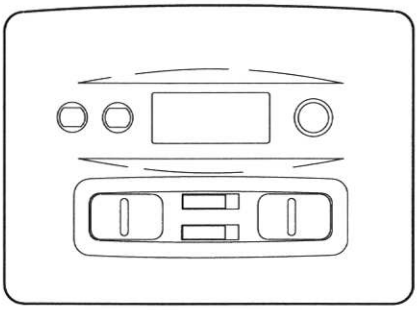
aiwa

aiwa SERVICE

HS-JX771
HS-JX789

SERVICE MANUAL



STEREO CASSETTE RADIO RECORDER

• BASIC TAPE MECHANISM: 6ZM–2 R1

• TYPE: 771(YHS)
789(Y1)

SPECIFICATIONS

Frequency range:	Reception area " EU " AM: 531 – 1,602 kHz (9 kHz steps) 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)
Maximum output:	12 mW + 12 mW (EIAJ 16 Ω)
Power source:	DC 3V using two R03 (size AAA) dry cell batteries AC house current using the optional AC adaptor: AC-620/AC-302
Maximum dimensions (W x H x D):	110.5 (W) x 80.1 (H) x 28.7 (D) mm ($4^{3}/_{8}$ x $3^{1}/_{4}$ x $1^{3}/_{16}$ in)
Weight:	Approx. 175 g (6.1oz) excluding batteries

• Design and specifications are subject to change without notice.

• Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol ▯▯ are trademarks of Dolby Laboratories Licensing Corporation.

S/M Code No. 09–978–207–5FP

ELECTRICAL MAIN PARTS LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC			
	87-002-423-080		IC,TA2002 FN
	87-001-875-080		IC,BA1106FS
	87-A20-580-040		C-IC,BA3641FV
	87-002-691-080		IC,BA3714F
	87-A20-588-040		C-IC,LB1977(V)
	87-A20-628-080		C-IC,TA2046FNST
	87-001-145-080		C-IC,TA8126F
	87-A20-638-040		C-IC,PST9120
	87-070-076-040		C-IC,PST9015
	87-HJ3-621-010		C-IC,TC9327F-006
	87-A20-581-040		C-IC,S-29220AFJ
	87-A20-681-080		C-IC,RN5RZ20BA
TRANSISTOR			
	89-115-884-080		CHIP -TRANSISTER 2SA1588Y
	87-026-418-080		TR,RN1311 (0.1W)
	87-026-461-080		C-TR IMH3
	87-026-414-080		C-TR RN1307
	89-508-804-080		CHIP FET 2SK880Y
	87-026-478-080		TR-RN2607
	87-026-567-080		TR,RN1611
	87-026-470-080		TR,HN1C03FB(0.3W)
	87-026-678-080		C-TR,FMG5A
	87-026-475-080		C-TR,RN1607
	87-026-476-080		TR,RN1610
	87-026-481-080		TR,RN4607 (0.3W)
	87-026-424-080		C-TR,RN2306
	89-113-625-080		TR,2SA1362GR
	87-026-477-080		C-TR,RN2605
	87-026-467-080		TR,HN1C01F GR
	89-327-125-080		CHIP TR,2SC2712GR
	89-333-266-080		CHIP TR,2SC3326B
	89-413-284-080		TR,2SD1328T
	89-341-165-080		C-TR,2SC4116GR
	89-508-824-080		C-FET,2SK882Y
	89-342-153-080		C-TR,2SC4215O
	87-A30-125-080		C-TR,IMB3A
	87-026-331-080		C-TR,DTA114YU
	87-026-417-080		C-TR,RN1310
	87-026-352-080		C-TR,DTC144TU
	89-115-864-080		C-TR,2SA1586Y
DIODE			
	87-A40-121-080		C-DIODE,RB715F
	87-017-367-080		DIODE,DAP 202U
	87-001-167-080		C-DIODE,1SS302
	87-001-166-080		DIODE,1SS301
	87-A40-395-080		C-ZENER,UDZ2.2B
	87-001-166-080		C-DIODE,1SS301
	87-A40-290-080		C-VARI-CAP,KV1590
	87-001-708-080		C-VARI-CAP,1SV228
	87-017-779-080		C-DIODE,1SS355
MAIN C.B			
C1	87-012-272-080		C-CAP,U 680P-50 B
C2	87-012-272-080		C-CAP,U 680P-50 B
C3	87-012-272-080		C-CAP,U 680P-50 B
C4	87-012-272-080		C-CAP,U 680P-50 B
C5	87-012-286-080		CAP, U 0.01-25
C6	87-A10-418-080		C-CAP,TN 22-4 A TCF
C7	87-A10-418-080		C-CAP,TN 22-4 A TCF
C8	87-A10-418-080		C-CAP,TN 22-4 A TCF
C9	87-016-114-080		C-CAP,U0.01-25B
C10	87-016-114-080		C-CAP,U0.01-25B
C11	87-010-787-080		CAP, U 0.022-25
C18	87-016-396-080		C-CAP,U 0.22-16F
C19	87-A10-249-080		C-CAP,U 1-10 ZF
C20	87-A10-422-080		C-CAP,TN 10-4 A TCF
C21	87-A10-263-080		C-CAP,U 0.1-16ZF
C22	87-A10-263-080		C-CAP,U 0.1-16ZF
C23	87-012-278-080		C-CAP,U 2200P-50 B
C24	87-012-278-080		C-CAP,U 2200P-50 B
C25	87-010-822-010		CAP, E 220-4(MJ)
C26	87-010-822-010		CAP, E 220-4(MJ)
C27	87-010-943-180		C-CAP,E 100-4 M MV
C51	87-012-274-080		CHIP CAP,U 1000P-50B
C52	87-012-274-080		CHIP CAP,U 1000P-50B
C53	87-012-274-080		CHIP CAP,U 1000P-50B
C54	87-012-274-080		CHIP CAP,U 1000P-50B
C55	87-A10-249-080		C-CAP,U 1-10 ZF
C56	87-A10-249-080		C-CAP,U 1-10 ZF
C57	87-A10-249-080		C-CAP,U 1-10 ZF
C58	87-A10-249-080		C-CAP,U 1-10 ZF
C59	87-A10-249-080		C-CAP,U 1-10 ZF
C60	87-A10-249-080		C-CAP,U 1-10 ZF
C61	87-A10-249-080		C-CAP,U 1-10 ZF
C62	87-A10-249-080		C-CAP,U 1-10 ZF
C63	87-A10-263-080		C-CAP,U 0.1-16ZF
C64	87-A10-263-080		C-CAP,U 0.1-16ZF
C65	87-015-923-080		C-CAP,TN 0.22-35
C66	87-015-923-080		C-CAP,TN 0.22-35
C67	87-010-787-080		CAP, U 0.022-25
C68	87-010-787-080		CAP, U 0.022-25
C69	87-A10-249-080		C-CAP,U 1-10 ZF
C70	87-A10-249-080		C-CAP,U 1-10 ZF
C71	87-A10-249-080		C-CAP,U 1-10 ZF
C72	87-A10-249-080		C-CAP,U 1-10 ZF
C73	87-A10-584-080		CAP,TN 100-4M 125 F93C
C74	87-012-286-080		CAP, U 0.01-25
C75	87-A10-418-080		C-CAP,TN 22-4 A TCF
C76	87-A10-422-080		C-CAP,TN 10-4 A TCF
C77	87-A10-418-080		C-CAP,TN 22-4 A TCF
C101	87-012-282-080		CAP, U 4700P-50
C102	87-012-282-080		CAP, U 4700P-50
C103	87-010-828-080		CHIP CAPACITOR,U 0.033-25F
C104	87-010-828-080		CHIP CAPACITOR,U 0.033-25F
C105	87-012-286-080		CAP, U 0.01-25
C106	87-012-286-080		CAP, U 0.01-25
C107	87-010-828-080		CHIP CAPACITOR,U 0.033-25F
C108	87-010-828-080		CHIP CAPACITOR,U 0.033-25F
C109	87-A10-263-080		C-CAP,U 0.1-16ZF
C110	87-A10-263-080		C-CAP,U 0.1-16ZF
C111	87-010-942-180		C-CAP,E 47-4 M MV
C151	87-A10-249-080		C-CAP,U 1-10 ZF
C152	87-A10-249-080		C-CAP,U 1-10 ZF
C153	87-016-396-080		C-CAP,U 0.22-16F
C154	87-016-396-080		C-CAP,U 0.22-16F
C155	87-A10-249-080		C-CAP,U 1-10 ZF
C156	87-A10-249-080		C-CAP,U 1-10 ZF
C159	87-A10-249-080		C-CAP,U 1-10 ZF
C160	87-A10-249-080		C-CAP,U 1-10 ZF
C185	87-016-396-080		C-CAP,U 0.22-16F
C251	87-A10-249-080		C-CAP,U 1-10 ZF
C252	87-A10-249-080		C-CAP,U 1-10 ZF
C253	87-A10-263-080		C-CAP,U 0.1-16ZF
C254	87-012-277-080		C-CAP,U 1800P-50 K B
C255	87-A10-263-080		C-CAP,U 0.1-16ZF
C256	87-016-396-080		C-CAP,U 0.22-16F
C257	87-015-923-080		C-CAP,TN 0.22-35
C261	87-A10-249-080		C-CAP,U 1-10 ZF
C262	87-A10-249-080		C-CAP,U 1-10 ZF
C301	87-A10-263-080		C-CAP,U 0.1-16ZF
C302	87-A10-353-080		C-CAP,U0.22-10KB
C303	87-A10-504-080		C-CAP,U 0.047-16 K B
C305	87-010-486-080		C-CAP,TN 0.33-50

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C306	87-A10-504-080		C-CAP,U 0.047-16 K B
C307	87-A10-504-080		C-CAP,U 0.047-16 K B
C308	87-A10-504-080		C-CAP,U 0.047-16 K B
C309	87-A10-263-080		C-CAP,U 0.1-16ZF
C310	87-A10-263-080		C-CAP,U 0.1-16ZF
C351	87-A10-249-080		C-CAP,U 1-10 ZF
C352	87-010-522-080		CAP, TN 2.2-10 ECS
C401	87-012-286-080		CAP, U 0.01-25
C402	87-012-279-080		C-CAP,U 2700P-50 B
C403	87-012-286-080		CAP, U 0.01-25
C404	87-A10-418-080		C-CAP,TN 22-4 A TCF
C405	87-012-278-080		C-CAP,U 2200P-50 K B
C406	87-012-267-080		C-CAP, U 270P-50 K B GRM
C451	87-010-822-010		CAP, E 220-4(MJ)
C452	87-010-822-010		CAP, E 220-4(MJ)
C453	87-A10-418-080		C-CAP,TN 22-4 A TCF
C454	87-A10-418-080		C-CAP,TN 22-4 A TCF
C455	87-A10-422-080		C-CAP,TN 10-4 A TCF
J1	87-099-658-110		JACK,3.5 ST BLK TWIN<771YHS>
J51	87-099-846-010		JACK,3.5 ST BLK<789Y1>
J451	87-A60-352-010		JACK,DC 3.8 MJC003-A
L1	84-HJ9-616-110		COIL,LOADING 3.3
L2	87-003-240-080		C-COIL,S 3.3UH
L3	87-003-240-080		C-COIL,S 3.3UH<771YHS>
L3	87-003-369-080		C-COIL,U 3.3UH K<789Y1>
L4	87-003-240-080		C-COIL,S 3.3UH<771YHS>
L4	87-003-369-080		C-COIL,U 3.3UH K<789Y1>
L5	87-003-240-080		C-COIL,S 3.3UH<771YHS>
L5	87-003-369-080		C-COIL,U 3.3UH K<789Y1>
L6	87-A50-007-080		C-COIL,S 68UH K MLF<771YHS>
L7	87-003-369-080		C-COIL,U 3.3UH K<789Y1>
L8	87-003-369-080		C-COIL,U 3.3UH K<789Y1>
L9	87-003-369-080		C-COIL,U 3.3UH K<789Y1>
L10	87-003-369-080		C-COIL,U 3.3UH K<789Y1>
L401	87-HJ3-605-080		C-COIL,OSC BIAS
PS351	87-026-504-010		SNSR, PHOTO NJL5164KF
R9	87-022-292-080		CHIP RES U 330K-1/16W F
R10	87-022-292-080		CHIP RES U 330K-1/16W F
R11	87-022-243-080		CHIP RES,U 15K-1/16W F
R12	87-022-243-080		CHIP RES,U 15K-1/16W F
S201	87-A90-330-080		SW,SL 1-1-2 SSSS81
S401	87-A90-330-080		C-SW,SL 1-1-2 SSSS81<771YHS>
S481	87-HJ3-608-010		SW,LEAF REC ASSY
S482	87-HJ3-608-010		SW,LEAF REC ASSY
S483	87-A90-455-010		SW,PUSH HXW4001
S484	87-036-236-080		SW SL 1-1-2 SSSS81
S485	87-A90-356-010		SW,LEAF 6ZM-2
SFR1	87-024-614-080		C-SFR,K 33K H EVM 3SS
TH301	87-A90-477-080		C-THMS,157-502-53002-TP
VR1	87-A90-538-080		C-VR,RTRY 20KAX2 XV0103G

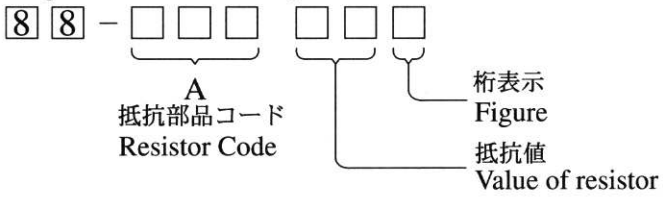
TUNER C.B

CF501, CF502, X501			
	87-A90-525-080		C-FLTR,CFKMFC5140 -AE-TC-KIT
BPF501	87-008-406-080		C-FLTR,BPF GFMB1
C501	87-012-195-080		C-CAP,U 100P-50 J CH
C502	87-A10-249-080		C-CAP,U 1-10 Z F
C503	87-012-195-080		C-CAP,U 100P-50 J CH
C504	87-012-195-080		C-CAP,U 100P-50 J CH
C505	87-010-831-080		C-CAP,U 0.1-16 Z F
C506	87-010-829-080		C-CAP,U 0.047-16 Z F
C507	87-010-787-080		C-CAP,U 0.022-25 K B
C508	87-012-286-080		C-CAP,U 0.01-25 K B
C509	87-010-318-080		C-CAP,S 47P-50 J CH
C510	87-012-168-080		C-CAP,U 6P-50 D CH
C511	87-012-186-080		C-CAP,U 39P-50 J CH
C512	87-012-140-080		C-CAP,S 470P-50 J CH
C513	87-012-247-080		C-CAP,U 18P-50 J UJ
C514	87-012-286-080		C-CAP,U 0.01-25 K B
C515	87-010-787-080		C-CAP,U 0.022-25 K B
C517	87-010-316-080		C-CAP,S 33P-50 J CH
C518	87-010-318-080		C-CAP,S 47P-50 J CH
C519	87-012-162-080		C-CAP,U 1P-50 C CH
C520	87-012-172-080		C-CAP,U 10P-50 D CH
C521	87-012-286-080		C-CAP,U 0.01-25 K B
C522	87-012-286-080		C-CAP,U 0.01-25 K B
C523	87-A10-249-080		C-CAP,U 1-10 Z F
C524	87-A10-249-080		C-CAP,U 1-10 Z F
C525	87-012-199-080		C-CAP,U 220P-50 J CH
C526	87-010-830-080		C-CAP,U 0.068-16 Z F
C527	87-010-831-080		C-CAP,U 0.1-16 Z F
C528	87-010-831-080		C-CAP,U 0.1-16 Z F
C529	87-012-273-080		C-CAP,U 820P-50 K B
C530	87-016-296-080		C-CAP,TN 22-4 M
C531	87-016-314-080		C-CAP,S 1-16 Z F
C532	87-012-286-080		C-CAP,U 0.01-25 K B
C533	87-012-286-080		C-CAP,U 0.01-25 K B
C534	87-010-197-080		C-CAP,S 0.01-25 K B
C535	87-012-195-080		C-CAP,U 100P-50 J CH
C536	87-010-831-080		C-CAP,U 0.1-16 Z F
C537	87-012-278-080		C-CAP,U 2200P-50 K B
C538	87-010-787-080		C-CAP,U 0.022-25 K B
C539	87-010-787-080		C-CAP,U 0.022-25 K B
C540	87-A10-594-080		C-CAP,TN 10-4 A2 MSV
C541	87-010-831-080		C-CAP,U 0.1-16 Z F
C542	87-012-286-080		C-CAP,U 0.01-25 K B
C601	87-010-505-080		C-CAP,TN 1-16 ECS
C602	87-010-787-080		C-CAP,U 0.022-25 K B
C604	87-012-276-080		C-CAP,U 1500P-50 K B
C605	87-012-172-080		C-CAP,U 10P-50 D CH
C607	87-012-156-080		C-CAP,S 220P-50 J CH GRM
C608	87-A10-249-080		C-CAP,U 1-10 Z F
C609	87-012-195-080		C-CAP,U 100P-50 J CH
C610	87-A10-249-080		C-CAP,U 1-10 Z F
C700	87-010-178-080		C-CAP,S 1000P-50 K B
C701	87-012-286-080		C-CAP,U 0.01-25 K B
C702	87-012-286-080		C-CAP,U 0.01-25 K B
C703	87-010-197-080		C-CAP,S 0.01-25 K B
C704	87-016-491-080		C-CAP,S 0.22-16 Z F C2021
C705	87-A10-048-080		C-CAP,TN 22-4 M F95
C706	87-A10-025-080		C-CAP,U 0.22-16 Z F
C707	87-012-172-080		C-CAP,U 10P-50 D CH
C708	87-012-172-080		C-CAP,U 10P-50 D CH
C709	87-010-831-080		C-CAP,U 0.1-16 Z F
C710	87-010-831-080		C-CAP,U 0.1-16 Z F
C711	87-010-831-080		C-CAP,U 0.1-16 Z F
C712	87-010-831-080		C-CAP,U 0.1-16 Z F
C901	87-010-505-080		C-CAP,TN 1-16 ECS
C902	87-A10-048-080		C-CAP,TN 22-4 M F95
CF503	87-A90-456-080		C-FLTR,PFWCC 450J3
CT501	87-011-189-080		C-TRIMMER,CER 10P 4.5X3.2 CTZ
L501	87-HR6-616-010		BAR-ANT,MW
L502	85-HR4-626-080		COIL,FM RF
L503	87-003-247-080		C-COIL, 100UH J LQH3
L504	85-HR4-625-080		COIL,FM OSC
L505	87-008-420-080		C-IFT MW 5M S5CDLN-1431AYV
L601	87-006-173-080		C-COIL,DD 5CDL
LCD701	87-HJ3-615-010		LCD,TC9327F-004
LED1001	87-A90-278-080		C-LED,SML-210VT RED
S701	87-A90-214-080		C-SW,SL 1-1-2 SSSS8A2-B
S702	87-A90-378-080		C-SW,PUSH PT035C1T
S703	87-A90-378-080		C-SW,PUSH PT035C1T
S704	87-036-308-180		C-SW,TACT 112HST
S705	87-036-308-180		C-SW,TACT 112HST
S706	87-036-308-180		C-SW,TACT 112HST
S707	87-036-308-180		C-SW,TACT 112HST
S708	87-036-308-180		C-SW,TACT 112HST
S709	87-036-308-180		C-SW,TACT 112HST
S710	87-036-308-180		C-SW,TACT 112HST

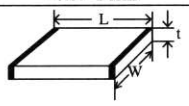
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
S711	87-036-203-180		C-SW,SL 1-1-3 SSSS81
X502	87-A70-083-010		VIB, KBR-912F103
X701	87-A70-078-010		VIB,XTAL 75KHZ KF-26R5
RPH FLEX C.B, EH FLEX C.B			
	86-ZM2-293-010		HEAD ASSY,R1
TUNER FLEX C.B			
	87-HR6-613-010		PWB,FLEX TU 34P
HP FLEX C.B			
	87-HJ3-609-010		PWB,FLEX HP<789Y1>
J1	86-HJ2-604-010		JACK,DIA3.5 ST 9P<789Y1>

Oチップ抵抗部品コード／CHIP RESISTOR PART CODE

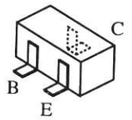
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



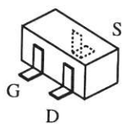
チップ抵抗
Chip resistor

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

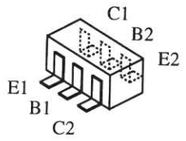
TRANSISTOR ILLUSTRATION



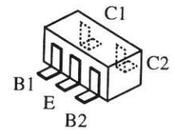
2SA1362
2SA1588
2SA1586
2SC2712
2SC3326
2SC4116
2SC4215
2SD1328T
DTA114YU
DTC144TU
RN1307
RN1310
RN1311
RN2306



2SK880
2SK882

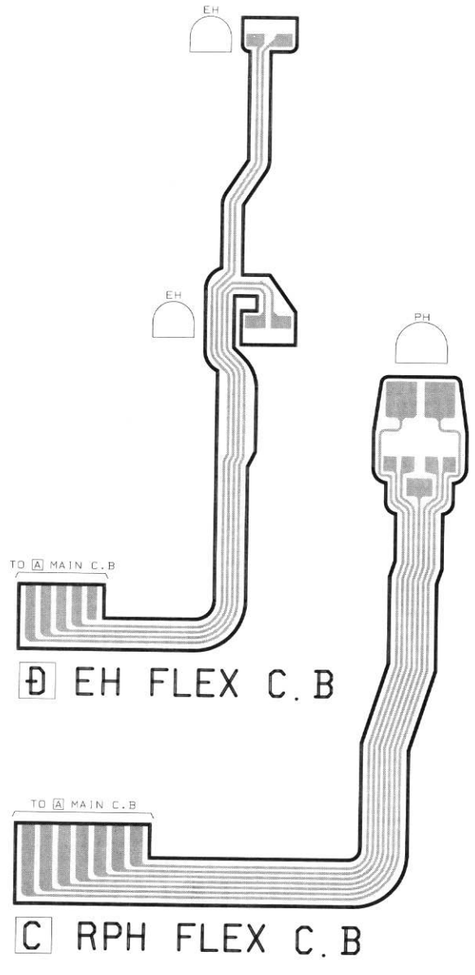


HN1C01F
HN1C03F
IMB3
IMH3
RN1607
RN1610
RN1611
RN2605
RN2607
RN4607

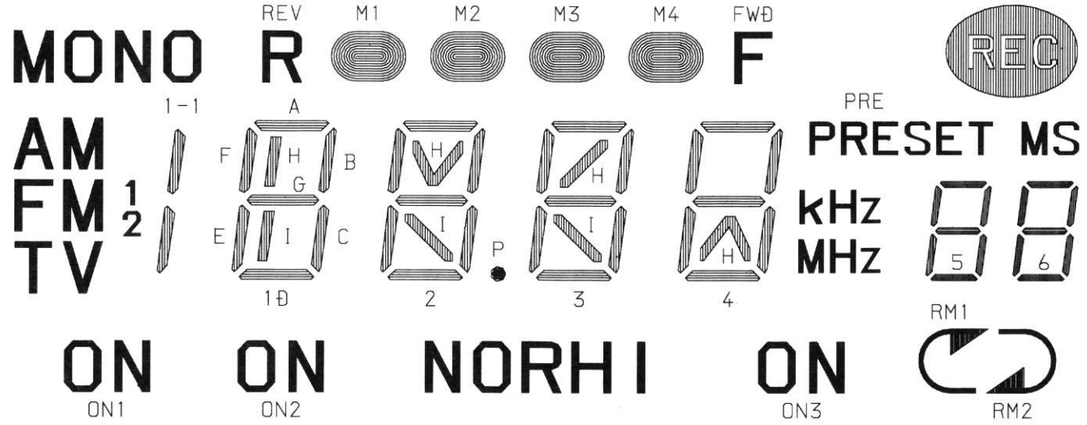


FMG5A

WIRING – 1 (EH / RPH FLEX)

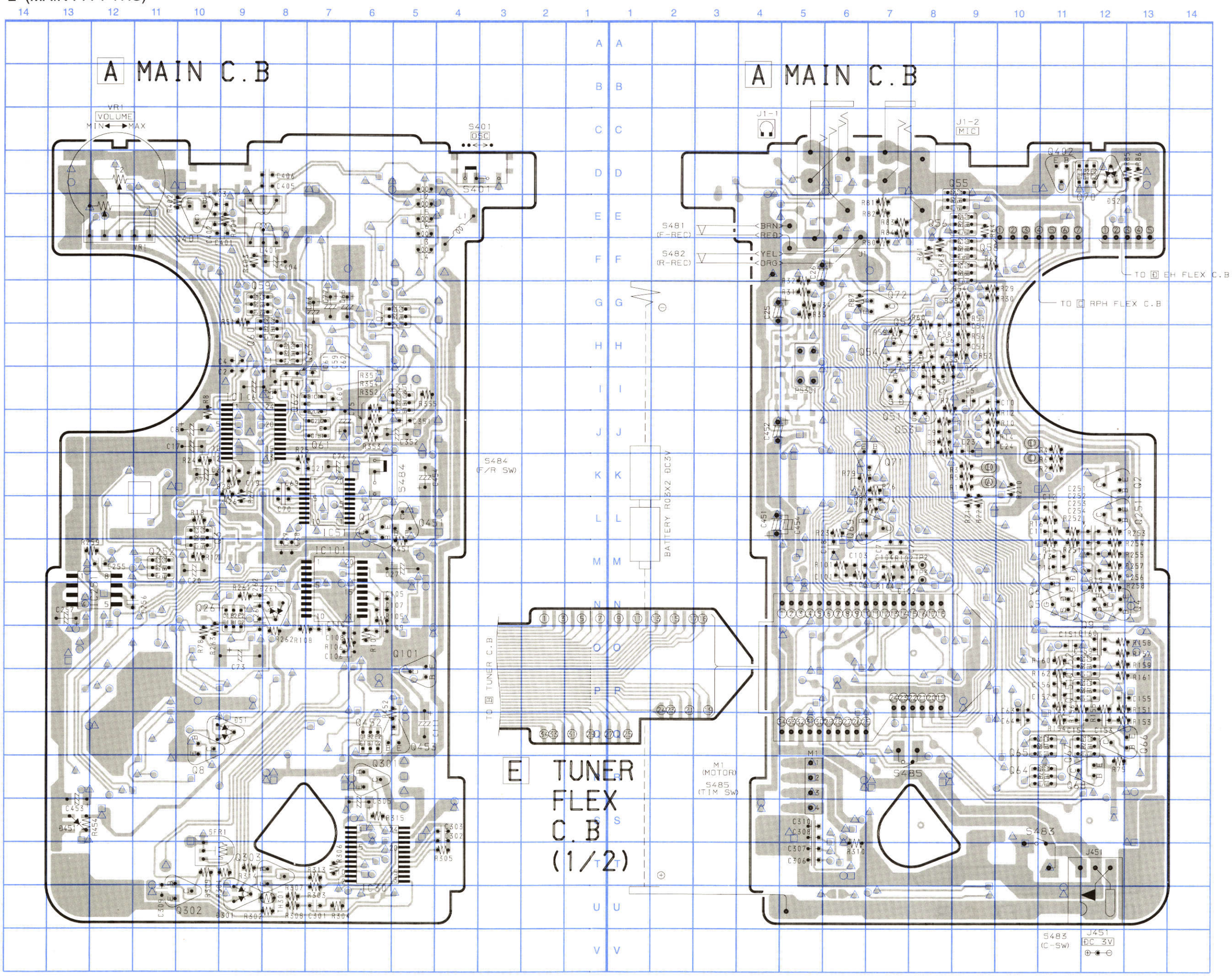


LCD DIAGRAM

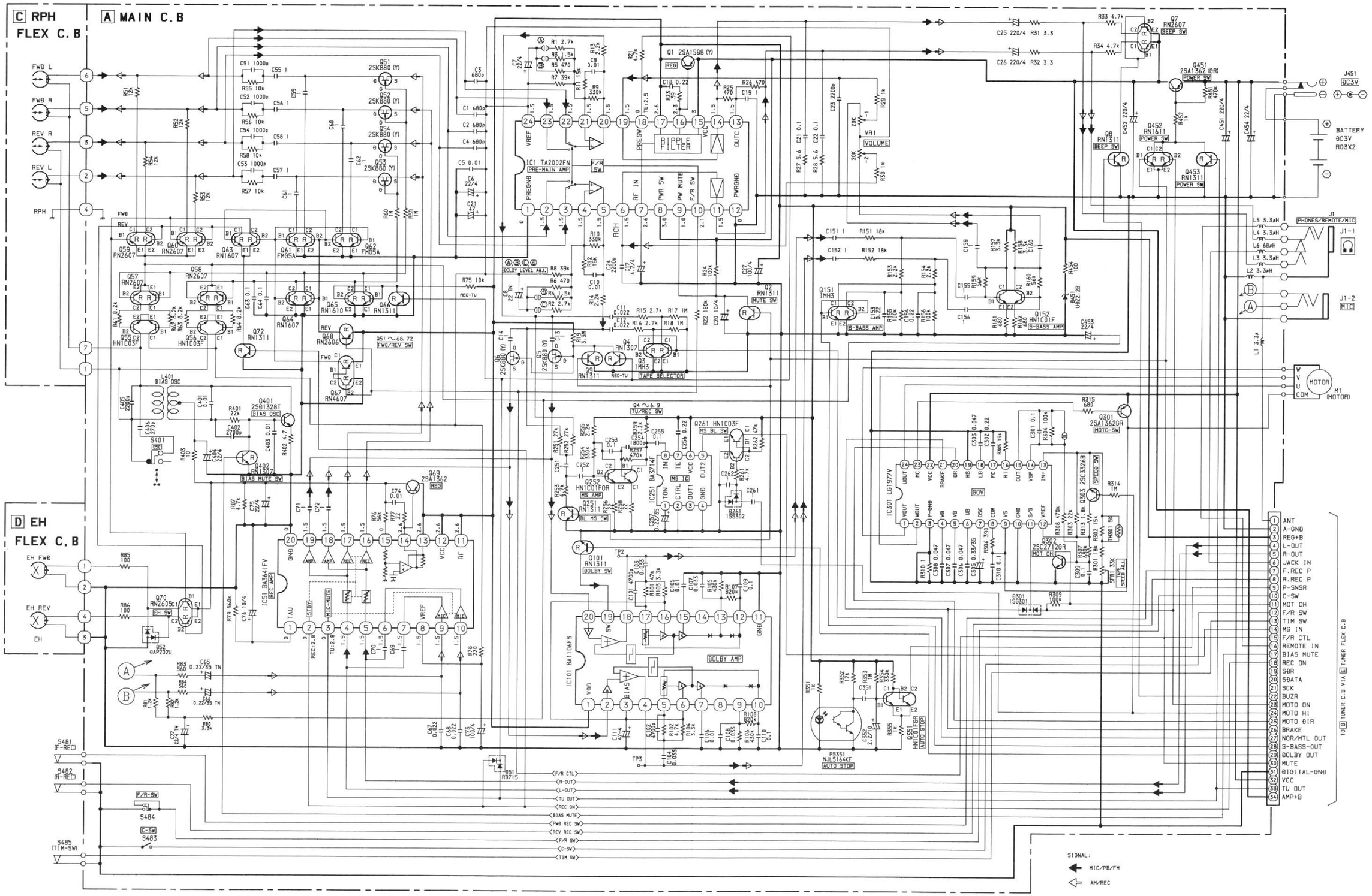


NO	1	2	3	4	5	6	7	8	9	10	11	12
COM1	COM1	—	—	—	AM	MONO	REV	1H	1A	M2	2H	2A
COM2	—	COM2	—	—	FM	1	1F	1G	1B	2F	2G	2B
COM3	—	—	COM3	—	TV	2	1E	1I	1C	2E	2I	2C
COM4	—	—	—	COM4	ON1	ON2	1-1	1Đ	M1	NOR	2Đ	P
NO	13	14	15	16	17	18	19	20	21	22	23	
COM1	M3	3H	3A	FWĐ	—	4A	REC	5F	5A	6F	6A	
COM2	3F	3G	3B	4F	4G	4B	PRE	5G	5B	6G	6B	
COM3	3E	3I	3C	4E	4H	4C	KHz	5E	5C	6E	6C	
COM4	HI	3Đ	M4	ON3	4Đ	MHz	RM1	RM2	5Đ	MS	6Đ	

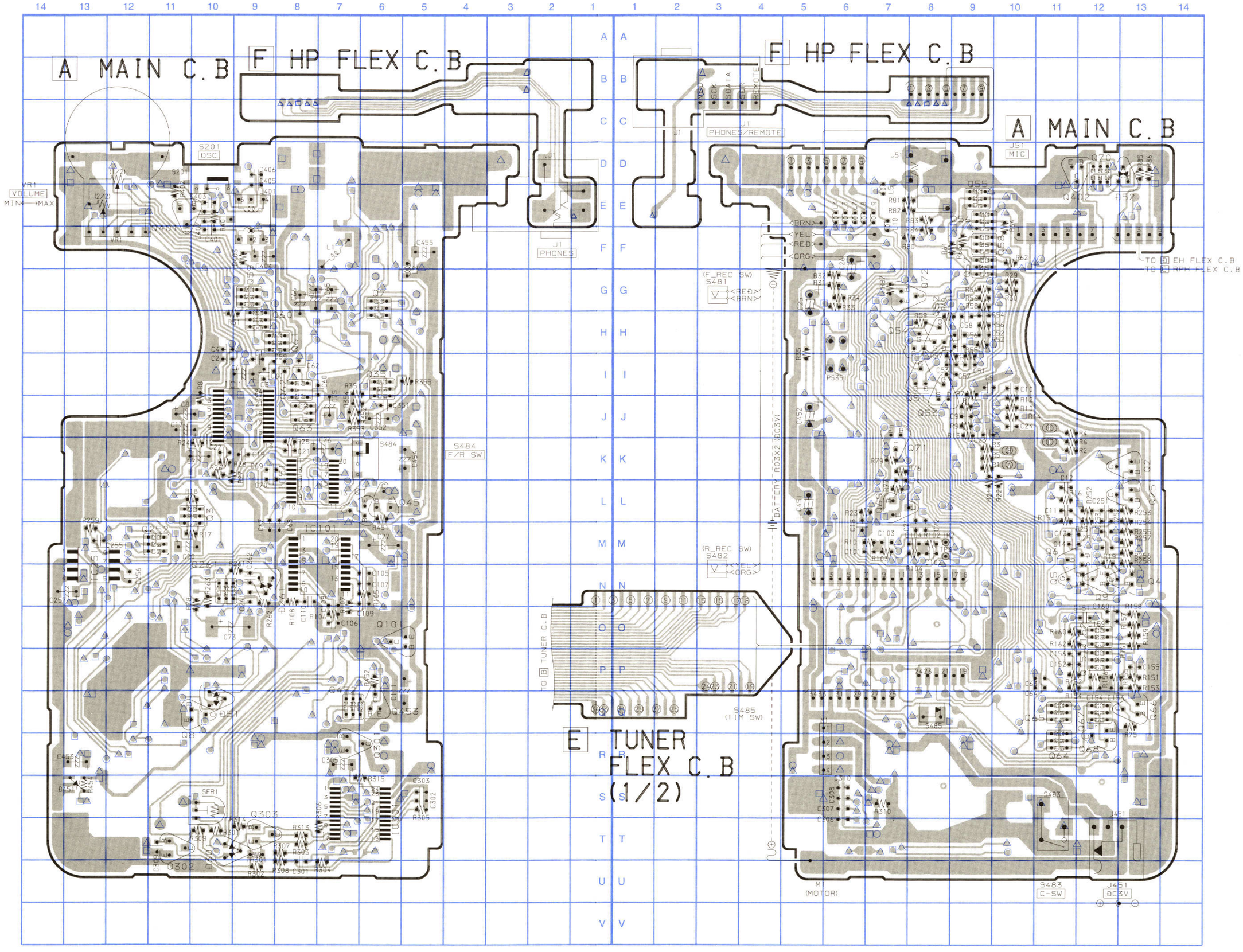
WIRING – 2 (MAIN : 771 YHS)



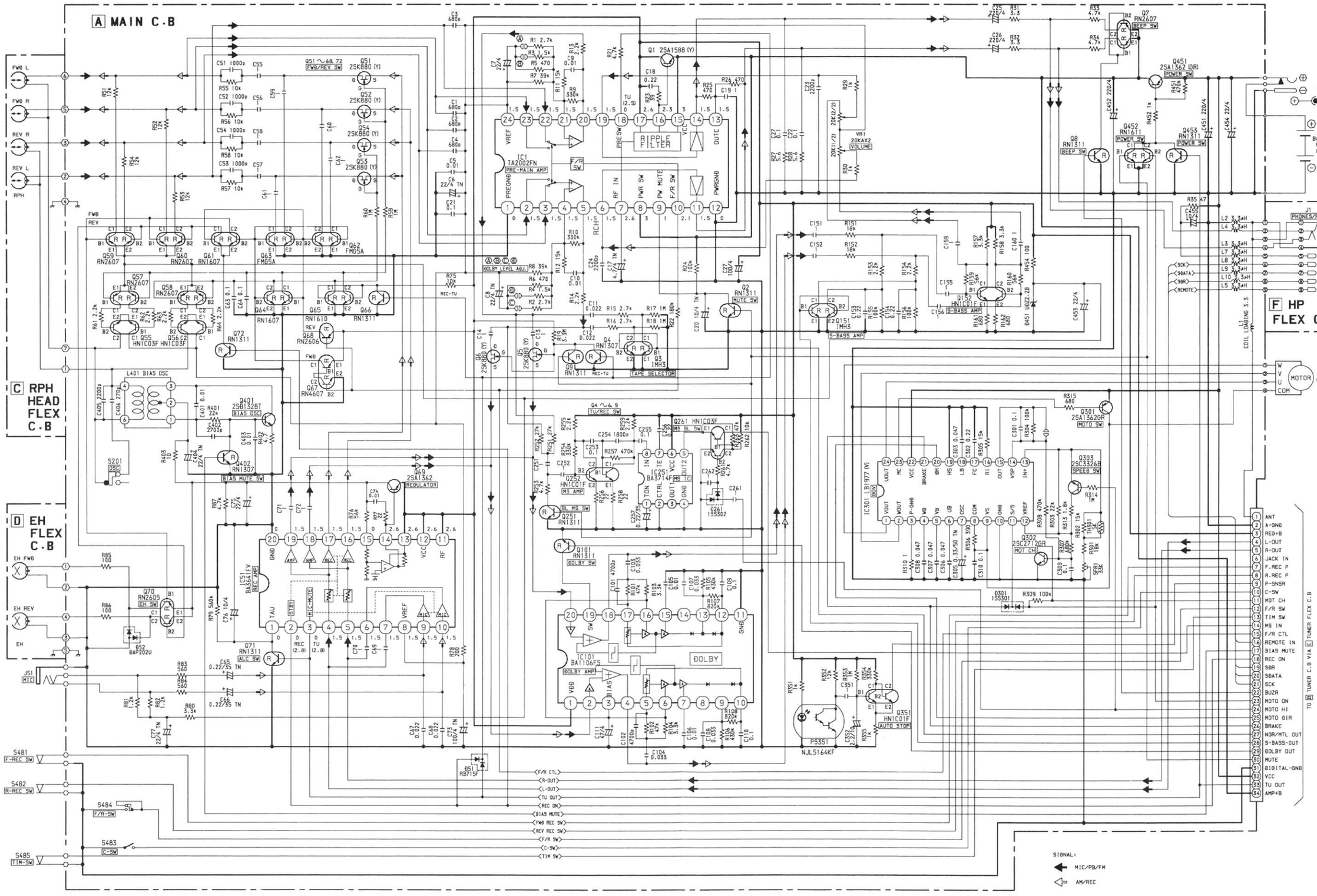
SCHEMATIC DIAGRAM – 1 (MAIN : 771 YHS)



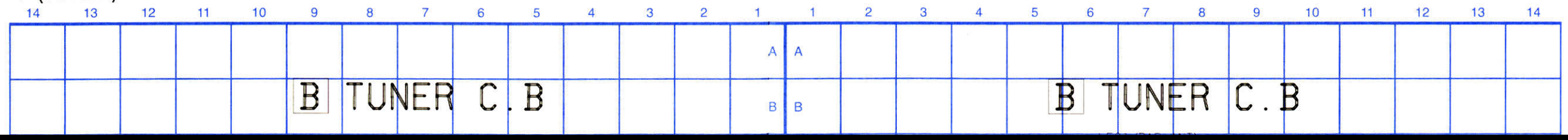
WIRING – 3 (MAIN : 789 Y1)



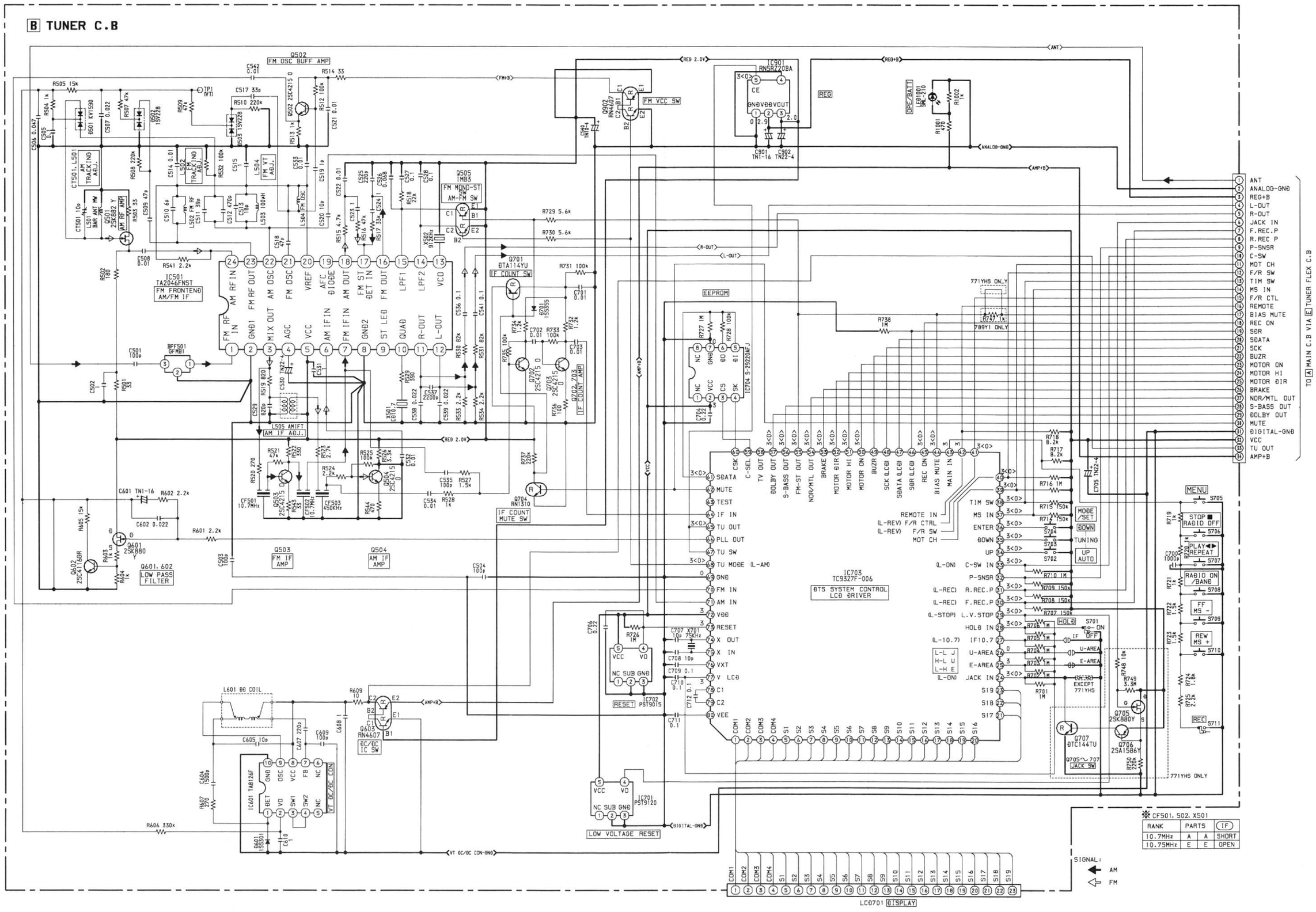
SCHEMATIC DIAGRAM – 2 (MAIN : 789 Y1)



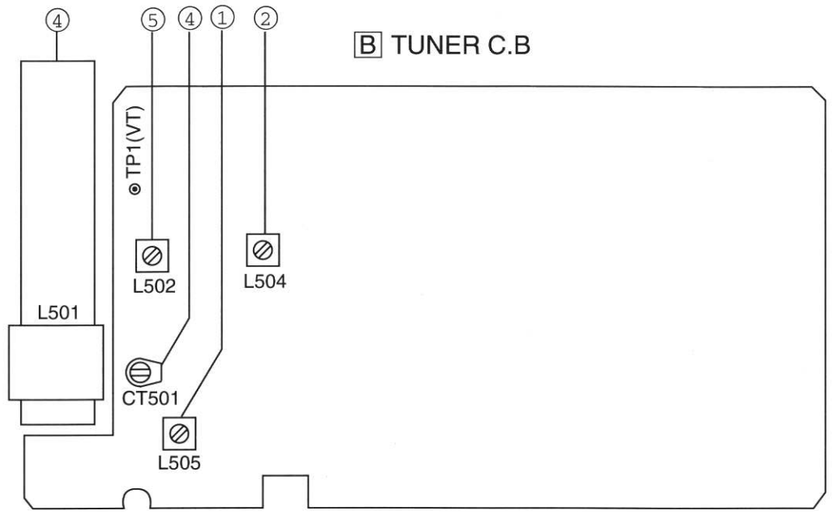
WIRING – 4 (TUNER)



[redacted]


B TUNER C.B
Q502 FM OSC BUFF AMP
IC901 RN5R220BA
REG
FM VCC SW
DPE/BATT
IC501 TA2046FNST FM FRONTEND AM/FM IF
Q505 1MB3 FM MONO-ST AM-FM SW
Q701 DTA114YU IF COUNT SW
EEPROM
IC703 TC9327F-006 DTS SYSTEM CONTROL LCD DRIVER
IC702 PST9015 RESET
IC701 PST9120 LOW VOLTAGE RESET
IC601 TA8126F VT DC/DC CON
Q601 2SK880 Y
Q601, 602 LOW PASS FILTER
Q602 2SC4116GR
Q603 RN4607 DC/DC IC SW
Q503 FM IF AMP
Q504 AM IF AMP
Q705 2SK880Y
Q706 2SA1586Y
Q707 DTC144TU
Q705~707 JACK SW
IF COUNT MUTE SW
L505 AMIFT AM IF ADJ.
L601 DD COIL
CT501, L501 AM TRACKING ADJ.
L502 FM TRACKING ADJ.
L504 FM VT ADJ.
BPF501 GFMB1
CF501 10.7MHz
CF502 10.7MHz
CF503 450KHz
X501 9.05MHz
X701 10p 75KHz
REMOTE IN
(L-REV) F/R CTRL
(L-REV) F/R SW
MOT CH
TIM SW
MS IN
ENTER
DOWN
UP
(L-ON) C-SW IN
P-SNSR
(L-REC) R.REC.P
(L-REC) F.REC.P
(L-STOP) L.V.STOP
HOLD IN
(L-10.7) IF10.7
U-AREA
E-AREA
JACK IN
MODE /SET
DOWN TUNING UP AUTO
MENU
STOP ■ RADIO OFF
PLAY◀▶ REPEAT
RADIO ON /BAND
FF MS -
REW MS +
REC
HOLD
IF OFF
U-AREA
E-AREA
EXCEPT 771YHS
771YHS ONLY
771YHS ONLY
789Y1 ONLY
SIGNAL: AM FM
LCD701 DISPLAY
TO A MAIN C.B VIA E TUNER FLEX C.B
ANT
ANALOG-GND
REG+B
L-OUT
R-OUT
JACK IN
F.REC.P
R.REC P
P-SNSR
C-SW
MOT CH
F/R SW
TIM SW
MS IN
F/R CTL
REMOTE
BIAS MUTE
REC ON
SDR
SDATA
SCK
BUZR
MOTOR ON
MOTOR HI
MOTOR DIR
BRAKE
NOR/MTL OUT
S-BASS OUT
DOLBY OUT
MUTE
DIGITAL-GND
VCC
TU OUT
AMP+B
※CF501, 502, X501
RANK | PARTS A | PARTS E | IF
10.7MHz | A | A | SHORT
10.75MHz | E | E | OPEN

ADJUSTMENT–1<TUNER>



PRACTICAL SERVICE FIGURE

<RADIO SECTION>

1. AM IF Adjustment
   L505..... 450 kHz

2. FM VT Adjustment
   Settings: •Test point : TP1
   •Adjustment location : L504
   Method: Set to FM 87.5 MHz and adjust L504 so that the test point becomes 1.0 V ± 0.1 V. Set to FM 108.0 MHz , check the voltage for less than 9.0 V.

3. AM VT Check
   Settings: •Test point : TP1
   Method: Set to AM 531 kHz and 1602 kHz, check the voltage for less than 1.0 V +0.4/–0.3 V(531 kHz) and 6.0 V(1602 kHz).

4. AM Tracking Adjustment
   L501..... 630 kHz
   CT501 ..... 1440 kHz

5. FM Tracking Adjustment
   L502 ..... 87.5 MHz

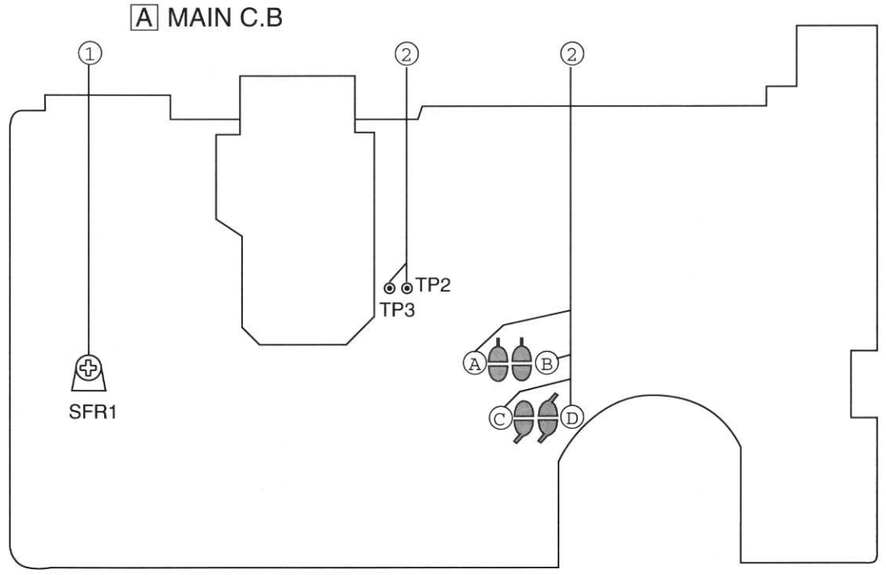
<RADIO SECTION>

Sensitivity :
(IHF, THD 3%) FM Less than 18 dB (87.5 MHz / 98.5 MHz / 108.0 MHz)
(S / N 10 dB) AM Less than 58 dB (630 kHz)
Less than 57 dB (999 kHz)
Less than 56 dB (1440 kHz)

Intermediate frequency : FM 10.7 MHz ± 0.05 MHz
AM 450 kHz ± 3 kHz

FM stereo separation : FM More than 16dB (98.5 MHz)

ADJUSTMENT–2<DECK>



PRACTICAL SERVICE FIGURE

<TAPE PLAYER SECTION>

1. Tape Speed Adjustment
   Settings: •Test tape : TTA-100
   •Test point : PHONES JACK (J1)
   •Adjustment location : SFR1
   •DOLBY NR : OFF
   •SUPER BASS : OFF
   Method: Play back the test tape, adjust for 2990 ± 10 Hz at FWD and + 45 / – 25 Hz at REV.

2. Dolby Level Adjustment
   Settings: •Test tape : TTA-200
   •Test point : TP2 (Lch), TP3 (Rch)
   •Adjustment location : Pattern A, B (Lch)
   : Pattern C, D (Rch)
   •VOLUME : MIN
   Method: Connect a coupling capacitor (10µF/16V) between the test point and AC volt meter. Check the test point voltage for 100mV ± 1.0dB. If TP2, TP3 level is different from the SPEC, perform this adjustment following the procedure below:

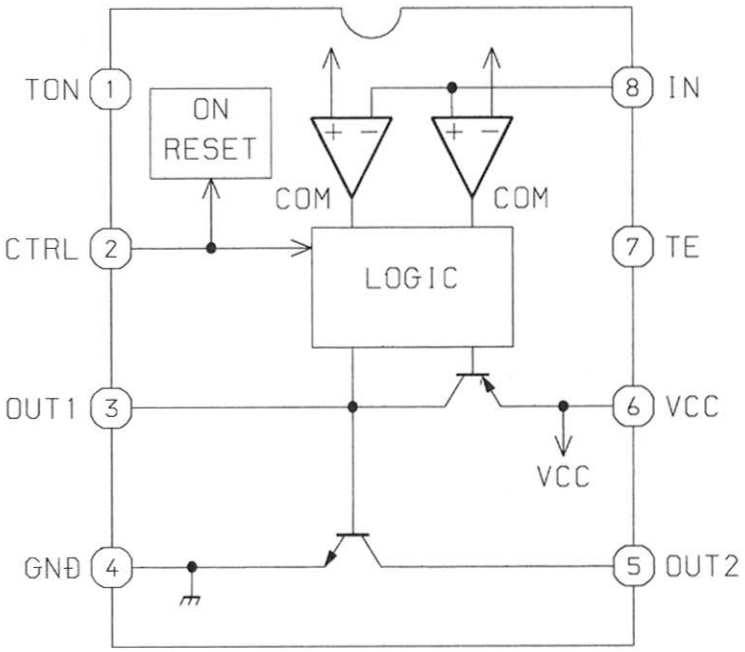
	Out level	Solder place
TP2 (LCH)	100mV + 1dB up	A
	100mV + 2dB up	B
	100mV + 3dB up	A , B
TP3 (RCH)	100mV + 1dB up	C
	100mV + 2dB up	D
	100mV + 3dB up	C , D

<RADIO SECTION>

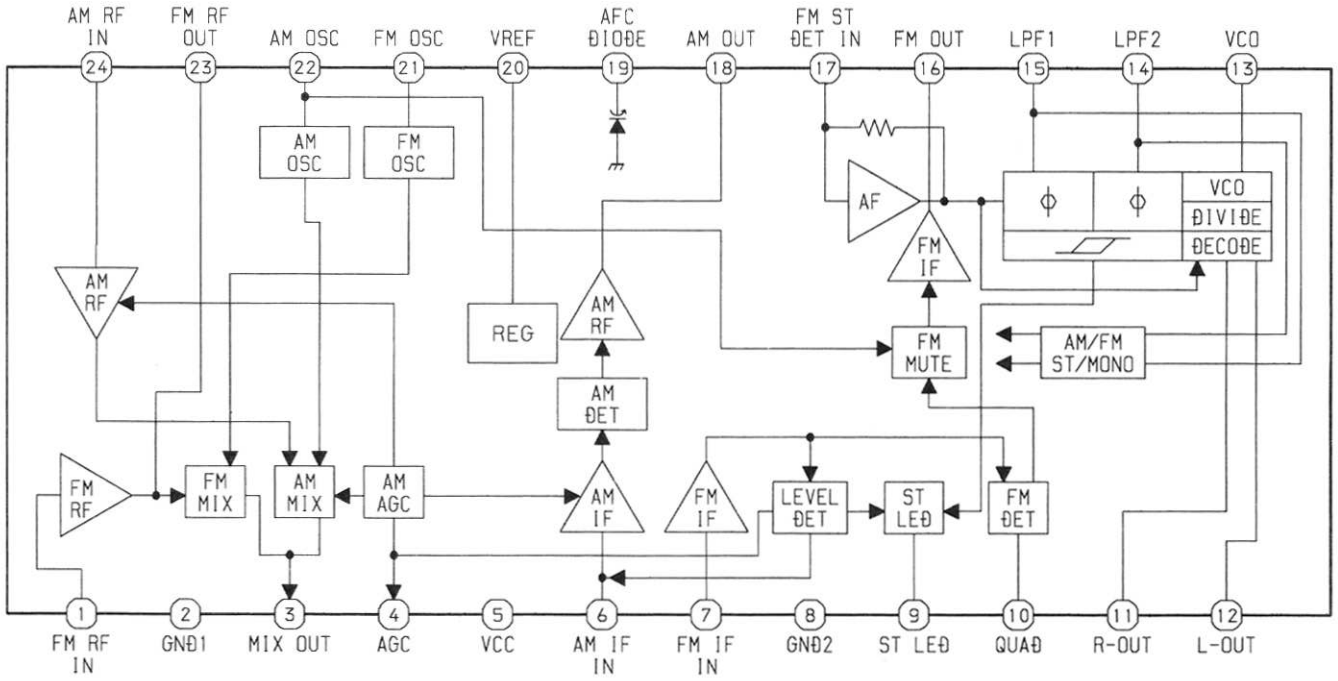
Tape speed : 3015 Hz ± 50 Hz
Wow & flutter : Less than 0.52 % (RMS)
Take-up torque : 20 ~ 30 g-cm (FWD, REV)
F. F torque : 100 ~ 150 g-cm
REW torque : 100 ~ 150 g-cm
Back tension : 1 ~ 3 g-cm (FWD, REV)
S/N ratio : More than 45 dB (DC, PB)
Distortion : Less than 3.0 % (DC, PB)
Noise level : Less than 3.0 mV (Vol MAX, DC)
Frequency response : 63 Hz +2/–6 dB ~ 8 kHz +3/–4 dB (NORMAL, PB)
63 Hz +2/–6 dB ~ 10 kHz +3/–4 dB (CrO2, PB)

IC BLOCK DIAGRAM

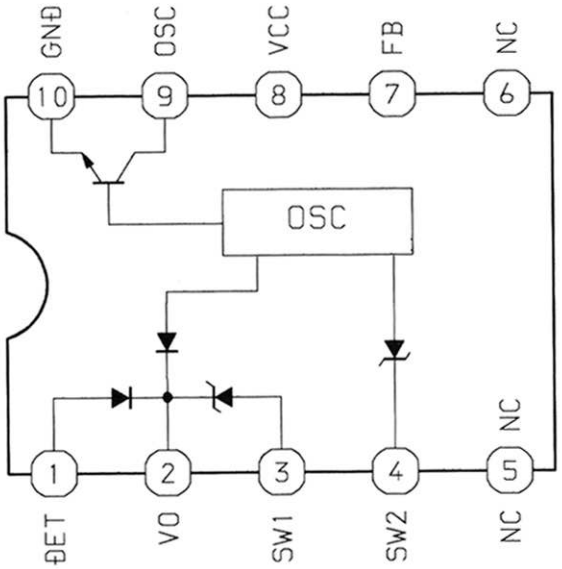
IC, BA3714F



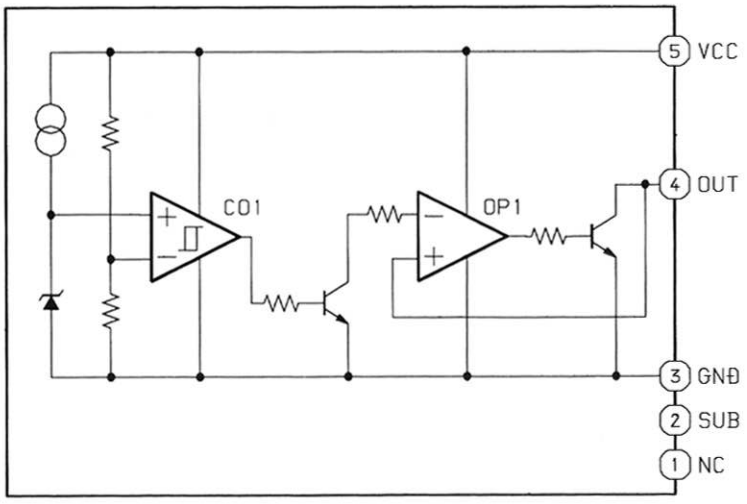
IC, TA2046FNST



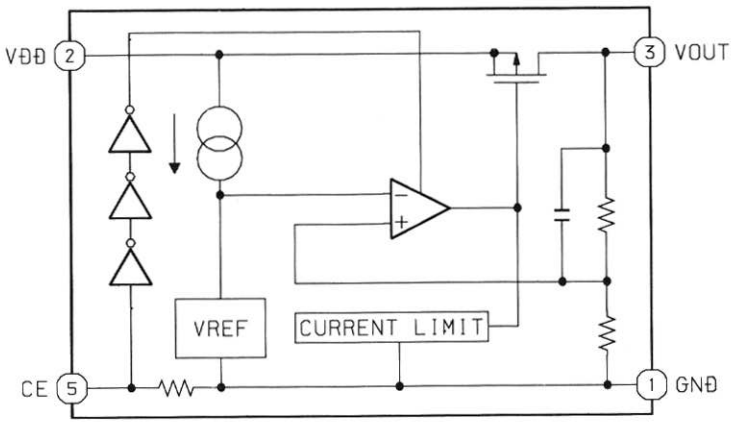
IC, TA8126F



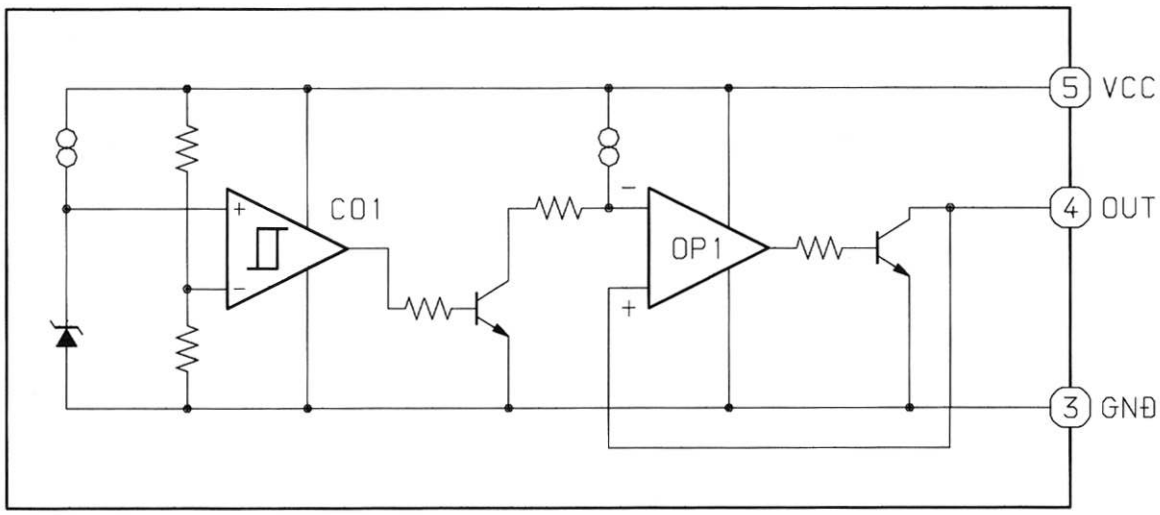
IC, PST9015



IC, RN5RZ20BA



IC, PST9120



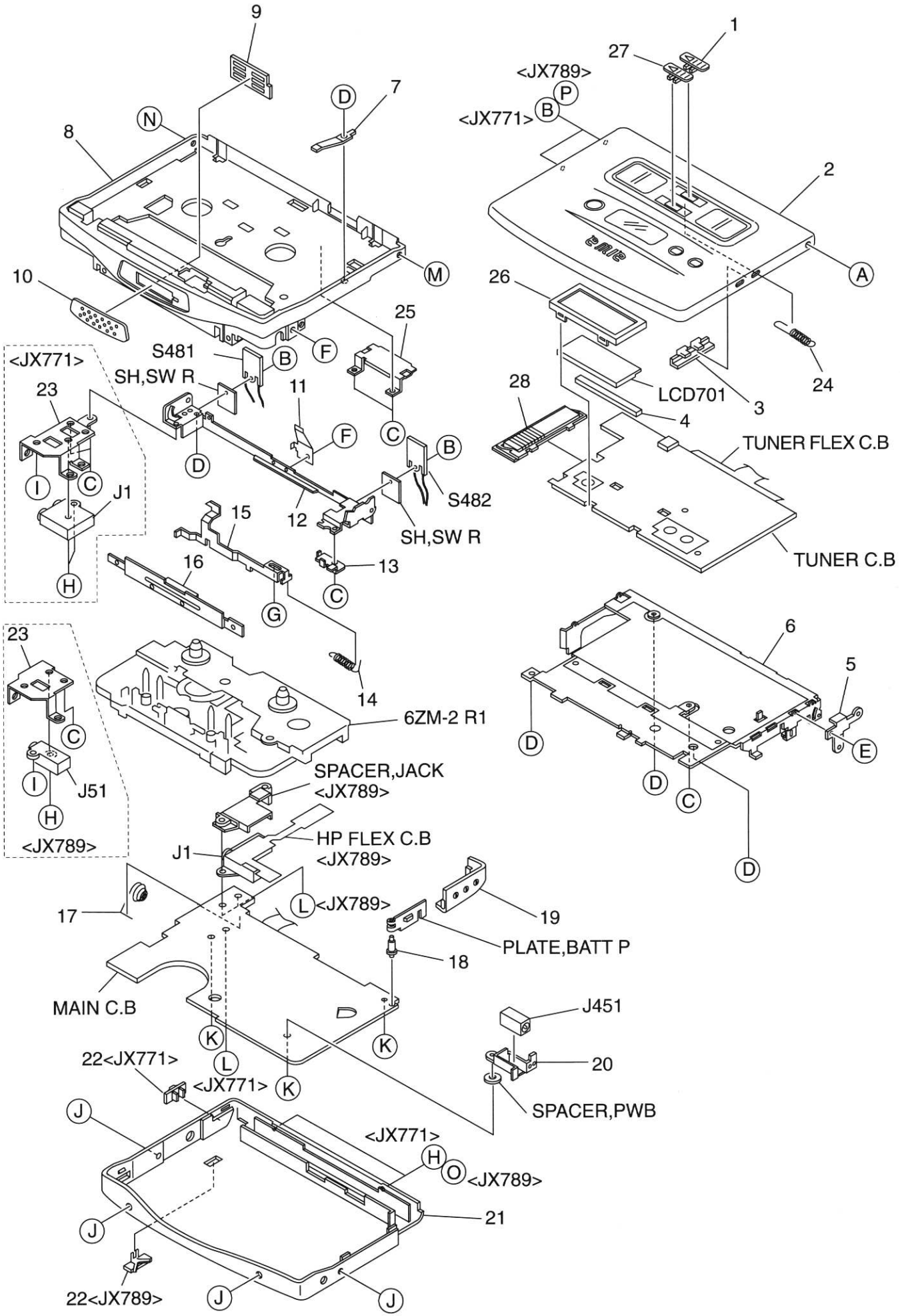
IC DESCRIPTION

IC, TC9327F-006

Pin No.	Pin Name	I/O	Description
1 ~ 4	COM1 ~ 4	O	LCD COMMON OUT1 ~ 4.
5 ~23	S1 ~ S19	O	LCD DRIVER OUT.
24	JACK IN	I	R-channel data invertCed output.
25	E-AREA	I	H, L] E AREA　L, H] U AREA　L, L] J AREA
26	U-AREA	I	
27	IF10.7	I	H : IF10.75MHz　L : IF10.7MHz
28	HOLD IN	I	Key hold set up for main unit.　H : HOLD ON　L : OFF
29	L.V.STOP	I	Mechanism stop when low voltage, key input limit.　L : mechanism stop
30	F.REC.P	I	H : REC key can not　L : Can
31	R.REC.P	I	H : REC key can not　L : Can
32	P-SNSR	I	Input pin of PHOTO SENSOR output wave form.
33	C-SW IN	I	Cassette have or not detection.　H : C-SW OFF　L : ON
34	UP	I	Up scan movement when TU.　H : ON　L : OFF
35	DOWN	I	Down scan movement when TU.　H : ON　L : OFF
36	ENTER	I	ENTER movement when TU.　H : ON　L : OFF
37	MS IN	I	MS IC signal input pin.　H : music have not　L : have
38	TIM SW	I	Input pin for mechanism movement set up.
39	MOT CH	I	Input pin MOT setting detection.
40	F/R SW	I	Input pin for mistake movement detection of mechanism.　H : FWD　L : REW
41	F/R CTRL	O	H : mechanism FWD mode　L : mechanism REV mode
42	REMOTEIN	I	Remote control key input.
43	MAIN IN	I	Main unit machine control key input.
44	BIASMUTE	O	MUTE output pin when REC.
45	REC ON	O	H : REC ON　L : OFF
46	SDR(LCD)	I	LCD microcomputer control pin.
47	SDATA(LCD)	O	LCD microcomputer serial data output pin.
48	SCK(LCD)	O	LCD microcomputer serial clock output pin.
49	BUZR	O	Buzzer output.
50	MOTOR ON	O	H : MOT ON　L : OFF
51	MOTOR HI	O	H : MOT HI SPEED　L : OFF
52	MOTORDIR	O	H : MOT CW　L : CCW
53	BRAKE	O	H : MOT BRAKE ON　L : OFF
54	NO/MT OUT	O	TAPE NORMAL / METAL change output pin.　H : METAL
55	FMST OUT	O	FM MONO / ST change output pin.　H : FM ST
56	BASS OUT	O	S-BASS ON / OFF output pin.　H : S-BASS ON
57	DOLBYOUT	O	DOLBY ON / OFF establish output pin.　H : DOLBY ON
58	TV OUT	O	H : TV (4 ~ 12 ch)　L : except TV (4 ~ 12 ch)
59	C-CEL(EP)	O	EEPROM head write control pin.
60	SCK(EP)	O	EEPROM serial clock output pin.
61	SDATA(EP)	I/O	EEPROM data input/output pin

Pin No.	Pin Name	I/O	Description
62	MUTE	O	Muting output. H : MUTE ON L : OFF
63	TEST	—	NC.
64	IF IN	I	IF signal input pin.
65	TU OUT	O	H : TU ON L : OFF
66	PLL OUT	O	PLL output pin.
67	TU SW	I	TU mode input. H : TU mode L : OFF
68	TU MODE	O	H : FM mode L : AM mode
69	GND	—	GND.
70	FM IN	I	FM programmable counter input.
71	AM IN	I	AM programmable counter input.
72	VDD	—	VDD.
73	RESET	—	System reset signal input pin.
74	XOUT	—	Crystal oscillator connecting pin.
75	XIN	—	Crystal oscillator connecting pin.
76	VXT	—	Voltage supply pin for crystal oscillator.
77	VLCD	—	Twice voltage boost pin for LCD drive.
78	CI	—	Twice voltage boost pin for LCD drive.
79	C2	—	Twice voltage boost pin for LCD drive.
80	VEE	—	1.5V fixed voltage supply pin for LCD drive.

MECHANICAL EXPLODED VIEW 1 / 1

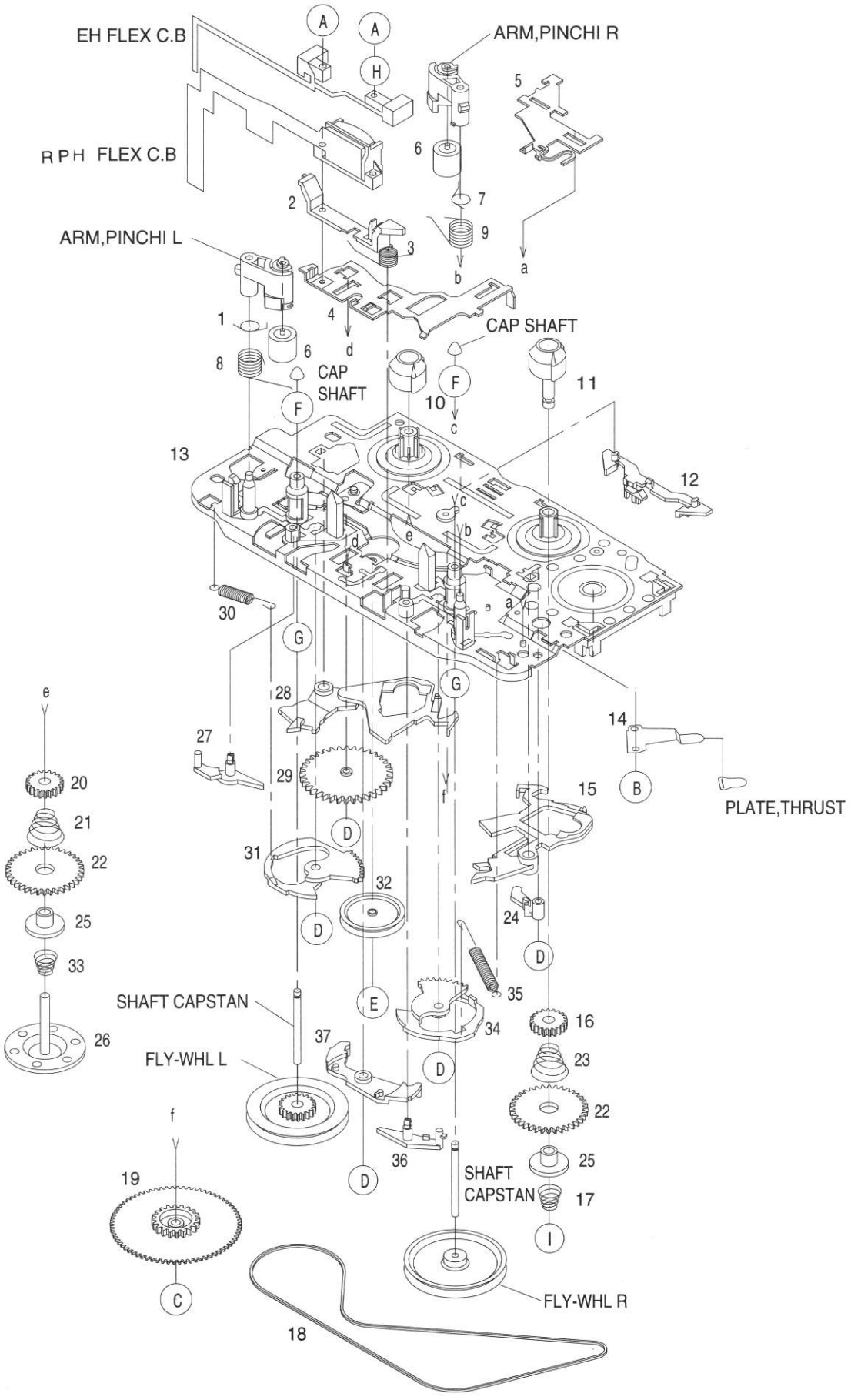


MECHANICAL PARTS LIST 1 / 1

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	87-HJ3-013-010		KNOB,SL H
2	09-028-335-010		LID CASS,ASSY<771YHS1>
2	09-028-334-010		LID CASS,ASSY<789Y1>
3	87-HR6-013-010		KEY,TUNING
4	87-HR6-225-010		CONN, RUBBER LCD
5	87-HR6-212-010		SPR-P,CLICK
6	87-HR6-204-010		HLDR,CASS
7	87-HR6-219-010		SPR-P,POP UP
8	87-HR6-001-010		FRAME,CENTER<771YHS1>
8	87-HJ3-004-010		FRAME,CENTER (ST)<789Y1>
9	87-HR6-208-010		PLATE,EJECT
10	87-HR6-015-010		KNOB,SL OPEN
11	87-HR6-209-010		SPR-P,CASS
12	87-HR6-201-010		PLATE,HINGE<771YHS1>
12	87-HR6-233-010		PLATE,HINGE LCD<789Y1>
13	87-HK6-217-010		SPR-P,GND
14	87-HK5-210-010		SPR-E,EJECT
15	87-HR6-207-010		PLATE,LOCK
16	87-HR6-203-010		PLATE,FRONT
17	87-HR6-211-010		SPR-C,BAT M
18	87-HR6-218-010		SHAFT,BAT
19	87-HR6-008-010		LID,BAT<771YHS1>
19	87-HJ3-008-010		LID,BAT (ST)<789Y1>
20	87-HR6-202-010		PLATE,SIDE
21	87-HJ4-007-010		CABI,REAR 771 (B)<771YHS1>
21	87-HJ4-003-010		CABI,REAR 789 (ST)<789Y1>
22	87-HJ3-015-010		KNOB,SL A<771YHS1>
22	87-HR6-017-010		KNOB,SL E<789Y1>
23	87-HR6-230-010		HLDR,JACK<771YHS1>
23	87-HR6-231-010		HLDR,JACK LCD<789Y1>
24	87-HJ3-202-010		SPR-E,REC
25	87-HR6-210-010		HLDR,FLEX
26	87-HR6-206-010		HLDR,LCD
27	87-HJ3-014-010		KNOB,SL REC
28	87-HR6-205-010		HLDR,ANT
A	85-HR4-217-010		S-SCREW,SERR+1.4-4CR<789Y1>
A	85-HR4-216-010		SCRW-SR,1.4-4 BL<771YHS1>
B	85-HK6-208-010		SCRW-SR,+1.4-2.2B L
C	87-067-732-010		TAPPING SCREW, VT1.4-3
D	87-067-385-010		SCREW,VT +1.4-2.5HL
E	87-078-216-010		SCRW-SR,1.4-1.4B LS
F	87-078-184-010		SCRW-SR,1.4-1.8 BL
G	87-HK5-235-010		S-SCREW,1.4-0.6-2.5
H	86-HK4-223-010		S-SCREW,SERR+1.4-3.5 B L
I	87-067-405-010		SCREW,VP+1.4-6HL
J	87-078-147-010		SCRW-SERR-M1.4-3B<771YHS1>
J	85-HK3-241-010		SCRW-SR,1.4-3CR L<789Y1>
K	87-078-113-010		S-SCRW,+1.4-3.5 HL(B
L	87-067-746-010		SCREW,M 1.4-2(H0.5)<771YHS1>
L	87-078-050-010		SCRW-SERR,M1.4-8<789Y1>
M	87-067-738-010		HINGE SCREW 1.4-1 BLK N<771YHS1>
M	87-067-739-010		HINGE SCREW 1.4-1 CR N<789Y1>
N	87-HK6-219-010		S-SCREW,+1.4-1 0.3 B<771YHS1>
N	87-HK6-220-010		S-SCREW,+1.4-1 0.3 CR N<789Y1>
O	86-HK4-224-010		S-SCREW,SERR+1.4-3.5 CR L<789Y1>
P	85-HKD-201-010		S-SCREW,SR+1.4-2.2 CR<789Y1>

TAPE MECHANISM EXPLODED VIEW 1 / 1

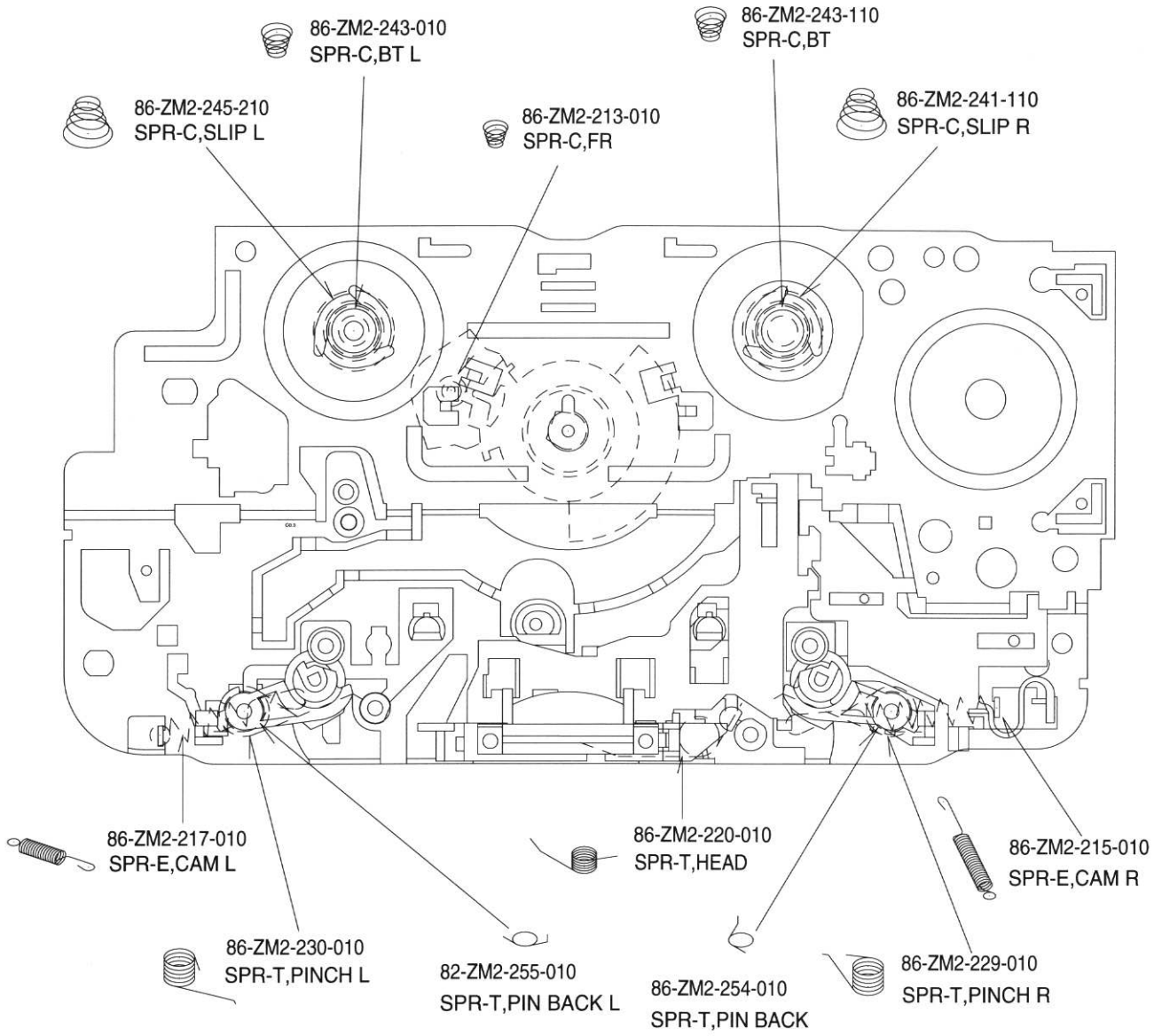


TAPE MECHANISM PARTS LIST 1 / 1

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	86-ZM2-255-010		SPR-T,PIN BACK L
2	86-ZM2-286-110		GUIDE,TAPE REC
3	86-ZM2-220-010		SPR-T,HEAD
4	86-ZM2-285-110		LEVER,HEAD REC
5	86-ZM2-247-010		LEVER,MS
6	86-ZM2-226-010		ROLLER ASSY,PINCH
7	86-ZM2-254-010		SPR-T,PIN BACK
8	86-ZM2-230-010		SPR-T,PINCH L
9	86-ZM2-229-010		SPR-T,PINCH R
10	86-ZM2-240-010		CAP,REEL
11	86-ZM2-234-010		SHAFT,REEL R
12	86-ZM2-273-010		LEVER,SW 8.4
13	86-ZM2-290-010		CHAS ASSY,P4
14	86-ZS2-312-010		SPR-P,6A-MOT
15	86-ZM2-232-010		LEVER,REEL R
16	86-ZM2-258-210		GEAR,REW
17	86-ZM2-243-110		SPR-C,BT
18	86-ZM2-302-010		BELT,R1
19	86-ZM2-209-010		GEAR,B
20	86-ZM2-238-010		GEAR,FF REW
21	86-ZM2-245-210		SPR-C,SLIP L
22	86-ZM2-237-010		GEAR,PLAY
23	86-ZM2-241-110		SPR-C,SLIP R
24	86-ZM2-272-010		LEVER,SW P 8.4
25	86-ZM2-236-010		CAP,SLIP
26	86-ZM2-235-010		SHAFT,REEL L
27	86-ZM2-223-010		LEVER,PIN UP L
28	86-ZM2-233-010		LEVER,REEL L
29	86-ZM2-208-010		GEAR,A
30	86-ZM2-217-010		SPR-E,CAM L
31	86-ZM2-216-010		LEVER,CAM L
32	84-ZM1-280-010		PULLY PM
33	86-ZM2-243-010		SPR-C,BT L
34	86-ZM2-214-010		LEVER,CAM R
35	86-ZM2-215-010		SPR-E,CAM R
36	86-ZM2-222-010		LEVER,PIN UP R
37	86-ZM2-218-010		LEVER,HEAD UP
A	86-ZM2-296-010		S-SCREW,+1.4-8.45
B	87-067-430-010		VT2+1.4-5 SWCH/CR BLK HL
C	87-067-516-010		W-P,1.58-3-0.25 SLIT
D	87-067-860-010		W-P,0.95-3-0.4
E	86-ZM2-277-010		W-P,0.8-3-0.2 SLT
F	86-ZM2-269-110		SH,1.2-2.9-0.25 SL
G	86-ZM2-279-010		W-L,1.76-4-0.125
H	86-ZM2-303-010		SPACER,1.4-3-0.2
I	86-ZM2-278-010		W-P,1.36-4-0.2 SLT

SPRING APPLICATION POSITION



ACCESSORIES / PACKAGE LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	87-HJ4-901-010		IB,EX-EC<789Y1>
2	87-B30-093-010		HEADPHONE, HP-MR016<771YHS>
2	87-B30-100-010		HEADPHONE,HP-MR018<789Y1>
3	86-HJ4-950-010		CASE,CARRYING
4	87-041-083-110		CM-S40A

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL

サービス技術ニュース	
番号	連絡内容
G— —	
G— —	
G— —	

アイワ株式会社
AIWA CO.,LTD.

9420208, 750038
Tokyo Japan

〒110 東京都台東区池之端1—2—11 ☎03（3827）3111 （代表）

Printed in Singapore