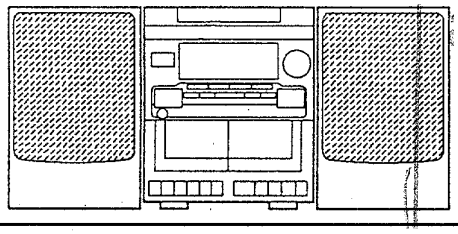
aiwa

aiwa SERVICE

NSX-V210
NSX-V220

SERVICE MANUAL



COMPACT DISC STEREO
CASSETTE RECEIVER

- BASIC TAPE MECHANISM : TN-21ZSW-1716
- BASIC CD MECHANISM : 4ZG–1 BDLNM <HR>
  4ZP–1 BDLNM <210EZ,K,220EZ>
- TYPE : EZ,K,HR <210>
  EZ <220>

SYSTEM	CD CASSEIVER	SPEAKER	REMOTE CONTROLLER
NSX-V210	CX-NV210	SX–NV210	RC UNIT, 6AS14
NSX-V220	CX-NV220		

- If requiring information about the CD mechanism, see Service Manual of 4ZG-1,4ZP-1,
  S/M Code No. 09-965-128-10T.

- If requiring information about the Speaker, see Service Manual of SX-NV210,
  S/M Code No. 09-964-137-8FP.

S/M Code No. 09–96C–173–6FP

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SPECIFICATIONS

<FM Tuner section>

Tuning range	87.5 MHz to 108 MHz
Usable sensitivity(IHF)	16.8 dBf
Antenna terminals	75 ohms (unbalanced)

<MW Tuner section>

Tuning range	531 kHz to 1602 kHz (9 kHz step) 530 kHz to 1710 kHz (10 kHz step)
Usable sensitivity	350 uV/m
Antenna	Loop antenna

<SW Tuner section> (HR)

Tuning range	5.900 MHz to 17.900 MHz
Antenna	Wire antenna

<LW Tuner section> (EXCEPT HR)

Tuning range	144 KHz to 290 KHz
Usable sensitivity(IHF)	1400 uV/m
Antenna terminals	Loop antenna

<Amplifier section>

Power output	HR: Rated 24 W + 24 W (6 ohms,T.H.D.1%,1 kHz) Reference: 30 W + 30 W (6 ohms, T.H.D.10%,1 kHz) EXCEPT HR: Rated 20 W + 20 W (6 ohms,T.H.D.1%,1 kHz / DIN45500) Reference: 24 W + 24 W (6 ohms, T.H.D.10%,1 kHz / DIN45324) DIN MUSIC POWER 54 W + 54 W
Total harmonic distortion	0.03% (10 W, 1 kHz, 6 ohms, DIN AUDIO)
Inputs	VIDEO/AUX : 400 mV
Outputs	SPEAKERS: accept speakers of 6 ohms or more PHONES (stereo jack) : accepts headphones of 32 ohms or more

<Cassette deck section>

Track format	4 tracks, 2 channels stereo
Frequency response	50 Hz ~10000 Hz
Recording system	AC bias
Heads	Deck 1 : Recording/Playback/ erase head x 1 Deck 2 : playback head x 1

<Compact disc player section>

Laser	Semiconductor laser (λ =780 nm)
D-A converter	1 bit dual
Signal-to-noise ratio	90 dB (1 kHz, 0 dB)
Harmonic distortion	0.03 % (1 kHz, 0 dB)
Wow and flutter	Unmeasurable

<General>

Power requirements	120 V / 220 – 240 V AC (switchable) 50 / 60 Hz (HR) 230 V AC 50 Hz (EXCEPT HR)
Power consumption	HR: 88 W 210EZ,K: 142 W 220EZ: 150 W
Dimensions of main unit (W X H X D)	260 x 308 x 341 mm
Weight of main unit	5.0 kg

<Speaker system SX–NV210>

Cabinet type	2 way, bass reflex (magnetic shielded type)
Speakers	Woofer : 120 mm cone type Tweeter : 10 mm cone type
Impedance	6 ohms
Output sound pressure level	87 dB/W/m
Dimensions (W x H x D)	220 x 302 x 238 mm
Weight	2.5 kg

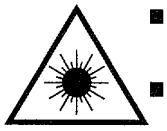
• Design and specifications are subject to change without notice.

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herin may result in hazardous radiation exposure.

ATTENTION

L'utillisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL

Usynlig laserstråling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saataa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CLASS 1	LASER PRODUCT
KLASSE 1	LASER PRODUKT
LUOKAN 1	LASER LAITE
KLASS 1	LASER APPARAT

Precaution to replace Optical block **(KSS – 210A)**

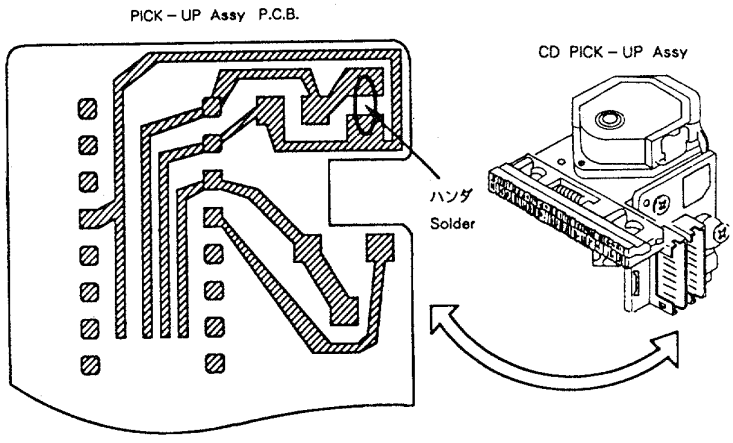
光学ブロック（ＫＳＳ－210Ａ）交換時の注意

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in figure below.

光学系ブロック内のレーザーダイオードは、衣服や人体に帯電した静電荷等で電位差を生じることにより、静電破壊することがあります。人体アース、作業台のアースをとり、衣服が触れぬよう注意して下さい。

1）コネクターを接続後、右図に示すハンダ付けを取り除いて下さい。



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			
	86-NFZ-630-010		IC,UPD78044HGF-020-3B9 <EXCEPT 220EZ>
	86-NFZ-706-010		IC,UPD78045HGF-017-3B9<220EZ>
	87-A20-317-010		IC,SPS-420-1-C
	86-NFZ-642-010		IC,NJM4558LD
	87-017-804-010		IC,BU4052BC
	87-A20-312-010		IC,M62420SP
	87-A20-502-010		IC,BU1920<220EZ>
	86-NFZ-655-010		IC,LC72131D(Z)
	86-NFZ-654-010		IC,LA1836(Z)
	87-017-914-010		IC,BU4094<220EZ>
	87-017-300-010		IC,NJM2100L<220EZ>
TRANSISTOR			
	89-213-702-010		TR,2SB1370E
	86-NFZ-658-080		TR,2SC2785F
	86-NFZ-659-080		TR,2SC3266GR
	89-113-187-080		TR,2SA1318T
	86-NFZ-656-080		TR,2SA1175F
	86-NFZ-648-080		TR,DTA143ESA
	86-NFZ-645-080		TR,DTA114YSA
	89-420-619-010		TR,2SD2061E
	86-NFZ-647-080		TR,DTC144ESA
	86-NFZ-650-080		TR,DTA144WSA
	87-A30-047-080		TR,CSD655E
	89-333-317-080		TR,2SC3331T
	86-NFZ-649-080		TR,DTC143XSA
	87-A30-012-080		FET,2SK439E
	89-305-352-380		TR,2SC535(B/C)
	86-NFZ-657-080		TR,2SC1923O
	86-NFZ-703-080		TR,2SC2002LK
	86-NFZ-704-080		TR,2SA953LK
	89-320-011-080		TR,2SC2001K
	87-026-269-080		TR,DTA114ES
	87-026-462-080		TR,2SC1740SRS<HR>
	87-026-463-080		TR,2SA933SRS<HR>
DIODE			
	87-070-178-090		DIODE,1N5402
	87-070-274-080		DIODE,1N4003 SEM
	87-A40-236-080		ZENER,MTZJ24D
	87-070-345-080		DIODE,1N4148
	87-017-933-080		ZENER,MTZJ10D
	87-A40-235-080		ZENER,MTZJ9.1C
	87-A40-234-080		ZENER,MTZJ5.6A
	87-A40-226-080		VARI-CAP,SVC251SPA
	87-002-843-080		DIODE,1SS108<220EZ>
MAIN C.B			
C102	87-016-473-090		CAP,E 3300-35 SSL
C103	87-016-595-010		CAP,E 2200-35 M SSL
C105	87-018-127-080		CAP,TC U 470P-50 K B UP050
C106	87-010-260-080		CAP,E 47-25 SME
C107	87-010-101-080		CAP,E 220-16 SME
C108	87-010-381-080		CAP,E 330-16 SME
C109	87-010-260-080		CAP,E 47-25 SME
C110	87-010-260-080		CAP,E 47-25 SME
C111	87-010-247-080		CAP,E 100-50 SME
C112	87-010-263-080		CAP,E 100-10 SME
C113	87-010-403-080		CAP,E 3.3-50 SME
C114	87-010-374-080		CAP,E 47-10 SME
C118	87-018-134-080		CAP,TC U 0.01-16 YN <EXCEPT 220EZ>
C151	87-018-134-080		CAP,TC U 0.01-16 YN<EZ,K>
C200	87-018-134-080		CAP,TC U 0.01-16 YN<220EZ>
C201	87-010-401-080		CAP,E 1-50 SME
C202	87-010-401-080		CAP,E 1-50 SME
C203	87-018-199-089		CAP,TC U 3300P-16 MX UP050
C204	87-018-199-089		CAP,TC U 3300P-16 MX UP050
C205	87-018-199-089		CAP,TC U 3300P-16 MX UP050 <EXCEPT 220EZ>
C205	87-018-196-080		CAP,TC U 1500P-16 MX UP050 <220EZ>
C206	87-018-199-089		CAP,TC U 3300P-16 MX UP050 <EXCEPT 220EZ>
C206	87-018-196-080		CAP,TC U 1500P-16 MX UP050<220EZ>
C207	87-010-545-080		CAP,E 0.22-50 SME
C208	87-010-545-080		CAP,E 0.22-50 SME
C209	87-010-221-080		CAP,E 470-10 SME
C210	87-010-221-080		CAP,E 470-10 SME
C211	87-018-024-080		CAP,TC S 47P-50 J SL UP100<EZ,K>
C212	87-018-024-080		CAP,TC S 47P-50 J SL UP100<EZ,K>
C213	87-018-104-080		CAP,TC U 10P-50 J SL UP100<EZ,K>
C214	87-018-104-080		CAP,TC U 10P-50 J SL UP100<EZ,K>
C219	87-010-544-080		CAP,E 0.1-50 SME
C220	87-010-544-080		CAP,E 0.1-50 SME
C221	87-018-134-080		CAP,TC U 0.01-16 NY UP050<EZ,K>
C222	87-018-134-080		CAP,TC U 0.01-16 NY UP050<EZ,K>
C225	87-010-394-080		CAP,E 220-35 SME
C226	87-010-408-089		CAP,E 47-50 SME
C227	87-010-405-080		CAP,E 10-50 SME
C292	87-018-134-080		CAP,TC U 0.01-16 NY UP050<EZ,K>
C301	87-018-195-080		CAP,TC U 1200P-16 M X UP050
C302	87-018-195-080		CAP,TC U 1200P-16 M X UP050
C303	87-010-263-080		CAP,E 100-10 SME
C304	87-010-263-080		CAP,E 100-10 SME
C309	87-010-546-080		CAP,E 0.33-50 SME
C310	87-010-546-080		CAP,E 0.33-50 SME
C311	87-018-130-080		CAP,TC U 820P-50 K B UP050
C312	87-018-130-080		CAP,TC U 820P-50 K B UP050
C314	87-010-260-040		CAP,E 47-25 SME
C345	87-018-115-080		CAP,TC U 47P-50 J SL UP050<EZ,K>
C349	87-018-209-080		CAP,TC U 0.1-50 ZF UP050<EZ,K>
C351	87-018-195-080		CAP,TC U 1200P-16 M X UP050
C352	87-018-195-080		CAP,TC U 1200P-16 M X UP050
C353	87-010-263-080		CAP,E 100-10 SME
C354	87-010-263-080		CAP,E 100-10 SME
C360	87-010-370-089		CAP,E 330-6.3 SME
C390	87-018-209-080		CAP,TC U 0.1-50 ZF UP050<EZ,K>
C391	87-018-115-080		CAP,TC U 47P-50 J SL UP050<EZ,K>
C395	87-018-134-080		CAP,TC U 0.01-16 YN<220EZ>
C401	87-010-401-080		CAP,E 1-50 SME
C402	87-010-401-080		CAP,E 1-50 SME
C403	87-018-118-080		CAP,TC U 82P-50 J B UP050
C404	87-018-118-080		CAP,TC U 82P-50 J B UP050
C405	87-018-118-080		CAP,TC U 82P-50 J B UP050V <210EZ,K>
C406	87-018-134-080		CAP,TC U 0.01-16 YN<210EZ,K>
C452	87-010-385-080		CAP,E 220-25 SME
C458	87-018-131-080		CAP,TC U 1000P-50 K B UP050
C459	87-018-128-080		CAP,TC U 560P-50 K B UP050
C461	87-018-126-080		CAP,TC U 390P-50 K B UP050
C462	87-018-126-080		CAP,TC U 390P-50 K B UP050
C505	87-010-545-080		CAP,E 0.22-50 SME
C506	87-010-545-080		CAP,E 0.22-50 SME
C510	87-010-405-080		CAP,E 10-50 SME<220EZ>
C511	87-010-260-040		CAP,E 47-25 SME
C512	87-010-260-040		CAP,E 47-25 SME
C513	87-010-221-080		CAP,E 470-10 SME
C515	87-010-401-080		CAP,E 1-50 SME
C516	87-010-401-080		CAP,E 1-50 SME
C517	87-018-134-080		CAP,TC U 0.01-16 YN<220EZ>
C518	87-018-134-080		CAP,TC U 0.01-16 YN
C551	87-018-115-080		CAP,TC U 47P-50 J SL UP050<220EZ>
C552	87-018-115-080		CAP,TC U 47P-50 J SL UP050<220EZ>

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C553	87-018-115-080		CAP,TC U 47P-50 J SL UP050<220EZ>
C701	87-010-404-080		CAP,E 4.7-50 SME
C704	87-018-131-080		CAP,TC U 1000P-50 K B UP050<EZ,K>
C711	87-010-260-040		CAP,E 47-25 SME
C712	87-010-112-040		CAP,E 100-16 SME
C719	87-018-209-080		CAP,TC U 0.1-50 ZF UP050<HR>
C720	87-018-134-080		CAP,TC U 0.01-16 YN<EXCEPT HR>
C722	87-018-104-080		CAP,TC U 10P-50 J SL UP050 <EXCEPT 220EZ>
C722	87-018-149-080		CAP,TC U 15P-50 J CH UP050<220EZ>
C728	87-010-248-040		CAP,E 220-10 SME
C730	87-018-134-080		CAP,TC U 0.01-16 YN<220EZ>
C733	87-018-103-080		CAP,TC U 8.2P-50 K SL UP050 <EXCEPT 220EZ>
C733	87-018-148-080		CAP,TC U 12P-50 J CH UP050<220EZ>
C741	87-010-401-080		CAP,E 1-50 SME<EZ,K>
C741	87-010-546-080		CAP,E 0.33-50 SME<HR>
C742	87-010-401-080		CAP,E 1-50 SME
C771	87-010-405-040		CAP,E 10-50 SME
C773	87-018-208-080		CAP,TC U 0.047-50 Z F UP050
C774	87-010-263-080		CAP,E 100-10 SME
C775	87-010-405-040		CAP,E 10-50 SME
C777	87-010-400-089		CAP,E 0.47-50 SME
C778	87-010-401-080		CAP,E 1-50 SME
C779	87-010-401-080		CAP,E 1-50 SME
C791	87-010-401-080		CAP,E 1-50 SME
C792	87-018-198-080		CAP,TC U 2700P-16 MX UP050 <EZ,K>
C792	87-018-196-080		CAP,TC U 1500P-16 MX UP050<HR>
C794	87-010-260-040		CAP,E 47-25 SME
C795	87-018-208-080		CAP,TC U 0.047-50 ZF UP050<EZ,K>
C796	87-010-403-080		CAP,E 3.3-50 SME
C799	87-010-405-040		CAP,E 10-50 SME
C801	87-018-102-089		CAP,TC U 6.8P-50 K SL UP050<HR>
C806	87-018-101-089		CAP,TC U 5.6P-50 K SL UP050<HR>
C807	87-018-102-089		CAP,TC U 6.8P-50 K SL UP050<HR>
C808	87-018-098-080		CAP,TC U 3.3P-50 K SL UP050<HR>
C809	87-018-119-080		CAP,TC U 100P-50 K B UP050<HR>
C811	87-018-107-080		CAP,TC U 18P-50 J SL UP050<HR>
C815	87-018-134-080		CAP,TC U 0.01-16 N YU<HR,220EZ>
C820	87-010-260-080		CAP,E 47-25 SME<EZ,K>
C821	87-018-105-080		CAP,TC U 12P-50 J SL UP050<HR>
C821	87-018-134-080		CAP,TC U 0.01-16 N YU<EZ,K>
C822	87-018-111-080		CAP,TC U 27P-50 J SL UP050<HR>
C823	87-018-111-080		CAP,TC U 27P-50 J SL UP050<HR>
C823	87-018-134-080		CAP,TC U 0.01-16 N YU<EZ,K>
C824	87-018-109-080		CAP,TC U 22P-50 J SL UP050<HR>
C825	87-018-209-080		CAP,TC U 0.1-50 ZF UP050<EZ,K>
C849	87-018-134-080		CAP,TC U 0.01-16 NY U<EZ,K>
C851	87-018-131-080		CAP,TC U 1000P-50 K B UP050<EZ,K>
C852	87-018-131-080		CAP,TC U 1000P-50 K B UP050<EZ,K>
C861	87-018-131-080		CAP,TC U 1000P-50 K B UP050 <220EZ>
C862	87-010-132-080		CAP,TC U 2200P-16 N X UP050 <220EZ>
C863	87-018-127-080		CAP,TC U 470P-50 K B UP050<220EZ>
C865	87-018-209-080		CAP,TC U 0.1-50 ZF UP050<220EZ>
C866	87-010-405-040		CAP,E 10-50 SME<220EZ>
C867	87-018-134-080		CAP,TC U 0.01-16 N YU<220EZ>
C868	87-018-111-080		CAP,TC U 27P-50 J SL UP050<220EZ>
C869	87-018-111-080		CAP,TC U 27P-50 J SL UP050<220EZ>
C941	87-018-107-080		CAP,TC U 18P-50 J SL UP050<HR>
C942	87-018-141-080		CAP,TC U 3.3P-50 K CH UP050<EZ,K>
C943	87-018-134-080		CAP,TC U 0.01-16 N YU<HR>
C944	87-014-051-010		CAP PP 560P-100 J<HR>
C945	87-018-134-080		CAP,TC U 0.01-16 N YU<HR>
C946	87-010-401-080		CAP,E 1-50 SME<EZ,K>
C949	87-014-049-080		CAP PP 470P-100 J<EZ,K>
C950	87-014-073-010		CAP PP 4700P-100 J<HR>
C952	87-018-134-080		CAP,TC U 0.01-16 N YU
C953	87-018-134-080		CAP,TC U 0.01-16 N YU<HR>
C954	87-010-400-080		CAP,E 0.47-50 SME<HR>
C955	87-018-134-080		CAP,TC U 0.01-16 N YU
C956	87-010-263-080		CAP,E 100-10 SME<HR>
C957	87-018-104-080		CAP,TC U 10P-50 J SL UP050<220EZ>
C958	87-018-134-080		CAP,TC U 0.01-16 N YU<EZ,K>
C960	87-018-209-080		CAP,TC U 0.1-50 ZF UP050<EZ,K>
C999	87-018-209-080		CAP,TC U 0.1-50 ZF UP050<HR>
CF801	87-008-423-080		FLTR,SFE10.7MS3 GH-A-TF21<EZ,K>
CF801	87-008-261-010		FLTR,CFSFE10.7MA5<HR>
CF802	82-785-747-080		CF,MS2 6HY,R<EZ,K>
FFE801	A8-6ZA-195-030		6ZA-1 YFEENM<EZ,K>
J201	87-A60-024-010		JACK,DIA 6.3 BLK W/WS KM
J202	87-A60-238-010		TERMINAL,SP 4P (MSC)
J203	87-099-715-010		JACK,PIN 2P
J801	87-A60-202-010		TERMINAL,ANT 4P MSP-154V-02<HR>
J802	87-033-241-010		TERMINAL,ANT 2P AJ-2039<EZ,K>
L201	87-003-383-010		COIL,1uH K<EZ,K>
L202	87-003-383-010		COIL,1uH K<EZ,K>
L451	87-NFZ-696-010		COIL,OSC 85KHZ BIAS
L741	87-A50-015-010		COIL,FM DET (TOK)
L742	87-A90-245-010		FLTR,CFAZH-450 (TOK)<EZ,K>
L742	87-A90-052-010		FLTR,CFMT-450A (TOK)<HR>
L801	87-A50-110-010		COIL,FM BPF EX<HR>
L802	87-006-244-010		COIL,RF FM 3-1/2T L4<HR>
L803	87-006-246-010		COIL,RF FM 3-1/2T L4<HR>
L804	87-NFZ-694-010		COIL,2.2uH K CECS<HR>
L805	87-A50-111-010		COIL,FM OSC EX<HR>
L806	86-ZA1-604-010		IFT,FM IFT 7-6.2<HR>
L807	87-NFZ-694-010		COIL,2.2uH K CECS<HR>
L832	87-005-847-080		COIL,2.2uH K CECS<EZ,K>
L850	87-NFZ-694-010		COIL,2.2uH K CECS<220EZ>
L901	86-NF4-666-010		COIL,AM PACK 3 (TOK)<HR>
L941	87-A50-020-010		COIL,ANT LW<EZ,K>
L941	87-A50-022-010		COIL,ANT SW<HR>
L942	87-A50-019-010		GOIL,OSC LW<EZ,K>
L942	87-A50-021-010		COIL,OSC SW<HR>
L943	87-005-372-080		COIL,1mH K LAL03<HR>
L944	87-003-131-080		COIL,10mH J EL0607<HR>
L981	86-NF4-665-010		COIL,AM PACK1<EZ,K>
⚠ PR201	87-A90-195-080		PROTECTOR 7A 125V 491<EXCEPT 220EZ>
⚠ PR201	87-026-681-080		PROTECTOR 5A 125V 491<220EZ>
⚠ PR401	87-A90-246-080		PROTECTOR 0.25A 125V 491<220EZ>
R245	87-022-050-080		RES,M/F 0.22-1W J
R246	87-022-050-080		RES,M/F 0.22-1W J
SFR451	86-NFZ-644-080		SFR,33K H RH0638C
SFR452	86-NFZ-644-080		SFR,33K H RH0638C
SFR722	86-NFZ-690-080		SFR,10K H RH0638C
TC941	87-011-220-080		TRIMMER,CER 20P 6.15 X 5.9VCT5<HR>
TC942	87-011-221-080		TRIMMER,CER 30P 6.15 X 5.9VCT5
W101	83-NE2-618-110		F-CABLE,5P-2.5
X703	87-A70-044-010		VIB, CER CMU2-456A15
X721	86-NFZ-689-010		VIB,XTAL 7.200MHZ CSA-309 <EXCEPT 220EZ>
X721	86-NFZ-651-010		VIB,XTAL 4.500MHZ CSA-309<220EZ>
X850	89-KT1-608-010		XTAL 4.332MHZ<220EZ>

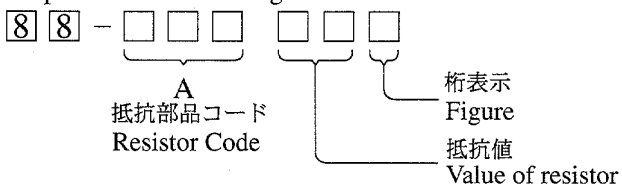
FRONT C.B

C201	87-010-404-040		CAP,E 4.7-50 SME
C202	87-010-404-040		CAP,E 4.7-50 SME
C203	87-010-405-040		CAP,E 10-50 SME
C204	87-010-408-040		CAP,E 47-50 SME<EXCEPT 220EZ>
C205	87-018-208-080		CAP,TC U 0.047-50 Z F UP050
C206	87-018-208-080		CAP,TC U 0.047-50 Z F UP050
C207	87-010-401-040		CAP,E 1-50 SME
C208	87-010-263-040		CAP,E 100-10 SME
C210	87-018-208-080		CAP,TC U 0.047-50 Z F UP050
C211	87-010-248-040		CAP,E 220-10 SME
C212	87-018-208-080		CAP,TC U 0.047-50 Z F UP050
C213	87-010-401-040		CAP,E 1-50 SME
C215	87-018-150-080		CAP,TC U 18P-50 J CH UP050
C216	87-018-147-089		CAP,TC U 10P-50 J SL UP050

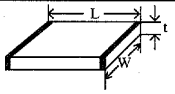
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C217	87-018-122-080		CAP,TC U 180P-50 K B UP050
C220	87-018-127-080		CAP,TC U 470P-50 K B UP050
C223	87-010-384-040		CAP,E 100-25 SME
C226	87-018-134-080		CAP,TC U 0.01-16 N Y UP050
C252	87-018-134-080		CAP,TC U 0.01-16 N YU<220EZ>
C253	87-018-134-080		CAP,TC U 0.01-16 N YU<220EZ>
C291	87-018-134-080		CAP,TC U 0.01-16 N YU <EXCEPT 220EZ>
C292	87-018-134-080		CAP,TC U 0.01-16 N YU <EXCEPT 220EZ>
C293	87-018-134-080		CAP,TC U 0.01-16 N YU <EXCEPT 220EZ>
C296	87-018-134-080		CAP,TC U 0.01-16 N YU <EXCEPT 220EZ>
C402	87-010-545-040		CAP,E 0.22-50 M SME<HR>
C403	87-018-118-080		CAP,TC U 82P-50 J B UP050<HR>
C404	87-010-544-040		CAP,E 0.1-50 M SME<HR>
C406	87-018-130-080		CAP,TC U 820P-50 K B UP050<HR>
C409	87-010-248-040		CAP,E 220-10 M SME<HR>
C410	87-010-405-040		CAP,E 10-50 M SME<HR>
D201	87-017-932-080		ZENER,MTZJ6.2B
FL301	82-NF7-631-010		FL 7BT-185GK<EXCEPT 220EZ>
FL301	82-NF7-661-010		FL 10BT-183GK<220EZ>
L201	86-NFZ-693-010		COIL,CLK 4.19MHZ
L202	87-005-135-080		COIL,220UH K LAL04
S201	87-A90-317-010		SW,RTRY,EC16B24204<HR>
S301	87-A90-095-080		SW,TACT EVQ11G04M
S302	87-A90-095-080		SW,TACT EVQ11G04M
S303	87-A90-095-080		SW,TACT EVQ11G04M
S304	87-A90-095-080		SW,TACT EVQ11G04M
S305	87-A90-095-080		SW,TACT EVQ11G04M
S306	87-A90-095-080		SW,TACT EVQ11G04M
S307	87-A90-095-080		SW,TACT EVQ11G04M
S308	87-A90-095-080		SW,TACT EVQ11G04M
S309	87-A90-095-080		SW,TACT EVQ11G04M
S310	87-A90-095-080		SW,TACT EVQ11G04M
S311	87-A90-095-080		SW,TACT EVQ11G04M
S312	87-A90-095-080		SW,TACT EVQ11G04M
S313	87-A90-095-080		SW,TACT EVQ11G04M
S314	87-A90-095-080		SW,TACT EVQ11G04M
S315	87-A90-095-080		SW,TACT EVQ11G04M
S316	87-A90-095-080		SW,TACT EVQ11G04M
S317	87-A90-095-080		SW,TACT EVQ11G04M
S318	87-A90-095-080		SW,TACT EVQ11G04M
S319	87-A90-095-080		SW,TACT EVQ11G04M
S320	87-A90-095-080		SW,TACT EVQ11G04M<220EZ>
S321	87-A90-095-080		SW,TACT EVQ11G04M<220EZ>
S322	87-A90-095-080		SW,TACT EVQ11G04M<220EZ>
SFR201	86-NFZ-639-089		SFR,2.2K HRH 06380
SW201	87-A90-317-010		SW,RTRY EC16B24204
VR401	86-NFA-607-010		VR,RTRY 10K15AX1 1 V XV0121PVN <HR>
AC1 C.B			
⚠	82-304-743-010		TERMINAL,1P
⚠ CL1	87-033-213-010		CLAMP FUSE SMK PFC5000
⚠ CL2	87-033-213-010		CLAMP FUSE SMK PFC5000
⚠ F101	87-035-362-010		FUSE,1A 250V T<EZ,K>
⚠ F101	87-035-365-010		FUSE,2A 250V T<HR>
⚠ PT101	86-NFZ-725-010		PT,6NF-32 RDS<220EZ>
⚠ PT101	86-NFZ-604-010		PT,6NF-32 EZK<210EZ,K>
⚠ PT101	86-NFZ-609-010		PT,6NF-32 HR<HR>
⚠ SW101	87-036-388-010		SW,SL1-2-2 HSW<HR>
AC2 C.B			
C100	87-018-134-080		CAP,TC U 0.01-16 NY UP050<EZ,K>

Oチップ抵抗部品コード／CHIP RESISTOR PART CODE

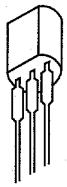
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



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



E C B

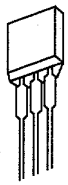
2SC19230
2SC3266
2SC535

E C B

2SA953
2SC2001
2SC2002
CSD655E

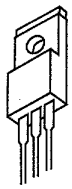
E C B

2SA1318
2SC3331T



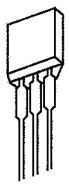
E C B

2SA933
2SA1175
2SC1740
2SC2785
DTA114ES
DTA114YSA
DTA143ESA
DTA144WSA
DTC143XSA
DTC144ESA



B C E

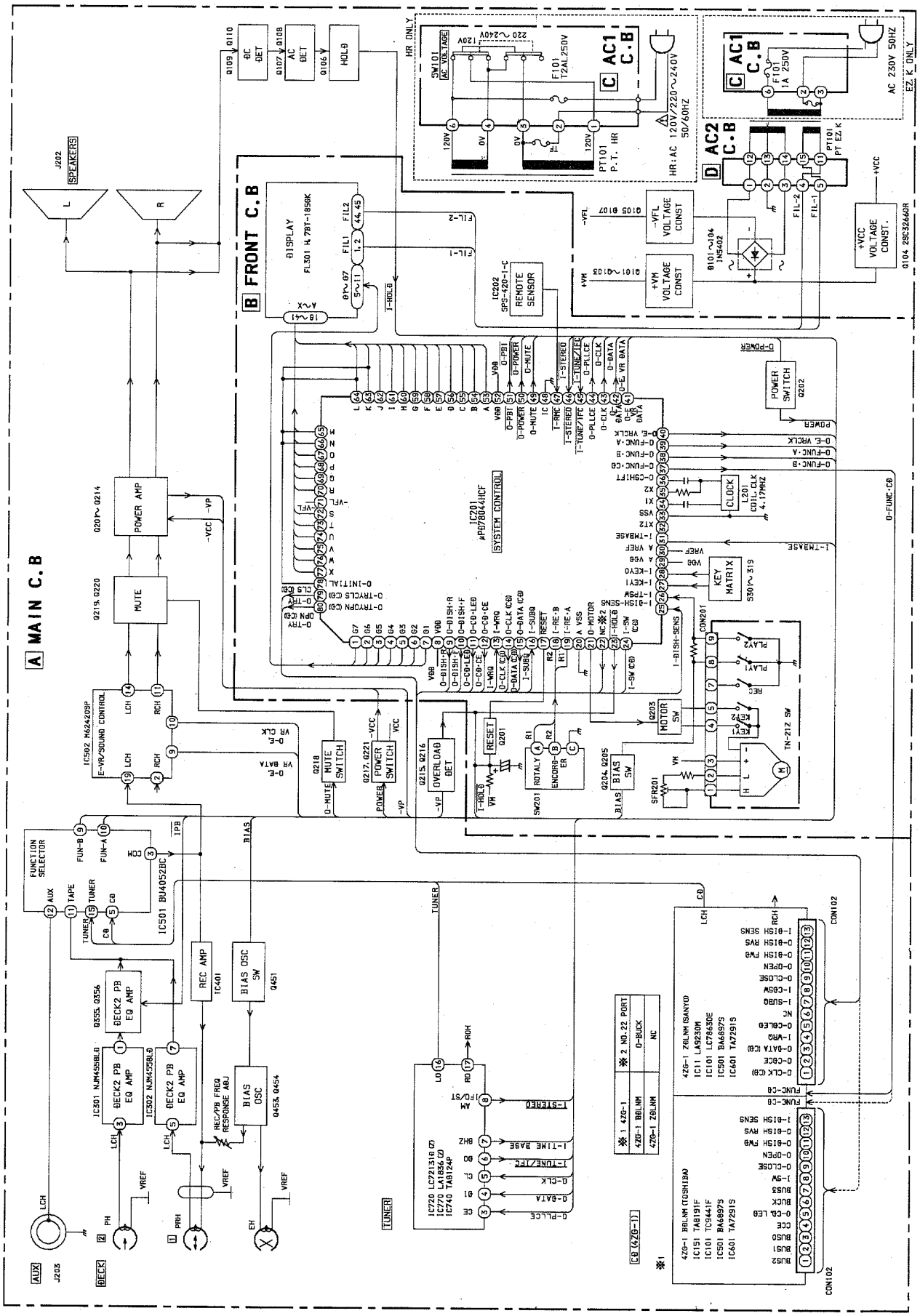
2SB1370
2SD2061



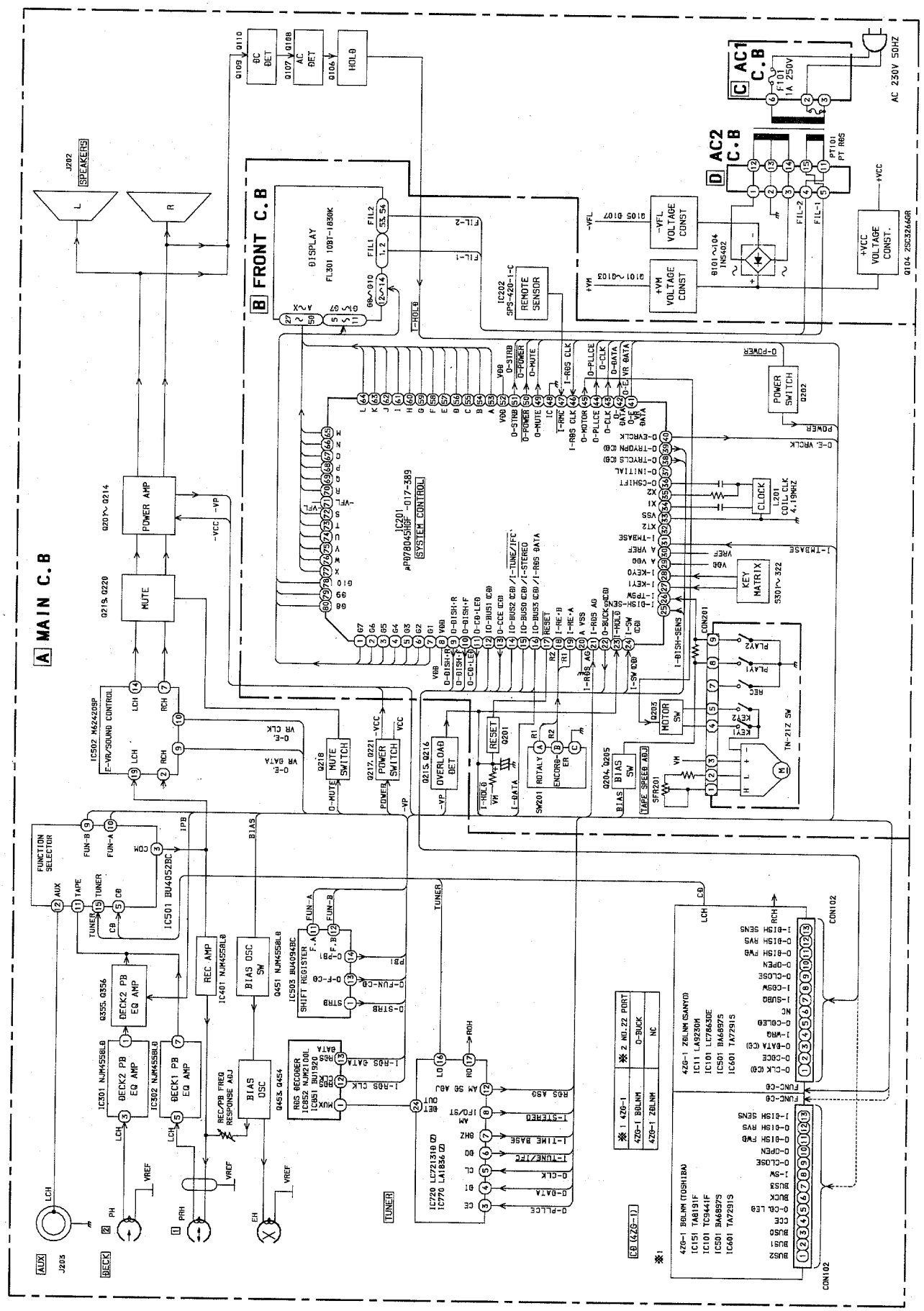
G S D

2SK439

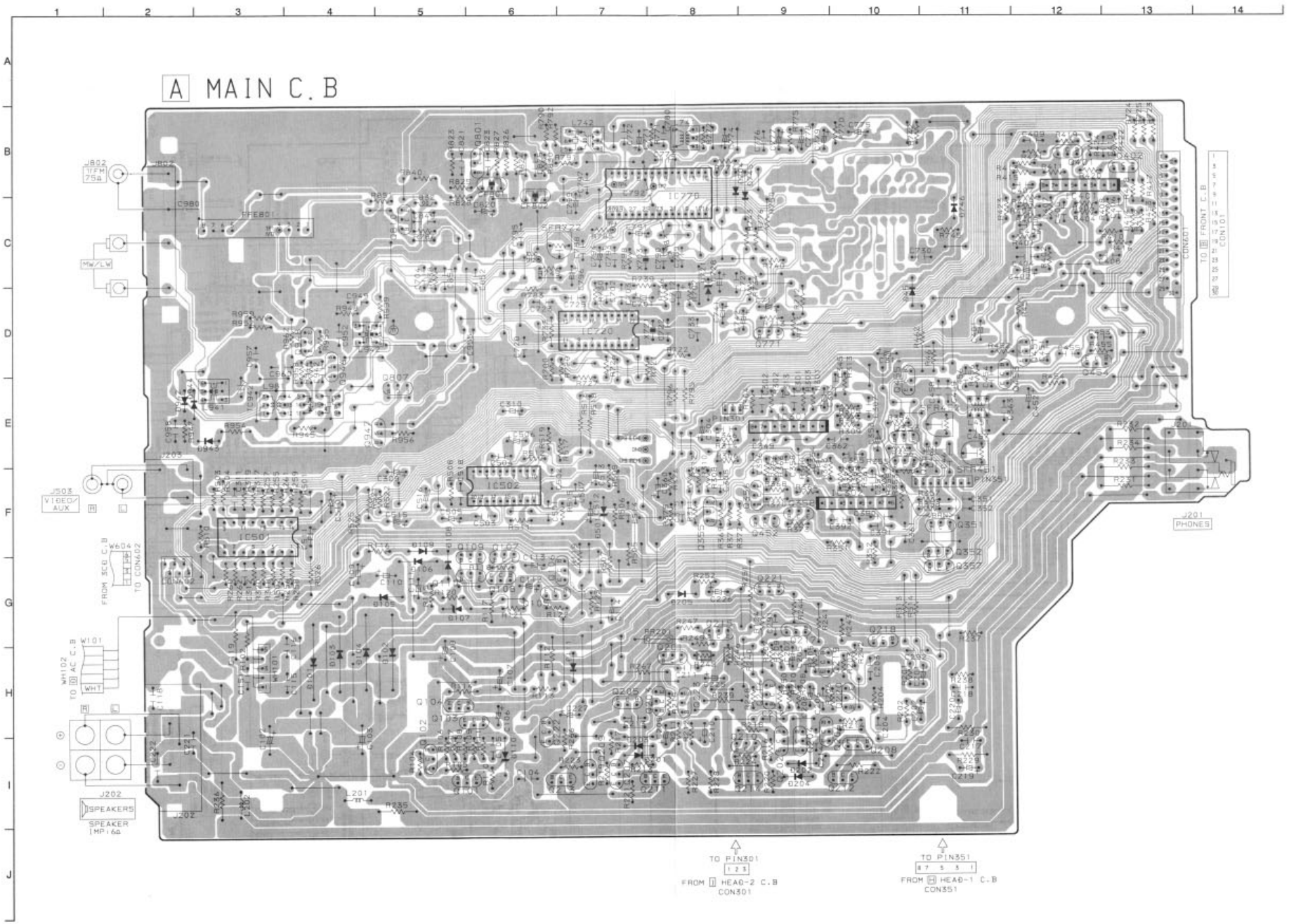
BLOCK DIAGRAM – 1 (MAIN/FRONT: 210 EZ,K,HR)



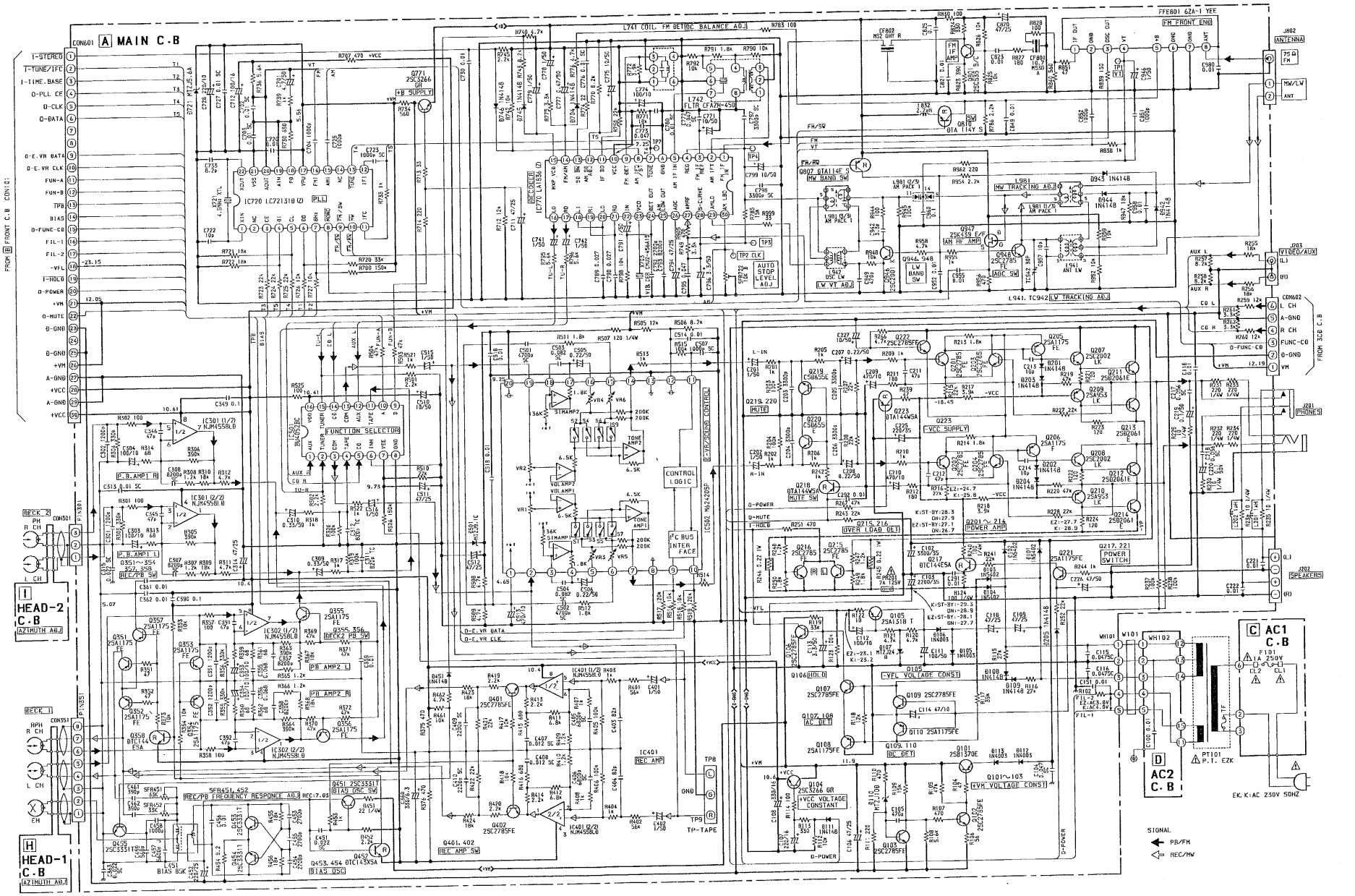
BLOCK DIAGRAM – 2 (MAIN/FRONT: 220 EZ)



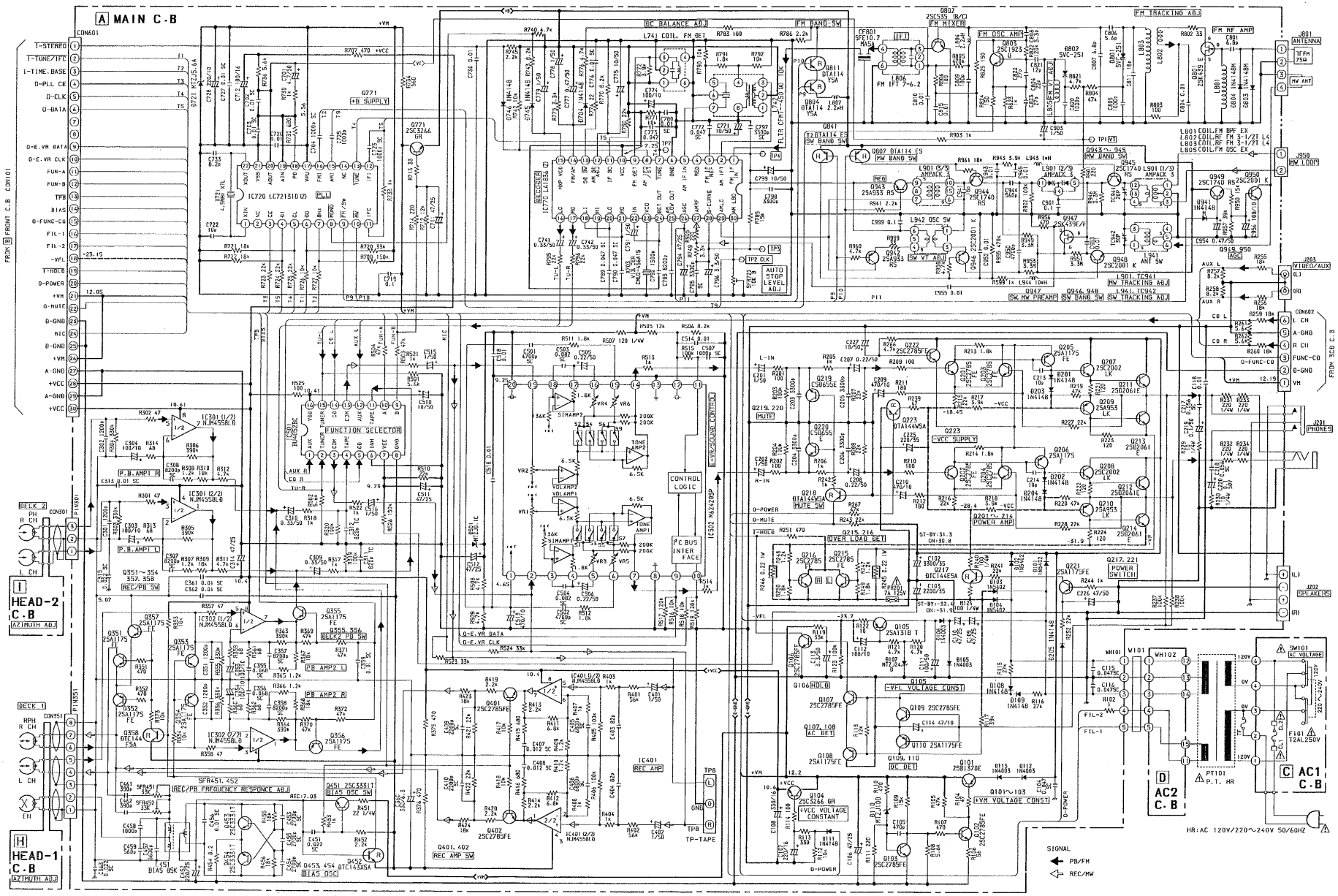
WIRING – 1 (MAIN: 210 EZ,K)

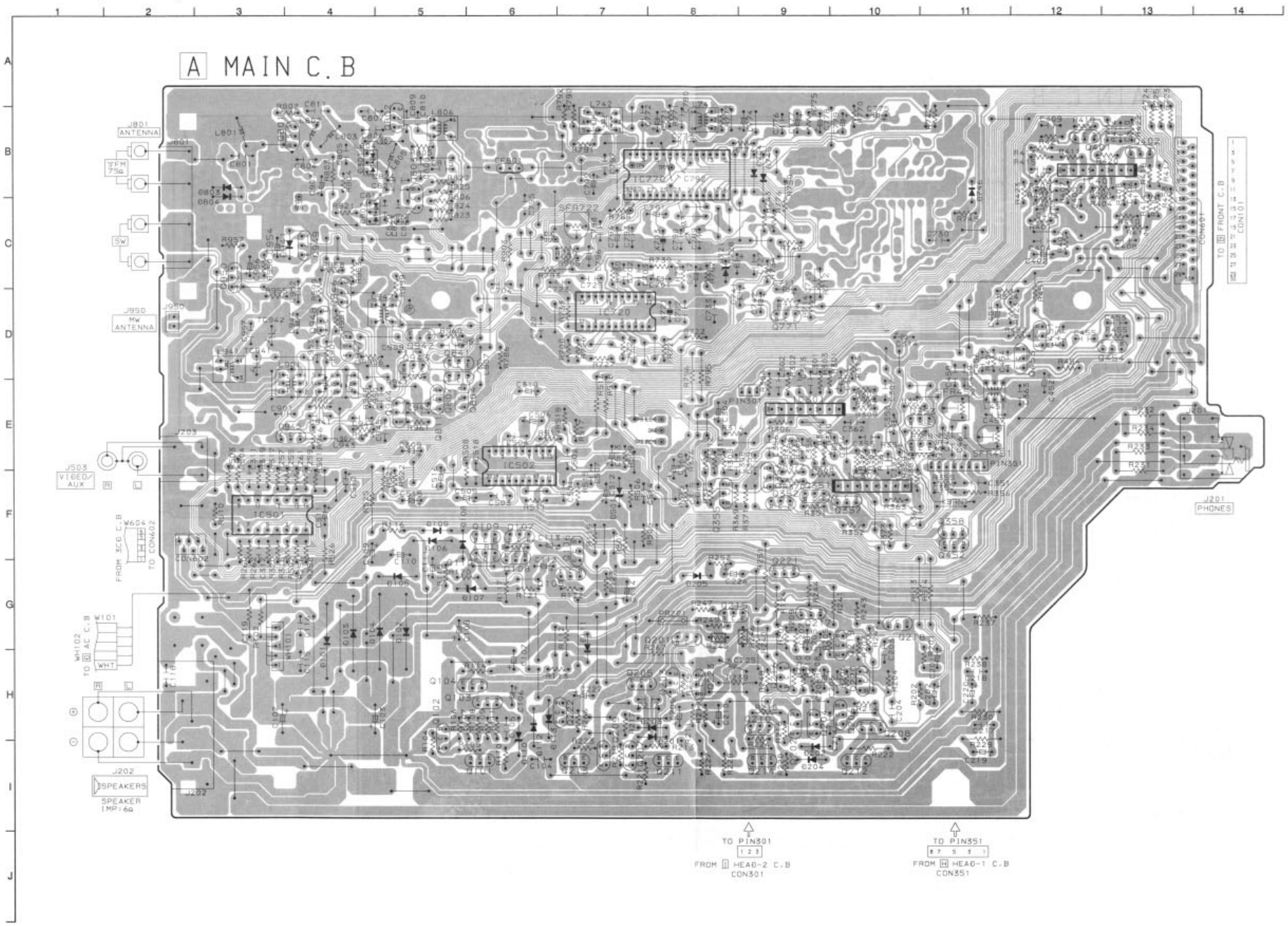


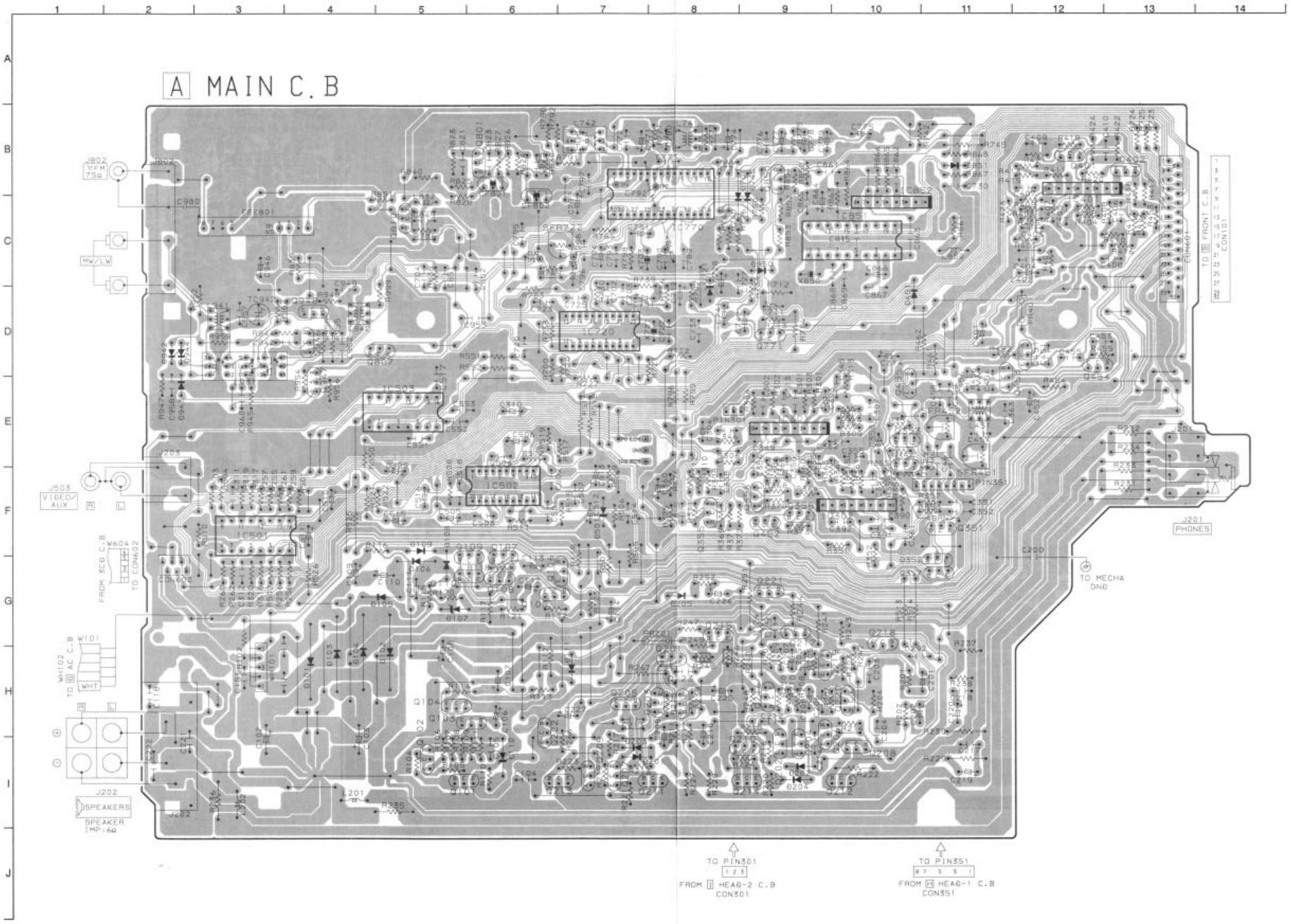
SCHEMATIC DIAGRAM –1 (MAIN: 210 EZ,K)



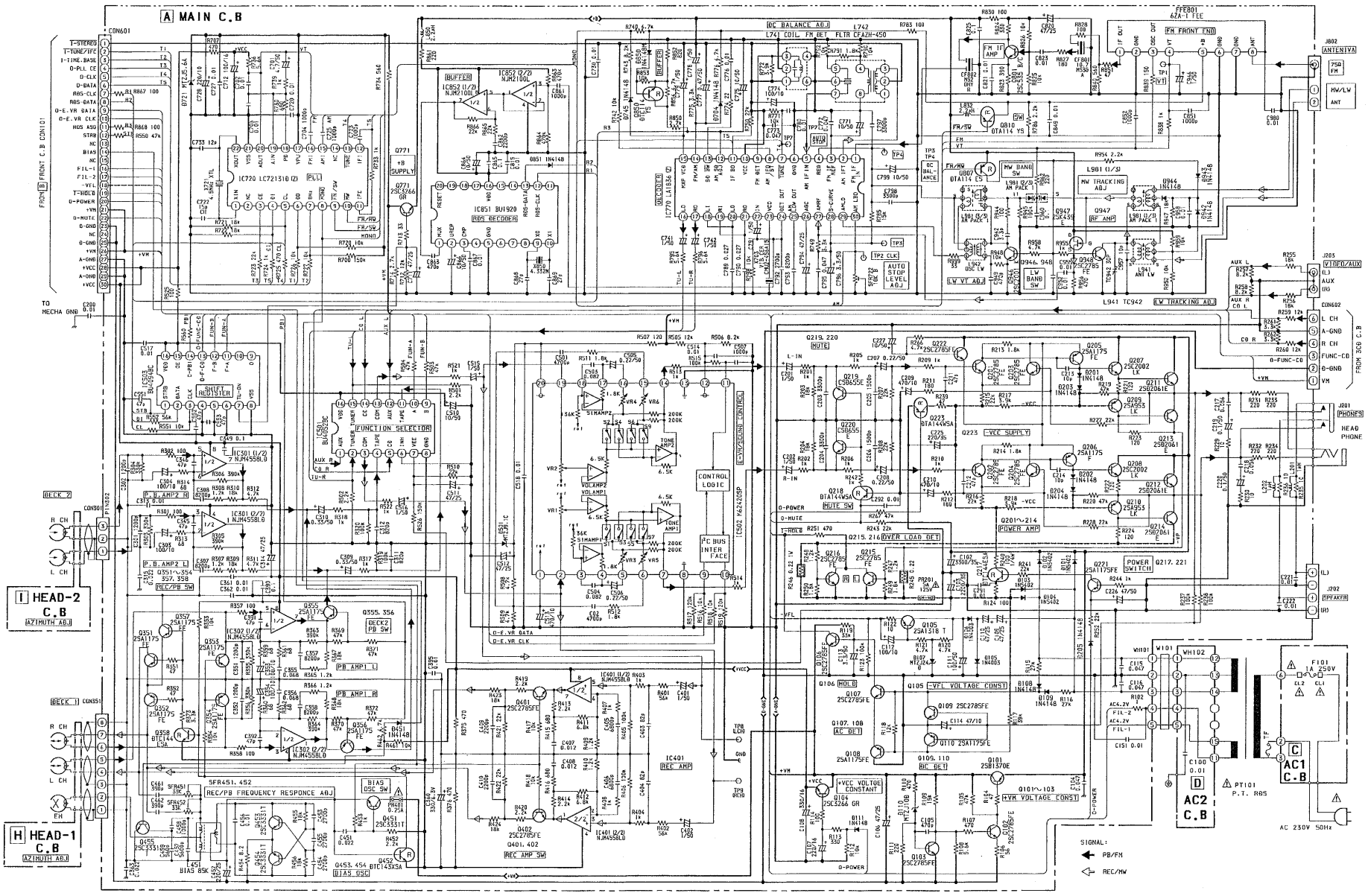
SCHEMATIC DIAGRAM – 2 (MAIN: HR)




A MAIN C.B
J801 ANTENNA
FM 75Ω
SW
J950 MW ANTENNA
J503 VIDEO/ AUX
J203
J202 SPEAKERS
SPEAKER IMP=6Ω
J201 PHONES
W604 FROM 3CG C.B TO CON602
W102 TO AC C.B
W101 WHT
TO P1N301
FROM H HEAD-2 C.B CON301
TO P1N351
FROM H HEAD-1 C.B CON351
TO FRONT C.B CON101
IC720
IC502
IC501

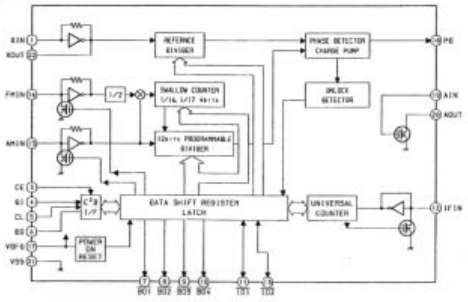

A MAIN C.B
J802 TFM 75Ω
MW/LW
J503 VIDEO/ AUX
J202 SPEAKERS
SPEAKER IMP: 6Ω
J201 PHONES
TO MECHA GND
TO PIN301
FROM J HEAD-2 C.B CON301
TO PIN351
FROM H HEAD-1 C.B CON351
TO H FRONT C.B CON101
FROM MCB C.B
TO CON602
WH102 TO G AC C.B
IC501
IC502
IC520
IC523

SCHEMATIC DIAGRAM – 3 (MAIN: 220 EZ)

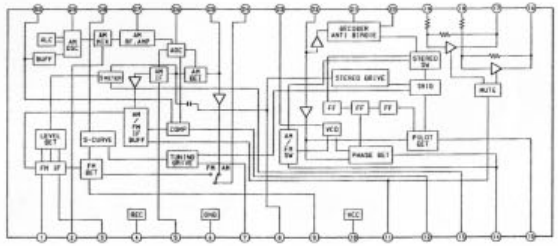


IC BLOCK DIAGRAM

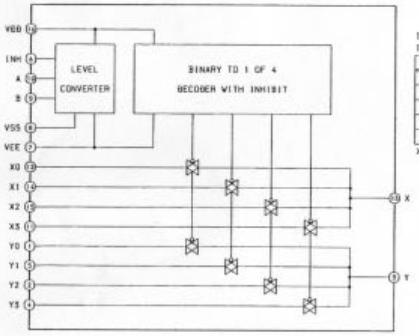
IC,LC72131D



IC, LA1836



IC, BU4052BC

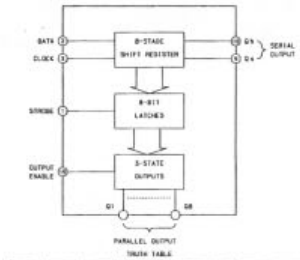


IC BU4052B
TRUTH TABLE

INHIBIT	A	B	ON SWITCH
L	L	L	X0 Y0
L	H	L	X1 Y1
L	L	H	X2 Y2
L	H	H	X3 Y3
H	X	X	NONE

X : DON'T CARE.

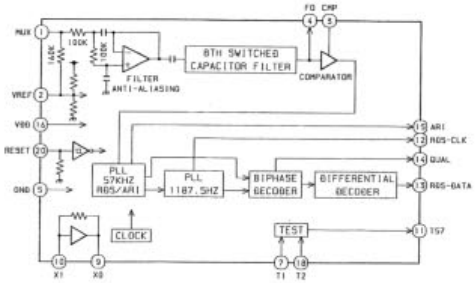
IC, BU4094



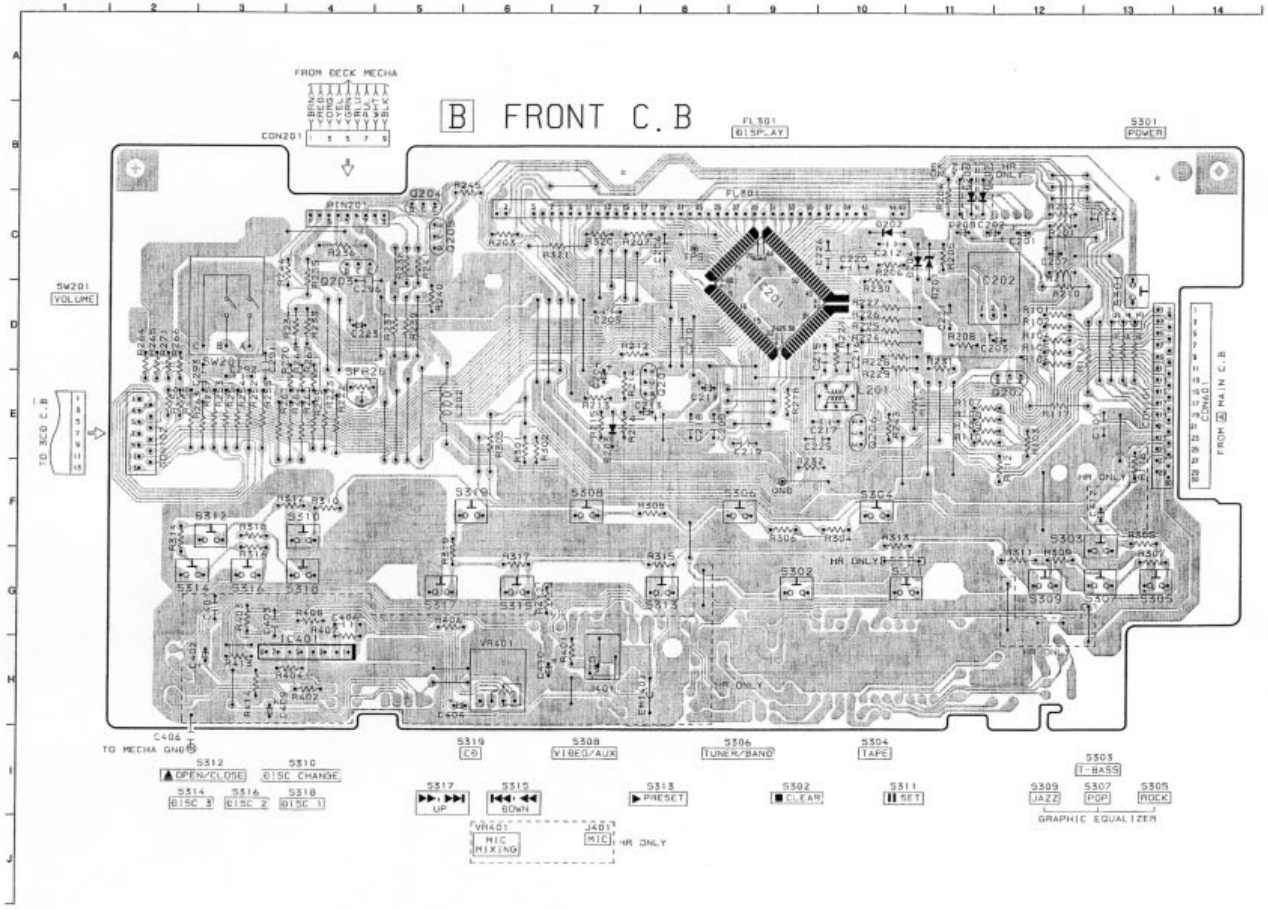
TRUTH TABLE

CLOCK	OUTPUT ENABLE	STROBE	DATA	PARALLEL OUTPUTS		SERIAL OUTPUTS	
				Q1	Q8	Q9	Q'9
↓	L	X	X	Z	Z	Q7	NO Chg.
↑	L	K	X	Z	Z	Qn Chg.	Qn
↓	H	L	X	No Chg.	No Chg.	Q7	No Chg.
↑	H	H	L	L	Qn-1	Q7	No Chg.
↓	H	H	H	H	Qn-1	Q7	No Chg.
↑	H	X	X	No Chg.	No Chg.	No Chg.	Qn

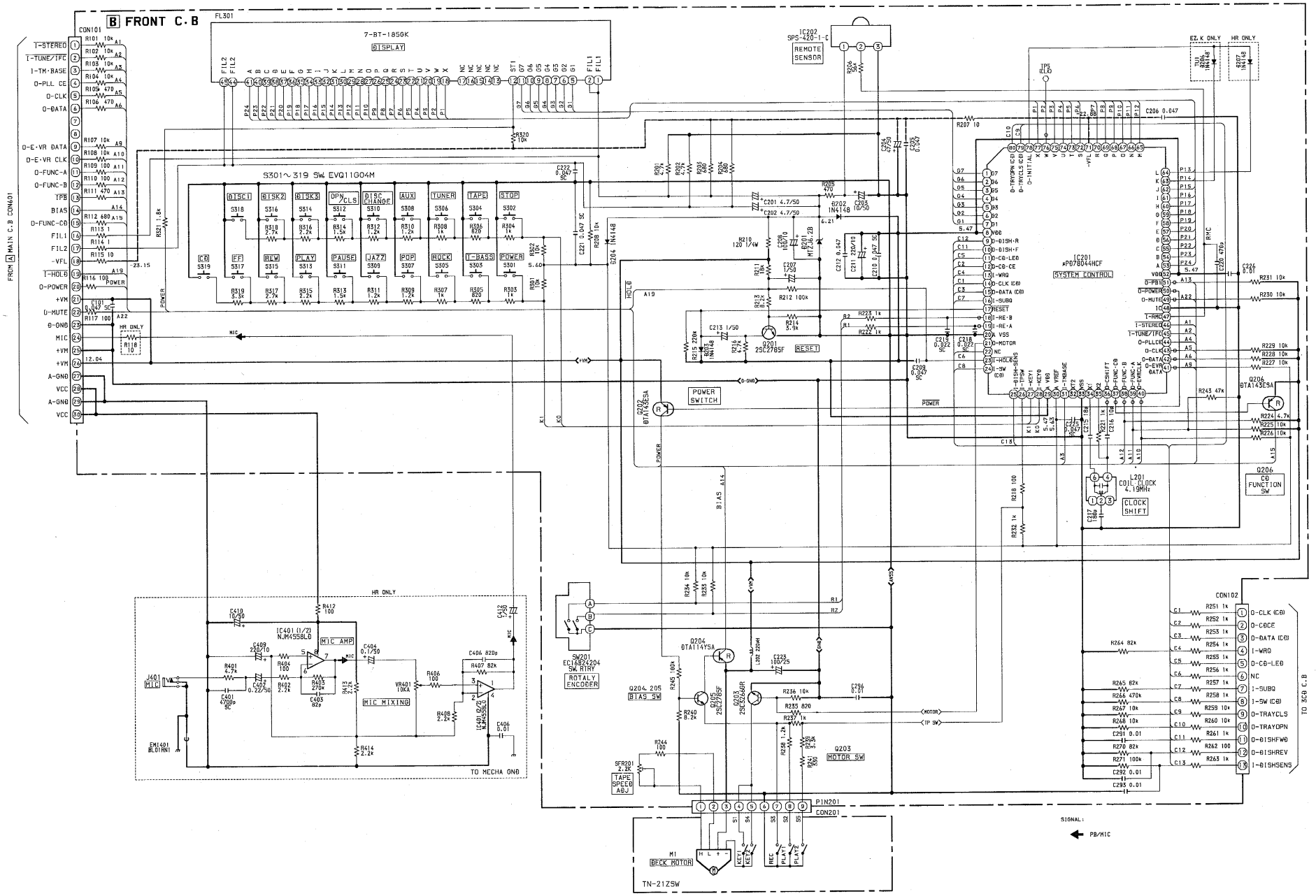
IC, BU1920

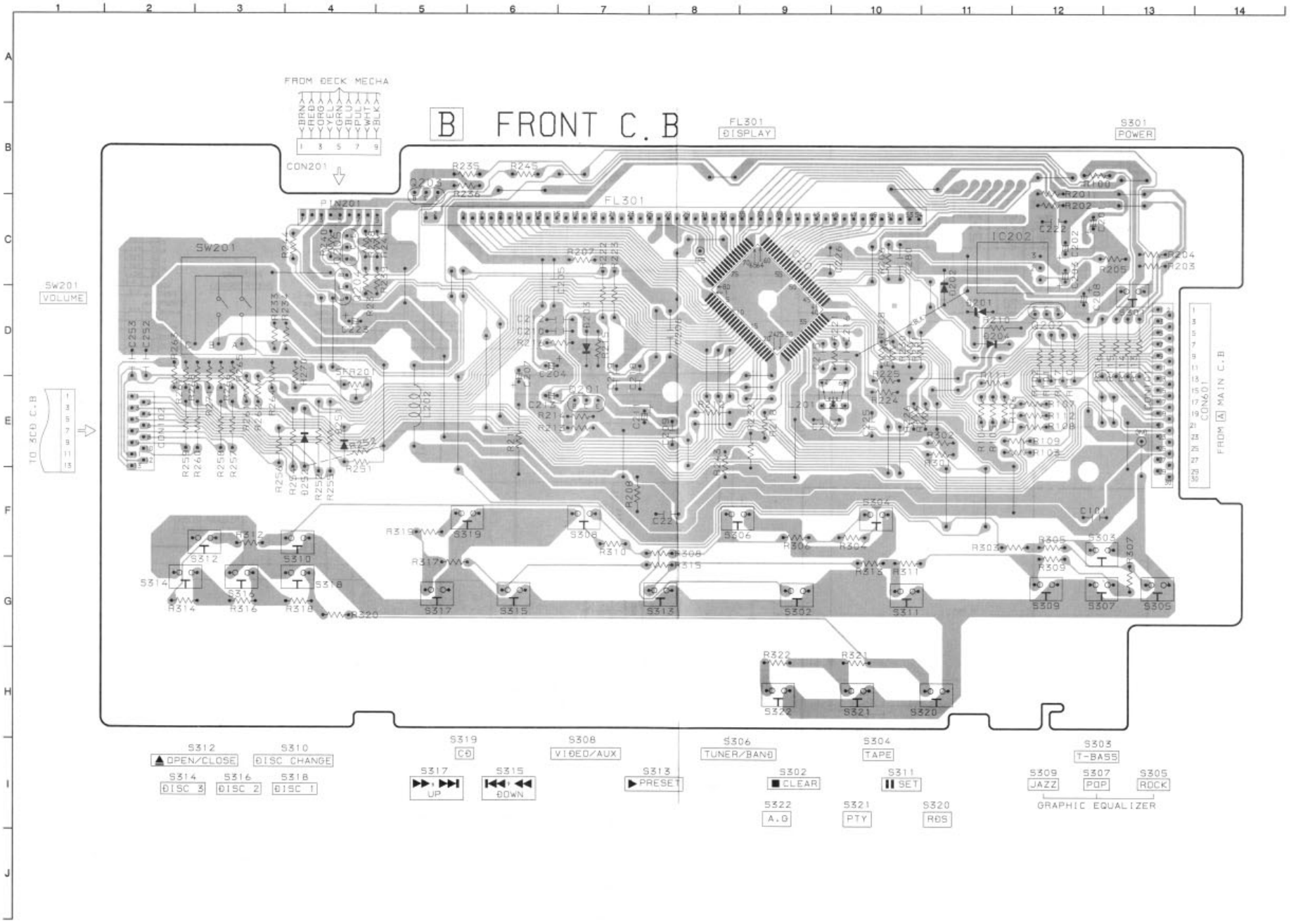


WIRING – 4 (FRONT : 210 EZ,K,HR)

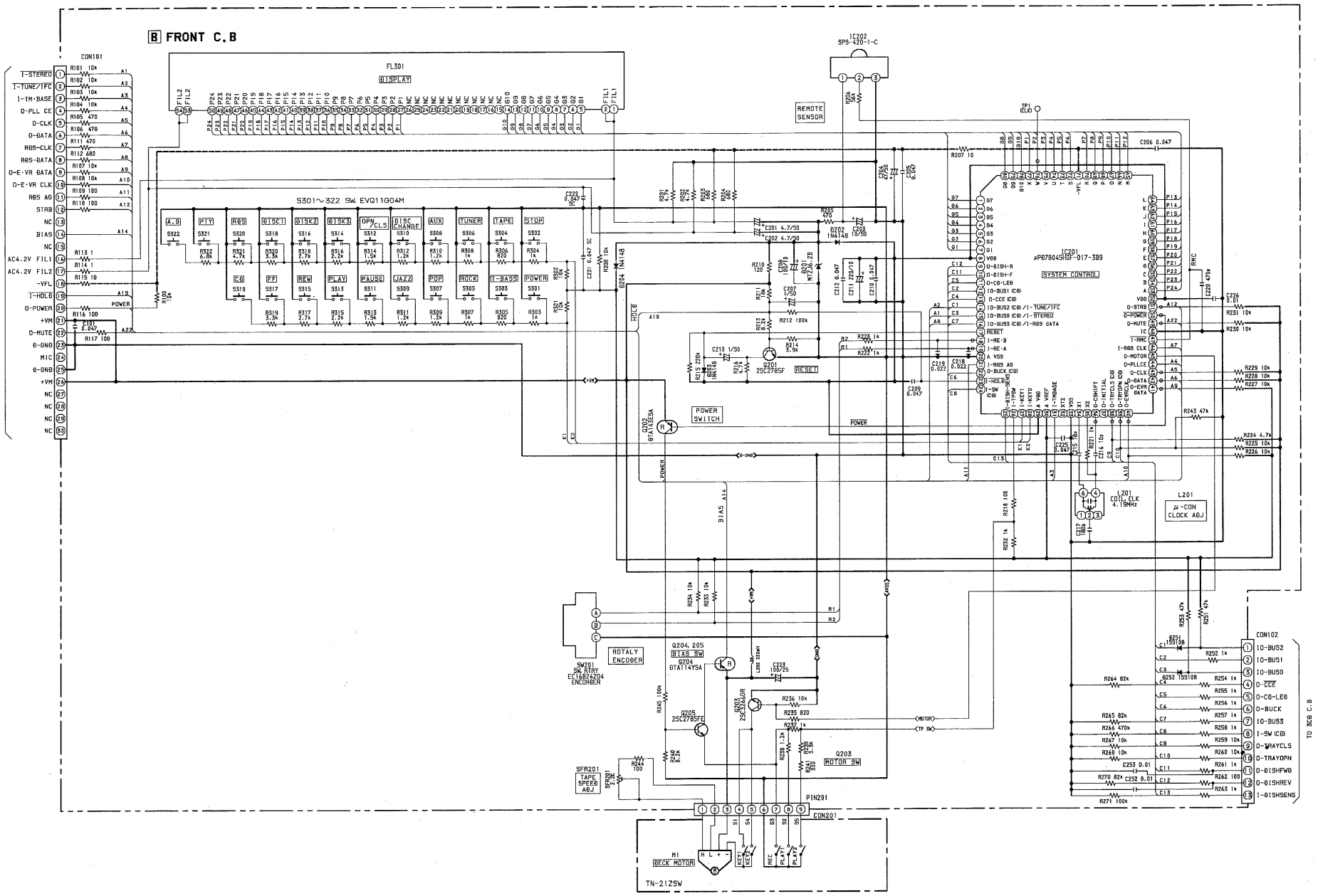


SCHEMATIC DIAGRAM – 4 : (FRONT : 210 EZ,K,HR)

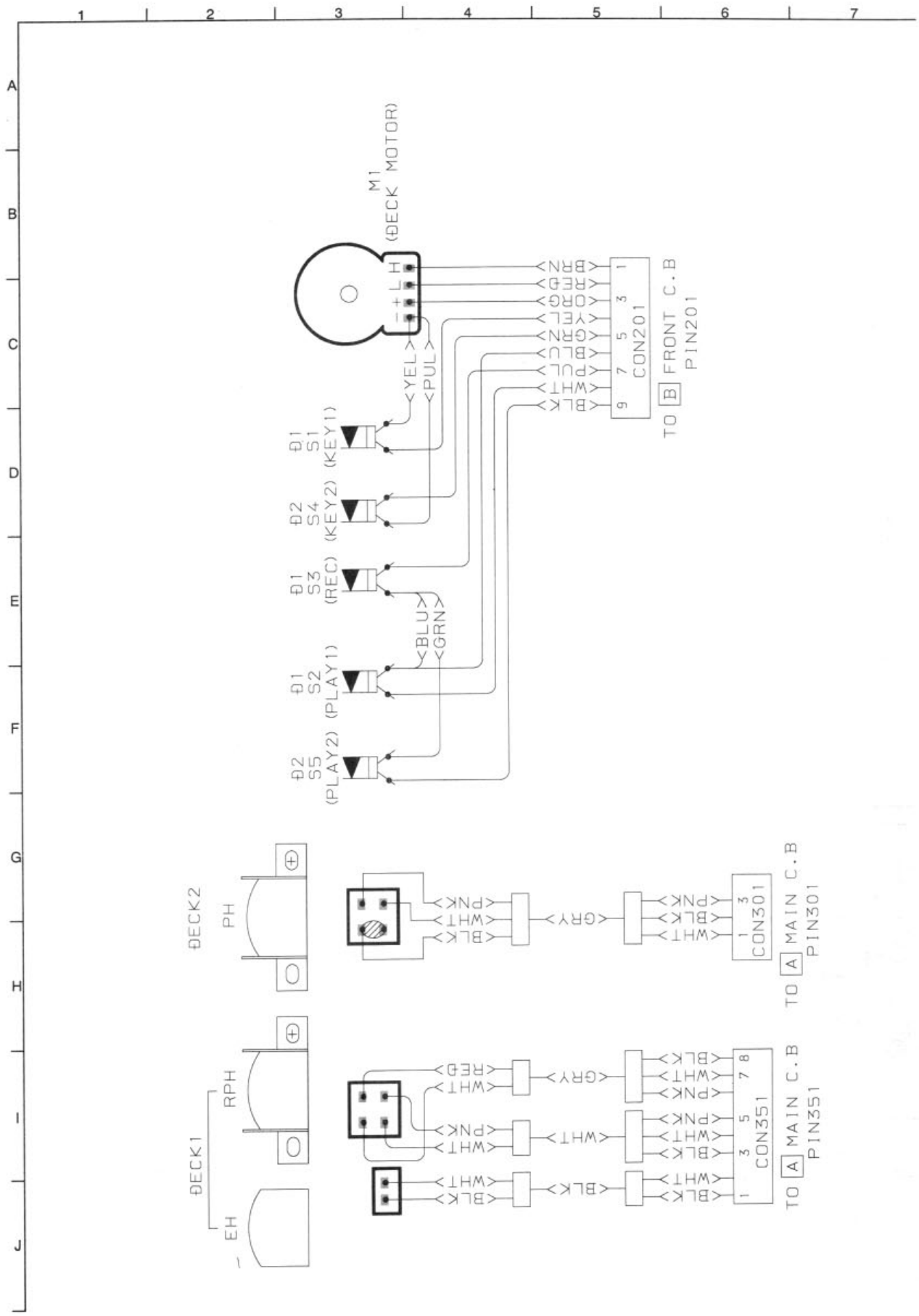



B FRONT C.B
FROM DECK MECHA
CON201
PIN201
FL301
DISPLAY
S301
POWER
SW201
VOLUME
IC202
TO SUB C.B
FROM A MAIN C.B
CON601
S312
OPEN/CLOSE
S310
DISC CHANGE
S314
DISC 3
S316
DISC 2
S318
DISC 1
S319
CD
S308
VIDEO/AUX
S317
UP
S315
DOWN
S313
PRESET
S306
TUNER/BAND
S302
CLEAR
S304
TAPE
S311
SET
S303
T-BASS
S309
JAZZ
S307
POP
S305
ROCK
GRAPHIC EQUALIZER
S322
A.G
S321
PTY
S320
RDS

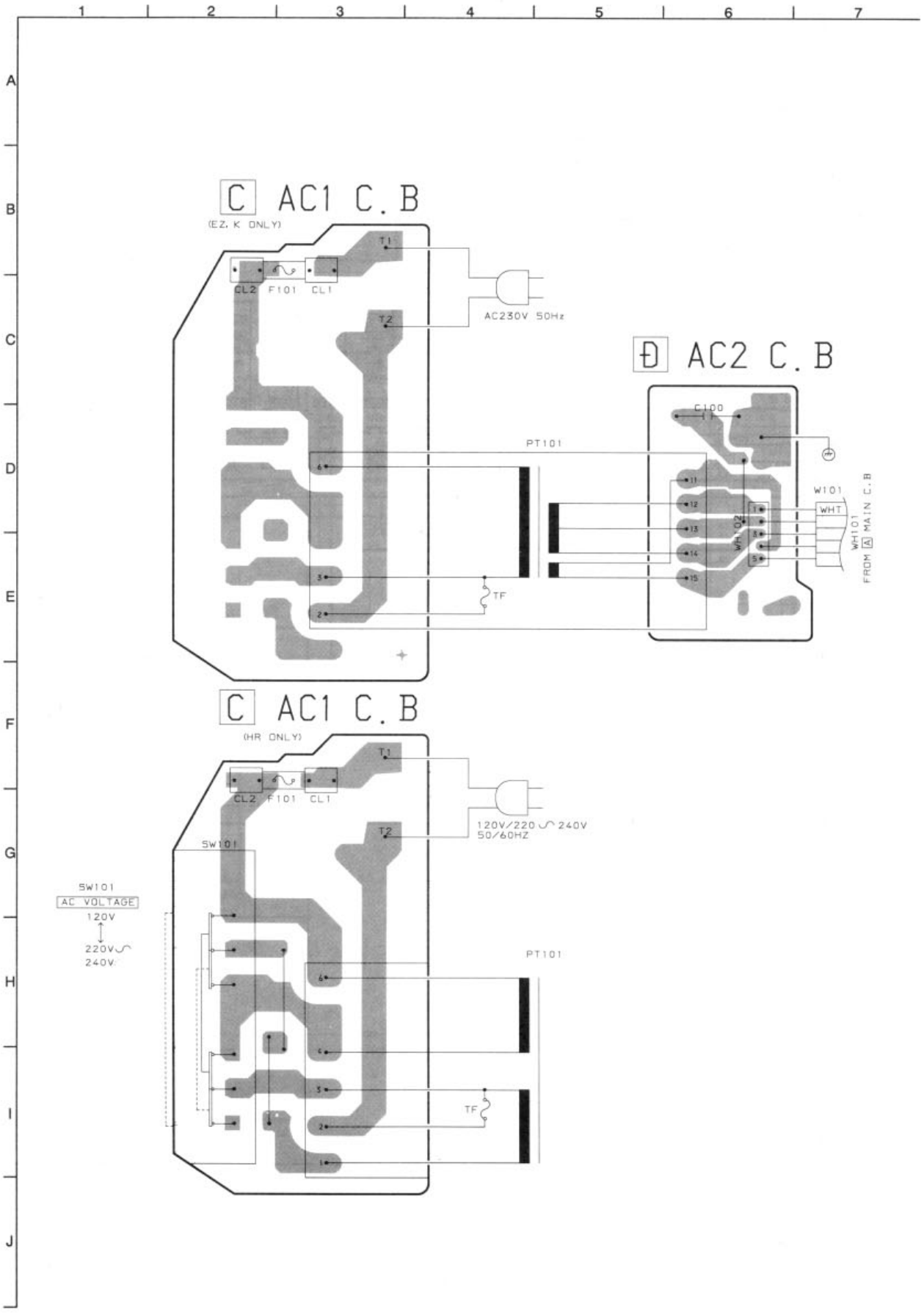
SCHEMATIC DIAGRAM –5 (FRONT : 220 EZ,)



WIRING – 6 (DECK)

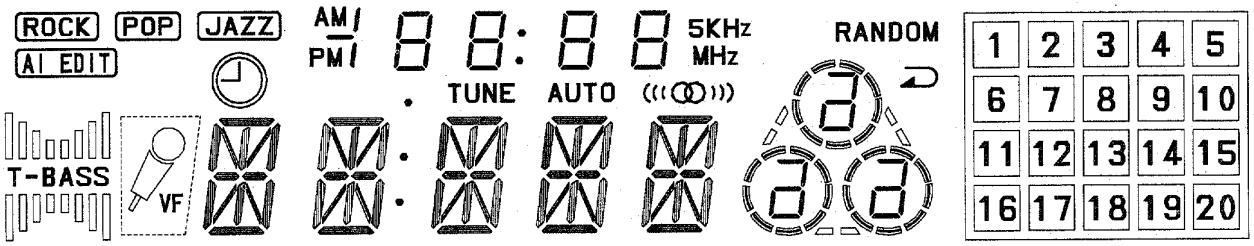


WIRING – 7 (PT)

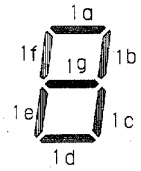

C AC1 C.B
(EZ, K ONLY)
T1
T2
CL2
F101
CL1
AC230V 50Hz
D AC2 C.B
C100
PT101
W101
WHT
WH102
WH101
FROM A MAIN C.B
TF
C AC1 C.B
(HR ONLY)
120V/220 ∫ 240V
50/60HZ
SW101
SW101
AC VOLTAGE
120V
220V∫
240V
PT101
TF

FL GRID ASSIGNMENT & ANODE CONNECTION

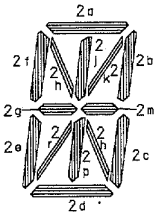
FL, 7BT-185GK



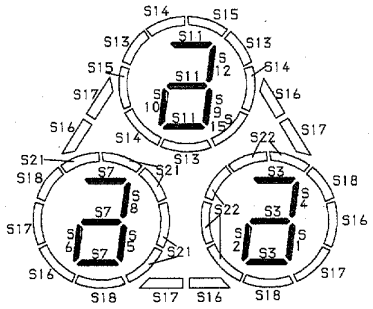
SEGMENT DESIGNATION



(6G ~ 3G)



(7G ~ 3G)



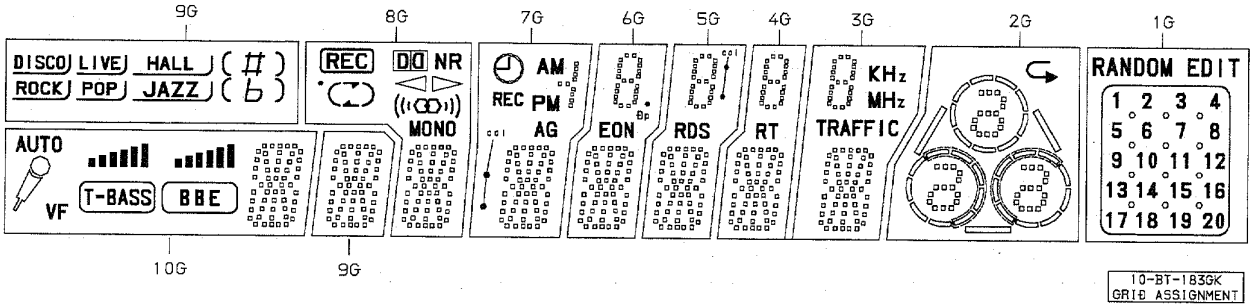
(2G)

ANODE CONNECTION

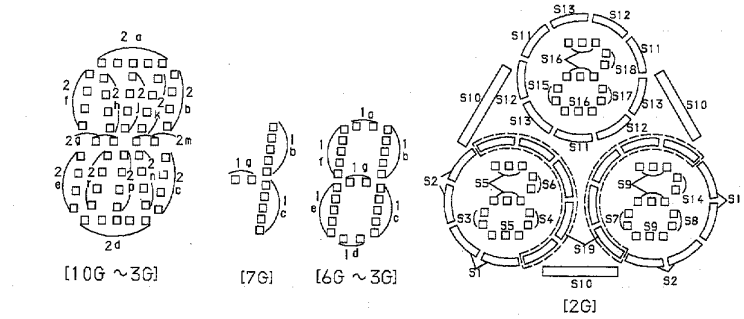
	7G	6G	5G	4G	3G	2G	1G
P1	2d	2d	2d	2d	2d	S1	20
P2	2j, 2p	2j, 2p	2j, 2p	2j, 2p	2j, 2p	S2	19
P3	2n	2n	2n	2n	2n	S3	18
P4	2r	2r	2r	2r	2r	S4	17
P5	2c	2c	2c	2c	2c	S5	16
P6	2e	2e	2e	2e	2e	S6	15
P7	2m	2m	2m	2m	2m	S7	14
P8	2g	2g	2g	2g	2g	S8	13
P9	2f	2f	2f	2f	2f	S9	12
P10	2b	2b	2b	2b	2b	S10	11
P11	2k	2k	2k	2k	2k	S11	10
P12	2h	2h	2h	2h	2h	S12	9
P13	2a	2a	2a	2a	2a	S13	8
P14	VF	•	TUNE	AUTO	((◎))	S14	7
P15	T-BASS	○	○lower	—	MHz	S15	6
P16	AI EDIT	—	○upper	—	KHz	S16	5
P17	◷	—	—	—	5	S17	4
P18	PM	1d	1d	1d	1d	S18	3
P19	—	1e	1e	1e	1e	—	2
P20	/	1c	1c	1c	1c	—	1
P21	AM	1g	1g	1g	1g	S21	—
P22	(JAZZ)	1f	1f	1f	1f	S22	—
P23	(POP)	1b	1b	1b	1b	↩	—
P24	(ROCK)	1a	1a	1a	1a	RANDOM	—
P25	—	—	—	—	—	—	▦

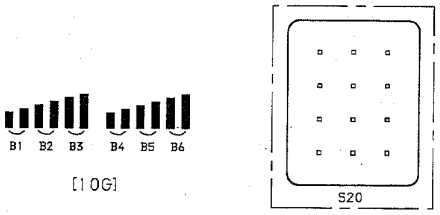
FL, 10BT-183GK

GRID ASSIGNMENT



SEGMENT DESIGNATION





ANODE CONNECTION

	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	2d	2d	2d	2d	2d	2d	2d	2d	S1	**20**
P2	2n	2n	2n	2n	2n	2n	2n	2n	S2	**19**
P3	2p	2p	2p	2p	2p	2p	2p	2p	S3	**18**
P4	2r	2r	2r	2r	2r	2r	2r	2r	S4	**17**
P5	2e	2e	2e	2e	2e	2e	2e	2e	S5	**16**
P6	2c	2c	2c	2c	2c	2c	2c	2c	S6	**15**
P7	2g	2g	2g	2g	2g	2g	2g	2g	S7	**14**
P8	2m	2m	2m	2m	2m	2m	2m	2m	S8	**13**
P9	2f	2f	2f	2f	2f	2f	2f	2f	S9	**12**
P10	2b	2b	2b	2b	2b	2b	2b	2b	S10	**11**
P11	2k	2k	2k	2k	2k	2k	2k	2k	S11	**10**
P12	2j	2j	2j	2j	2j	2j	2j	2j	S12	**9**
P13	2h	2h	2h	2h	2h	2h	2h	2h	S13	**8**
P14	2a	2a	2a	2a	2a	2a	2a	2a	S14	**7**
P15	BBE	(DISCO)	**MONO**	**AG**	**EON**	**RDS**	**RT**	**TRAFFIC**	S15	**6**
P16	T-BASS	(LIVE)	(( ))	col	—	col (DOWN)	—	**MHz**	S16	**5**
P17	VF	(HALL)	◁	**REC**	Ðp	col (UP)	—	**KHz**	S17	**4**
P18	**AUTO**	(ROCK)	▷	⏲	1d	1d	1d	1d	S18	**3**
P19	B1	(POP)	○	**PM**	1e	1e	1e	1e	S19	**2**
P20	B2	(JAZZ)	☾	**AM**	1c	1c	1c	1c	↻	**1**
P21	B3	([#])	☼	1g	1g	1g	1g	1g	—	**RANDOM**
P22	B4	([b])	☽	1b, 1c	1f	1f	1f	1f	—	**EDIT**
P23	B5	**DISCO LIVE HALL**	REC	—	1b	1b	1b	1b	—	S20
P24	B6	**ROCK POP JAZZ**	DD NR	—	1a	1a	1a	1a	—	—
P25	—	# b	—	—	—	—	—	—	—	—

IC DESCRIPTION

IC, μPD78044HGF-20-3B9 <EXCEPT 220EZ>

<table>
<tr><th>Pin No.</th><th>Pin Name</th><th>I/O</th><th>Description</th></tr>
<tr><td>1~7</td><td>G7~G1</td><td>O</td><td>FL grid output.</td></tr>
<tr><td>8</td><td>VDD</td><td>-</td><td>Power supply input.</td></tr>
<tr><td>9</td><td>O-DISH·R</td><td>O</td><td>CD turntable reverse ratation output.</td></tr>
<tr><td>10</td><td>O-DISH·F</td><td>O</td><td>CD turntable forword ratation output.</td></tr>
<tr><td>11</td><td>O-CD·LED</td><td>O</td><td>CD flash window LED ON/$\overline{\text{OFF}}$ output.</td></tr>
<tr><td>12</td><td>O-CDCE(CD)</td><td>O</td><td>CDCE output.</td></tr>
<tr><td>13</td><td>I-WRQ(CD)</td><td>I</td><td>WRQ intput.</td></tr>
<tr><td>14</td><td>O-CLK(CD)</td><td>O</td><td>CLK output.</td></tr>
<tr><td>15</td><td>O-DATA(CD)</td><td>O</td><td>DATA output.</td></tr>
<tr><td>16</td><td>I-SUBQ(CD)</td><td>I</td><td>SUB-Q input.</td></tr>
<tr><td>17</td><td>RESET</td><td>-</td><td>Reset input.</td></tr>
<tr><td>18</td><td>I-RE·B</td><td>I</td><td>Rotary encoder A input.</td></tr>
<tr><td>19</td><td>I-RE·A</td><td>I</td><td>Rotary encoder B input.</td></tr>
<tr><td>20</td><td>A VSS</td><td>-</td><td>GND.</td></tr>
<tr><td>21</td><td>O-MOTOR</td><td>O</td><td>Deck motor output.</td></tr>
<tr><td>22</td><td>NC</td><td>-</td><td>Not used.</td></tr>
<tr><td>23</td><td>I-$\overline{\text{HOLD}}$</td><td>I</td><td>Power failure detected input "L" to stop clock and maintain memory.</td></tr>
<tr><td>24</td><td>I-CDSW</td><td>I</td><td>CD mechanicl switch A/D converter input.</td></tr>
<tr><td>25</td><td>I-DISH</td><td>I</td><td>CD turntable photo sensor A/D converter input.</td></tr>
<tr><td>26</td><td>I-TPSW</td><td>I</td><td>Deck mechanical switch A/D converter input.</td></tr>
<tr><td>27,28</td><td>I-KEY0,1</td><td>I</td><td>Key input. (A/D)</td></tr>
<tr><td>29</td><td>A VDD</td><td>-</td><td>Power supply input.</td></tr>
<tr><td>30</td><td>A VREF</td><td>-</td><td>Reference voltage. (+5V)</td></tr>
<tr><td>31</td><td>I-TMBASE</td><td>I</td><td>Reference clock input for timer watch.</td></tr>
<tr><td>32</td><td>NC</td><td>-</td><td>Not used.</td></tr>
<tr><td>33</td><td>VSS</td><td>-</td><td>GND.</td></tr>
<tr><td>34,35</td><td>X1,X2</td><td>I/O</td><td>511.47Hz oscillator circuit.</td></tr>
<tr><td>36</td><td>O-CSHIFT</td><td>O</td><td>Micon clock shift output. (active high)</td></tr>
<tr><td>37</td><td>$\overline{\text{O-FUNC·CD}}$</td><td>O</td><td>Power supply for CD. Output $\overline{\text{ON}}$/OFF.</td></tr>
<tr><td>38</td><td>O-FUNC·B</td><td rowspan="2">O</td><td rowspan="2">Function switch output.
<table>
<tr><th></th><th>AUX</th><th>TUNER</th><th>CD</th><th>TAPE</th></tr>
<tr><td>O-FUNCA</td><td>0</td><td>0</td><td>1</td><td>1</td></tr>
<tr><td>O-FUNCB</td><td>0</td><td>1</td><td>0</td><td>1</td></tr>
</table></td></tr>
<tr><td>39</td><td>O-FUNC·A</td></tr>
<tr><td>40</td><td>O-EVRCLK</td><td>O</td><td>Electrical volume clock output.</td></tr>
<tr><td>41</td><td>O-EVRDATA</td><td>O</td><td>Electrical volume data output.</td></tr>
<tr><td>42</td><td>O-DATA</td><td>O</td><td>PLL IC data output.</td></tr>
<tr><td>43</td><td>$\overline{\text{O-CLK}}$</td><td>O</td><td>PLL IC $\overline{\text{clock}}$ output.</td></tr>
<tr><td>44</td><td>$\overline{\text{O-PLLCE}}$</td><td>O</td><td>PLL IC chip enable.</td></tr>
<tr><td>45</td><td>I-$\overline{\text{TUNE/IFC}}$</td><td>I</td><td>Tuner SD detected input. IF count serial data input.</td></tr>
<tr><td>46</td><td>I-STEREO</td><td>I</td><td>Tuner stereo detected input.</td></tr>
<tr><td>47</td><td>I-RMC</td><td>I</td><td>System remote control signal input.</td></tr>
</table>

Pin No.	Pin Name	I/O	Description
48	IC	-	Connected to GND.
49	O-MUTE	O	System mute output.
50	$\overline{\text{O-POWER}}$	O	System power supply $\overline{\text{ON}}$/OFF output.
51	$\overline{\text{O-PB1}}$	O	Playback Deck 1 and 2 switch output. "L" = Deck 1.
52	VDD	-	Power supply input.
53~70	O-SEG·A~O-SWG·R	O	FL segment output P24~P7.
71	-VFL	-	Power for FL display.
72~77	O-SEG·S~O-SEG·X	O	FL segment output P6~P1.
78	O-INITIAL	O	Output initial diode input.
79	O-TRYCLS	O	CD tray close data ouput.
80	O-TRYOPN	O	CD tray open data output.

IC, μPD78045HGF-017-3B9 <220EZ>

Pin No.	Pin Name	I/O	Description
1~7	G7~G1	O	FL grid output.
8	VDD	-	Power supply input.
9	O-DISH·R	O	CD turntable reverse ratation output.
10	O-DISH·F	O	CD turntable forword ratation output.
11	O-CD·LED	O	CD flash window LED ON/$\overline{\text{OFF}}$ output.
12	IO-BUS1(CD)	I/O	BUS1(CD) output.
13	O-CCE(CD)	O	CCE(CD) output.
14	IO-BUS2(CD)/ $\overline{\text{I-TUNE/IFC}}$	I/O	BUS2(CD) output / IFC input.
15	IO-BUS0(CD)/ $\overline{\text{I-STEREO}}$	I/O	BUS0(CD) output / FM ST indicator.
16	IO-BUS3(CD)/ I-RDS DATA	I/O	BUS3(CD) input / RDS data input.
17	RESET	-	Reset input.
18	I-RE·B	I	Rotary encoder A input.
19	I-RE·A	I	Rotary encoder B input.
20	A VSS	-	GND.
21	I-RDS AG	I	RDS signal input.
22	O-BUCK(CD)	O	Buck(CD) output.
23	$\overline{\text{I-HOLD}}$	I	Power failure detected input "L" to stop clock and maintain memory.
24	I-CDSW	I	CD mechanicl switch A/D converter input.
25	I-DISH	I	CD turntable photo sensor A/D converter input.
26	I-TPSW	I	Deck mechanical switch A/D converter input.
27,28	I-KEY0,1	I	Key input. (A/D)
29	A VDD	-	Power supply input.
30	A VREF	-	Reference voltage. (+5V)

Pin No.	Pin Name	I/O	Description
31	I-TMBASE	I	Reference clock input for timer watch.
32	NC	-	Not used.
33	VSS	-	GND.
34,35	X1,X2	I/O	511.47Hz oscillator circuit.
36	O-CSHIFT	O	Micon clock shift output. (active high).
37	O-INITIAL	-	Not used.
38	O-TRY CLS(CD)	O	CD tray close / open output.
39	O-TRY OPN(CD)		
40	O-EVRCLK	O	Electrical volume clock output.
41	O-EVRDATA	O	Electrical volume data output.
42	O-DATA	O	PLL IC data output.
43	O-CLK	O	PLL IC clock output.
44	O-PLLCE	O	PLL IC chip enable.
45	O-MOTOR	O	Deck motor output.
46	I-RDS CLK	I	RDS input.
47	I-RMC	I	System remote control signal input.
48	IC	-	Connected to GND.
49	O-MUTE	O	System mute output.
50	O-POWER	O	System power supply ON/OFF output.
51	O-STRB	O	Shift register (STRB).
52	VDD	-	Power supply input.
53~70	O-SEG·A~O-SWG·R	O	FL segment output P24~P7.
71	-VFL	-	Power for FL display.
72~77	O-SEG·S~O-SEG·X	O	FL segment output P6~P1.
78~80	G10~G8	O	FL grid output.

PRACTICAL SERVICE FIGURE

<TUNER SECTION>

<FM SECTION>

IHF Sensitivity :	11dB ± 6dB
(THD 3%)	[at 87.5 / 98.0 / 108.0MHz]
S/N 50 Quieting sensitivity :	
	Less than 35dB (only HR)
	36dB (except HR)
	[at 87.5 / 98.0 / 108.0MHz]
Signal to noise ratio :	More than 70dB (only HR)
	More than 67dB (except HR)
	[at 98.0MHz]
Distortion :	(STEREO)less than 2.0%
	(MONO)less than 1.3%
	[at 98.0MHz]
Auto stop level :	20+10/-5dB
	[at 98.0MHz]
Stereo separation :	More than 28dB (only HR)
	More than 30dB (except HR)
	[at 98.0MHz]
Intermediate frequency :	10.7MHz

<AM(MW) SECTION>

Sensitivity :	52 ~ 64dB
(S/N 20dB)	[at 603kHz]
	46 ~ 58 dB
	[at 999 / 1404kHz]
Signal to noise ratio :	More than 30dB
	[at 999kHz]
Distortion :	Less than 1.5%
	[at 999kHz]
Auto stop level :	43dB ~ 68dB
	[at 999kHz]
Intermediate frequency :	450kHz

<LW SECTION> (except HR)

Sensitivity :	62 ~ 72dB
(S/N 20dB)	[at 144kHz]
	59 ~ 69dB
	[at 198kHz]
	57 ~ 67dB
	[at 290kHz]
Intermediate frequency :	450kHz

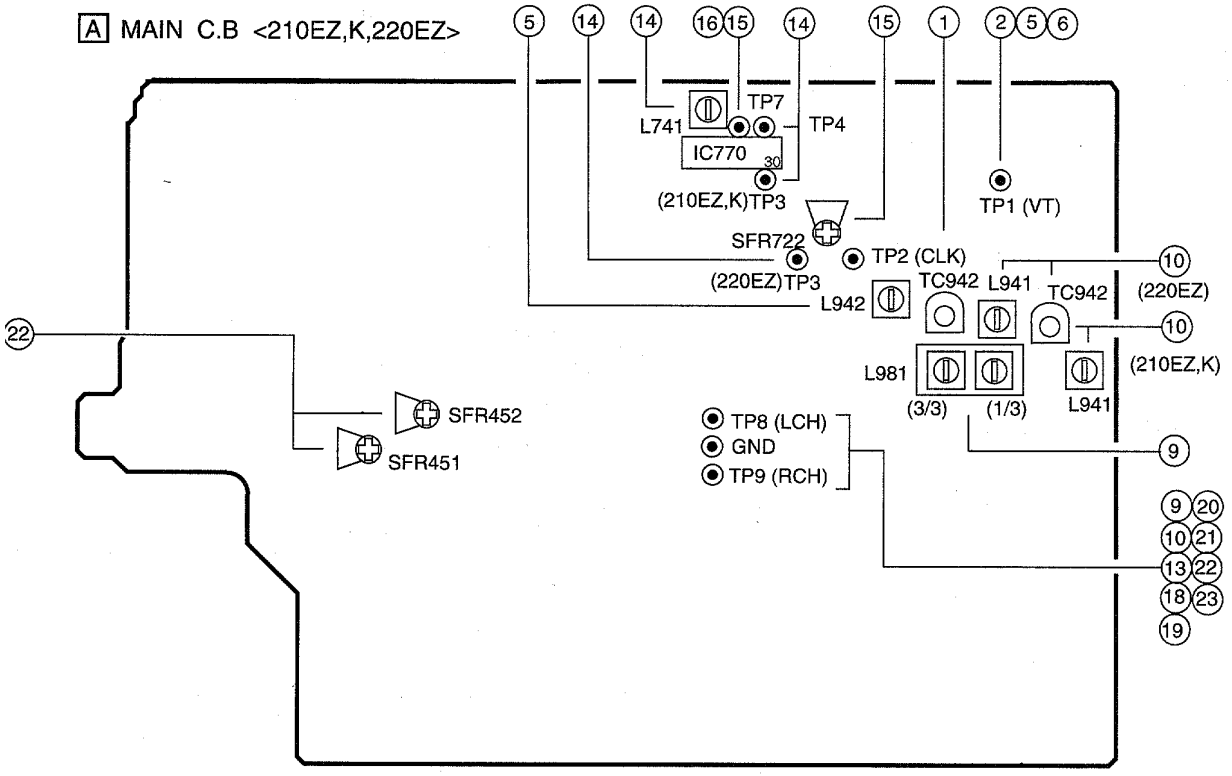
<SW SECTION> (only HR)

Sensitivity :	37 ~ 47dB
(S/N 20dB)	[at 5.9MHz]
	31 ~ 41dB
	[at 12.0 / 17.9MHz]
Overload signal Distortion :	
	Less than 3.0%
	[at 12.0M Hz]

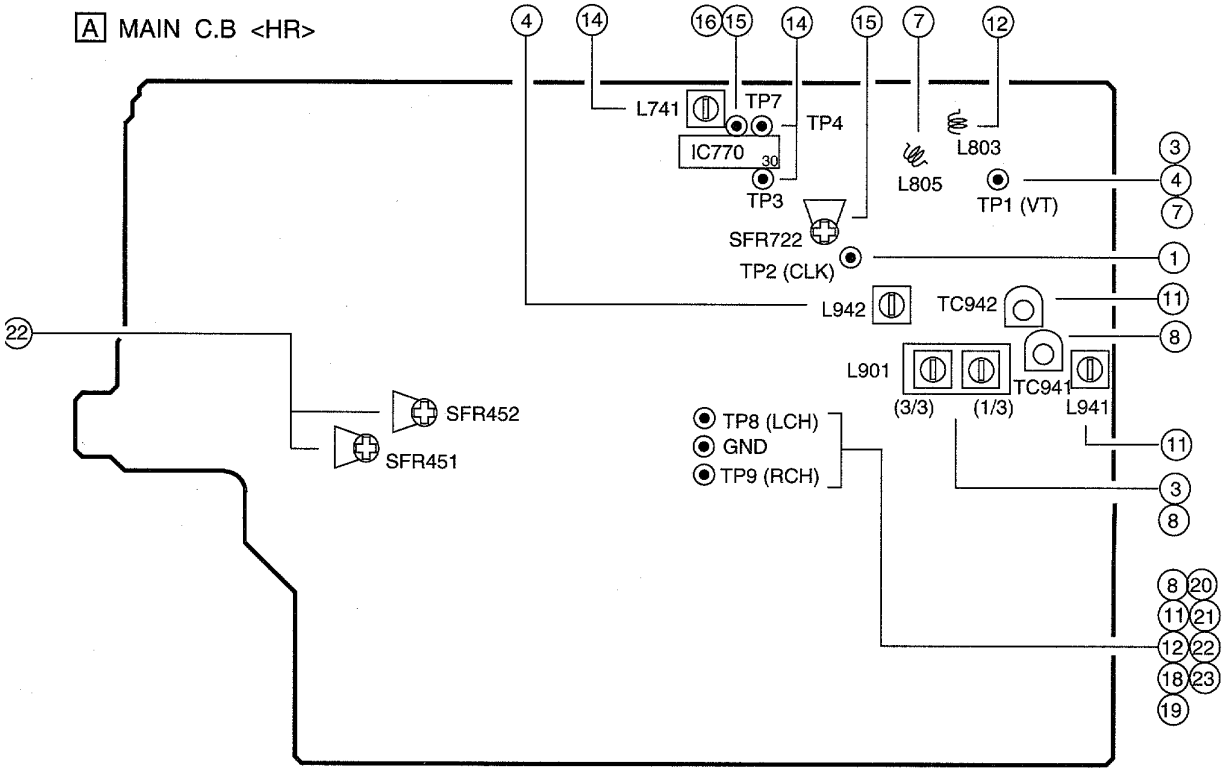
<DECK SECTION>

Tape speed :	3000Hz ± 45Hz
Wow & flutter :	Less than 0.35%
	(RMS)
Take-up torque :	30 ~ 60g-cm
	(FWD, REV)
F.F & REW torque :	55 ~ 140g-cm
Back tension :	2 ~ 5g-cm
	(FWD, REV)
PB output level :	2.8V ±3dB
	(SP OUT 2V)
REC/PB output level :	2.0V ± 3.5dB
	(SP OUT 2V)
Distortion (REC/PB) :	Less than 2.0% (NORM)
Noise level (PB) :	Less than 25mV
	(NORM,SP OUT 2V,DOLBY OFF)
Noise level (REC/PB) :	Less than 30mV
	(NORM,SP OUT 2V,DOLBY OFF)
Erasing ratio :	More than 55dB
	(at 125Hz, 10VU)
Test tape :	TTA–602 (NORM)

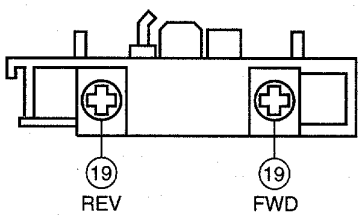
A MAIN C.B <210EZ,K,220EZ>

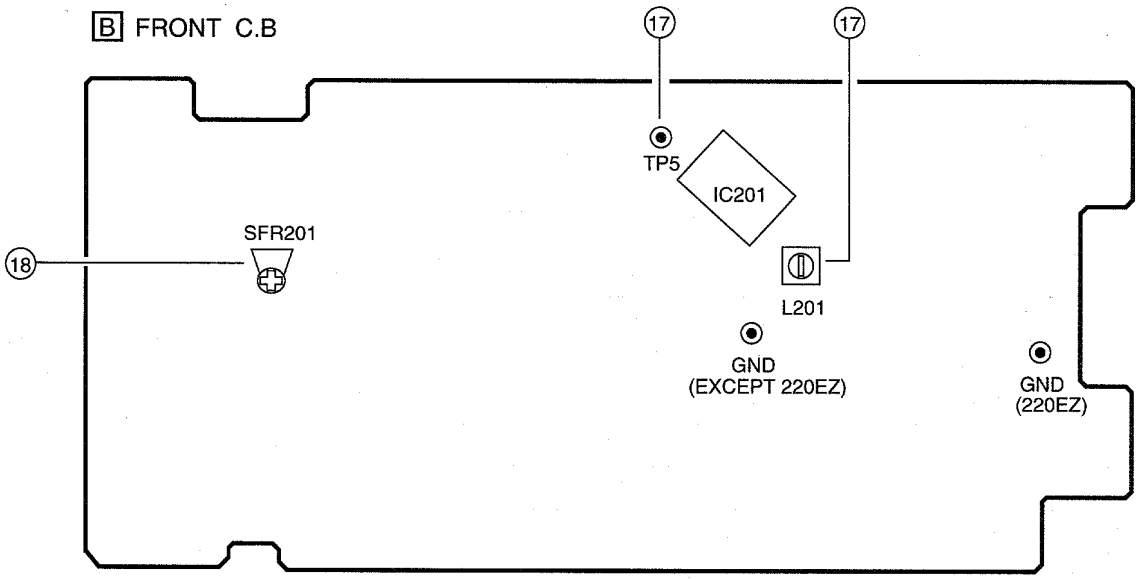


A MAIN C.B <HR>



DECK–1 P, DECK–2 R / P / E HEAD





< TUNER SECTION >

1. Clock Frequency Check
   Settings : • Test point : TP2
   Method : Set to MW 1602kHz and check that the test point is 2052kHz ± 0.08kHz.

2. MW VT Check <210EZ,K,220EZ>
   Settings : • Test point : TP1 (VT)
   Method : Set to MW 1602kHz and check that the test point is 5.6V ± 1.0V.

3. MW VT Adjustment <HR>
   Settings : • Test point : TP1 (VT)
   • Adjustment location : L901 (3/3)
   Method : Set to MW 1710kHz and adjust L901 (3/3) so that the test point is 8.5V ± 0.05V.

4. SW VT Adjustment <HR>
   Settings : • Test point : TP1 (VT)
   • Adjustment location : L942
   Method : Set to SW 17.9MHz and adjust L942 so that the test point is 7.0V ± 0.05V.

5. LW VT Adjustment <210EZ,K,220EZ>
   Settings : • Test point : TP1 (VT)
   • Adjustment location : L942
   Method : Set to LW 144kHz and adjust L942 so that the test point is 1.3V ± 0.05V.

6. FM VT Check <210EZ,K,220EZ>
   Settings : • Test point : TP1 (VT)
   Method : Set to FM 87.5MHz and check that the test point is more than 1.5V.Then Set to FM 108.0MHz and check that the test point is less than 8.2V.

7. FM VT Adjustment <HR>
   Settings : • Test point : TP1 (VT)
   • Adjustment location : L805
   Method : Set to FM 87.5MHz, 108.0MHz and check that the test point is more than 1.0V (87.5MHz) and adjust L805 so that the test point becomes 7.0V ± 0.05V (108.0MHz).

8. MW Tracking Adjustment <HR>
   Settings : • Test point : TP8,TP9
   • Adjustment location :
   L901 (1/3) 600kHz
   TC941 ..... 1404kHz
   Method : Set up TC941 to center before adjustment, the level at 600kHz is adjust to maxmum by L901 (1/3). Then the level at 1404kHz is adjust to maximum by TC941.

9. MW Tracking Adjustment <210EZ,K,220EZ>
   Settings : • Test point : TP8, TP9
   • Adjustment location :
   L981 (1/3) 999kHz
   Method : Set to MW 999kHz and adjust L981 (1/3) so that the test point become maximum.

10. LW Tracking Adjustment <210EZ,K,220EZ>
    Settings : • Test point : TP8, TP9
    • Adjustment location :
    L941 .....144kHz
    TC942 ..... 290kHz
    Method : Set up TC942 to center before adjustment. The level at 144kHz is adjust to maximum by L941. Then the level at 290kHz is adjust to maximum by TC942.

11. SW Tracking Adjustment <HR>
    Settings : • Test point : TP8, TP9
    • Adjustment location :
    L941 .....5.9MHz
    TC942 .....17.9MHz
    Method : Set up TC942 to center before adjustment. The level at 5.9MHz is adjust to maximum by L941. Then the level at 17.9MHz is adjust to maximum by TC942.

12. FM Tracking Adjustment <HR>
    Settings : • Test point : TP8, TP9
    • Adjustment location : L803
    Method : 87.5MHz is adjustment maximum by L803 then check usable sensitivity is 10dB ± 6dB (108.0MHz).

13. FM Tracking Check <210EZ,K,220EZ>
    Settings : • Test point : TP8,TP9
    Method : Set to FM 98.0MHz and check that the test point is 10 ± 6dB.

14. DC Balance / Mono Distortion Adjustment
    Settings : • Test point : TP3, TP4
    • Adjustment location : L741
    • Input level : 54dB
    Method : Set to FM 98.0MHz and adjust L741 so that the voltage between TP3 and TP4 becomes 0V ± 0.04V.
    Next, check that the distortion is less than 3%.

15. Auto Stop Level Adjustment
    Settings : • Test point : TP7
    • Adjustment location : SFR722
    • Input level : 54dB
    Method : Set to FM 98.0 MHz and adjust voltage low (about 0.1V) by SFR722. After that voltage high (about 7.0V) by 2dB down.

16. Auto Stop Level Check
    SW <HR>
    Settings : • Test point : TP7
    • Input level : 54dB
    Method : Set to SW 12.0MHz and check that the test point is 45 ± 10 dB.

    MW
    Settings : • Test point : TP7
    • Input level : 54dB
    Method : Set to AM 999kHz and check that the test point is 58 +10/-15dB.

    FM
    Settings : • Test point : TP7
    • Input level : 54dB
    Method : Set to FM 98.0MHz and check that the test point is 20 dB ± 10 dB.

17. μ-con Clock Adjustment
    Settings : • Test point : TP5
    • Adjustment location : L201
    Method : Connect frequency counter across TP5 and GND then adjust L201 so that the test point becomes 511.47 ± 0.4Hz (210EZ,HR,K), 371.92 ± 0.4Hz (220EZ).

< DECK SECTION >

18. Tape Speed Adjustment
    Settings : • Test tape : TTA–410
    • Test point : TP8, TP9
    • Adjustment location : SFR201
    Method : Play back the test tape and adjust SFR201 so that the frequency counter reads 3000Hz ± 5Hz.

19. Head Azimuth Adjustment
    Settings : • Test tape : TTA–410
    • Test point : TP8, TP9
    • Adjustment location : Head azimuth adjustment screw
    Method : Play back the 10kHz signal of the test tape and adjust screw so that the output becomes maximum. Next, perform on each FWD and REV PLAY mode.

20. PB Frequency Response Check (DECK 1, DECK 2)
    Settings : • Test tape : TTA–410
    • Test point : TP8, TP9
    Method : Play back the 315Hz and 10kHz signals of the test tape and check that the output ratio of the 10kHz signal with respect to that of the 315Hz signal is ±5dB,Lch and Rch level less than 3.0dB.

21. PB Sensitivity Check (DECK 1, DECK 2)
    Settings : • Test tape : TTA–200
    • Test point : TP8, TP9
    Method : Play back the test tape and check that the output level of the test point is 150mV ± 3.0dB .

22. REC/PB Frequency Response Adjustment

Settings : • Test tape : TTA–602
• Test point : TP8, TP9
• Input signal : 800Hz / 8kHz (LINE IN)
• Adjustment location : SFR451 (Lch)
SFR452 (Rch)

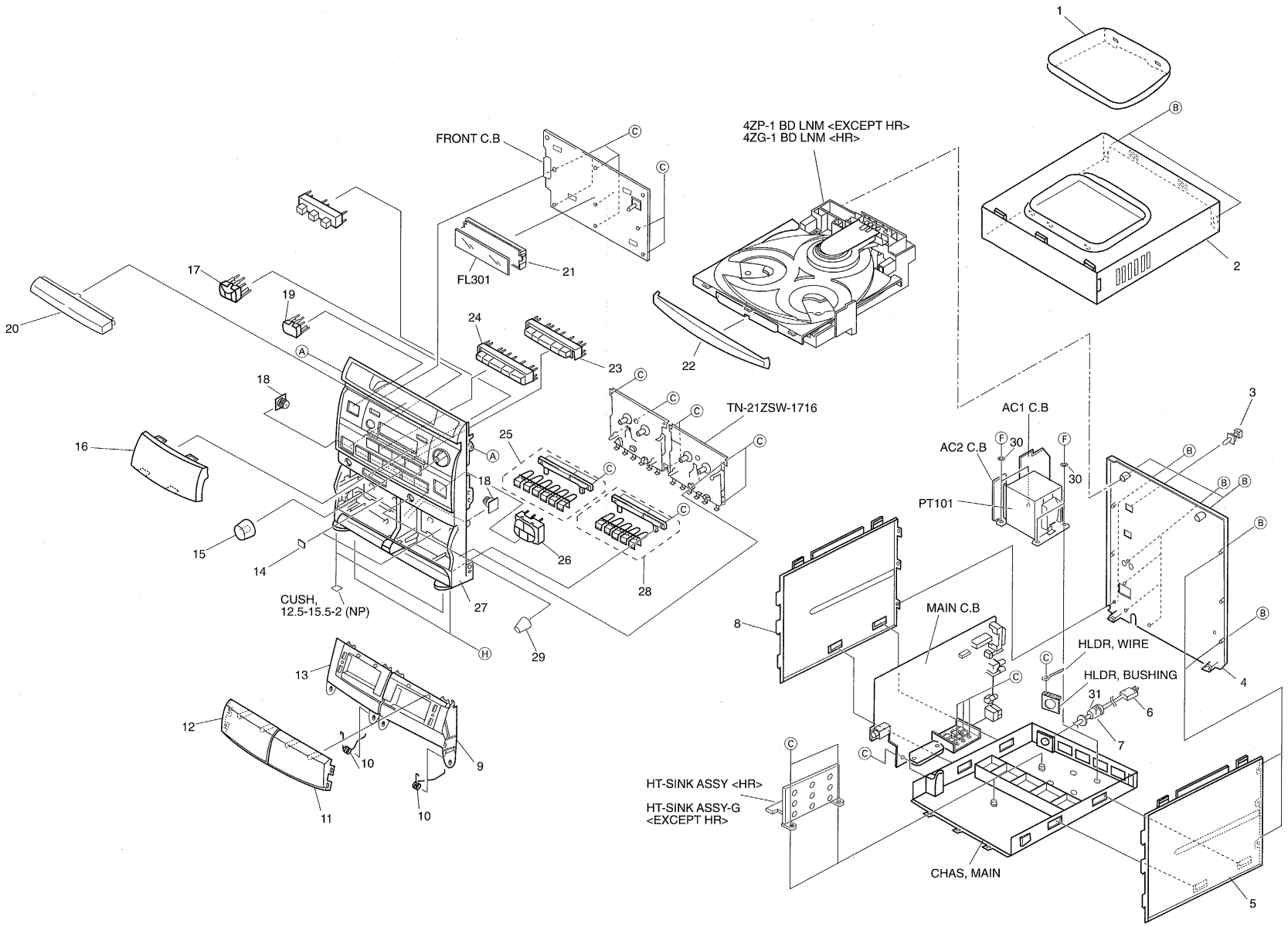
Method : Apply a 800Hz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP8, TP9 becomes 11mV. Record and play back the 800Hz and 8kHz signals and adjust SFRs so that the output of the 8kHz signals becomes 12mV +1.5~ +0.5dB with respect to that of the 800Hz signal.

23. REC/PB Sensitivity Check

Settings : • Test tape : TTA–602
• Test point : TP8, TP9
• Input signal : 800Hz (LINE IN)

Method : Apply a 800Hz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP8, TP9 becomes 11mV. Record and play back the 800Hz signals and check that the output is 10mV + 1.5~-2.5dB.

MECHANICAL EXPLODED VIEW 1/1

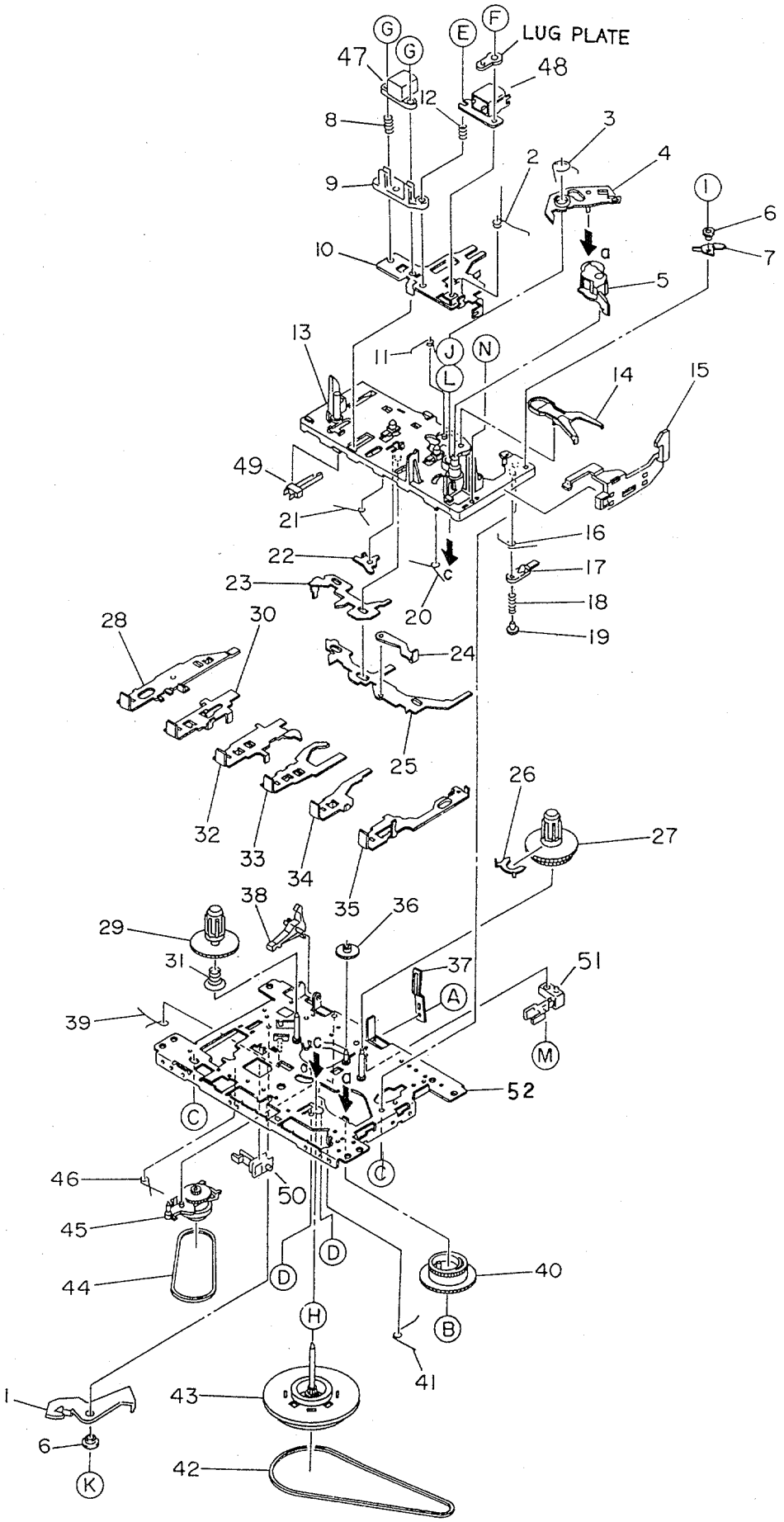


MECHANICAL PARTS LIST 1 / 1

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

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	86-NFZ-001-010		WINDOW,TOP
2	86-NFZ-011-010		PANEL,TOP
3	84-ZG1-245-210		CAP,OPTICAL
4	86-NFZ-026-010		CABI, REAR <HR>
4	86-NFZ-041-010		CABI, REAR EZBNE <210EZ>
4	86-NFZ-042-010		CABI, REAR KBNE <K>
4	86-NFZ-048-010		CABI, REAR EZBNE RDS <220EZ>
5	86-NFZ-031-010		PANEL,RIGHT 2
⚠ 6	87-050-016-010		AC CORD ASSY,E <210EZ>
⚠ 6	87-050-079-010		AC CORD ASSY,E BLK <HR,220EZ>
⚠ 6	87-A80-023-010		AC CORD ASSY,K 3P <K>
7	87-085-185-010		BUSHING,AC CORD(E) CM-22B
8	86-NFZ-030-010		PANEL,LEFT 2
9	86-NFZ-036-010		BOX,CASS HR <HR>
9	86-NFZ-009-010		BOX,CASS UR <EXCEPT HR>
10	82-NF7-218-010		SPR-T,CASS
11	86-NFZ-003-110		WINDOW,CASS R
12	86-NFZ-002-110		WINDOW,CASS L
13	86-NFZ-035-010		BOX,CASS HL <HR>
13	86-NFZ-008-010		BOX,CASS UL <EXCEPT HR>
14	81-532-080-010		LBL,CASS-COMPT
15	86-NFZ-020-010		KNOB,RTRY VOL
16	86-NFZ-005-010		WINDOW,DISPLAY <EXCEPT 220EZ>
16	86-NFZ-046-010		WINDOW,DISPLAY RDS <220EZ>
17	86-NFZ-015-010		KEY,CURSOR GEQ
18	87-063-164-010		OIL-DMPR,
19	86-NFZ-018-010		KEY,POWER
20	86-NFZ-004-110		WINDOW,CD
21	82-NF7-210-110		GUIDE,FL
22	86-NFZ-037-010		PANEL,TRAY <HR>
22	86-NFZ-010-010		PANEL,TRAY <EXCEPT HR>
23	86-NFZ-016-010		KEY,FUNCTION
24	86-NFZ-021-010		KEY,PLAY
25	86-NF7-095-010		KEY,CASS LN
26	86-NFZ-014-010		KEY,CURSOR CD
27	86-NFZ-033-010		CABI, FR H <HR>
27	86-NFZ-038-010		CABI, FR E <210EZ,K>
27	86-NFZ-044-010		CABI, FR RDS <220EZ>
28	86-NF7-096-011		KEY,CASS RN
29	86-NF7-056-010		KNOB,RTRY MIC <HR>
30	86-NFZ-217-010		W,4.5-10-1 (FW) <EXCEPT EZ>
31	87-003-317-010		F-BEAD,15-25-15 E2515M <EXCEPT HR>
32	86-NF4-047-010		KEY,RDS <220 EZ>
A	87-721-097-410		QT2+3-12 W/O SLOT
B	87-067-761-010		BVT2+3-10 BLK
C	87-067-703-010		BVT2+3-10 W/O SLOT
F	87-741-172-410		UT2+4-12 W/O SLOT
H	87-067-581-010		BVT2+3-15 W/O SLOT

TAPE MECHANISM EXPLODED VIEW 1/2

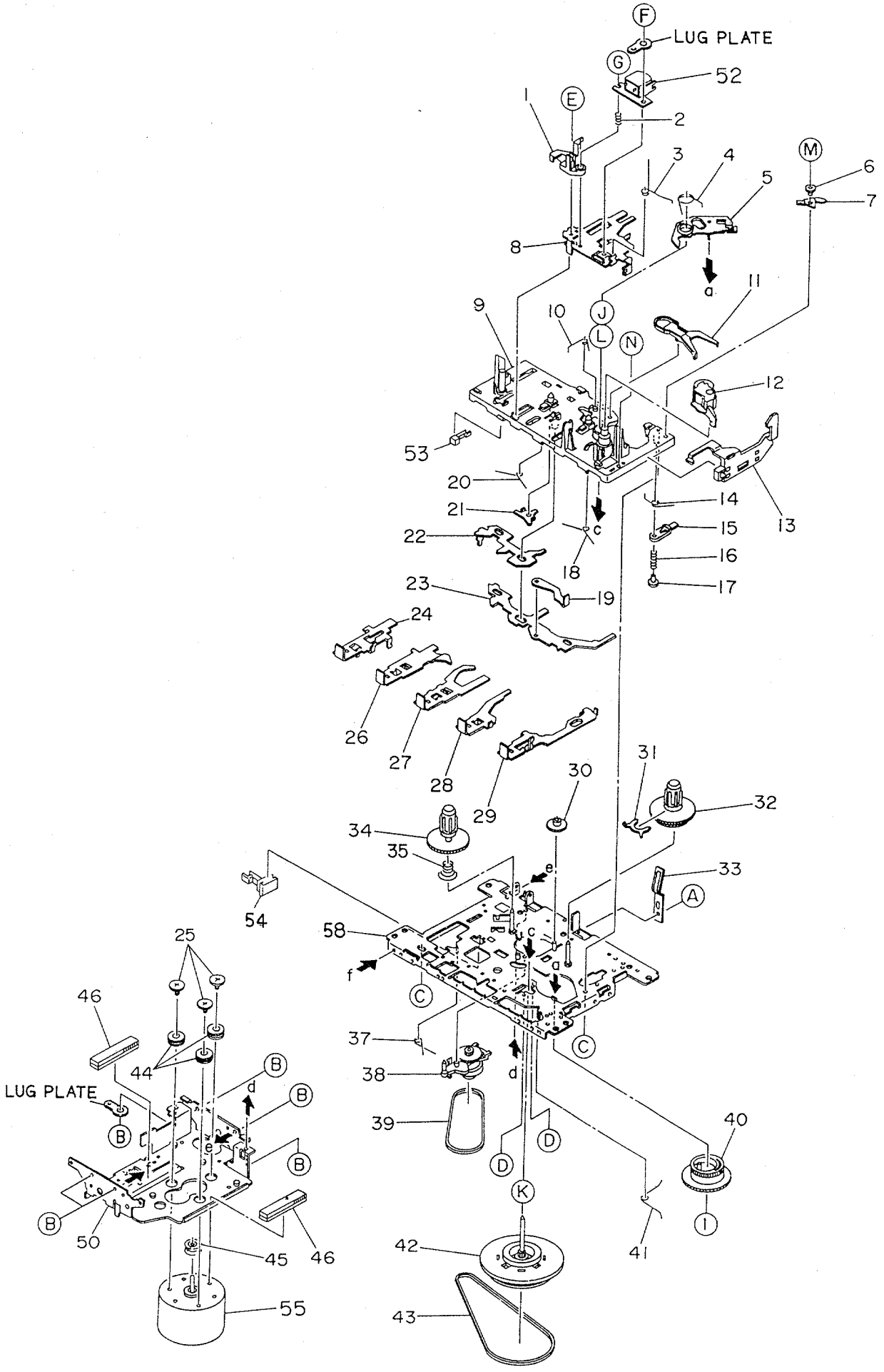


TAPE MECHANISM PARTS LIST 1 / 2

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

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	S1-921-020-010		REC ARM
2	S1-921-030-090		PANEL P SPRING
3	S1-921-260-050		GEAR PLATE SPRING
4	S1-921-265-020		GEAR PLATE ASSY
5	S1-921-043-100		PINCH ROLLER ARM ASSY
6	S1-921-140-370		P ARM COLLER
7	S1-921-140-340		P ARM
8	S1-821-030-080		EH SPRING
9	S1-921-030-060		HEAD BASE
10	S1-921-030-140		HEAD PANEL
11	S1-921-141-8A0		M CONTROL SPRING
12	S1-821-030-070		AZIMUTH SPRING
13	S1-921-143-180		BASE ASSY
14	S1-921-260-4A0		SENSING LEVER
15	S1-921-130-020		EJECT SLIDE LEVER
16	S1-921-141-3A0		P CONTROL SPRING
17	S1-921-140-550		PAUSE LEVER(E)
18	S1-921-140-120		PAUSE LEVER SPRING
19	S1-921-140-110		PAUSE STOPPER
20	S1-921-140-150		BUTTON LEVER SPRING(B)
21	S1-921-140-140		BUTTON LEVER SPRING(A)
22	S1-921-140-200		PR STOPPER
23	S1-921-140-090		SWITCH ACTUATOR
24	S1-921-140-640		E KICK LEVER
25	S1-921-140-080		PUSH BUTTON ACTUATOR
26	S1-921-050-060		SENSER
27	S1-921-053-030		TAKE UP REEL ASSY
28	S1-921-140-220		REC BUTTON LEVER
29	S1-921-053-040		SUPPLY REEL ASSY
30	S1-921-140-230		PLAY BUTTON LEVER
31	S1-821-100-990		BACK TENSION SPRING
32	S1-921-140-240		REW BUTTON LEVER
33	S1-921-140-250		FF BUTTON LEVER
34	S1-921-140-660		STOP BUTTON LEVER
35	S1-921-140-610		PAUSE BUTTON LEVER
36	S1-821-100-700		FF GEAR
37	S1-829-100-010		PACK SPRING
38	S1-821-100-690		RECORD SAFETY LEVER
39	S1-921-140-210		REC BUTTON LEVER SPRING
40	S1-921-260-020		CAM GEAR
41	S1-921-140-160		E ACTUATOR SPRING
42	S1-921-090-240		MAIN BELT
43	S1-921-093-030		FLYWHEEL ASSY
44	S1-821-070-110		RF BELT
45	S1-921-073-080		RF CLUTCH ASSY
46	S1-921-140-170		P.S.LEVER SPRING
47	S6-202-140-190		E HEAD
48	S6-201-010-750		R.P.HEAD RP-7442BS
49	S6-401-011-490		LEAF SW MSW-1541T
50	S6-401-011-610		LEAF SW MSW-17820MVEI
51	S6-401-010-380		LEAF SW MSW-1275
52	S1-921-015-010		CHASSIS ASSY
A	S9-179-000-000		C TAP SCREW M2-3
B	S9-422-000-000		P WASHER CUT 12-3.8-0.3
C	S9-679-000-000		P TAP SCREW M2-5
D	S9-999-180-090		TAP SCREW M2-4.5
E	S9-922-000-000		AZIMUTH SCREW M2-8
F	S9-115-000-000		+ BIND SCREW M2-3
G	S9-821-000-000		+-CAP SCREW M2-8
H	S9-882-000-000		P WASHER 2-3.5-0.4
I	S9-999-200-410		P TAP SCREW M2-3
J	S9-999-030-130		P WASHER CUT 1.45-3.8-0
K	S9-180-000-000		C TAP SCREW M2-4
L	S9-999-000-030		P WASHER2.1-4-0.13
M	S9-181-000-000		C TAP SCREW M2-5
N	S9-P05-200-610		S TAPPING SCREW M2-6

TAPE MECHANISM EXPLODED VIEW 2/2



TAPE MECHANISM PARTS LIST 2 / 2

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

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	S1-921-030-4A0		HEAD BASE
2	S1-821-030-070		AZIMUTH SPRING
3	S1-921-030-090		PANEL P SPRING
4	S1-921-260-050		GEAR PLATE SPRING
5	S1-921-265-020		GEAR PLATE ASSY
6	S1-921-140-370		P ARM COLLER
7	S1-921-140-340		P ARM
8	S1-921-030-110		HEAD PANEL
9	S1-921-143-170		BASE ASSY
10	S1-921-141-8A0		M CONTROL SPRING
11	S1-921-260-4A0		SENSING LEVER
12	S1-921-043-100		PINCH ROLLER ARM ASSY
13	S1-921-130-020		EJECT SLIDE LEVER
14	S1-921-141-3A0		P CONTROL SPRING
15	S1-921-140-550		PAUSE LEVER(E)
16	S1-921-140-120		PAUSE LEVER SPRING
17	S1-921-140-110		PAUSE STOPPER
18	S1-921-140-150		BUTTON LEVER SPRING(B)
19	S1-821-011-590		E KICK LEVER
20	S1-921-140-140		BUTTON LEVER SPRING(A)
21	S1-921-140-200		PR STOPPER
22	S1-921-140-090		SWITCH ACTUATOR
23	S1-921-140-080		PUSH BUTTON ACTUATOR
24	S1-921-140-230		PLAY BUTTON LEVER
25	S1-821-120-020		MOTOR COLLER SCREW
26	S1-921-140-240		REW BUTTON LEVER
27	S1-921-140-250		FF BUTTON LEVER
28	S1-921-140-260		STOP BUTTON LEVER
29	S1-921-140-610		PAUSE BUTTON LEVER
30	S1-821-100-700		FF GEAR
31	S1-921-050-060		SENSER
32	S1-921-053-030		TAKE UP REEL ASSY
33	S1-829-100-010		PACK SPRING
34	S1-921-053-040		SUPPLY REEL ASSY
35	S1-821-100-990		BACK TENSION SPRING
37	S1-921-140-170		P.S.LEVER SPRING
38	S1-921-073-080		RF CLUTCH ASSY
39	S1-821-070-110		RF BELT
40	S1-921-260-020		CAM GEAR
41	S1-921-140-160		E ACTUATOR SPRING
42	S1-921-093-040		FLYWHEEL ASSY
43	S1-921-090-240		MAIN BELT
44	S1-820-130-060		MOTOR RUBBER
45	S1-921-120-130		MOTOR PULLEY
46	S1-921-120-120		ANTI VIBR FELT MAT
50	S1-921-120-110		MOTOR BRACKET
52	S6-201-010-750		R.P.HEAD RP-7442BS
53	S6-401-011-490		LEAF SW MSW-1541T
54	S6-401-011-610		LEAF SW MSW-17820MVE1
55	S6-002-030-290		MOTOR EG530YD-2BH
58	S1-921-015-010		CHASSIS ASSY
A	S9-179-000-000		C TAP SCREW M2-3
B	S9-180-000-000		C TAP SCREW M2-4
C	S9-679-000-000		P TAP SCREW M2-5
D	S9-999-180-090		TAP SCREW M2-4.5
E	S9-004-000-000		SCREW M2-6
F	S9-115-000-000		+ BIND SCREW M2-3
G	S9-922-000-000		AZIMUTH SCREW M2-8
I	S9-422-000-000		P WASHER CUT 12-3.8-0.3
J	S9-999-030-130		P WASHER CUT 1.45-3.8
K	S9-882-000-000		P WASHER 2-3.5-0.4
L	S9-999-000-030		P WASHER2.1-4-0.13
M	S9-999-200-410		P TAP SCREW M2-3
N	S9-P05-200-610		S TAPPING SCREW M2-6

ACCESSORIES / PACKAGE LIST

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

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	86-NFZ-903-010		IB,H(ECA)M <HR>
1	86-NFZ-907-010		IB,K(E)NE <210 K>
1	86-NFZ-908-010		IB,E(EGFSI)NE <210 EZ>
1	86-NFZ-909-010		IB,E(EGFSI)NE V220 <220 EZ>
2	86-NFZ-638-010		RC UNIT,6AS14
3	87-006-269-010		ANT,LOOP AM <HR>
⚠ 4	87-A90-312-010		PLUG,CONVERSION WTN-1157R1 <HR>
5	87-043-115-010		FEEDER-ANT,FM <HR>
6	87-006-225-010		ANT,LOOP ANT NC2 <EXCEPT HR>
7	87-043-106-010		ANT,FM 1007 AWG <EXCEPT HR>

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－ －	

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