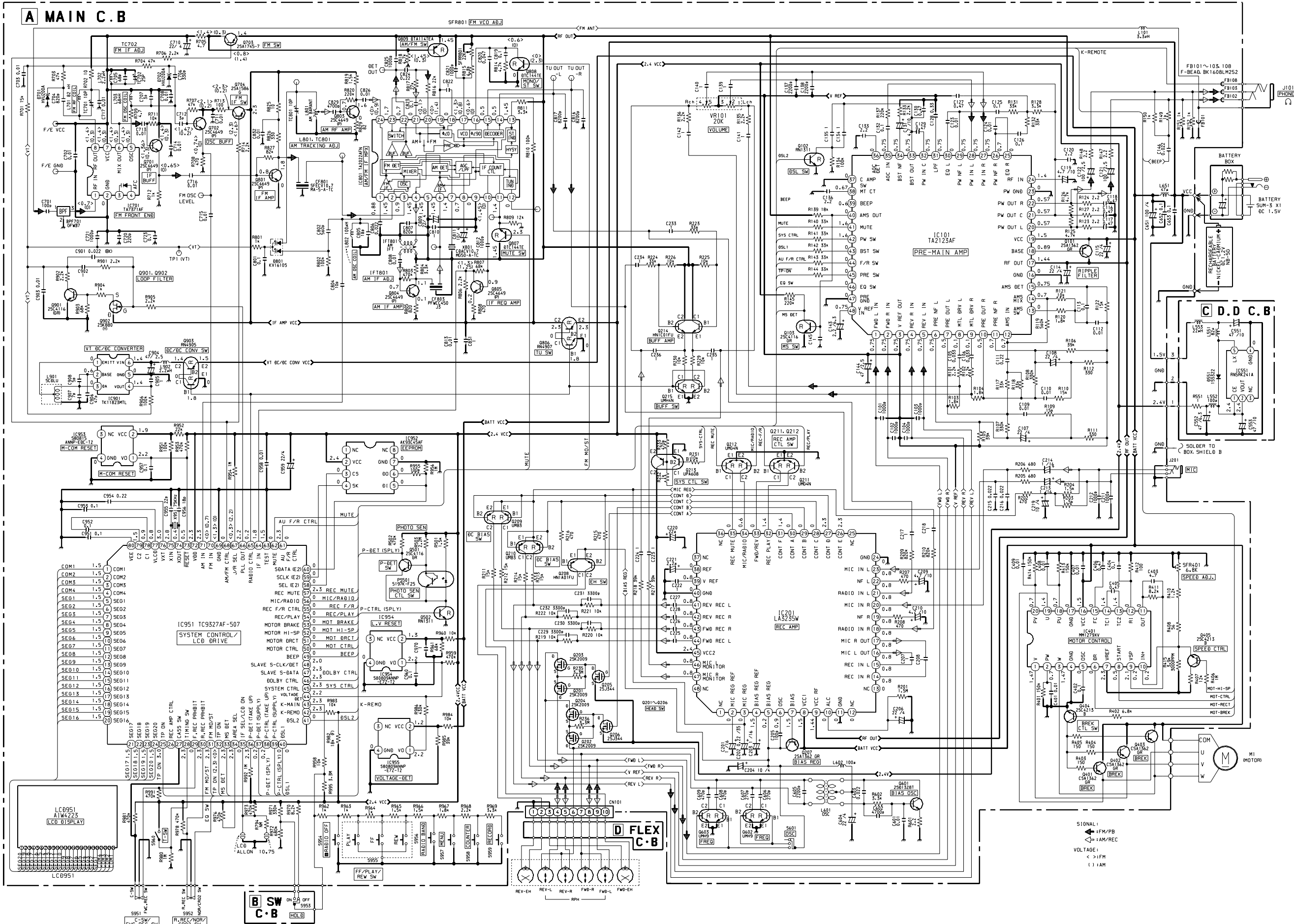


IC, TA7371AF





SCHEMATIC DIAGRAM



IC DESCRIPTION

IC,TC9327AF-507

Pin No.	PinName	I/O	Description
1 ~ 4	COM1 ~ COM4	O	LCD driver common output.
5 ~ 24	SEG1 ~ SEG20	O	LCD driver output.
25	TP ON	O	H: Except TAPE mode, L: TAPE mode
26	REC AMP CTRL	O	Always output L. (Not used)
27	CASS SW	I	H: SW OFF, L: SW ON.
28	TIMING SW	I	Input mechanism operation detection.
29	F. REC PRHBIT	I	H: Can not Record, L: can Record.
30	R. REC PRHBIT	I	H: Can not Record, L: can Record.
31	FM MO/ST	O	Output FM MONO/STEREO switching.
32	$\overline{\text{TP-ON}}$	O	H: Radio mode, L: Except Radio mode.
33	MS DET	I	H: Exist music, L: No music.
34	AREA SET	I	Input voltage level of each AREA(D,U,E,H).
35	IF SEL/LCD ON	I	H: IF 10.7, MID: IF 10.75, L: LCD ALL ON.
36	P-DET(TAKE UP)	I	Connected to ground.
37	P-DET(SUPPLY)	I	Input P-SNSR output waveform.
38	P-CTRL(TAKE UP)	O	Always output L. (Not used)
39	P-CTRL(SUPPLY)	O	Control P-SNSR circuit power supply.
40	DSL1	O	H: DSL ON, L: DSL OFF.
41	DSL2	O	H: DSL1, L: DSL2.
42	K-REMO	I	Input remote controller key.
43	K-MAIN	I	Input main unit key.
44	VOLTAGE DET	I	Reducing voltage mecha stop.
45	SYSTEM CTRL	O	H: Except standby mode, L: Standby mode.
46	DOLBY CTRL	O	H: Dolby OFF, L: Dolby ON.
47	SLAVE S-DATA	O	Output display data for remote controller.
48	SLAVES-CLK/DET	I	Input serial clock. (Not used)
49	BEEP	O	Output buzzer. (Not used)
50	MOTOR CTRL	O	H: Motor ON, L: Motor OFF.
51	MOTOR DRCT	O	H: Clockwise, L: Counter clockwise.
52	MOTOR HI-SP	O	H: Hi speed, L: Nomal speed.
53	MOTOR BRAKE	O	H: Motor brake ON, L: OFF.
54	REC/PLAY	O	H: Recording, L: Except Recording.
55	REC F/R CTL	O	H: Reverse Recording, L: Except Reverse Recording.
56	MIC/RADIO	O	H: Radio recording, L: Except Radio recording.
57	REC MUTE	O	Rec Muting control.
58	SEL(E2)	O	EEPROM R/W switching terminal.
59	SCLK(E2)	O	Output EEPROM serial clock.
60	SDATA(E2)	I/O	Input/output EEPROM.
61	AU F/R CTL	O	H: REV mode, L: FWD mode.
62	MUTE	O	H: Mute OFF, L: Mute ON.

Pin No.	PinName	I/O	Description
63	TEST	–	Connected to ground.
64	IF IN	I	Input IF signal.
65	RADIO CTRL	O	H: Radio mode, L: Except Radio mode.
66	PLL OUT	O	Output phase comparator.
67	J/R SEL	I	H: With Recording, L: Without Recording.
68	AM/FM CTRL	O	H: Except FM mode, L: FM mode.
69	GND	–	Connected to ground.
70	FM IN	I	Input FM programable counter.
71	AM IN	I	Input AM programable counter.
72	VDD	–	Connected to VDD.
73	$\overline{\text{RESET}}$	I	Input reset.
74	XOUT	O	Connected to crystal oscillator.
75	XIN	I	
76	VXT	–	Power supply for crystal oscillator.
77	VLCD	–	Reference voltage for LCD drive.
78	C1	–	
79	C2	–	
80	VEE	–	1.5V constant voltage for LCD drive.

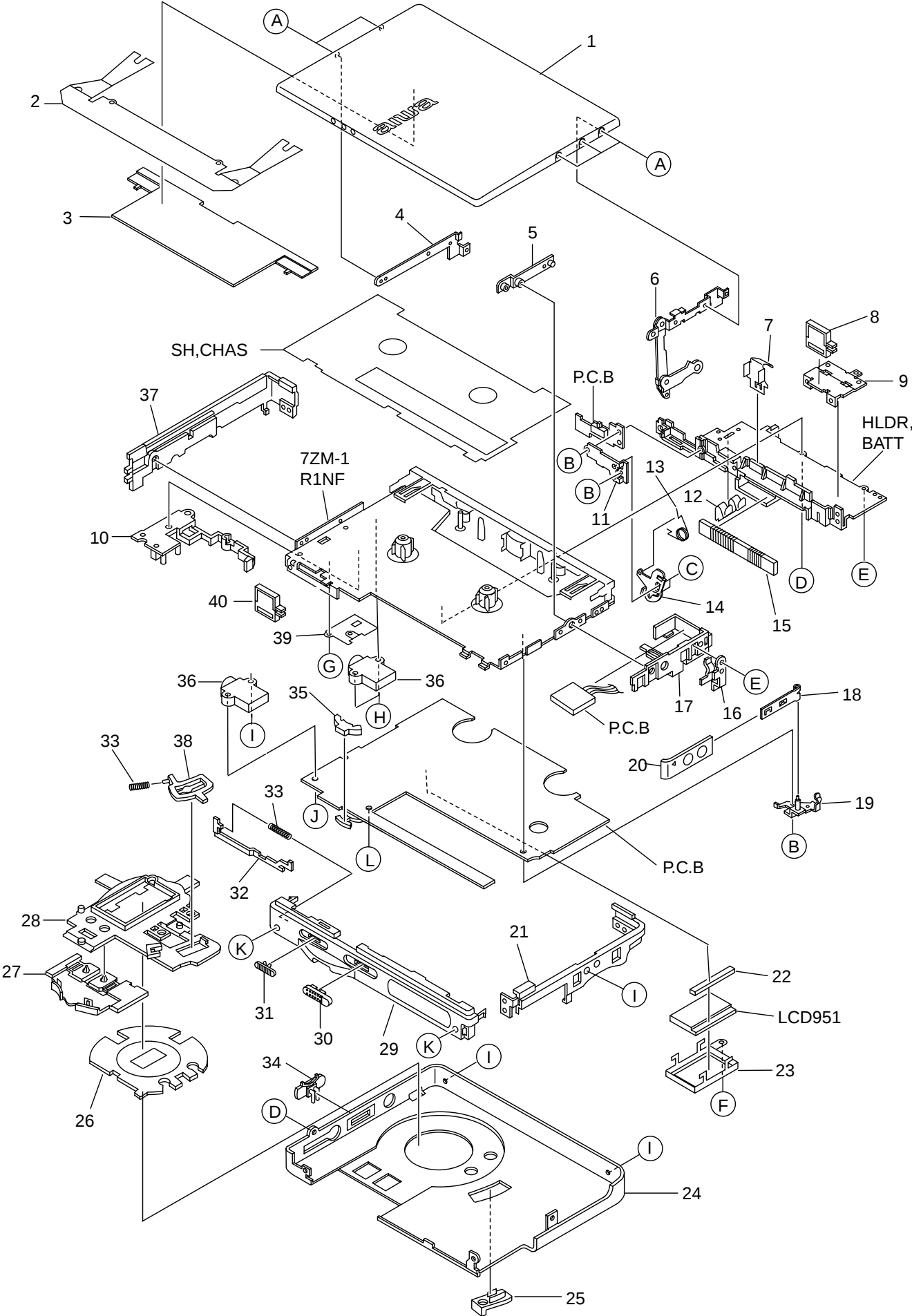
ADJUSTMENT

<TUNER SECTION>

1. AM IF Adjustment
IFT801 450 kHz
2. FM IF Adjustment
TC702 10.7/10.75 MHz
3. AM VT Check
Settings : • Test point : TP1 (VT)
Method : Set to AM 531 kHz and TP1, check the test point is 1.0 ~ 1.6 V.
Then set to AM 1602 kHz and check that the test point is less than 7.8 V.
4. FM VT Check
Settings : • Test point : TP1 (VT)
Method : Set to FM 87.5 MHz and TP1, check the test point voltage is 2.7 ~ 3.3 V.
Then set to FM 108.0 MHz and check that the test point voltage is less than 12.0 V.
5. AM Tracking Adjustment
L801 630 kHz
TC801 1440 kHz
6. FM Tracking Adjustment
TC701 76.0 MHz
7. FM VCO Adjustment
Settings : • Test point : IC801 (pin11,12)
• Adjustment location : SFR801
Method : Connect a frequency counter to pin 11 & 12 of IC801.
Adjust SFR 801 such that the frequency counter indicates 19kHz $\pm$ 100 Hz.

<TAPE SECTION>

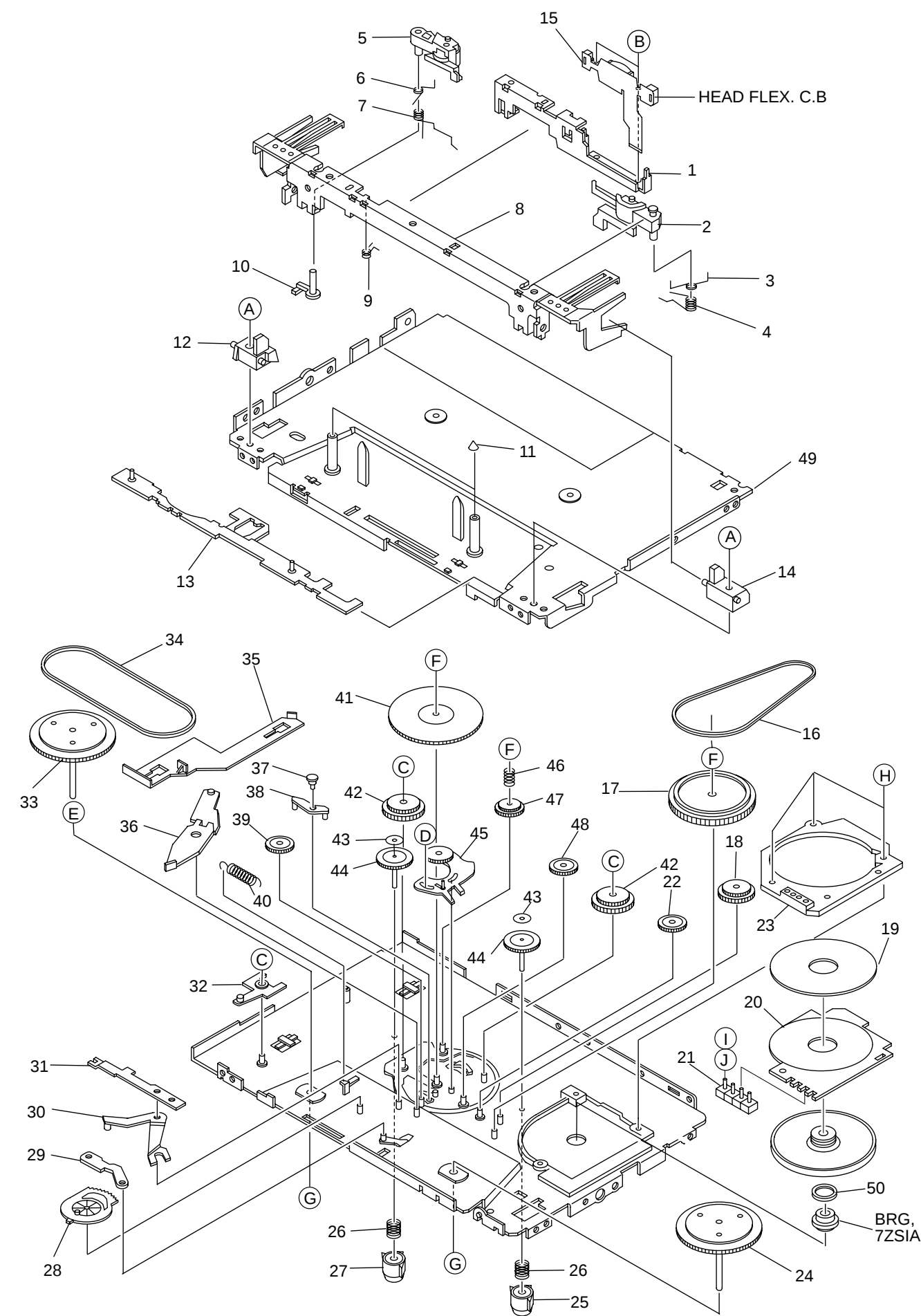
8. Tape Speed Adjustment
Settings : • Test tape : TTA-100
• Test point : Phones Jack (J101)
• Adjustment location : SFR401
• Volume : MAX
• Power voltage : 1.5 V
Method : Play back the test tape and adjust SFR401 for 3015 Hz $\pm$ 10 Hz (FWD) and 3015 Hz $\pm$ 45 Hz (REV).



REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-HJ2-024-010		LID, CASS ASSY 989
2	8Z-HK4-228-010		SPR-P, LID
3	8A-HJ2-003-010		WINDOW, CASS
4	8A-HJ2-202-010		HLDR, LID
5	8Z-HK4-210-010		NUT, B-BOX
6	8Z-HK4-206-110		HLDR, ARM ASSY
7	8A-HJ2-212-010		SPR-P, CASS
8	8A-HJ2-608-010		SW, LEAF 7ZM-1R1
9	8A-HJ2-223-010		PLATE, SW REC
10	8A-HJ2-204-010		HLDR, MIC
11	8A-HJ2-209-010		BASE, LOCK
12	8A-HJ2-207-010		BAT-CONTACT, (-)
13	8A-HJ2-224-010		SPR-T, LOCK
14	8A-HJ2-229-010		PLATE, LOCK J2
15	88-HR4-614-010		BAR, ANT MW
16	8A-HJ2-216-010		BAT-CONTACT, BOX (-)
17	8A-HJ2-205-010		HLDR, DD CON
18	8A-HJ2-208-010		BAT-CONTACT, (+)
19	8A-HJ2-213-010		SHAFT, ASSY
20	8A-HJ2-008-010		LID, BAT
21	8A-HJ2-006-010		FRAME, R
22	8A-HJ2-222-010		CONN, RUBBER LCD
23	8A-HJ2-221-010		HLDR, LCD
24	8A-HJ2-004-010		CABI, REAR<YH>
24	8A-HJ2-021-010		CABI, REAR 990<AH>
25	8A-HJ2-016-010		KNOB, SL REC
26	8A-HJ2-010-010		WINDOW, LCD<YH>
26	8A-HJ2-023-010		WINDOW, LCD 20<AH>
27	8A-HJ2-009-010		PANEL, CONT
28	8A-HJ2-011-010		KEY, CONT
29	8A-HJ2-005-010		FRAME, CENTER
30	8A-HJ2-013-010		KNOB, SL OPEN
31	8A-HJ2-014-010		KNOB, SL HOLD
32	8A-HJ2-210-010		PLATE, OPEN
33	8A-HJ2-217-010		SPR-C, REC
34	8A-HJ2-015-010		KNOB, SL OSC
35	8A-HJ2-012-010		KNOB, SL JOG
36	87-A60-272-010		JACK, 3.5 ST 4P
37	8A-HJ2-007-010		FRAME, L
38	8A-HJ2-017-010		KNOB, LEVER REC
39	8A-HJ2-206-010		PLATE, HP
40	8A-HJ2-607-010		SW, LEAF 7ZM-1REC
A	87-067-754-010		V+1.4-1.6 CR N
B	87-067-732-010		TAPPING SCREW, VT1.4-3
C	87-078-206-010		S-SCRW, 1.4-0.6 B NL
D	87-078-186-010		SCRW-SR, 1.4-1.8 CR L
E	87-078-153-010		SCRW, 1.4-2.5 CR
F	8Z-HR8-212-010		S-SCREW, +1.4-4.5 CR HL
G	87-078-216-010		SCRW-SR, 1.4-1.4B LS
H	87-067-360-010		SCREW+1.4-3.5 (BK)
I	85-HK3-241-010		SCRW-SR, 1.4-3CR L
J	8A-HJ2-233-010		S-SCREW, +1.4-2.8 BLK
K	8A-HJ2-227-010		S-SCREW, SR+1.4-7 CR L
L	8A-HK5-217-010		S-SCREW, SERR1.4-6 CR

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



REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	87-ZM1-305-010		HLD R,HEAD J
2	87-ZM1-254-110		ARM ASSY,PINCH R
3	87-ZM1-287-010		SPR-T,PINCH BACK R
4	87-ZM1-309-010		SPR-T,PINCH R J
5	87-ZM1-252-110		ARM ASSY,PINCH L
6	87-ZM1-286-010		SPR-T,PINCH BACK L
7	87-ZM1-308-010		SPR-T,PINCH L J
8	87-ZM1-225-110		HLD R ASSY,CASSET
9	87-ZM1-275-010		SPR-T,HEAD BACK
10	87-ZM1-269-010		SHAFT,PINCH
11	87-ZM1-267-010		CAP,CAPSTAN
12	87-ZM1-263-010		HLD R,CASSET HLD L
13	87-ZM1-221-110		LEVER ASSY,DIR
14	87-ZM1-264-010		HLD R,CASSET HLD R
15	87-ZM1-604-010		HEAD ASSY, 7ZM-1 J
16	87-ZM1-271-010		BELT,MOT
17	87-ZM1-234-110		GEAR,PULLY
18	87-ZM1-244-010		GEAR,IDL D
19	M8-7ZS-191-000		ABL-71 YMB
20	87-ZS1-205-010		COIL,FP 7ZS1A
21	87-ZS1-216-010		PIN ASSY,7ZS1 5.0
22	87-ZM1-243-010		GEAR,IDL C
23	87-ZS1-210-210		HLD R,7ZS1A
24	87-ZM1-248-410		FLY-WHL ASSY,L
25	80-ZM4-230-310		REAL CAP,L
26	85-ZM2-269-010		SPR-C GEAR REEL
27	80-ZM4-231-210		REAL CAP,R
28	87-ZM1-232-010		GEAR,CAM
29	87-ZM1-266-210		HLD R,DIR
30	87-ZM1-268-010		LEVER,CAM 2
31	87-ZM1-265-010		HLD R,CAM
32	87-ZM1-261-010		LEVER,SW
33	87-ZM1-250-210		FLY-WHL ASSY,R
34	87-ZM1-272-010		BELT,FLY-WHL
35	87-ZM1-306-010		LEVER,DIR OFF J
36	87-ZM1-231-010		LEVER,CAM CONNECT
37	87-ZM1-207-010		SHAFT,CONTROL
38	87-ZM1-262-110		LEVER,FR CONTROL
39	87-ZM1-246-010		GEAR,CAM C
40	87-ZM1-282-110		SPR-E,CAM
41	87-ZM1-325-010		GEAR ASSY,SLIP J
42	87-ZM1-241-010		GEAR,IDL A
43	87-ZM1-307-010		SH,AUTO J
44	87-ZM1-236-110		GEAR,REEL
45	87-ZM1-217-010		LEVER ASSY,T-UP
46	87-ZM1-281-010		SPR-C,FR
47	87-ZM1-245-010		GEAR,FF/REW
48	87-ZM1-242-010		GEAR,IDL B
49	87-ZM1-335-010		CHAS ASSY,OUT-SERT R1NF
50	87-ZS1-211-010		MAGNET,PULL 7ZS1A
A	87-ZM1-273-010		S-SCREW,1.7-5
B	87-ZM1-314-010		S-SCREW,HEAD J 7ZM-1
C	87-B10-136-010		W-P,1.09-3.1-0.4
D	87-B10-228-010		W-P,0.95-2-0.2
E	87-ZM1-292-010		W,1.55-2.62-0.2 SOMA LIGHT
F	87-ZM1-291-010		W-P,0.86-3-0.25
G	87-ZM1-296-010		W-L,1.15-2.6-0.188
H	87-ZS1-215-010		S-SCREW,VT+1.4-3.5 CR HL
I	87-B10-200-010		W-P,0.6-2.5-0.5 SLT
J	87-B10-305-010		W-P,0.6-3-0.6 SLT

ACCESSORIES / PACKAGE LIST

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-HJ2-920-010		IB, AH (CK) S989<AH>
1	8A-HJ2-912-010		IB, AH (ECK) S989<AH>
1	8A-HJ2-913-010		IB, YHS (ECH) S989<YH>
2	87-B30-298-010		BAT, NB-5G (S)
3	8Z-HK4-090-010		BOX, BAT ASSY SIL
4	82-HK3-951-010		CARRYING, CASE
5	87-B30-341-110		CHARGER, RB-107 H (L)
6	87-B30-405-010		HEADPHONE, HP-M041 (T2)
7	87-041-083-110		MIC, CM-S40A
8	8A-HJ2-953-010		RC UNIT, RC989

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