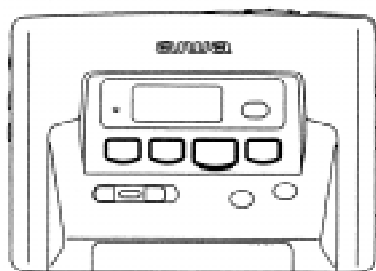


HS-JX803 YH

HS-JX804 AH



SERVICE MANUAL

STEREO RADIO
CASSETTE RECORDER

BASIC TAPE MECHANISM : 6ZM-2 R2

SPECIFICATIONS

Frequency range:		Power source:	804AH :
Reception area "EU"	AM 531 – 1,602kHz (9kHz steps) FM1,FM2 87.5 – 108MHz (50kHz steps)		DC 1.2V using supplied rechargeable battery NB-3A
Reception area "USA"	AM 530 – 1,710kHz (10 kHz steps) FM1,FM2 87.5 – 108.1MHz (200kHz steps)	Maximum dimensions:	111.4 (W) x 79.7 (H) x 38.2 (D) mm (4 ¹ / ₂ x 3 ¹ / ₄ x 1 ³ / ₁₆ in.)
Reception area "JPN"	AM 531 – 1,629kHz (9kHz steps) FM1, FM2 76 – 108MHz (100kHz step in 76 – 90 MHz, 50kHz step in 90 – 108MHz)	Weight:	Approx. 146g (5.1oz) (excluding batteries)
Maximum output:	4 mW + 4 mW (EIAJ 32 ohms)	< Battery charger RB-N01 >	
		Rated voltage:	AC 115V – 230V, 50/60Hz

- Design and specifications are subject to change without notice.

- "DOLBY" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

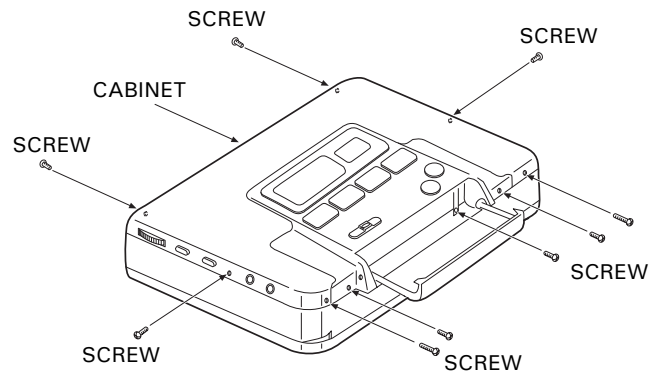
ACCESSORIES / PACKAGE LIST

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	88-HJ5-901-010	IB, EC	
2	87-B30-170-010	HEADPHONE, HP-M007A	
3	86-HJ4-950-010	CASE, CARRYING	
4	87-041-083-110	CM-S40A	
5	87-B30-135-010	CHARGER, RB-N01HNC	
6	87-047-153-210	BAT, NB-3A PH	

DISASSEMBLY INSTRUCTIONS

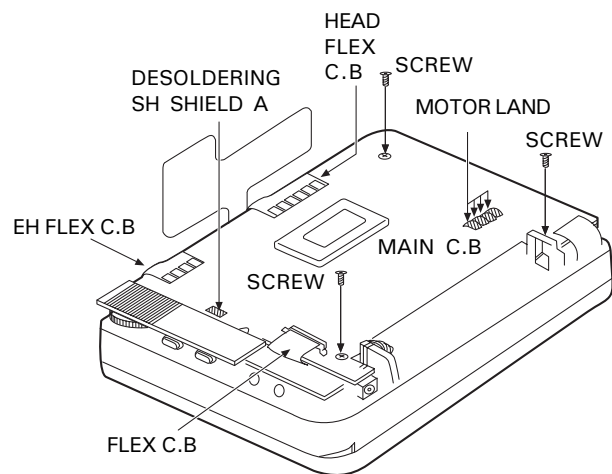
•REMOVAL OF CABINET

- 1) Remove the 9 screws.
- 2) Remove the cabinet.



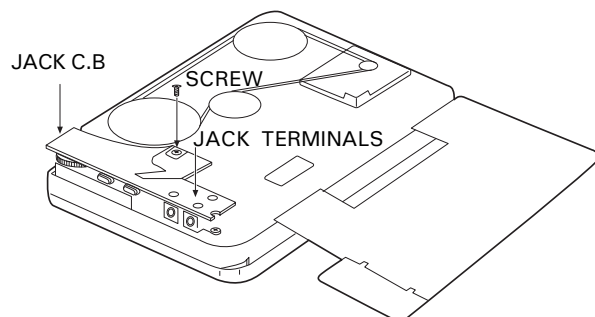
•REMOVAL OF MAIN C.B

- 1) Remove the 3 screws.
- 2) Remove SH SHIELD A.
- 3) Remove the EH FLEX C.B.
- 4) Remove the HEAD FLEX C.B.
- 5) Remove the FLEX C.B from the connector.
- 6) Remove the soldering of the motor terminal.
- 7) Remove the battery terminal from the holder and pull up the MAIN C.B.



•REMOVAL OF JACK C.B

- 1) Remove the screw on the JACK C.B.
- 2) Remove the soldering of the jack terminals.
- 3) Pull up the JACK C.B.



ELECTRICAL MAIN PARTS LIST

REF.NO.	PARTNO.	KANRI NO.	DESCRIPTION	REF.NO.	PARTNO.	KANRI NO.	DESCRIPTION
IC				C261	87-012-140-080		CAP 470P
	87-A20-745-040		C-IC,TA2030FN	C262	87-012-245-080		C-CAP,U 15P-50 UJ
	87-A20-076-040		C-IC,TA2022AFN	C263	87-010-787-080		CAP, U 0.022-25
	87-A20-124-080		IC,TK11823	C264	87-012-274-080		CHIP CAP,U 1000P-50B
	87-A20-441-010		C-IC,BA3632K	C265	87-A10-353-080		C-CAP,U0.22-10KB
	87-A20-818-040		C-IC,NJM2185AV	C266	87-010-787-080		CAP, U 0.022-25
	87-A20-580-040		C-IC,BA3641FV	C267	87-A10-263-080		C-CAP,U 0.1-16ZF
	87-A20-878-040		C-IC,TK70403M	C268	87-A10-249-080		C-CAP,U 1-10 ZF
	87-A20-880-010		C-IC,TC9327F-017	C269	87-012-273-080		C-CAP,U 820P-50 B
	87-A21-050-040		C-IC,S-808010ANNP-E72-T2	C270	87-A10-031-080		C-CAP,U 0.01-25 KB
	87-A20-755-080		C-IC,AK93C45AF	C271	87-A10-418-080		C-CAP,TN 22-4 A TCF
	87-A20-757-040		C-IC,S-80815ANNP-EDC-T2	C272	87-A10-249-080		C-CAP,U 1-10 ZF
	87-A20-961-040		C-IC,MM1279XV	C273	87-A10-422-080		C-CAP,TN 10-4 A TCF
	87-A20-603-040		C-IC,RN5RK241A	C274	87-012-274-080		CHIP CAP,U 1000P-50B
TRANSISTOR				C275	87-012-282-080		CAP, U 4700P-50
	87-026-482-080		TR,RN4610	C276	87-012-349-080		C-CAP,S 1000P-50 CH
	87-A30-188-080		C-TR,2SC4915 (O)	C277	87-010-829-080		CAP, U 0.047-16
	89-342-153-080		TR,2SC4215	C278	87-012-274-080		CHIP CAP,U 1000P-50B
	87-026-343-080		C-TR,DTC123JU	C279	87-012-282-080		CAP, U 4700P-50
	89-508-814-080		C-FET 2SK881 Y	C280	87-012-282-080		CAP, U 4700P-50
	87-026-425-080		C-TR,RN2307	C281	87-A10-249-080		C-CAP,U 1-10 ZF
	87-026-480-080		TR,RN4605 (0.3W)	C282	87-A10-249-080		C-CAP,U 1-10 ZF
	89-508-804-080		CHIP FET 2SK880Y	C283	87-A10-418-080		C-CAP,TN 22-4 A TCF
	89-341-165-080		CHIP TRANSISTOR 2SC4116GR	C284	87-A10-368-080		C-CAP,S 2.2-10 Z F
	87-026-597-080		C-TR,UMH3	C301	87-010-787-080		CAP, U 0.022-25
	87-026-352-080		CHIP-TR,DTC144TU	C302	87-A10-419-080		C-CAP,TN 1-16 A TCF
	89-113-625-080		TR,2SA1362GR(120MHZ,0.	C303	87-A10-707-080		C-CAP,U 0.47-10 ZF
	87-026-585-080		C-TR,IMX1 HQQ	C304	87-A10-251-080		C-CAP,TN 33-2.5 A
	87-026-461-080		C-TR IMH3	C305	87-A10-264-080		C-CAP,S0.1-16 ZF
	87-026-532-080		C-TR,RN2907	C306	87-012-167-080		C-CAP,U 5P-50 CH
	87-026-596-080		C-TR,UMH9	C307	87-012-174-080		CAP CHIP CERA SS 12P CHJ
	87-026-424-080		C-TR,RN2306	C308	87-012-191-080		CHIP CAP 68 PF
	87-026-524-080		CHIP TR,HN1C03F U(B)	C401	87-012-274-080		CHIP CAP,U 1000P-50B
	89-413-284-080		TR,2SD1328T	C402	87-012-274-080		CHIP CAP,U 1000P-50B
	87-026-346-080		CHIP-TR,DTC114YU	C403	87-012-274-080		CHIP CAP,U 1000P-50B
	87-A30-228-080		C-TR,UMB3	C404	87-012-274-080		CHIP CAP,U 1000P-50B
	87-026-481-080		TR,RN4607 (0.3W)	C405	87-016-117-080		C-CAP,U 0.018-25 J B
	89-342-132-080		TR,2SC4213	C406	87-016-117-080		C-CAP,U 0.018-25 J B
	87-026-648-080		C-TR,UPA608T	C407	87-016-296-080		C-CAP,TN 22-4SV(A)
DIODE				C408	87-016-296-080		C-CAP,TN 22-4SV(A)
	87-017-366-080		DIODE,DAN 202U	C409	87-010-828-080		CHIP CAPACITOR,U 0.033-25F
	87-017-367-080		DIODE,DAP 202U	C410	87-010-828-080		CHIP CAPACITOR,U 0.033-25F
	87-001-553-080		C-DIODE 1SS322	C411	87-A10-262-080		C-CAP,U 1-10 ZF
	87-017-366-080		DIODE,DAN 202U	C412	87-A10-262-080		C-CAP,U 1-10 ZF
	87-001-553-080		C-DIODE 1SS322	C415	87-012-272-080		C-CAP,U 680P-50 B
	87-017-366-080		DIODE,DAN 202U	C416	87-012-272-080		C-CAP,U 680P-50 B
	87-001-553-080		C-DIODE 1SS322	C417	87-A10-262-080		C-CAP,U 1-10 ZF
	87-017-366-080		DIODE,DAN 202U	C418	87-A10-262-080		C-CAP,U 1-10 ZF
	87-001-553-080		C-DIODE 1SS322	C419	87-A10-263-080		C-CAP,U 0.1-16ZF
	87-017-366-080		DIODE,DAN 202U	C420	87-A10-263-080		C-CAP,U 0.1-16ZF
	87-001-553-080		C-DIODE 1SS322	C421	87-A10-263-080		C-CAP,U 0.1-16ZF
MAIN C.B				C422	87-A10-703-080		C-CAP,TN 47-2.5 M A
	87-A90-291-080		C-FLTR,KMFC5132-AE-TC	C423	87-A10-703-080		C-CAP,TN 47-2.5 M A
BPF201	81-HW1-628-080		CHIP BAND PASE FILTER	C424	87-A10-263-080		C-CAP,U 0.1-16ZF
C201	87-A10-031-080		C-CAP,U 0.01-25 KB	C425	87-016-296-080		C-CAP,TN 22-4SV(A)
C202	87-012-274-080		CHIP CAP,U 1000P-50B	C426	87-010-829-080		CAP, U 0.047-16
C203	87-A10-031-080		C-CAP,U 0.01-25 KB	C427	87-A10-781-080		C-CAP,U 0.15-10 K B
C204	87-012-270-080		CHIP CAP 470P	C428	87-016-504-080		C-CAP,TN 6.8-4 (A2)
C205	87-A10-031-080		C-CAP,U 0.01-25 KB	C429	87-A10-260-080		C-CAP,U 0.1-16 K B
C206	87-012-165-080		CAP 3P	C431	87-016-296-080		C-CAP,TN 22-4SV(A)
C207	87-012-162-080		C-CAP,U 1P-50 CK	C432	87-016-286-080		C-CAP,TN 2.2-6.3 F93
C208	87-A10-031-080		C-CAP,U 0.01-25 KB	C433	87-A10-263-080		C-CAP,U 0.1-16ZF
C209	87-012-193-080		C-CAP,U 82P-50 CH	C434	87-010-274-080		C-CAP,TN 3.3-4
C210	87-A10-368-080		C-CAP,S 2.2-10 Z F	C435	87-A10-704-080		C-CAP,TN 100-2.5 M B2
C211	87-A10-030-080		C-CAP,U 100P-50 CH	C436	87-010-787-080		CAP, U 0.022-25
C212	87-A10-030-080		C-CAP,U 100P-50 CH	C437	87-A10-263-080		C-CAP,U 0.1-16ZF
C214	87-012-275-080		C-CAP,U 1200P-50 B	C438	87-012-273-080		C-CAP,U 820P-50 B
C251	87-A10-368-080		C-CAP,S 2.2-10 Z F	C439	87-A10-263-080		C-CAP,U 0.1-16ZF
C254	87-A10-031-080		C-CAP,U 0.01-25 KB	C440	87-A10-263-080		C-CAP,U 0.1-16ZF
C257	87-A10-263-080		C-CAP,U 0.1-16ZF	C441	87-010-746-080		CAP, TANTAL 10-4
C259	87-012-172-080		CAPACITOR CHIP U 10P CH	C442	87-012-274-080		CHIP CAP,U 1000P-50B
C260	87-012-180-080		C-CAP,U 22P-50 CH	C443	87-A10-827-080		C-CAP,U 0.47-6.3 K B

REF.NO.	PARTNO.	KANRI NO.	DESCRIPTION	REF.NO.	PARTNO.	KANRI NO.	DESCRIPTION
C444	87-A10-827-080		C-CAP,U 0.47-6.3 K B	IFT251	87-005-788-080		C-IFT,AM (450K)
C445	87-A10-353-080		C-CAP,U0.22-10KB	J801	87-A60-319-010		JACK,DC DIA 2.75
C446	87-A10-353-080		C-CAP,U0.22-10KB	L201	87-A50-245-080		C-COIL,S 0.1UH G
C450	87-A10-262-080		C-CAP,U 1-10 ZF	L202	87-A50-244-080		C-COIL,S 82NH G
C451	87-A10-262-080		C-CAP,U 1-10 ZF	L203	87-005-564-080		CHIP-COIL S2.2MH
C452	87-A10-262-080		C-CAP,U 1-10 ZF	L251	88-HJ3-610-010		BAR-ANT,MW
C453	87-012-274-080		CHIP CAP,U 1000P-50B	L252	87-A50-194-080		C-COIL, 100UH J NL252018
C501	87-012-274-080		CHIP CAP,U 1000P-50B	L253	87-003-245-080		C-COIL,22UH
C502	87-012-274-080		CHIP CAP,U 1000P-50B	L301	87-A50-037-080		C-COIL,D-D 5CDLU
C503	87-012-274-080		CHIP CAP,U 1000P-50B	L403	87-A50-322-080		C-COIL,S BK2125LM252
C504	87-012-274-080		CHIP CAP,U 1000P-50B	L404	87-HJ2-613-010		COIL,LOADING3.3UH
C505	87-A10-262-080		C-CAP,U 1-10 ZF	L405	87-003-245-080		C-COIL,22UH
C506	87-A10-262-080		C-CAP,U 1-10 ZF	L501	87-HJ3-605-080		C-COIL,OSC BIAS
C507	87-A10-262-080		C-CAP,U 1-10 ZF	L803	87-003-089-110		CHOKE COIL,47UH FL5R200F
C508	87-A10-262-080		C-CAP,U 1-10 ZF	L804	87-003-089-110		CHOKE COIL,47UH FL5R200F
C509	87-A10-262-080		C-CAP,U 1-10 ZF	L805	87-003-246-080		C-COIL,33UH
C510	87-A10-262-080		C-CAP,U 1-10 ZF	LCD601	88-HJ3-608-010		LCD,AIW4145
C511	87-A10-262-080		C-CAP,U 1-10 ZF	LED601	87-070-079-080		C-LED,SML-010 VT
C512	87-A10-262-080		C-CAP,U 1-10 ZF	PS601	87-A90-440-010		SNSR,PHOTO GP2S24N2-B
C513	87-012-271-080		CAP, U 560P-50	R403	87-022-432-080		C-RES,U 270-1/16WF
C514	87-012-267-080		C-CAP,U 270P-50 B	R404	87-022-432-080		C-RES,U 270-1/16WF
C515	87-012-278-080		C-CAP,U 2200P-50 B	R405	87-022-437-080		C-RES,U 430-1/16WF
C516	87-A10-031-080		C-CAP,U 0.01-25 KB	R406	87-022-437-080		C-RES,U 430-1/16WF
C517	87-A10-031-080		C-CAP,U 0.01-25 KB	R434	87-022-252-080		C-RES,U 36K-1/16WF
C518	87-012-279-080		C-CAP,U 2700P-50 B	R612	87-022-245-080		C-RES,U 18K-1/16WF
C519	87-016-296-080		C-CAP,TN 22-4SV(A)	R613	87-022-245-080		C-RES,U 18K-1/16WF
C520	87-010-746-080		CAP, TANTAL 10-4	R616	87-022-223-080		C-RES,U 2.2K-1/16WF
C521	87-A10-262-080		C-CAP,U 1-10 ZF	R617	87-022-223-080		C-RES,U 2.2K-1/16WF
C522	87-A10-262-080		C-CAP,U 1-10 ZF	R618	87-022-223-080		C-RES,U 2.2K-1/16WF
C523	87-015-923-080		C-CAP,TN 0.22-35	R619	87-022-227-080		C-RES,U 3.3K-1/16WF
C524	87-015-923-080		C-CAP,TN 0.22-35	R620	87-022-227-080		C-RES,U 3.3K-1/16WF
C525	87-010-787-080		CAP, U 0.022-25	R621	87-022-231-080		C-RES,U 4.7K-1/16WF
C526	87-010-787-080		CAP, U 0.022-25	R804	87-022-569-080		C-RES,0.47-1/2WK
C527	87-A10-704-080		C-CAP,TN 100-2.5 M B2	S501	87-036-415-080		C-SW,SL 1-3BSSSS8
C528	87-016-296-080		C-CAP,TN 22-4SV(A)	S601	87-036-220-080		C-SW,TACT SKQBAA
C529	87-A10-031-080		C-CAP,U 0.01-25 KB	S602	87-A90-361-010		SW,PUSH SPPB51-H11.3
C530	87-010-746-080		CAP, TANTAL 10-4	S603	87-A90-356-210		SW,LEAF 62M-2
C531	87-A10-262-080		C-CAP,U 1-10 ZF	S604	87-036-373-080		C-SW,SLIDE 1-1-2 (E)
C532	87-A10-262-080		C-CAP,U 1-10 ZF	S605	87-036-220-080		C-SW,TACT SKQBAA
C533	87-010-505-080		CAP, CHIP TANTALUM 1-16	S606	87-A90-665-080		C-SW,TACT LS7A2M
C534	87-A10-263-080		C-CAP,U 0.1-16ZF	S607	87-A90-665-080		C-SW,TACT LS7A2M
C535	87-010-196-080		CHIP CAPACITOR,0.1-25	S608	87-A90-665-080		C-SW,TACT LS7A2M
C536	87-010-196-080		CHIP CAPACITOR,0.1-25	S609	87-A90-665-080		C-SW,TACT LS7A2M
C601	87-A10-263-080		C-CAP,U 0.1-16ZF	S610	87-A90-665-080		C-SW,TACT LS7A2M
C603	87-A10-031-080		C-CAP,U 0.01-25 KB	S611	87-036-203-180		C-SW,SL1-1-3 SSSS81
C604	87-016-296-080		C-CAP,TN 22-4SV(A)	S614	87-HJ3-608-010		SW,LEAF REC ASSY
C605	87-012-172-080		CAPACITOR CHIP U 10P CH	S615	87-HJ3-608-010		SW,LEAF REC ASSY
C606	87-012-172-080		CAPACITOR CHIP U 10P CH	SFR701	87-024-406-080		C-SFR,6.8K RH03A3A
C607	87-A10-025-080		C-CAP,U 0.22-16Z F	TC201	87-011-189-080		TRIMMER CHIP CTZ-10A
C608	87-A10-263-080		C-CAP,U 0.1-16ZF	TC202	87-A90-688-080		C-TRIMMER,30P CTZ2S-30C
C609	87-A10-263-080		C-CAP,U 0.1-16ZF	TC251	87-011-189-080		TRIMMER CHIP CTZ-10A
C610	87-A10-263-080		C-CAP,U 0.1-16ZF	TH701	87-A90-855-080		C-THMS,SC20-3K102K
C611	87-A10-263-080		C-CAP,U 0.1-16ZF	VR251	87-A90-027-080		C-SFR,22K H CVR-32
C613	87-A10-262-080		C-CAP,U 1-10 Z F	X601	87-A70-078-110		VIB,XTAL 75KHZ KF-26R5
C701	87-A10-031-080		C-CAP,U 0.01-25 KB				
C702	87-A10-260-080		C-CAP,U 0.1-16 K B	JACK C.B			
C703	87-A10-950-080		C-CAP,S 4.7-10 ZF				
C704	87-A10-263-080		C-CAP,U 0.1-16ZF	C413	87-A10-262-080		C-CAP,U 1-10 ZF
C705	87-A10-025-080		C-CAP,U 0.22-16Z F	C414	87-A10-262-080		C-CAP,U 1-10 ZF
C706	87-A10-707-080		C-CAP,U 0.47U-16 F Z	C421	87-010-673-080		CAP, ELECT 100-2
C707	87-A10-031-080		C-CAP,U 0.01-25 KB	C422	87-010-673-080		CAP, ELECT 100-2
C708	87-A10-031-080		C-CAP,U 0.01-25 KB	J402	87-A60-273-010		JACK,3.5 ST 5P
C709	87-A10-031-080		C-CAP,U 0.01-25 KB	J501	87-A60-416-010		JACK,3.5 BLK ST 3P
C801	87-010-674-080		CAP, ELECT 220-2	L401	87-A50-322-080		C-COIL,S BK2125LM252
C805	87-016-296-080		C-CAP,TN 22-4SV(A)	L402	87-A50-322-080		C-COIL,S BK2125LM252
CF251	87-A90-456-080		C-FLTR,PFWCC 450J3	S612	87-A90-378-080		C-SW,PUSH PTO35C1T
CN401	87-A60-473-080		C-CONN,18P H SFV2ST	S613	87-A90-378-080		C-SW,PUSH PTO35C1T
D201	87-A40-517-040		C-VARI-CAP,SVC208	VR401	88-HJ3-609-080		C-VR,RTRY 50KCX2 XV0103G
D202	87-A40-517-040		C-VARI-CAP,SVC208				
D251	87-A40-462-040		C-VARI-CAP,SVC347(S)	DD C.B			

REF.NO.	PART NO.	KANRI NO.	DESCRIPTION
C802	87-016-444-080		C-CAP,TN 47-10 F95E
C803	87-016-444-080		C-CAP,TN 47-10 F95E
C804	87-A10-034-080		C-CAP,TN 33-10 (B2)
L801	87-A50-174-080		C-COIL, 82UH 7004-2
L802	87-A50-010-080		C-COIL,22UH LQH3C

FLEX C.B

88-HJ3-606-010 PWB,FLEX 18P

HEAD FLEX C.B

RPH 86-ZM2-323-010 HEAD ASSY,R2

DD CON FLEX C.B

88-HJ3-607-010 PWB,FLEX 4P

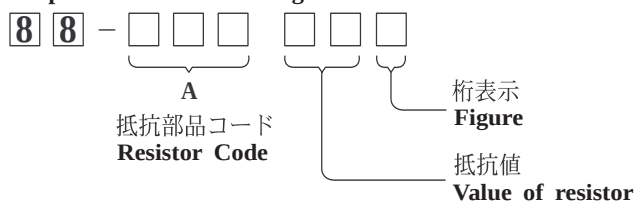
EH FLEX C.B

86-ZM2-326-010 HEAD ASSY,EH 6ZM-2 R2

○チップ抵抗部品コード／CHIP RESISTOR PART CODE

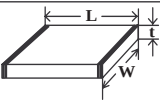
チップ抵抗部品コードの成り立ち

Chip Resistor Part Coding

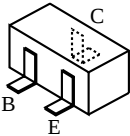


チップ抵抗

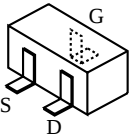
Chip resistor

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

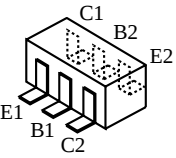
TRANSISTOR ILLUSTRATION



2SA1362
2SC4116
2SC4213
2SC4215
2SC4915
2SD1328

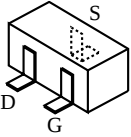


2SK880



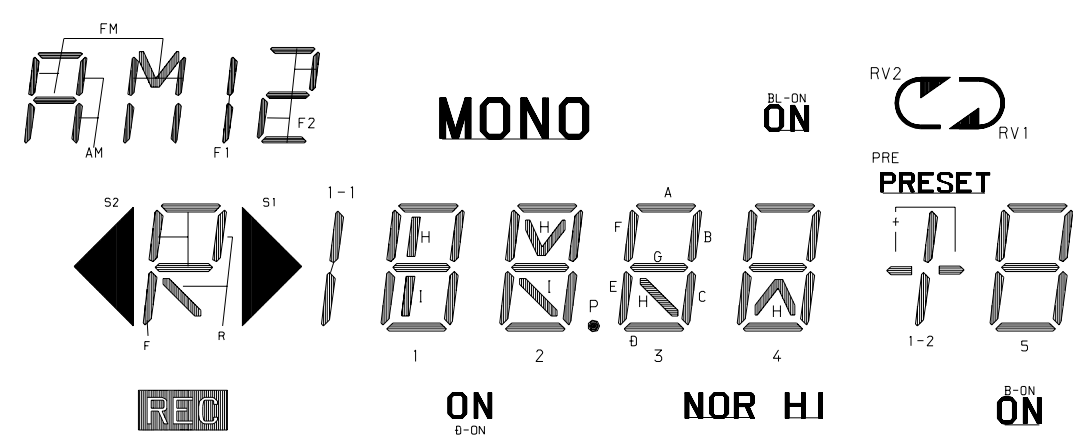
HN1C03F
RN2907
RN4605
RN4610
UMB3
RN4607

UMH3
UMH9
IMH3
IMX1 HQQ
UPA608T



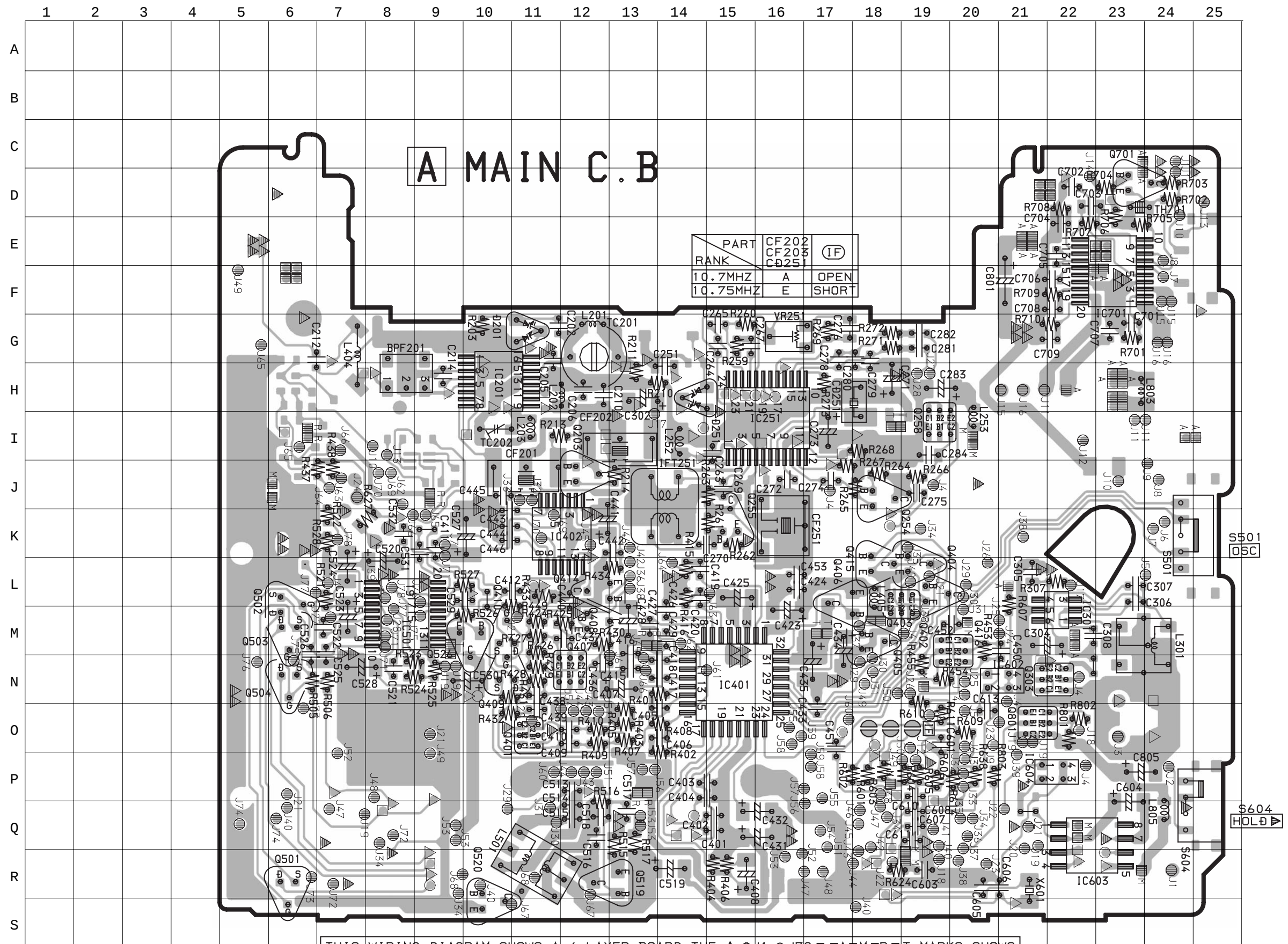
2SK881

LCD DIAGRAM



NO	COM1	COM2	COM3	COM4
1	2D	2I	2G	NOR
2	P	2C	2B	HI
3	3D	3H	—	—
4	3C	3G	3A	+
5	B-ON	4E	4F	5E
6	4D	4H	4G	4A
7	—	4C	4B	5D
8	—	—	COM3	—
9	—	COM2	—	—
10	COM1	—	—	—
11	5A	5B	5C	5G
12	—	3B	1-2	5F
13	—	3E	3F	PRE
14	—	—	—	COM4
15	—	—	COM3	—
16	—	COM2	—	—
17	COM1	—	—	—
18	MONO	BL-ON	RV2	RV1
19	—	COM2	—	—
20	—	—	COM3	—
21	—	—	—	COM4
22	1-1	1E	1F	1A
23	F	R	AM	F2
24	S2	S1	FM	F1
25	1D	1I	1G	1H
26	REC	1C	1B	2A
27	D-ON	2E	2F	2H

WIRING-1/2 (MAIN)



THIS WIRING DIAGRAM SHOWS A 4 LAYER BOARD. THE J1-J78, A, M, B, R, T MARKS SHOWS THE CONNECTIONS BETWEEN THE USUAL DOUBLE FACE PATTERNS AND THE PATTERNS ON THE INTERNAL LAYERS THAT CANNOT BE SEEN.

THE PATTERN WITH MARK ARE CONNECTED TO GND PATTERNS.

THE PATTERN WITH J1-J78 MARK ARE CONNECTED TO JUMPER PATTERNS.

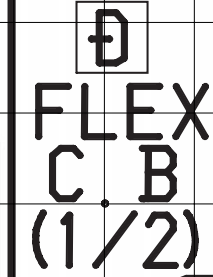
THE PATTERN WITH MARK ARE CONNECTED TO VCC PATTERNS.

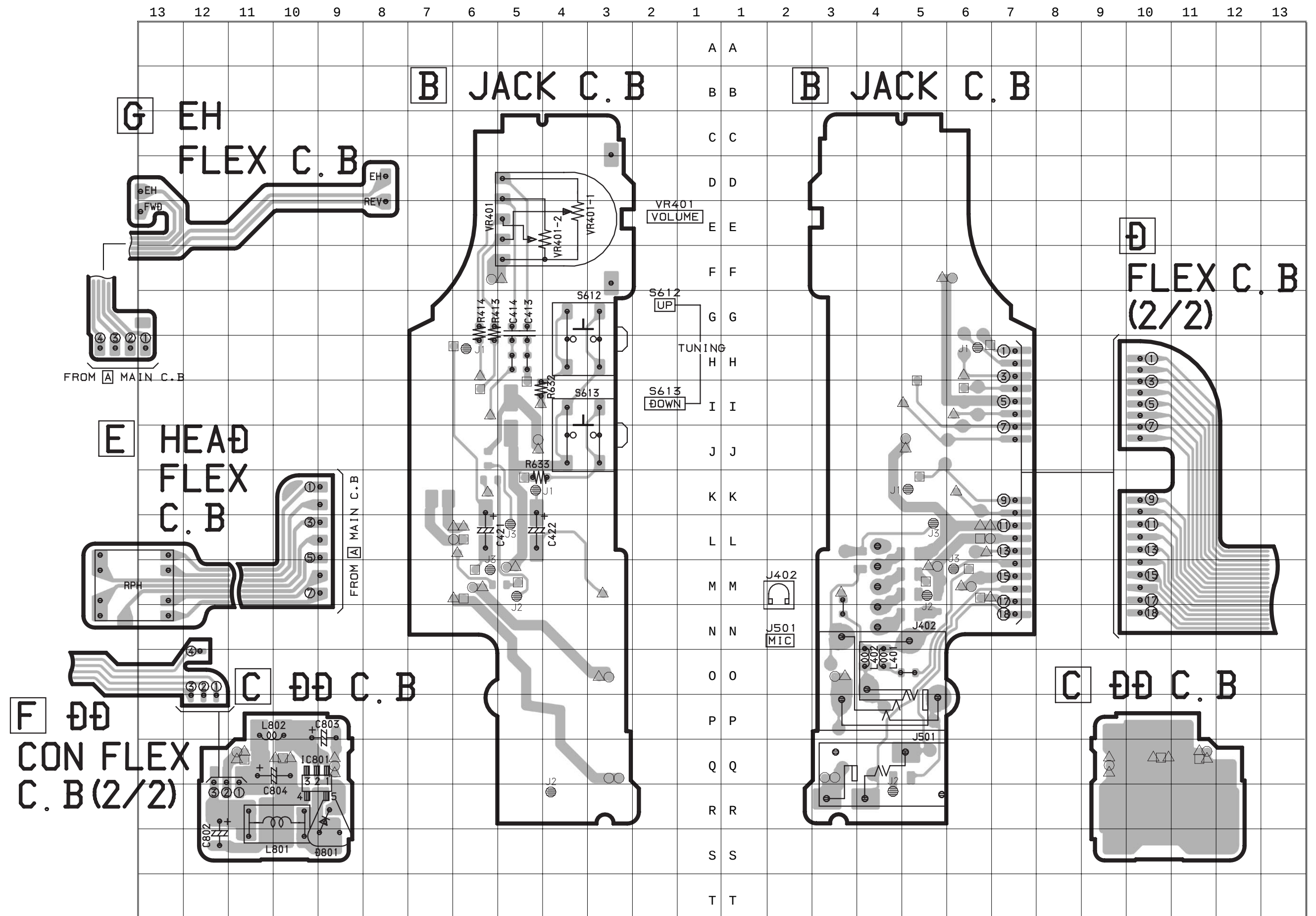
THE PATTERN WITH MARK ARE CONNECTED TO AU/TU DD-VCC PATTERNS.

THE PATTERN WITH MARK ARE CONNECTED TO MCOM VDD PATTERNS.

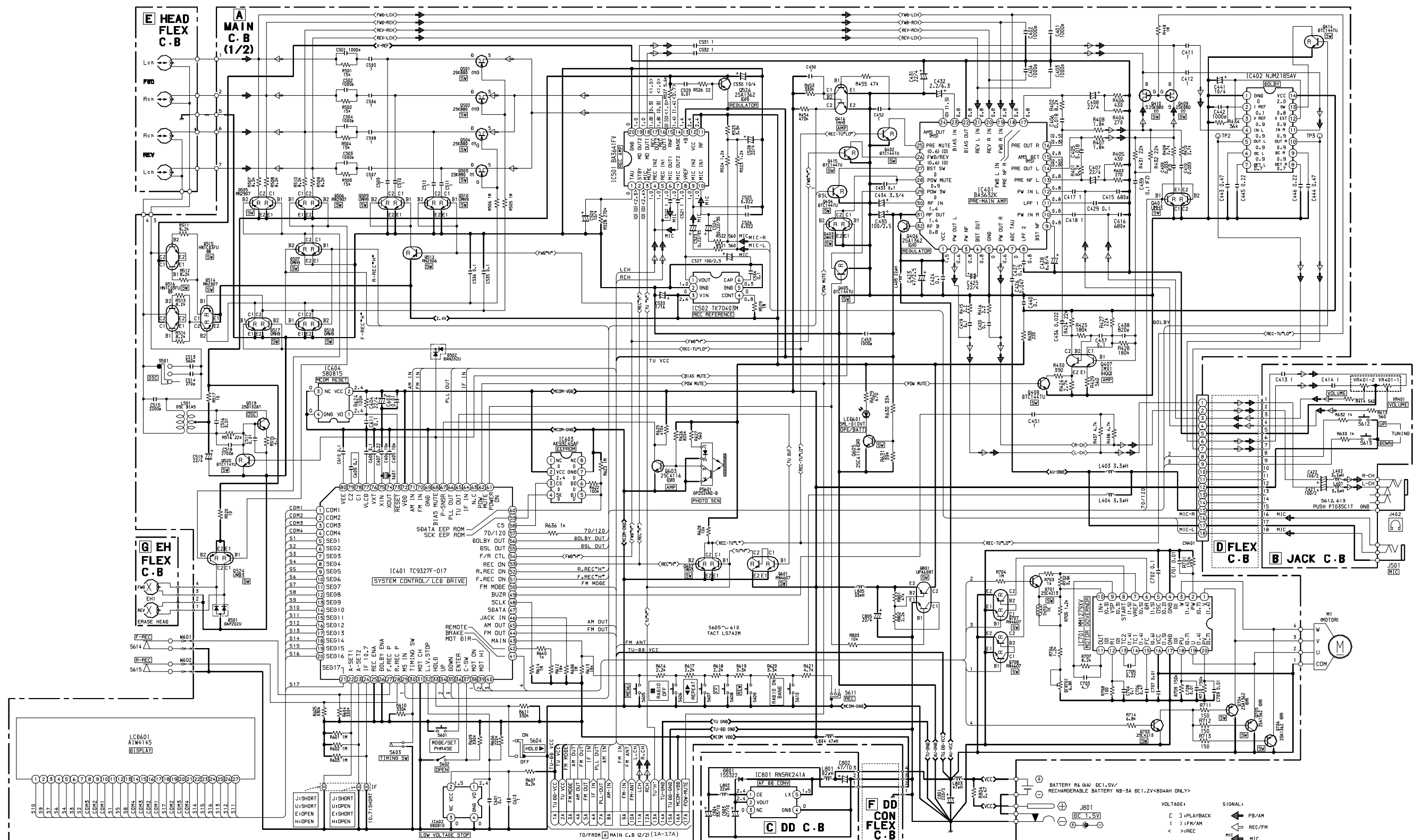
THE PATTERN WITH MARK ARE CONNECTED TO TU VCC PATTERNS.

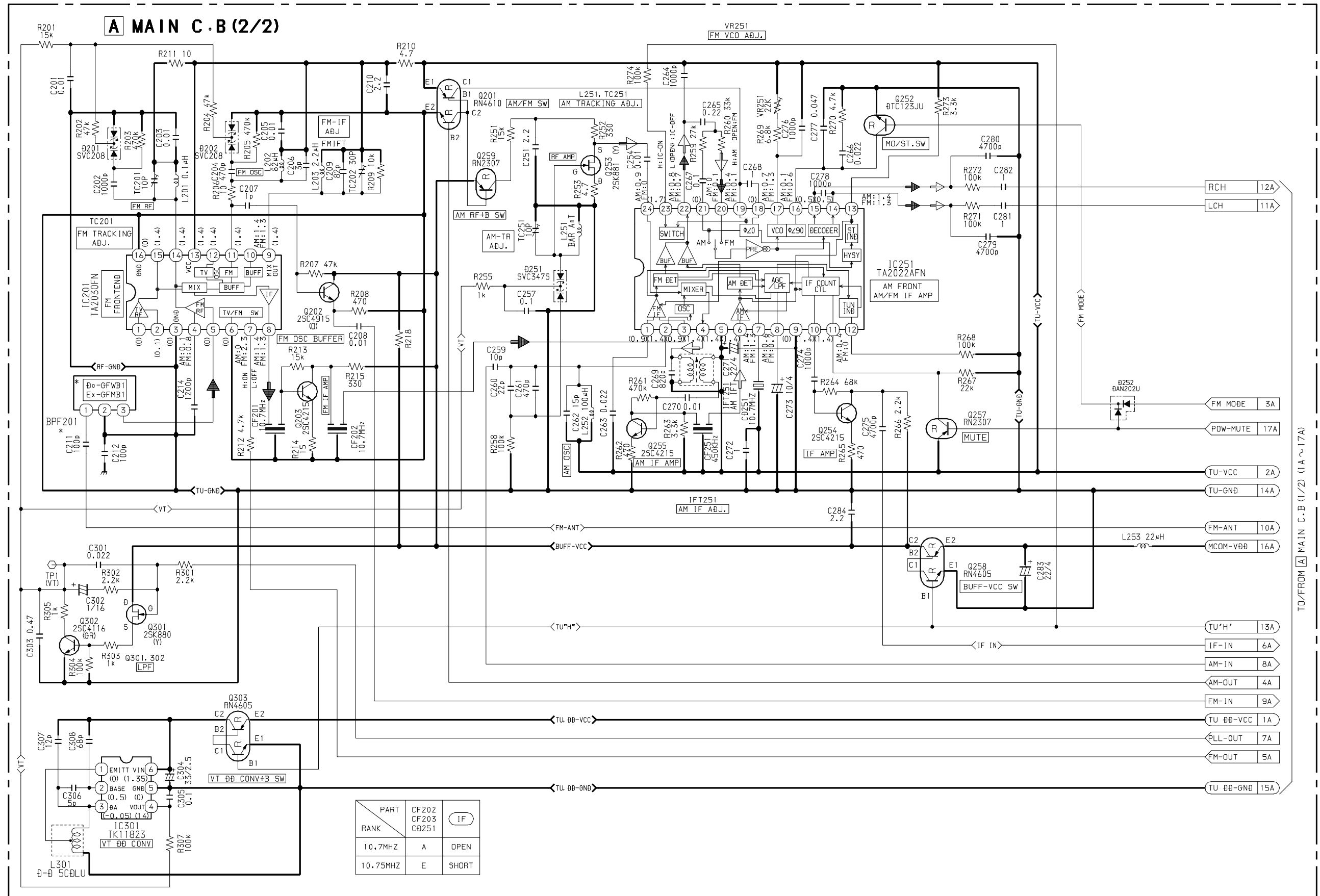
THE PATTERN WITH MARK ARE CONNECTED TO VREF PATTERNS.



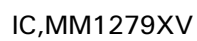
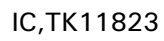


THIS WIRING DIAGRAM SHOWS A 4 LAYERS BOARD.
THE  MARKS SHOWS THE CONNECTIONS BETWEEN
THE USUAL DOUBLE FACE PATTERNS AND THE PATTERNS
ON THE INTERNAL LAYERS THAT CANNOT BE SEEN
THE PATTERN WITH  ARE CONNECTED TO JUMPER PATTERNS

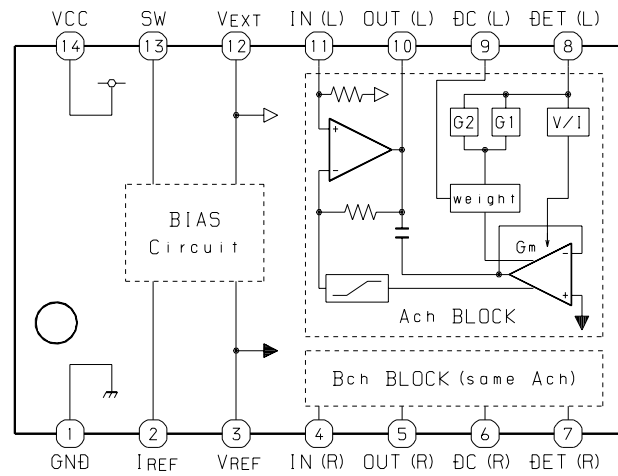




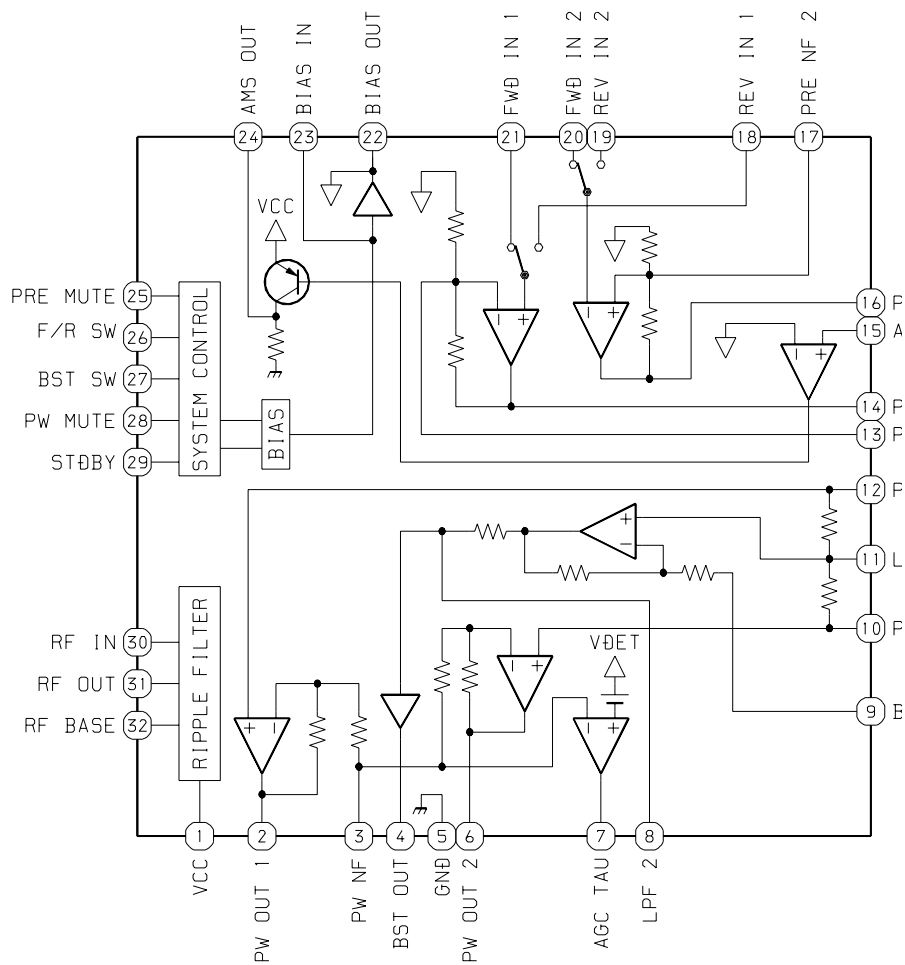
IC,BA3641FV



IC,NJM2185V



IC,BA3632K



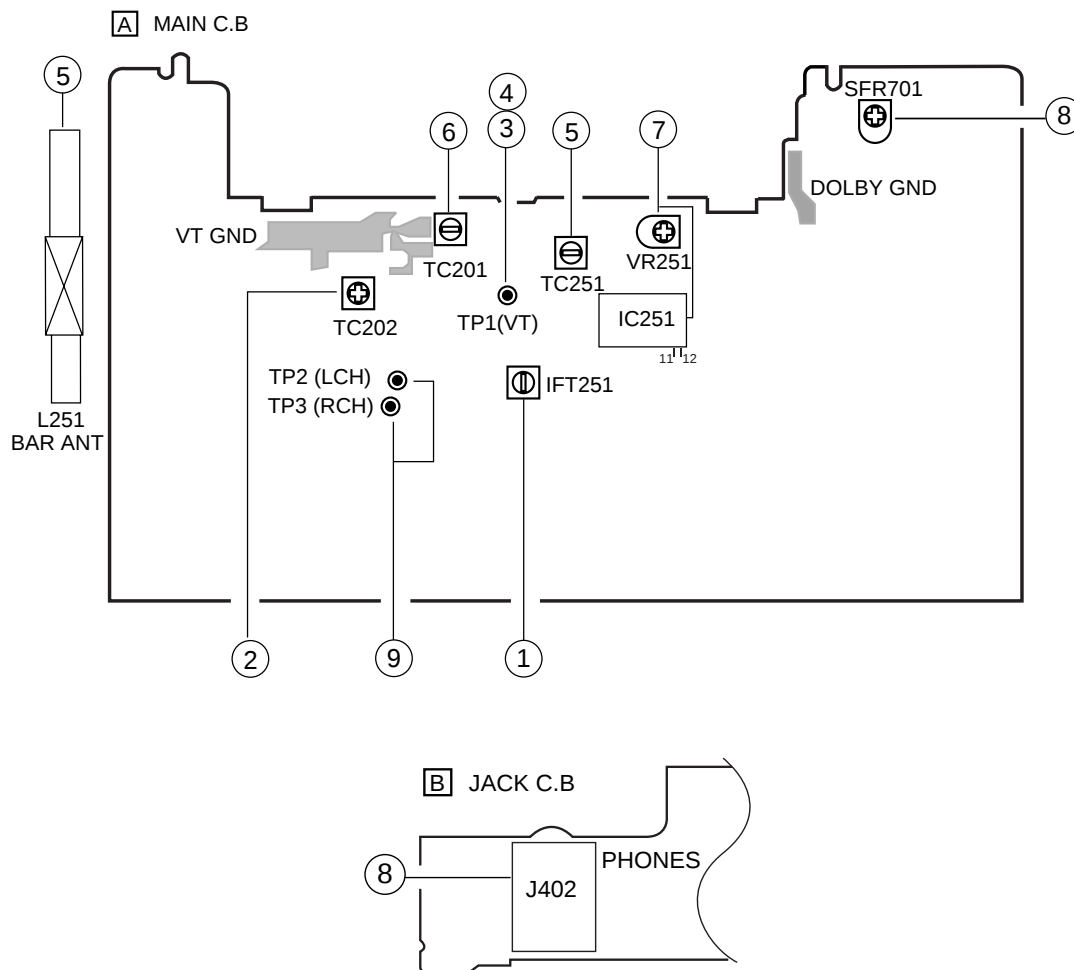
IC DESCRIPTION

IC, TC9327F-017

Pin No.	Pin Name	I/O	Description				
1 ~ 4	COM1~COM4	O	LCD common output 1~4.				
5 ~ 21	SEG1 ~ SEG17	O	LCD segment output 1~17.				
22,23	A-SET1,2	I	Input pin for switching J , U , E , H areas.				
				J area	U area	E area	H area
			A-SET1	L	L	H	H
			A-SET2	L	H	L	H
24	IF 10.7	I	"H": IF 10.75 MHz. "L": 10.7 MHz.				
25	REC ENA	I	Input pin for REC enable. "H": REC enable. "L": REC disable.				
26	DOLBY ENA	I	Input pin for DOLBY enable. "H": DOLBY enable. "L": DOLBY disable.				
27	F. REC P	I	"H": FWD REC shift disable. "L": enable.				
28	R. REC P	I	"H": REV REC shift disable. "L": enable.				
29	MS IN	I	Pin to input music sensor signal. "H": music exist. "L": blank.				
30	TIMING SW	I	Pin to input for mechanism operation detection.				
31	MOT CH	I	Pin to input for motor activation detection.				
32	L.V. STOP	I	Stop mechanism operation and hold key input when low voltage is detected.				
33	HOLD	I	"H": Hold OFF. "L": Hold ON.				
34	UP	I	Up key input pin. "H": Key ON. "L": Key OFF.				
35	DOWN	I	Down key input pin. "H": Key ON. "L": Key OFF.				
36	ENTER	I	Enter key input pin. "H": Key ON. "L": Key OFF.				
37	C-SW	I	Input pin for detecting the presence of cassette. "H": C-SW OFF. "L": C-SW ON.				
38	MOT ON	O	Pin to output motor control. "H": Motor ON. "L": Motor OFF.				
39	MOT HI	O	Pin to control motor. "H": Motor high speed. "L": Motor normal speed.				
40	MOT DIR	O	Pin to output for motor rotation direction. "H": Clockwise. "L": Counter Clockwise.				
41	BRAKE	O	Pin to output brake control for motor. "H": Brake ON. "L": Brake OFF.				
42	REMOTE	I	Remote control key input pin.				
43	MAIN	I	Main unit key input pin.				
44	FM OUT	O	Pin to output for FM mode. "H": FM mode. "L" except FM mode.				
45	AM OUT	O	Pin to output for AM mode. "H": AM(MW) mode. "L" except AM(MW) mode.				
46	JACK IN	I	This is a pin where HP plug input is detected. "H": no plug. "L" plug exist.				
47	SDATA	O	Pin to output data for remote controller display.				
48	SCLK	I	Pin to input serial clock.				
49	BUZR	O	Output buzzer.				
50	FM MODE	O	Pin to output FM MONO/ST switching.				
51	F. REC ON	O	"H": FWD REC mode. "L": Other mode.				
52	R.REC ON	O	"H": REV REC mode. "L": Other mode.				
53	REC ON	O	"H": REC mode. "L": Other mode.				
54	F/R CTL	O	Output pin for tape run direction. "H": FWD direction. "L": REV direction.				
55	DSL OUT	O	Pin to output DSL ON/OFF control.				

Pin No.	Pin Name	I/O	Description
56	DOLBY OUT	O	DOLBY ON/OFF control output pin.
57	70/120	O	Pin to output normal tape and metal tape switching.
58	CS	O	Pin to control READ,WRITE of EEPROM.
59	SCK EEPROM	O	Pin to output serial clock of EEPROM.
60	SDATA EEPROM	I/O	Pin to input/output data of EEPROM.
61	POWER ON	O	"H": POWER ON. "L": POWER OFF.
62	POW MUTE	O	Pin to output muting. "H": MUTE ON. "L": MUTE OFF.
63	NC	–	Not connected.
64	IF IN	I	Pin to input IF signal.
65	TU OUT	O	Output "H". "H": TU mode. "L": except TU mode.
66	PLL OUT	O	Output phase comparison instrument.
67	P-SNSR	I	Pin to input photo sensor waveform output.
68	BIAS MUTE	O	Pin to output mute when REC. "H": MUTE ON. "L": MUTE OFF.
69	GND	–	GND.
70	FM IN	I	Input FM programmable counter.
71	AM IN	I	Input AM programmable counter.
72	VDD	–	Pin to apply voltage.
73	$\overline{\text{RESET}}$	I	Pin to input system reset signal.
74	XOUT	O	Crystal oscillation pin.
75	XIN	I	Crystal oscillation pin.
76	VXT	–	Power supply pin for crystal oscillation.
77	VLCD	–	Reference voltage pin for LCD drive.
78	C1	–	Reference voltage pin for LCD drive.
79	C2	–	Reference voltage pin for LCD drive.
80	VEE	–	1.5V constant voltage power supply pin for LCD drive.

ADJUSTMENT



<TUNER SECTION>

1. AM IF Adjustment
IFT251 450 kHz
2. FM IF Adjustment
TC202 10.7 MHz
3. AM VT Check
Settings : • Test point : TP1 (VT)
Method : Set to AM 531 kHz and check that the test point voltage is $1.3 \pm 0.3V$. Then set to AM 1602 kHz and check that the test point voltage is less than 6.7~8.2V.
4. FM VT Check
Settings : • Test point : TP1 (VT)
Method : Set to FM 87.5MHz and check that the test point voltage is $3.6 \pm 0.4V$. Then set to FM 108.0MHz and check that the test point voltage is less than 6.8~9.0V.
5. AM Tracking Adjustment
L251 630 kHz
TC251 1440 kHz
6. FM Tracking Adjustment
TC201 87.5 MHz

7. FM VCO Adjustment

- Settings : • Adjustment location : VR251
Method : Connect a frequency counter to pin 11 and 12 of IC251, adjust VR251 for VCO to $19kHz \pm 100Hz$.

<TAPE PLAYER SECTION>

8. Tape Speed Adjustment
Settings : • Test tape : TTA-100
• Test point : PHONES JACK (J402)
• Volume : MAX.
• Adjustment location : SFR701
Method : Play back the test tape and adjust SFR701 for $3015Hz \pm 10Hz$ (FWD) and $3015Hz \pm 45Hz$ (REV).
9. Dolby Level Check
Settings : • Test tape : TTA-200
• Test point : TP2(Lch), TP3(Rch)
• Volume : MIN.
• DOLBY SW : OFF
Method : Connect an electrolytic capacitor (10uF/16V) to measured instrument and test point, check the voltage for $31.6mV \pm 1dB$.

PRACTICAL SERVICE FIGURE

<TUNER SECTION>

<FM SECTION>

Sensitivity :	Less than 17 dB
(IHF, THD 3%)	[at 87.5 / 98.5 / 108 MHz]
Distortion :	Less than 3% (at 54 dB)
	Less than 5% (at 110 dB)
	[at 98.5 MHz]
Stereo separation :	More than 16 dB
	[at 98.5 MHz]
Auto stop level :	20 dB $\pm$ 6 dB
	[at 98.5 MHz]
Intermediate frequency :	10.7/10.75 MHz $\pm$ 0.05 MHz

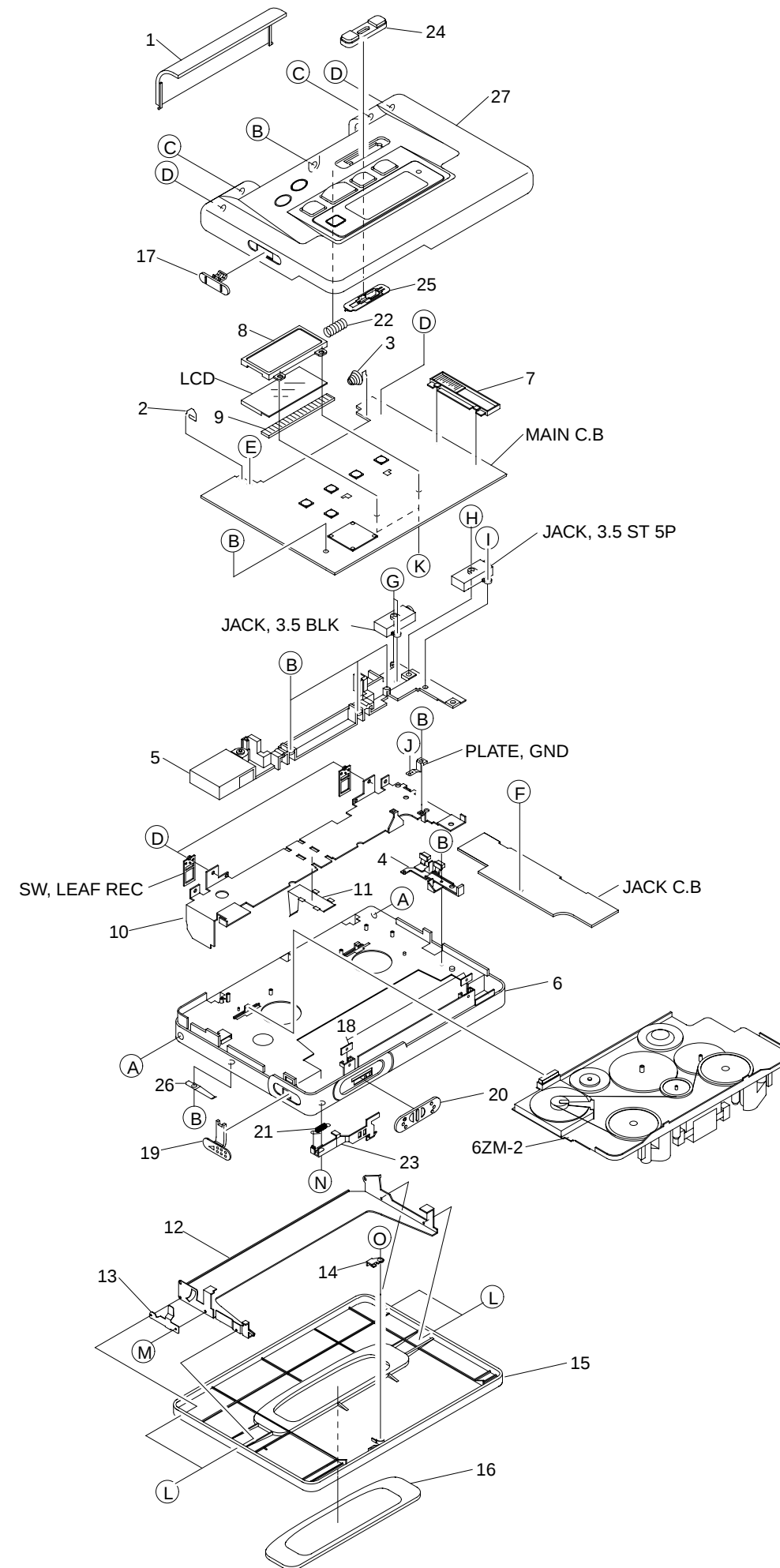
<AM SECTION>

Sensitivity :	Less than 58 dB
(S/N 10dB)	[at 630 kHz]
	Less than 56 dB
	[at 999 / 1440 kHz]
S/N ratio :	More than 26 dB
(at 74dB)	[at 630 kHz]
	More than 27 dB
	[at 999 / 1440 kHz]
Distortion :	Less than 5% (at 74 dB)
	Less than 10% (at 120 dB)
	[at 999 kHz]
Auto stop level :	60 dB $\pm$ 7 dB
	[at 999 kHz]
Intermediate frequency :	450 kHz $\pm$ 3 kHz

<TAPE SECTION>

Tape speed :	3015Hz $\pm$ 50Hz
Wow & flutter :	Less than 0.52% (RMS)
Take-up torque :	20 ~ 30g-cm (FWD, REV)
F.F torque :	70 ~ 150g-cm
Rew torque :	70 ~ 150g-cm
Back tension :	1.0 ~ 3.0g-cm (FWD, REV)
S/N ratio :	More than 43dB (PB, DC)
	More than 20dB (REC/PB, DC)
Distortion :	Less than 3.0% (PB, DC)
	Less than 7.0% (REC/PB, DC)
Noise level :	Less than 3.0mV (PB, DC, MAX.)
	Less than 0.3mV (PB, DC, MIN.)
Erasing Ratio:	More than 45dB
Dolby level :	31.6mV $\pm$ 1dB
Dolby NR effect :	More than 8.5dB (B-TYPE)
Frequency response :	63Hz +2/-6dB ~ 8kHz $\pm$ 4dB
	(NORMAL,PB)
	63Hz +2/-6dB ~ 10kHz $\pm$ 4dB
	(CRO2,PB)
	125Hz -4-12dB ~ 8kHz+3/-12dB
	(REC/PB)
Test tape :	MTT-15070
	TTA-100
	TTA-200
	TTA-210
	TTA-320(NORMAL)/
	TTA-310(CRO2)
	TTA-601
	TTA-610

MECHANICAL EXPLODED VIEW 1/1



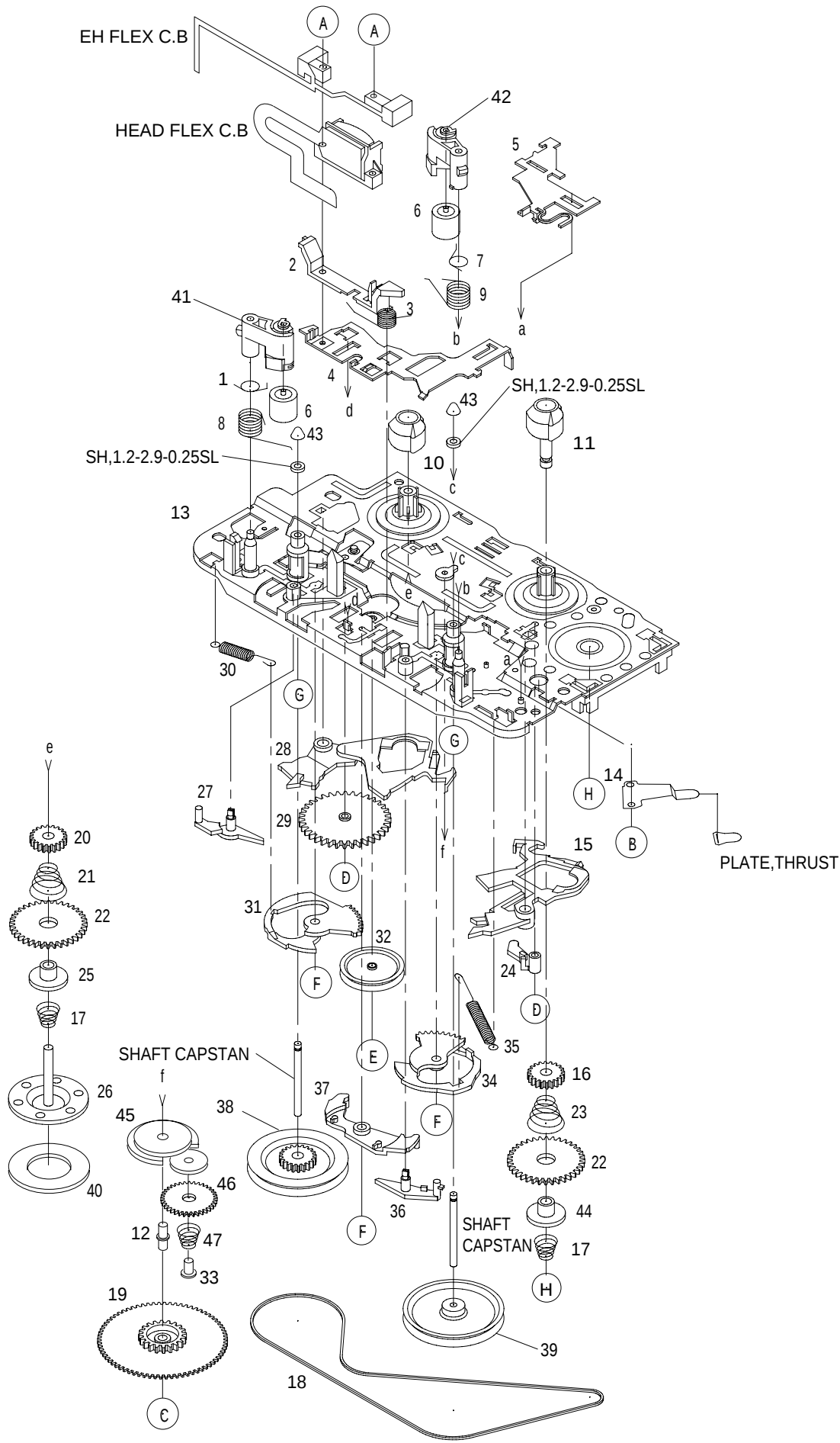
MECHANICAL PARTS LIST 1/1

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	88-HJ3-006-010	LID,BAT	
2	88-HJ3-211-010	TERMINAL,BAT+	
3	88-HJ3-212-010	TERMINAL,BAT-	
4	88-HJ3-015-010	KEY,TUNING	
5	88-HJ3-210-010	HLDR,BAT	
6	88-HJ3-020-010	FRAME,CENTER LOW	
7	88-HJ3-204-010	HLDR,ANTENNA	
8	88-HR4-201-010	HLDR,LCD	
9	88-HR4-202-010	CONN, RUBBER LCD	
10	88-HJ3-206-010	PLATE,HINGE	
11	88-HJ3-205-010	SPR-P,CASS	
12	88-HJ3-202-010	HLDR,CASS	
13	88-HJ3-203-010	SPR-P,CLICK	
14	88-HJ3-201-010	STOPPER,CASS	
15	88-HJ5-004-010	LID,CASS S JX803<803YH1>	
15	88-HJ5-001-010	LID,CASS S JX804<804AH>	
16	88-HJ3-007-010	WINDOW,CASS	
17	88-HJ3-010-010	KNOB,SL SIDE	
18	88-HJ3-208-010	NUT, FRONT	
19	88-HJ3-009-010	KNOB,SL HOLD	
20	88-HJ3-008-010	KNOB,SL OPEN	
21	87-HR5-225-010	SPR-E,EJECT N	
22	82-HK3-206-110	C-SP,LOCK	
23	88-HJ3-207-010	PLATE,LOCK	
24	88-HJ3-011-010	KNOB,SL REC	
25	88-HJ3-012-010	STOPPER,REC	
26	87-HR6-219-010	SPR-P,POP UP	
27	09-028-357-010	CABI REAR ASSY<803YH1>	
27	09-028-358-010	CABI REAR ASSY<804AH>	
A	88-HJ3-220-010	S-SCREW,+1.4-0.7-1 CR NL	
B	87-067-384-010	SCREWVT1.4-3.5HL	
C	86-HK4-224-010	S-SCREW,SERR+1.4-3.5 CR L	
D	87-078-153-010	SCRW,1.4-2.5 CR	
E	87-067-534-010	SCREW,VT-1.4-6	
F	87-078-113-010	S-SCRW,+1.4-3.5 HL(B	
G	87-078-185-010	SCRW-SR,1.4-4.5 BL	
H	87-262-512-310	V+1.4-5.5	
I	87-078-218-010	SCRW-SERR,M1.4-5.3	
J	88-HK5-228-010	S-SCREW,+1.4-2 CR	
K	88-HR4-222-010	S-SCREW,+1.4-1.6 CR (0.2)	
L	86-HJ3-222-010	S-SCREW,SERR+1.4-2 CR L	
M	87-078-216-010	SCREW-SR,1.4-1.4B LS	
N	87-HK5-235-010	S-SCREW,1.4-0.6-2.5	
O	88-HJ3-219-010	S-SCREW,+1.4-2.5 B HL(0.3)	

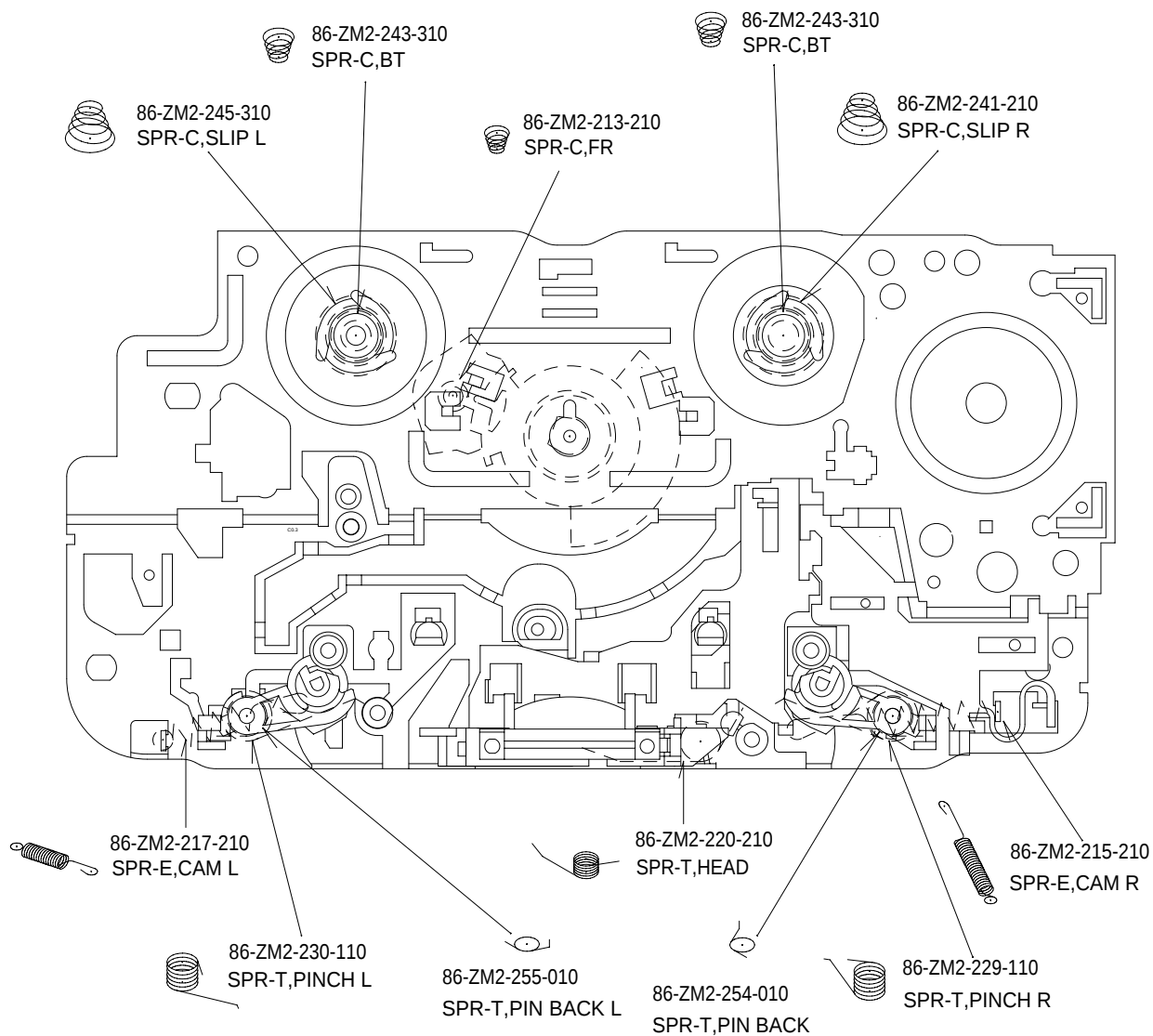
TAPE MECHANISM EXPLODED VIEW 1/1

TAPE MECHANISM PARTS LIST 1/1

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	86-ZM2-255-010		SPR-T,PIN BACK L	31	86-ZM2-216-410		LEVER,CAM L
2	86-ZM2-286-210		GUIDE,TAPE REC	32	86-ZM2-276-010		PULLEY,COUPLER
3	86-ZM2-220-210		SPR-T,HEAD	33	86-ZM2-212-210		SHAFT,FR
4	86-ZM2-285-110		LEVER,HEAD REC	34	86-ZM2-214-410		LEVER,CAM R
5	86-ZM2-247-210		LEVER,MS	35	86-ZM2-215-210		SPR-E,CAM R
6	86-ZM2-226-110		ROLLER ASSY,PINCH	36	86-ZM2-222-210		LEVER,PIN UP R
7	86-ZM2-254-010		SPR-T,PIN BACK	37	86-ZM2-218-110		LEVER,HEAD UP
8	86-ZM2-230-110		SPR-T,PINCH L	38	86-ZM2-205-410		FLY-WHL,L
9	86-ZM2-229-110		SPR-T,PINCH R	39	86-ZM2-330-010		FLY-WHL,R2
10	86-ZM2-240-110		CAP,REEL	40	86-ZM2-282-010		SH,AUTO 2
11	86-ZM2-234-110		SHAFT,REEL R	41	86-ZM2-225-310		ARM,PINCH L
12	86-ZM2-251-210		SHAFT,GEAR B	42	86-ZM2-224-210		ARM,PINCH R
13	86-ZM2-308-310		CHAS ASSY,OUT-SERT R	43	86-ZM2-283-010		CAP,SHAFT
14	86-ZS2-312-010		SPR-P,6A-MOT	44	86-ZM2-275-110		CAP,SLIP R
15	86-ZM2-232-210		LEVER,REEL R	45	86-ZM2-210-610		LEVER,FR
16	86-ZM2-258-610		GEAR,REW	46	86-ZM2-211-210		GEAR,FR
17	86-ZM2-243-310		SPR-C,BT	47	86-ZM2-213-210		SPR-C,FR
18	86-ZM2-329-110		BELT,P5	A	86-ZM2-296-110		S-SCREW,+1.4-8.45
19	86-ZM2-209-110		GEAR,B	B	87-067-430-010		VT1.4-5 BLK
20	86-ZM2-238-610		GEAR,FF	C	87-067-516-010		PW,3-1.58-0.25,SLIT
21	86-ZM2-245-310		SPR-C,SLIP L	D	87-067-860-010		PW,3-0.95-0.4
22	86-ZM2-237-010		GEAR,PLAY	E	86-ZM2-277-010		W-P,0.8-3-0.2 SLT
23	86-ZM2-241-210		SPR-C,SLIP R	F	86-ZM2-319-010		W-L,0.95-3-0.35
24	86-ZM2-272-010		LEVER,SW P 8.4	G	86-ZM2-313-010		W-P,1.76-4-0.13
25	86-ZM2-236-210		CAP,SLIP	H	86-ZM2-278-010		W-P,1.36-4-0.2 SLT
26	86-ZM2-235-210		SHAFT,REEL L				
27	86-ZM2-223-210		LEVER,PIN UP L				
28	86-ZM2-233-310		LEVER,REEL L				
29	86-ZM2-208-210		GEAR,A				
30	86-ZM2-217-210		SPR-E,CAM L				



SPRING APPLICATION POSITION



L ▶

A4 ▶

サービス技術ニュース	
番号	連絡内容
Gー	ー
Gー	ー
Gー	ー

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, JAPAN TEL:03 (3827)