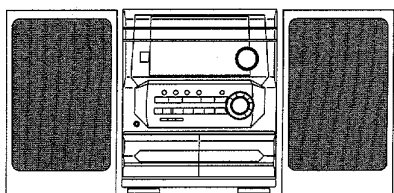


# aiwa



NSX-S222  
NSX-S223  
NSX-S226  
NSX-S229  
NSX-S333  
NSX-S336



COMPACT DISC /  
STEREO CASSETTE RECEIVER

- BASIC TAPE MECHANISM : 6ZM-3
- BASIC CD MECHANISM : 4ZG-1

- TYPE : LH,HA,HR,V,K,EZ

## REVISION PUBLISHING

- This Service Manual is the "Revision Publishing" and replaces Simple Manual of NSX-S222/S223 <HR,K,EZ> (S/M Code No. 09-991-404-4T2), NSX-S222/S229/S333 <HA,LH,HR,EZ> (S/M Code No. 09-993-404-4T3), NSX-S222/S226/336 <V,EZ,HR> (S/M Code No. 09-993-404-4T4).
- If requiring information about the CD mechanism, see Service Manual of 4ZG-1 <Z3RDLSH>, <Z4RDLSH> (S/M Code No. 09-983-249-3S2).

TABLE OF SYSTEM STRUCTURE

SYSTEM	SPEAKER	CD - CASSEIVER	REMOTE CONTROLLER	TAPE MECHANISM (6ZM-3)	CD MECHANISM (4ZG-1)
NSX-S222 (TYPE : HA)	SX-NS222	CX - NS222	RC -ZAS02	YPR1NM	Z3RDLSHCM
NSX-S229 (TYPE : LH)	SX-SNS332				Z3RDLSHM
NSX-S222 (TYPE : HR)	SX- NS222			Z3RDLSHM	
NSX-S333 (TYPE : HR)	SX-NS332	CX - NS333		YPR2NF	KZ3RDLSHF
NSX-S336 (TYPE : HR)	SX-NS552	CX - NS336		PR2NM	Z3RDLSHM
NSX-S222 (TYPE : V)	SX-NS222	CX - NS222		PR1NM	
NSX-S222 (TYPE : K)				YPR1N	Z4RDLSHM
NSX-S222 (TYPE : EZ)					
NSX-S223 (TYPE : EZ)					
NSX-S333 (TYPE : EZ)	SX-NAV224	CX - NS333			
NSX-S226 (TYPE : EZ)	SX-NS226	CX - NS226	RC -ZAS02	PR1NM	Z3RDLSHM

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# SPECIFICATIONS

<b>&lt;FM Tuner section&gt;</b>		<b>Outputs</b>	<b>SPEAKERS:</b> accept speakers of 6 ohms or more <b>PHONES (stereo jack) :</b> accepts headphones of 32 ohms or more
<b>Tuning range</b>	HA,LH,HR,K,EZ : 87.5 MHz to 108 MHz V: FM1 (OIRT) 65 MHz to 74 MHz(10 kHz step) FM2 (CCIR) 87.5 MHz to 108 MHz(50 kHzstep)		
<b>Usable sensitivity (IHF)</b>	HA,LH,HR : 13.2 dBf EZ,K : 16.8 dBf V: FM1 : 15.3 dBf FM2 : 12.8 dBf	<b>&lt;Cassette deck section&gt;</b>	4 tracks, 2 channels stereo 50 Hz - 10000 Hz AC bias Deck 1 : Playback head x 1 Deck 2 : Recording/playback/erase head x 1
<b>Antenna terminals</b>	75 ohms (unbalanced)	<b>Track format</b> <b>Frequency response</b> <b>Recording system</b> <b>Heads</b>	
<b>&lt;AM/MW Tuner section&gt;</b>		<b>&lt;Compact disc player section&gt;</b>	
<b>Tuning range</b>	530 kHz to 1710 kHz (10 kHz step) 531 kHz to 1602 kHz (9 kHz step)	<b>Laser</b> <b>D-A converter</b> <b>Signal-to-noise ratio</b> <b>Harmonic distortion</b> <b>Wow and flutter</b>	Semiconductor laser ( $\lambda=780$ nm) 1 bit dual 85 dB (1 kHz, 0 dB) 0.05% (1 kHz, 0 dB) Unmeasurable
<b>Usable sensitivity</b>	350 $\mu$ V/m		
<b>Antenna</b>	Loop antenna		
<b>&lt;SW Tuner section&gt; (HR)</b>		<b>&lt;Speaker system SX-NS222,SX-NS223,SX-NS226,SX-NS332&gt;</b>	
<b>Tuning range</b>	5.900 MHz to 17.900 MHz	<b>Cabinet type</b>	2 way, bass reflex (magnetic shielded type)
<b>Usable sensitivity</b>	40 $\mu$ V(IEC)	<b>Speakers</b>	Woofer : 120 mm cone type Tweeter : 20 mm ceramic type
<b>Antenna</b>	Wire antenna	<b>Impedance</b>	6 ohms
<b>&lt;LW Tuner section&gt; (EZ,K)</b>		<b>Output sound pressure level</b>	87 dB/W/m
<b>Tuning range</b>	144 kHz to 290 kHz	<b>Dimensions (W x H x D)</b>	234 x 324 x 270 mm
<b>Usable sensitivity</b>	1400 $\mu$ V/m	<b>Weight</b>	2.8 kg
<b>Antenna</b>	Loop antenna		
<b>&lt;Amplifier section&gt;</b>		<b>&lt;Speaker system SX-NS552&gt;</b>	
<b>Power output</b>	222HA,222LH,333/336HR: Rated : 24 W + 24 W (6 ohms, T.H.D. 1 %, 1 kHz) Reference: 30W + 30W (6 ohms, T.H.D. 10 %, 1 kHz)  222HR: Rated : 12 W + 12 W (6 ohms, T.H.D. 1 %, 1 kHz) Reference: 15W + 15W (6 ohms, T.H.D. 10 %, 1 kHz)  K,V,222/223/226EZ: Rated : 12 W + 12 W (6 ohms, T.H.D. 1 %, 1 kHz/DIN 45500) Reference: 15W + 15W (6 ohms, T.H.D. 10 %, 1 kHz/DIN 45324) DIN MUSIC POWER: 35 W + 35 W  333EZ : Rated : 30 W + 340 W (6 ohms, T.H.D. 1 %, 1 kHz/DIN 45500) Reference: 37W + 37W (6 ohms, T.H.D. 10 %, 1 kHz/DIN 45324) DIN MUSIC POWER: 75 W + 75 W	<b>Cabinet type</b>	3 way, bass reflex (magnetic shielded type)
		<b>Speakers</b>	Woofer : 160 mm cone type Tweeter : 50 mm ceramic type Super tweeter : 20 mm ceramic type
		<b>Impedance</b>	6 ohms
		<b>Output sound pressure level</b>	87 dB/W/m
		<b>Dimensions (W x H x D)</b>	234 x 324 x 270 mm
		<b>Weight</b>	3.8 kg
		<b>&lt;Speaker system SX-NAV224&gt;</b>	
		<b>Cabinet type</b>	2 way, bass reflex (magnetic shielded type)
		<b>Speakers</b>	Woofer : 140 mm cone type Tweeter : 60 mm cone type
		<b>Impedance</b>	6 ohms
		<b>Output sound pressure level</b>	87 dB/W/m
		<b>Dimensions (W x H x D)</b>	240 x 324 x 253 mm
		<b>Weight</b>	3.8 kg
		<b>&lt;General&gt;</b>	
		<b>Power requirements</b>	HA,LH,HR: 120V / 220-230V / 240V AC, switchable, 50/60 Hz K,V,EZ : 230V AC, 50Hz
<b>Total harmonic distortion</b>	222HA,229LH,333/336HR: 0.05 % (15 W, 1 kHz, 6 ohms, DIN AUDIO)  222HR,K,V,222/223/226EZ: 0.05 % (6 W, 1 kHz, 6 ohms, DIN AUDIO)  333EZ: 0.05 % (15W, 1 kHz, 6 ohms, DIN AUDIO)	<b>Power consumption</b>	222HA,229LH,333/336HR: 80W 222HR,K,V,222/223/226EZ: 50 W 333EZ : 85 W
		<b>Dimensions of main unit (W x H x D)</b>	260 x 330 x 350 mm (10 <sup>1</sup> / <sub>4</sub> x 13 x 13 <sup>7</sup> / <sub>8</sub> in.)
<b>Inputs</b>	VIDEO/AUX : 500 mV MIC: 1.0 mV (10 kohms)<HR only>	<b>Weight of main unit</b>	222HA,229LH,333/336HR : 5.9 kg 222HR,K,V,222/223/226EZ : 5.0 kg 333EZ : 5.9 kg

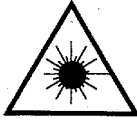
• Design and specifications are subject to change without notice.

## 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.

### VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylit-tävälle näkymättömälle lasersäteilylle.

### VARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvisning, kan användaren utsättas för osynlig laserstråling, som överskrider gränsen för laserklass 1.

### CAUTION

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

### ATTENTION

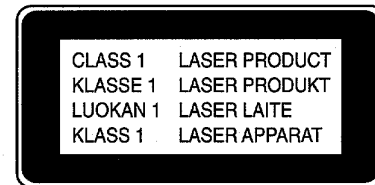
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

### ADVARSEL!

Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er 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.



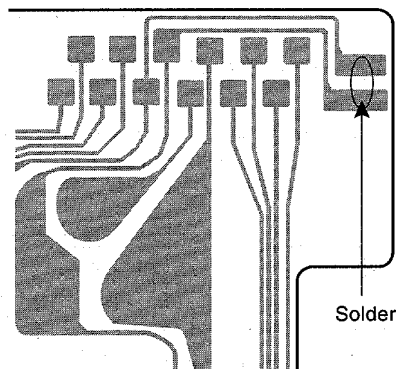
## Precaution to replace Optical block

### (KSS – 213F)

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 right figure.

PICK-UP Assy P.C.B



## NOTE ON BEFORE STARTING REPAIR

### 1. Forced discharge of electrolytic capacitor of power supply block

When repair is going to be attempted in the set that uses relay circuit in the power supply block, electric potential is kept charged across the electrolytic capacitors (C101, 102) even though AC power cord is removed. If repair is attempted in this condition, secondary defect can occur.

In order to prevent the secondary trouble, perform the following measures before starting repair work.

#### Discharge procedure

- ① Remove the AC power cord.
- ② Connect a discharging resistor at an end of lead wire that has clips at both ends. Connect the other end of the lead wire to metal chassis.
- ③ Contact the other end of the discharging resistor to the positive (+) side (+VH) of C101. (For two seconds)
- ④ Contact the same end of the discharging resistor as step ③ to the negative (-) side (-VH) of C102 in the same way. (For two seconds)
- ⑤ Check that voltage across C101 and C102 has decreased to 1 V or less using a multimeter or an oscilloscope.

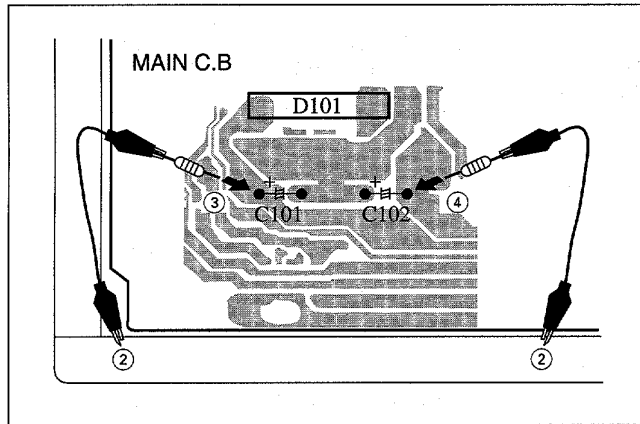


Fig-1

Select a discharging resistor referring to the following table.

Charging voltage (V) (C101, 102)	Discharging resistor ( $\Omega$ )	Rated power (W)	Parts number
25-48	100	3	87-A00-247-090
49-140	220	5	87-A00-232-090

Note: The reference numbers (C101, C102) of the electrolytic capacitors can change depending on the models. Be sure to check the reference numbers of the charging capacitors on schematic diagram before starting the discharging work.

### 2. Check items before exchanging the MICROCOMPUTER

Be sure to check the following items before exchanging the MICROCOMPUTER. Exchange the MICROCOMPUTER after confirming that the MICROCOMPUTER is surely defective.

#### 2-1. Regarding the HOLD terminal of the MICROCOMPUTER

When the HOLD terminal (INPUT) of the MICROCOMPUTER is "H", the MICROCOMPUTER is judged to be operating correctly. When this terminal is "L", the main power cannot be turned on. Therefore, be sure to check the terminal voltage of the HOLD terminal before exchange.

When the MICROCOMPUTER is not defective, the HOLD terminal can also go "L" when the POWER AMPLIFIER has any abnormalities that triggers the abnormality detection circuit on the MAIN C. B. that sets the HOLD terminal to "L".

#### • Good or no good judgement of the MICROCOMPUTER

- ① Turn on the AC main power.
- ② Confirm that the main power is turned on and the HOLD terminal of the MICROCOMPUTER keeps the "H" level or not.
- ③ When the HOLD terminal is "L" level, the abnormality detection circuit is judged to be working correctly and the MICROCOMPUTER is judged to be good.

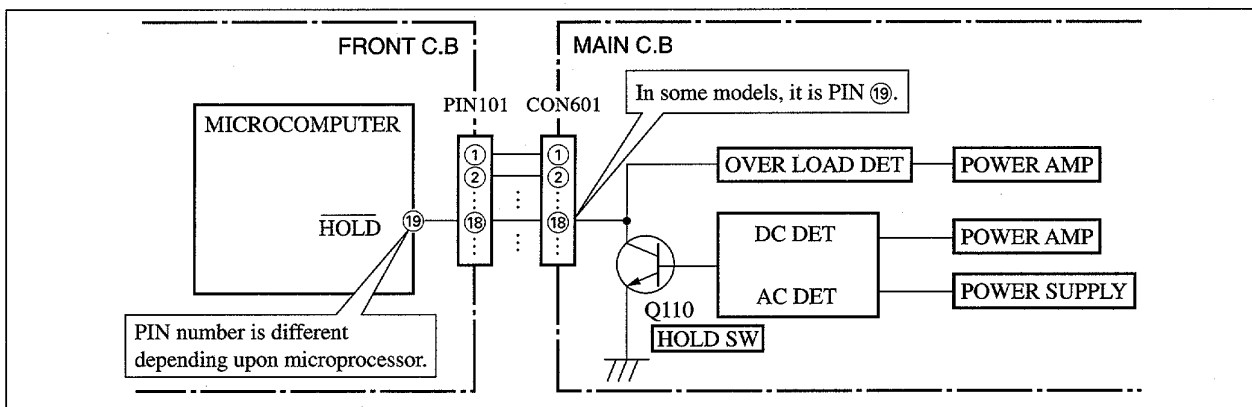


Fig-2-1

In such a case, check also if the POWER AMPLIFIER circuit or power supply circuit has any abnormalities or not.

## 2-2. Regarding reset

There are cases that the machine does not work correctly because the MICROCOMPUTER is not reset even though the AC power cord is re-inserted, or the software reset (pressing the STOP key + POWER key) is performed.

When the above described phenomenon occurs, it can lead to wrong judgement as if the MICROCOMPUTER is defective and to exchange the MICROCOMPUTER. In such a case, perform the forced-reset by the following procedure and check good or no good of the MICROCOMPUTER.

- ① Remove the AC power cord.

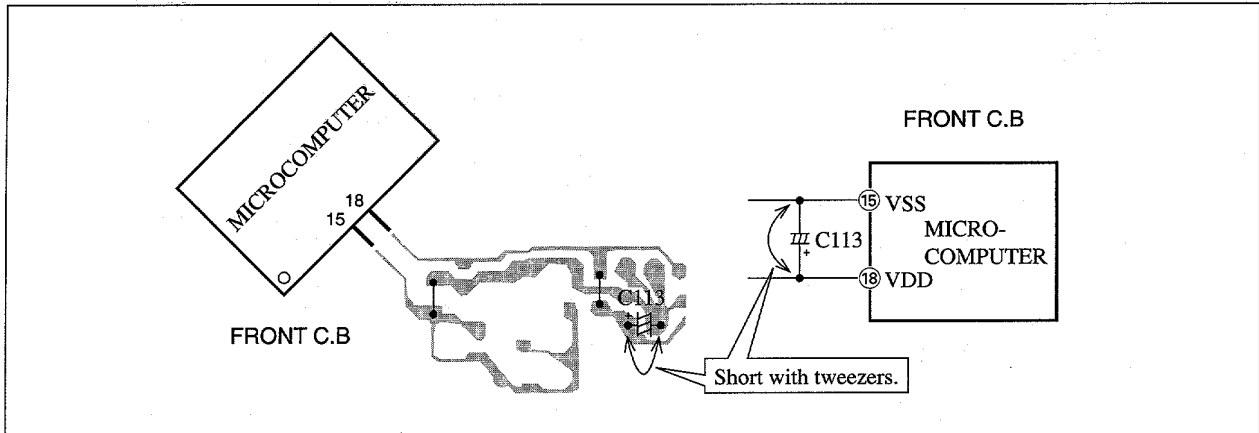


Fig-2-2

- ② Short both ends of the electrolytic capacitor C113 that is connected to VDD of the MICROCOMPUTER with tweezers.
- ③ Connect the AC power cord again. If the MICROCOMPUTER returns to the normal operation, the MICROCOMPUTER is good.

**Note:** The reference number or MICROCOMPUTER pin number of transistor (Q110) and electrolytic capacitor (C113) can change depending on the models. Be sure to check the reference numbers on schematic diagram before starting the discharging work.

## 2-3. Confirmation of soldering state of MICROCOMPUTER

Check the soldering state of the MICROCOMPUTER in addition to the above described procedures. Be sure to exchange the MICROCOMPUTER after surely confirming that the trouble is not caused by poor soldering but the MICROCOMPUTER itself.

# ELECTRICAL MAIN PARTS LIST

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

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC				C123	87-010-384-080		CAP,E 100-25V<2HR,K,V,2EZ,23EZ>
	8Z-NF9-637-010		C-IC,M38B59MFH-E107FP<23EZ>	C123	87-010-408-080		CAP,E 47-50V<3HR,3EZ,HA,LH>
	8Z-NF9-631-010		C-IC,M38B59MFH-E110F<336HR>	C130	87-A11-155-080		CAP,TC U 0.01-16 Z F<3EZ>
	8Z-NF9-630-010		C-IC,M38B59MFH-P101FP<exp 23EZ,36HR>	C130	87-018-131-080		CAP,TC U 1000P-50 K B<V>
	87-A20-715-010		IC,M62439SP	C152	87-010-394-080		CAP,E 220-35V<HR,HA,LH>
	87-017-889-010		IC,NJM4558LD				
	87-A21-218-010		IC,NJL64H380A	C152	87-010-385-080		CAP,E 220-25V<K,V,2EZ,23EZ>
	87-070-127-110		IC,LC72131 D	C152	87-010-409-080		CAP,E 220-50 SME<3EZ>
	87-A21-218-010		IC,NJL64H380A	C207	87-010-546-080		CAP, ELECT 0.33-50V
	87-A20-913-010		IC,LA1837NL	C208	87-010-546-080		CAP, ELECT 0.33-50V
	87-A20-502-010		IC,BU1920<23EZ>	C209	87-A11-154-080		CAP,TC U 4700P-16 Z F
	87-A20-454-010		IC,DN6851				
TRANSISTOR				C210	87-A11-154-080		CAP,TC U 4700P-16 Z F
	87-026-218-080		TR,DTC144ES (0.2W)	C211	87-010-403-080		CAP, ELECT 3.3-50V
	87-026-610-080		TR,KYC3198GR	C212	87-010-403-080		CAP, ELECT 3.3-50V
	87-A30-196-080		TR,2SC4115SRS	C213	87-010-260-080		CAP, ELECT 47-25V
	87-026-609-080		TR,KTA1266GR	C214	87-010-260-080		CAP, ELECT 47-25V
	89-213-702-010		TR,2SB1370 (1.8W)				
	87-026-269-080		TR,DTA114ES	C217	87-A10-304-080		CAP,M 0.056-50 J
	87-026-219-080		TR,DTA144ES (0.3W)	C218	87-A10-304-080		CAP,M 0.056-50 J
	87-A30-090-080		FET,2SK2541	C219	87-010-544-080		CAP, ELECT 0.1-50V
	87-026-215-080		TR,DTC114YS	C220	87-010-544-080		CAP, ELECT 0.1-50V
	87-A30-190-080		TR,CC5551<3HR,3EZ,HA,LH>	C221	87-018-211-080		CAP,CER 0.01-50<K,V,EZ>
	87-A30-109-010		TR,2SD 2495<3EZ>	C222	87-018-211-080		CAP,CER 0.01-50<K,V,EZ>
	87-A30-256-010		TR,2SD1933<exp 3EZ>	C223	87-A11-155-080		CAP,TC 0.01-16<K,V,EZ>
	87-A30-255-010		TR,2SB1342<exp 3EZ>	C224	87-A11-155-080		CAP,TC 0.01-16<K,V,EZ>
	87-A30-108-010		TR,2SB1626<3EZ>	C229	87-018-123-080		CAP, CER 220P-50V<exp 3EZ>
	87-A30-091-080		FET,2SJ460	C229	87-018-124-080		CAP, CER 270P-50V<3EZ>
	87-026-287-080		TR,DTC143ES				
	87-026-245-080		TR,DTC114ES	C230	87-018-123-080		CAP, CER 220P-50V<exp 3EZ>
	87-A30-240-080		TR,CSA1585BC	C230	87-018-124-080		CAP, CER 270P-50V<3EZ>
	87-A30-318-080		TR,CSA952K	C235	87-A11-148-080		CAP,TC 0.1-50 ZF<V,3HR,3EZ,HA,LH>
	87-026-214-080		TR,DTA114YS (0.3W)	C236	87-A11-148-080		CAP,TC 0.1-50 ZF<V,3HR,3EZ,HA,LH>
	87-A30-164-080		TR,CSC2001K<exp HA,LH>	C237	87-A11-155-080		CAP,TC 0.01-16 Z F
	87-A30-092-080		FET,2SK439E/F<exp HA,LH>				
	89-305-352-380		TR,2SC535<K,V,EZ>	C253	87-018-131-080		CAP,CER 1000P<K,V,EZ>
DIODE				C254	87-018-131-080		CAP,CER 1000P<K,V,EZ>
	87-070-274-080		DIODE,1N4003 SEM	C255	87-018-115-080		CAP,CER 47P<K,V,EZ>
	87-A40-336-080		ZENER,MTZJ27D T-72	C256	87-018-115-080		CAP,CER 47P<K,V,EZ>
	87-020-465-080		DIODE,1SS133 (110MA)	C257	87-018-119-080		CAP,CER 100P<K,V,EZ>
	87-A40-345-080		ZENER,MTZJ10C	C258	87-018-119-080		CAP,CER 100P<K,V,EZ>
	87-A40-535-080		DIODE,1N5393<exp 3EZ,HA,LH>	C301	87-018-131-080		CAP, CER 1000P-50V
	87-A40-455-080		DIODE,RL203 GW<3EZ,HA,LH>	C302	87-018-131-080		CAP, CER 1000P-50V
	87-A40-509-080		ZENER,MTZJ6.8C<exp K,2EZ,3EZ>	C303	87-018-131-080		CAP, CER 1000P-50V
	87-A40-466-080		ZENER,MTZJ2.7A	C304	87-018-131-080		CAP, CER 1000P-50V
	87-017-931-080		ZENER,MTZJ5.6B				
MAIN C.B				C307	87-010-263-080		CAP, ELECT 100-10V
	C101 87-016-495-090		CAP,E 3300-25 SMG<V>	C308	87-010-263-080		CAP, ELECT 100-10V
	C101 87-010-917-090		CAP,E 3300-50 M SMG<3EZ>	C309	87-018-115-080		CAP,CER 47P-50V<K,V,EZ>
	C101 87-A10-520-090		CAP,E 3300-35 M SMG<exp V,3EZ>	C310	87-018-115-080		CAP,CER 47P-50V<K,V,EZ>
	C103 87-A10-627-090		CAP,E 2200-50 M SMG<3EZ>	C311	87-A10-305-080		CAP,M 0.068-50 J
	C103 87-A10-011-090		CAP,E 2200-25 SMG<V>				
	C103 87-016-051-090		CAP,E 2200-35 SMG<exp V,3EZ>	C312	87-A10-305-080		CAP,M 0.068-50 J
	C105 87-018-127-080		CAP, CER 470P-50V	C315	87-010-374-080		CAP, ELECT 47-10V
	C107 87-010-384-080		CAP, ELECT 100-25V	C317	87-010-546-080		CAP, ELECT 0.33-50V
	C108 87-010-381-080		CAP, ELECT 330-16V	C318	87-010-546-080		CAP, ELECT 0.33-50V
	C111 87-010-247-080		CAP,E 100-50V<2HR,K,V,2EZ,23EZ>	C322	87-A11-148-080		CAP,TC U 0.1-50<K,V,EZ>
	C111 87-010-430-080		CAP,E 100-63<3HR,3EZ,HA,LH>				
	C112 87-010-263-080		CAP, ELECT 100-10V	C326	87-018-205-080		CAP, CERA-SOL 0.022
	C113 87-010-403-080		CAP, ELECT 3.3-50V	C360	87-010-401-080		CAP, ELECT 1-50V
	C114 87-010-374-080		CAP, ELECT 47-10V	C361	87-010-374-080		CAP, ELECT 47-10V
	C115 87-A10-303-080		CAP,M 0.047-50 J	C399	87-018-127-080		CAP, CER 470P-50V
	C116 87-A10-303-080		CAP,M 0.047-50 J	C401	87-010-544-080		CAP, ELECT 0.1-50V
	C122 87-010-384-080		CAP,E 100-25V<2HR,K,V,2EZ,23EZ>				
	C122 87-010-408-080		CAP,E 47-50V<3HR,3EZ,HA,LH>	C402	87-010-544-080		CAP, ELECT 0.1-50V
				C403	87-018-118-080		CAP,TC-U 82P-50 B
				C404	87-018-118-080		CAP,TC-U 82P-50 B
				C411	87-010-405-080		CAP, ELECT 10-50V
				C412	87-010-405-080		CAP, ELECT 10-50V
				C452	87-010-382-080		CAP,E 22-25V<HR,HA,LH,V>
				C452	87-010-260-080		CAP,E 47-25V<K,EZ>
				C458	87-018-131-080		CAP, CER 1000P-50V
				C459	87-018-128-080		CAP,TC U 560P-50 K B
				C461	87-018-126-080		CAP,TC-U 390P-50 B
				C462	87-018-126-080		CAP,TC-U 390P-50 B
				C601	87-018-195-080		CAP, CER 1200P-16V
				C602	87-018-195-080		CAP, CER 1200P-16V
				C611	87-010-545-080		CAP, ELECT 0.22-50V
				C612	87-010-545-080		CAP, ELECT 0.22-50V



\*NOTE: 2EZ=222EZ, 226EZ 2HR=222HR  
 3EZ=333EZ 3HR=333HR, 336HR  
 23EZ=223EZ exp=EXCEPT

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C613	87-010-545-080		CAP, ELECT 0.22-50V	C854	87-A11-144-080		CAP, TC U 0.1-50 K B<23EZ>
C614	87-010-545-080		CAP, ELECT 0.22-50V	C855	87-010-405-080		CAP, ELECT 10-50V<23EZ>
C615	87-018-104-080		CAP, TC-U 10P-50 SL	C856	87-010-405-080		CAP, ELECT 10-50V<23EZ>
C616	87-010-260-080		CAP, ELECT 47-25V	C857	87-A11-155-080		CAP, TC U 0.01-16 Z F<23EZ>
C617	87-010-260-080		CAP, ELECT 47-25V	C858	87-018-109-080		CAP, CER 22P-50V<23EZ>
C701	87-010-404-080		CAP, ELECT 4.7-50V	C859	87-018-109-080		CAP, CER 22P-50V<23EZ>
C702	87-A11-155-080		CAP, TC U 0.01-16 Z F	C860	87-A11-155-080		CAP, TC U 0.01-16 Z F<23EZ>
C703	87-A11-155-080		CAP, TC U 0.01-16 Z F	C901	87-A11-148-080		CAP, TC U 0.1-50 Z F
C704	87-018-131-080		CAP, CER 1000P-50V	C902	87-A11-144-080		CAP, TC U 0.1-50 K B<HR>
C705	87-018-131-080		CAP, CER 1000P-50V	C921	87-A11-155-080		CAP, TC 0.01-16ZF<K, EZ>
C706	87-018-131-080		CAP, CER 1000P-50V	C922	87-018-099-080		CAP CERA 3.9P-50<K, EZ>
C707	87-010-112-080		CAP, ELECT 100-16V	C923	87-018-102-080		CAP, TC-U 6.8P-50<K, EZ>
C708	87-A11-144-080		CAP, TC U 0.1-50 K B	C924	87-014-049-080		CAP, PP 470P-100 J<K, EZ>
C709	87-010-248-080		CAP, ELECT 220-10V	C931	87-010-263-080		CAP, ELECT 100-10V<HR>
C710	87-010-112-080		CAP, ELECT 100-16V	C932	87-010-400-080		CAP, ELECT 0.47-50V<HR>
C712	87-018-149-080		CAP, TC-U 15P-50 CH	C934	87-A11-155-080		CAP, TC U 0.01-16 Z F<HR>
C713	87-018-149-080		CAP, TC-U 15P-50 CH	C935	87-A11-155-080		CAP, TC U 0.01-16 Z F<HR>
C714	87-010-112-080		CAP, ELECT 100-16V	C936	87-A11-155-080		CAP, TC U 0.01-16 Z F<HR>
C715	87-018-119-080		CAP, CER 100P-50V	C937	87-A11-155-080		CAP, TC U 0.01-16 Z F<exp HA, LH, V>
C746	87-A11-155-080		CAP, TC U 0.01-16 Z F	C938	87-A11-155-080		CAP, TC U 0.01-16 Z F<exp HA, LH, V>
C751	87-018-131-080		CAP, CER 1000P-50V	C939	87-014-073-080		CAP, PP 4700P-100 J<HR>
C752	87-018-143-080		CAP, TC 4.7P-50CH<K, V, EZ>	C940	87-014-051-080		CAPACITOR (PP), 560P<HR>
C753	87-010-408-080		CAP, ELECT 47-50V	C941	87-018-109-080		CAP, CER 22P-50V<HR>
C755	87-A11-144-080		CAP, TC U 0.1-50 K B	C943	87-A11-144-080		CAP, TC U 0.1-50 K B
C756	87-A11-155-080		CAP, TC U 0.01-16 Z F	C944	87-018-104-080		CAP, TC-U 10P-50 SL<HA, LH, V>
C757	87-A11-155-080		CAP, TC U 0.01-16 Z F	CF801	87-008-261-010		FLTR, SFE10.7MA5<HR, HA, LH, V>
C758	87-010-112-080		CAP, ELECT 100-16V	CF801	87-008-423-010		FLTR, SFE10.7MS3G-A<K, EZ>
C759	87-A11-155-080		CAP, TC U 0.01-16 ZF<exp HR>	CF802	82-785-747-010		CF MS2 GHY R<K, EZ>
C761	87-010-404-080		CAP, ELECT 4.7-50V	CF802	87-008-261-010		FLTR, SFE10.7MA5-A<V>
C762	87-010-400-080		CAP, ELECT 0.47-50V	CN301	87-A60-620-010		CONN, 3P V 2MM JMT
C763	87-010-401-080		CAP, ELECT 1-50V	CN351	87-A60-625-010		CONN, 8P V 2MM JMT
C764	87-010-401-080		CAP, ELECT 1-50V	CN601	88-NF9-657-010		CONN, 30P H BLK TYK-B(X)
C765	87-018-115-080		CAP, CER 47P-50V	CN602	87-099-194-010		CONN, 6P 6216V
C766	87-010-407-080		CAP, ELECT 33-50V	D981	87-A40-618-080		VARI-CAP, SVC 348(S/T)<HR>
C768	87-A11-147-080		CAP, TC U 0.047-50 Z F	FB601	87-008-372-080		FLTR, EMI BLOIRNI<K, V, EZ>
C769	87-010-403-080		CAP, ELECT 3.3-50V	FB603	87-008-474-080		F-BEAD, EMI BL02RN1<exp HA, LH>
C770	87-A11-155-080		CAP, TC U 0.01-16 Z F	FB813	87-008-372-080		FLTR, EMI BLOIRNI<HR, HA, LH>
C771	87-010-406-080		CAP, ELECT 22-50	FCC3	88-906-251-110		FF-CABLE, 6P 1.25
C773	87-018-131-080		CAP, TC 1000P-50<HR, HA, LH, V>	FFE801	A8-8ZA-190-030		8ZA-1 FEUNM<2HR>
C773	87-018-195-080		CAP, TC 1200P-16<23EZ>	FFE801	A8-8ZA-191-030		8ZA-1 YFEUNM<3HR, HA, LH>
C773	87-018-196-080		CAP, TC 1500P-16<K, 2EZ, 3EZ>	FFE801	A8-6ZA-193-130		6ZA-1 FEVNM<V>
C774	87-010-405-080		CAP, ELECT 10-50V	FFE801	A8-6ZA-19C-170		6ZA-1 YFEENC<K, EZ>
C776	87-A11-155-080		CAP, TC U 0.01-16 Z F	J201	87-A60-602-010		JACK, DIA6.3 BLK ST W/SW TC
C783	87-018-199-080		CAP, CER 3300P<HR, HA, LH, V>	J202	87-A60-238-010		TERMINAL, SP 4P (MSC)
C783	87-018-202-080		CAP. CERAM. 6800PF<K, EZ>	J601	87-A60-881-010		JACK, PIN 2P MSP 242V05 PBSN
C784	87-018-199-080		CAP, CER 3300P<HR, HA, LH, V>	J801	87-A60-202-010		TML, ANT4P MSP<HR, HA, LH, V>
C784	87-018-202-080		CAP. CERAM. 6800PF<K, EZ>	J802	87-A60-403-010		TML, ANT PAL 2P<K, EZ>
C785	87-010-405-080		CAP, ELECT 10-50V	J931	81-754-629-010		CONNECTOR, 2P<HR>
C786	87-010-405-080		CAP, ELECT 10-50V	L201	87-003-383-010		COIL, 1UH-S
C787	87-A11-153-080		CAP, TC U 2200P-16 Z F<HA, LH>	L202	87-003-383-010		COIL, 1UH-S
C787	87-018-196-080		CAP, TC 1500P-16<exp HA, LH>	L451	87-007-342-010		COIL, OSC 85K BIAS
C788	87-A11-153-080		CAP, TC U 2200P-16 Z F<HA, LH>	L701	87-005-847-080		COIL, 2.2UH(CECS)
C788	87-018-196-080		CAP, TC 1500P-16<exp HA, LH>	L771	87-A50-266-010		COIL, FM DET-2N(TOK)
C789	87-010-403-080		CAP, ELECT 3.3-50V	L772	87-A90-052-010		FLTR, CFMT-450A(TOK)<HR>
C790	87-010-403-080		CAP, ELECT 3.3-50V	L772	87-A91-110-010		FLTR, PCFJZH-450(TOK)<HA, LH, V>
C801	87-A11-155-080		CAP, TC 0.01-16ZF<K, EZ>	L772	87-A90-733-010		FLTR, PCFAZH-450<K, EZ>
C802	87-A11-155-080		CAP, TC 0.01-16ZF<K, EZ>	L801	87-005-847-080		COIL, 2.2UH(CECS)
C803	87-A11-155-080		CAP, TC 0.01-16ZF<K, EZ>	L802	87-005-849-080		COIL, 10UH K CECS <V>
C804	87-A11-155-080		CAP, TC 0.01-16ZF<K, EZ>	L851	87-005-847-080		COIL, 2.2UH(CECS)<23EZ>
C805	87-A11-144-080		CAP, TC 0.1-50KB	L855	87-005-849-080		COIL, 10UH K CECS <V>
C807	87-A11-144-080		CAP, TC U 0.1-50KB	L933	87-A50-159-010		COIL, 10MH K C2B<HR>
C808	87-A11-155-080		CAP, TC U 0.01-16 Z F	L934	87-005-372-080		COIL S 1MHM<HR>
C809	87-A11-155-080		CAP, TC 0.01-16ZF<K, V, EZ>	L941	87-A50-020-010		COIL, ANT LW(COI)<K, EZ>
C810	87-A11-155-080		CAP, TC 0.01-16ZF<K, V, EZ>	L941	87-A50-022-010		COIL, ANT SW(COI)<HR>
C811	87-A11-155-080		CAP, TC 0.01-16ZF<K, V, EZ>	L942	87-A50-019-010		COIL, OSC LW(COI)<K, EZ>
C812	87-010-408-080		CAP, E 47-50V<K, V, EZ>	L942	87-A50-173-010		COIL, OSC SW-N(COI)<HR>
C813	87-018-131-080		CAP, CER 1000P-50V	L981	8Z-NFA-665-010		COIL, AMPACK 2L<K, EZ>
C851	87-018-123-080		CAP, CER 220P-50V<23EZ>	L981	8Z-NFA-664-010		COIL, AMPACK 4L<HA, LH, V>
C852	87-018-123-080		CAP, CER 220P-50V<23EZ>	L982	87-A50-431-010		COIL, OSC MW(3BSW)<HR>
C853	87-018-127-080		CAP, CER 470P-50V<23EZ>	L983	87-A50-430-010		COIL, ANT MW(3BSW)<HR>

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
R223	87-A00-258-080		RES,M/F 0.22-1WJ<3HR,3EZ,HA,LH>	EMI401	87-008-372-080		FILTER, EMI BL OIRNI<HR>
R224	87-A00-258-080		RES,M/F 0.22-JWJ<3HR,3EZ,HA,LH>	FCC1	88-913-221-110		FF-CABLE, 13P 1.25 220MM
R249	87-A00-258-080		RES,M/F 0.22-1WJ	FCC2	88-911-201-110		FF-CABLE, 11P 1.25
R250	87-A00-258-080		RES,M/F 0.22-1WJ	FL301	8Z-NF9-610-010		FL,SVA-10MS12
R253	87-A11-155-080		CAP,TC U 0.01-16 Z F<3EZ>	J401	87-A60-651-010		JACK, 3.5MONO<2HR,3HR>
R254	87-A11-155-080		CAP,TC U 0.01-16 Z F<3EZ>	L201	87-A50-434-010		COIL,CLK 4.19M(TOKO)
RY101	87-A90-464-010		RELAY, DG12D2-0(M)	LED601	87-A40-619-080		LED,SLR-56PT-TE7-W GRN
SFR451	87-024-355-080		SFR,33K DIA6 H	LED602	87-A40-619-080		LED,SLR-56PT-TE7-W GRN
SFR452	87-024-355-080		SFR,33K DIA6 H	LED603	87-A40-619-080		LED,SLR-56PT-TE7-W GRN<exp 3HR>
TC941	87-011-220-080		TRIMMER CAP 20P VTC<HR>	LED604	87-A40-619-080		LED,SLR-56PT-TE7-W GRN
TC942	87-011-221-080		CAP,TRMR 30P<K,EZ>	LED605	87-A40-619-080		LED,SLR-56PT-TE7-W GRN
TC943	87-011-221-080		CAP,TRIMMER 30P<HR>	LED608	87-A40-619-080		LED,SLR-56PT-TE7-W GRN<3HR>
W101	83-NE2-618-110		F-CABEL,5P-2.5	LED609	87-A40-619-080		LED,SLR-56PT-TE7-W GRN<3HR>
WH102	87-A90-459-010		HLDR,WIRE 2.5-5P	S201	87-A90-535-010		SW,RTRY EC16B24304
X701	87-A70-061-010		VIB,XTAL 4.500MHZ CSA-309	S202	87-A90-791-010		SW,RTRY EC16B12204 ENCODER
X751	87-030-354-010		VIB,CF BFU 450C<HR>	S301	87-A90-164-080		SW,TACT SKQAB(N)
X851	87-A70-091-010		VIB,XTAL 4.332MHZ CSA-309<23EZ>	S302	87-A90-164-080		SW,TACT SKQAB(N)
				S303	87-A90-164-080		SW,TACT SKQAB(N)
				S304	87-A90-164-080		SW,TACT SKQAB(N)
				S305	87-A90-164-080		SW,TACT SKQAB(N)
FRONT C.B							
C101	87-A11-140-080		CAP,TC U 0.047-50 K B	S306	87-A90-164-080		SW,TACT SKQAB(N)
C151	87-A11-142-080		CAP,TC U 0.068-50 K B	S307	87-A90-164-080		SW,TACT SKQAB(N)
C153	87-010-221-080		CAP, ELECT 470-10V	S308	87-A90-164-080		SW,TACT SKQAB(N)<exp 3HR>
C201	87-010-421-040		CAP,E 4.7-50 5L	S309	87-A90-164-080		SW,TACT SKQAB(N)
C202	87-010-421-040		CAP,E 4.7-50 5L	S310	87-A90-164-080		SW,TACT SKQAB(N)
C203	87-010-560-040		CAP,E 10-50 GAS	S311	87-A90-095-080		SW,TACT EVQ11G04M<23EZ>
C204	87-010-246-040		CAP,E 47-35 SME	S312	87-A90-164-080		SW,TACT SKQAB(N)
C205	87-018-205-080		CAP, CERA-SOL 0.022	S313	87-A90-095-080		SW,TACT EVQ11G04M<23EZ>
C210	87-010-060-040		CAP,E 100-16<exp 3HR>	S314	87-A90-164-080		SW,TACT SKQAB(N)
C210	87-A10-818-040		CAP,E 100-16 7L SRA<3HR>	S315	87-A90-095-080		SW,TACT EVQ11G04M<23EZ>
C211	87-A11-242-040		CAP,E 220-10 M 5L SRM	S316	87-A90-164-080		SW,TACT SKQAB(N)
C212	87-018-205-080		CAP, CERA-SOL 0.022	S317	87-A90-164-080		SW,TACT SKQAB(N)
C213	87-015-695-040		E/CAP IUF 50V TAPG	S318	87-A90-164-080		SW,TACT SKQAB(N)
C214	87-A11-155-080		CAP,TC U 0.01-16 Z F	S319	87-A90-164-080		SW,TACT SKQAB(N)
C216	87-018-131-080		CAP, CER 1000P-50V	S320	87-A90-164-080		SW,TACT SKQAB(N)
C217	87-018-125-080		CAP, CER 330P-50V	S321	87-A90-164-080		SW,TACT SKQAB(N)
C218	87-018-125-080		CAP, CER 330P-50V	S322	87-A90-164-080		SW,TACT SKQAB(N)
C219	87-018-131-080		CAP, CER 1000P-50V	S323	87-A90-164-080		SW,TACT SKQAB(N)
C220	87-018-205-080		CAP, CERA-SOL 0.022	S324	87-A90-164-080		SW,TACT SKQAB(N)
C221	87-018-105-080		CAP,TC-U 12P-50 SL	S325	87-A90-164-080		SW,TACT SKQAB(N)
C222	87-018-128-080		CAP, CERA-SOL SS 560P	S329	87-A90-164-080		SW,TACT SKQAB(N)
C224	87-018-205-080		CAP, CERA-SOL 0.022	S330	87-A90-164-080		SW,TACT SKQAB(N)<3HR>
C230	87-A11-140-080		CAP,TC U 0.047-50 K B	VR401	86-NFA-607-010		VR,RTRY 10K15AX1<HR>
C231	87-015-681-040		E/CAP 10-16				
C232	87-A11-140-080		CAP,TC U 0.047-50 K B				
AC1 C.B							
C234	87-A11-140-080		CAP,TC U 0.047-50 K B	△ F101	87-035-224-010		FUSE, 1.6AT<HA,LH,3HR>
C241	87-018-117-080		CAP,TC-U 68P-50 SL	△ F101	87-035-222-010		FUSE, 1AT<2HR,3EZ>
C242	87-018-117-080		CAP,TC-U 68P-50 SL	△ F101	87-035-219-010		FUSE, 500MA'T'<K,V,22EZ,23EZ>
C243	87-018-117-080		CAP,TC-U 68P-50 SL	△ FC1	87-033-213-080		CLAMP, FUSE<K,V,EZ>
C244	87-018-117-080		CAP,TC-U 68P-50 SL	△ FC2	87-033-213-080		CLAMP, FUSE<K,V,EZ>
C245	87-018-117-080		CAP,TC-U 68P-50 SL	△ FC101	87-033-147-010		FUSE CLAMP<HR,HA,LH>
C246	87-018-118-080		CAP,TC-U 82P-50 B	△ FC102	87-033-147-010		FUSE CLAMP<HR,HA,LH>
C251	87-018-117-080		CAP,TC-U 68P-50 SL	△ PT101	88-NF9-611-010		PT,8NF-9 HI-LH<HA,LH>
C252	87-018-131-080		CAP, CER 1000P-50V	△ PT101	88-NF9-608-010		PT,8NF9-EKZ<K,V,2EZ,23EZ>
C401	87-A11-154-080		CAP,TC U 4700P-16 ZF<HR>	△ PT101	8Z-NF9-622-010		PT,ZNF-9 EZ-HI<3EZ>
C402	87-010-112-040		CAP, E 100-16<HR>	△ PT101	8Z-NF9-623-010		PT,ZNF-9 HR<2HR>
C403	87-A11-149-080		CAP,TC U 0.22-50 ZF<HR>	△ PT101	8Z-NF9-610-010		PT,8NF-9 HI-HR<3HR>
C404	87-018-117-080		CAP,TC-U 68P-50 SL<HR>	△ SW101	87-A90-165-010		SW,SL 1-2-3<HR,HA,LH>
C405	87-010-400-040		CAP, E 0.47-50<HR>	△ T1	87-A60-317-010		TERMINAL,1P<K,V,EZ>
C406	87-A11-144-080		CAP,TC U 0.1-50 KB<HR>	△ T2	87-A60-317-010		TERMINAL,1P<K,V,EZ>
C407	87-015-699-040		CAP, E 10-50 7L<HR>	△ T101	87-A60-317-010		TERMINAL,1P<HR,HA,LH>
C408	87-018-118-080		CAP,TC-U 82P-50 B<HR>	△ T102	87-A60-317-010		TERMINAL,1P<HR,HA,LH>
C409	87-010-378-040		CAP,E 10-16 SME<HR>				
C410	87-A11-140-080		CAP,TC U 0.047-50 K B<HR>				
C412	87-018-131-080		CAP, CER 1000P-50V<HR>				
AC2 C.B							
C413	87-018-131-080		CAP, CER 1000P-50V<HR>	PR101	87-026-681-080		PROTR,5A 60V<3HR,33EZ,HA,LH>
C701	87-018-115-080		CAP, CER 47P-50V	PR102	87-026-681-080		PROTR,5A 60V<3HR,33EZ,HA,LH>
CN701	87-099-013-010		CONN,11P 6216 V	WH101	87-A90-459-010		HLDR,WIRE 2.5-5P
CON101	88-NF9-658-010		CONN,30P BLKTYK-B(P)				
CON102	87-099-015-010		CONN,13P 6216V				

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
DECK C.B			
CN105	87-099-753-019		CONN, 11P 9604
CN301	86-ZM3-604-219		CON ASSY, 3P-PB
CN351	86-ZM3-605-119		CON ASSY, 8P-PB
SFR1	87-024-581-019		SFR, 3.3K DIA 6H
SOL1	82-ZM1-618-410		SOL ASSY, 27
SOL2	82-ZM1-618-410		SOL ASSY, 27
SW1	87-A90-248-019		SW, MICRO ESE11SH2CXQ
SW2	87-A90-248-019		SW, MICRO ESE11SH2CXQ
SW3	87-A90-248-019		SW, MICRO ESE11SH2CXQ
SW4	87-A90-248-019		SW, MICRO ESE11SH2CXQ
SW5	87-A90-248-019		SW, MICRO ESE11SH2CXQ
W1	82-ZM1-632-019		REN-CORD, 4P-120MM

## TRANSISTOR ILLUSTRATION



E C B

KTA1266GR  
KTC3198GR  
2SC352



E C B

CSA1585BC  
CC5551  
CSA952K  
CSC2001K



B C E

2SB1370



B C E

2SC4115S



S D G

2SK2541  
2SK439E/F



S D G

2SJ460



B C E

2SB1342  
2SB1626  
2SD1933  
2SD2495

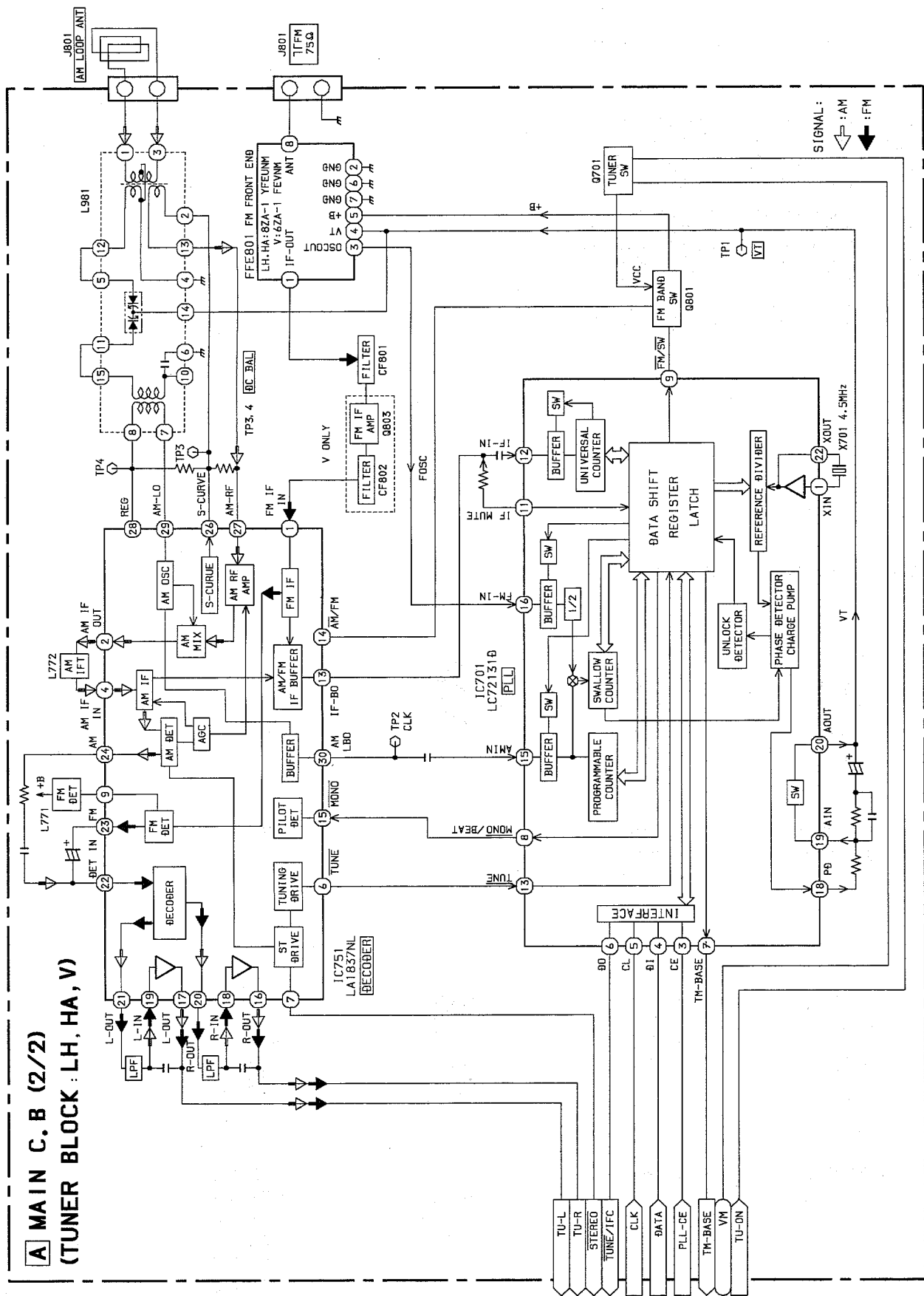


E C B

DTC144ES  
DTA114YS  
DTA114ES  
DTC114YS  
DTC114ES  
DTC143ES  
DTA144ES

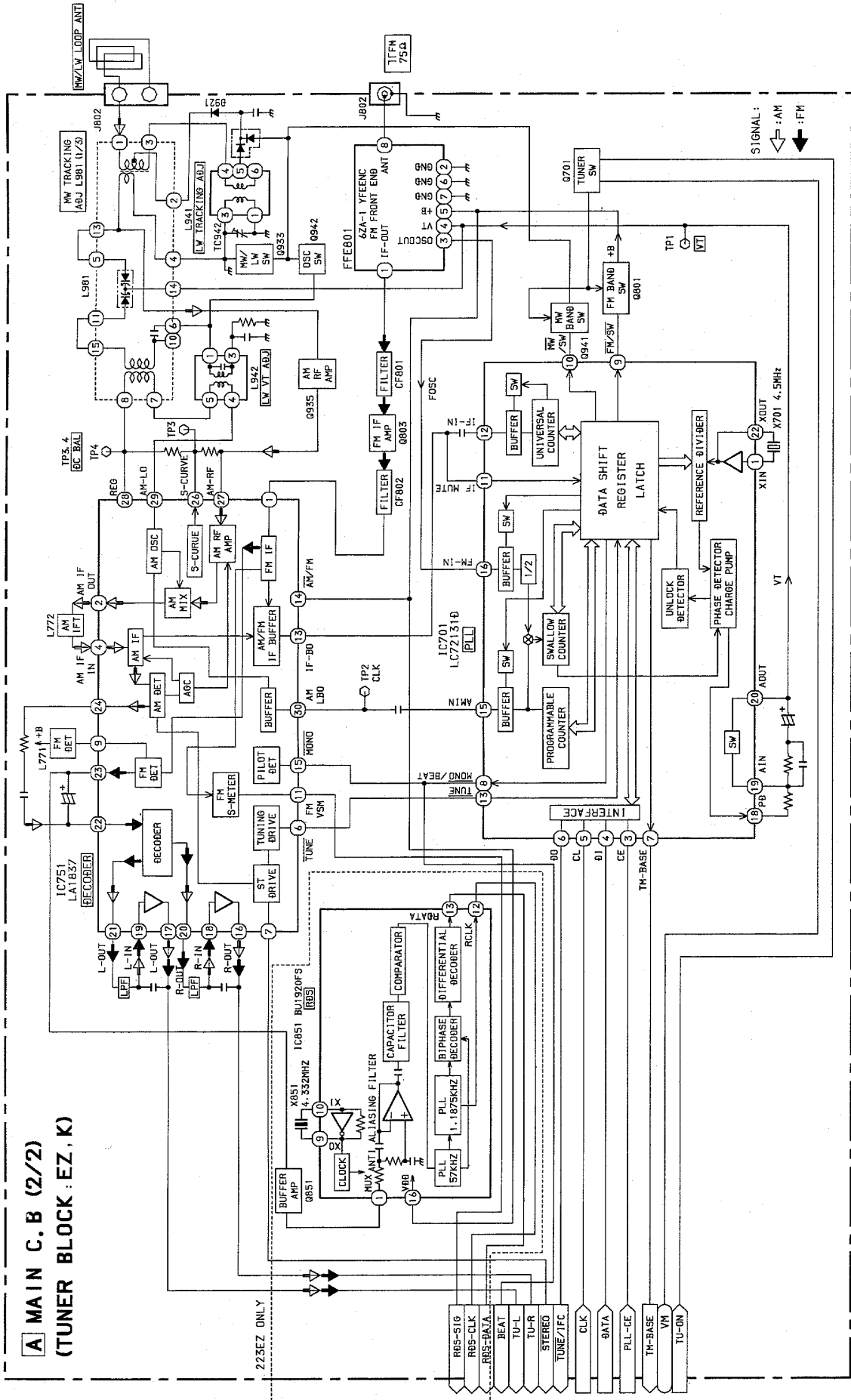
BLOCK DIAGRAM - 1 (TUNER : HA, LH, V)

**A MAIN C.B (2/2)**  
(TUNER BLOCK : LH, HA, V)

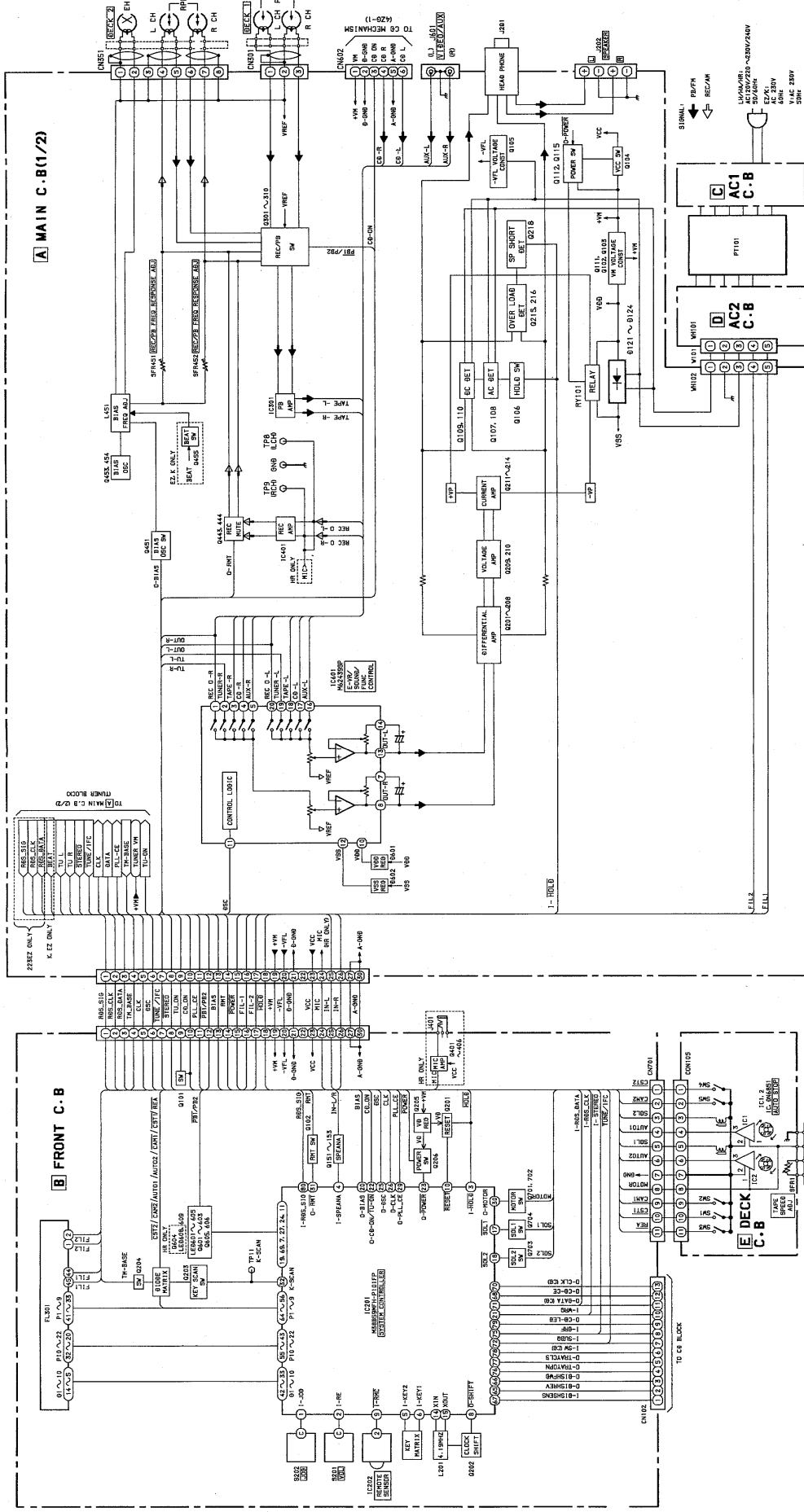




BLOCK DIAGRAM - 1 (TUNER : K, EZ)



BLOCK DIAGRAM - 4 (MAIN / FRONT)



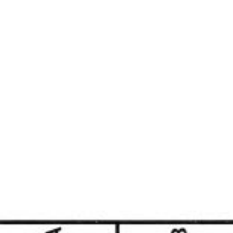
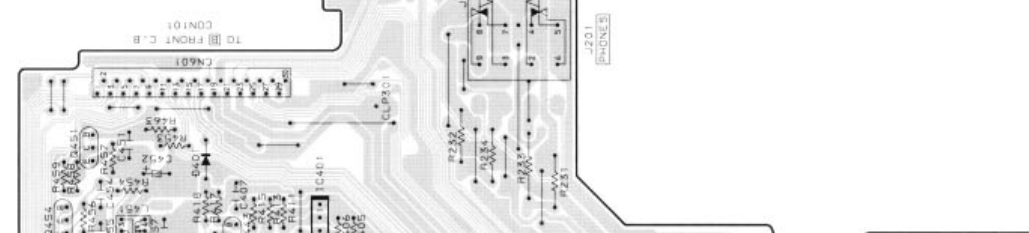
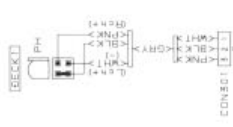
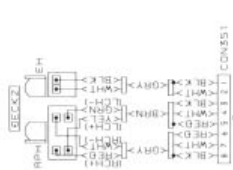
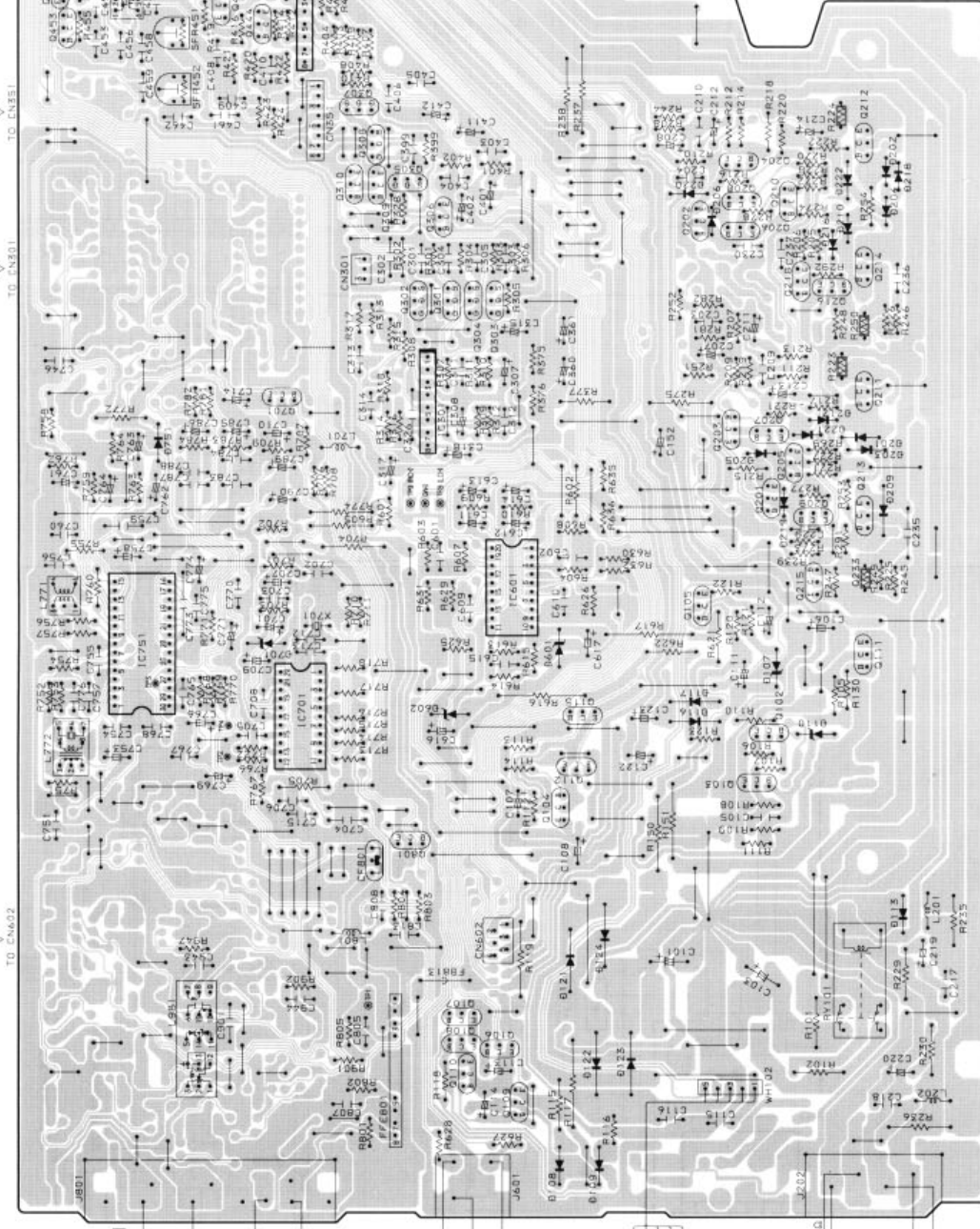
A

A MAIN C.B

TO CO MECHANISM 420-11

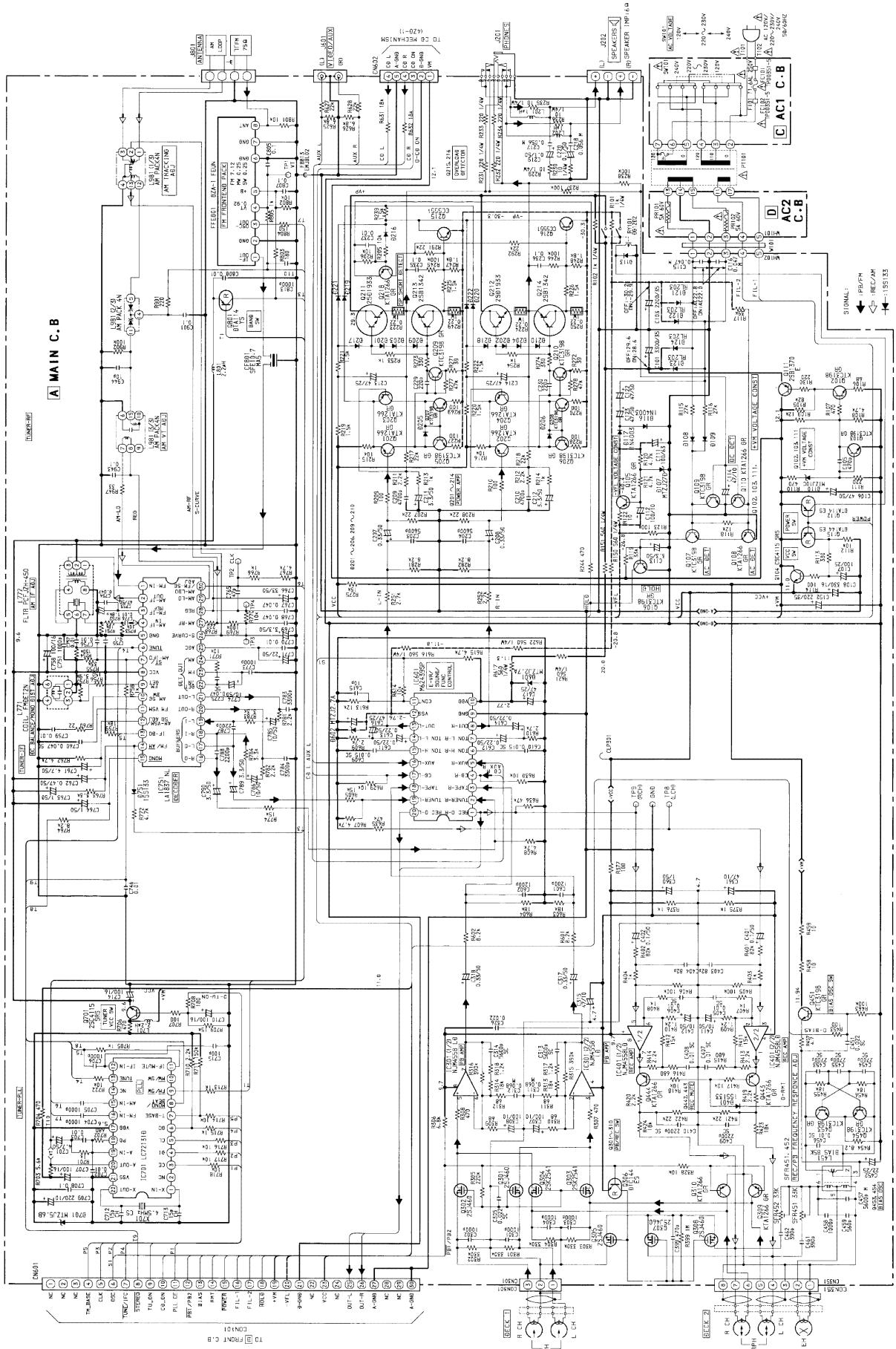
FCCE

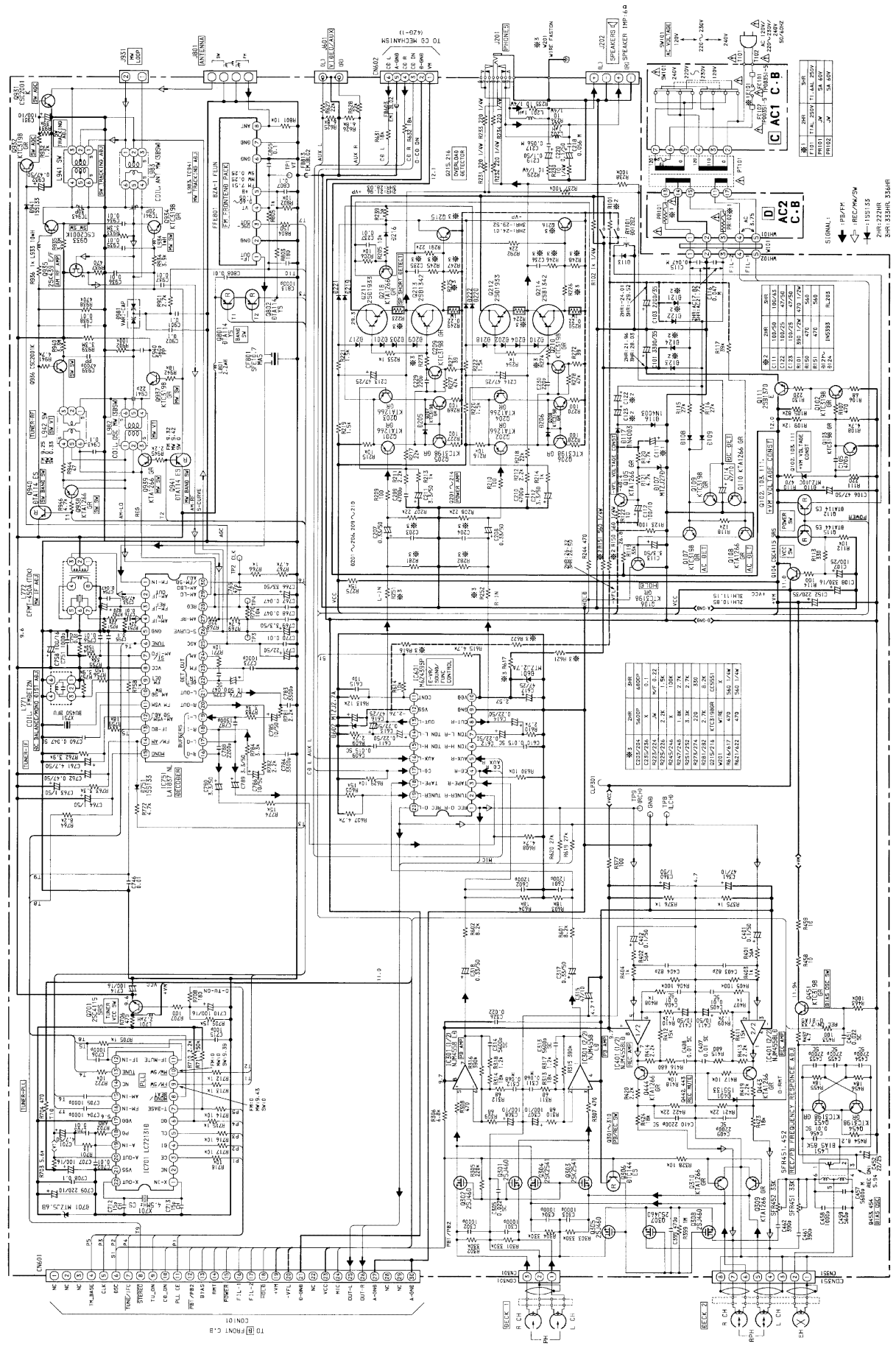
TO CM602





SCHEMATIC DIAGRAM - 1 (MAIN : HA, LH)





1 2 3 4 5 6 7 8 9 10 11 12 13 14

A B C D E F G H I J

# A MAIN C.B

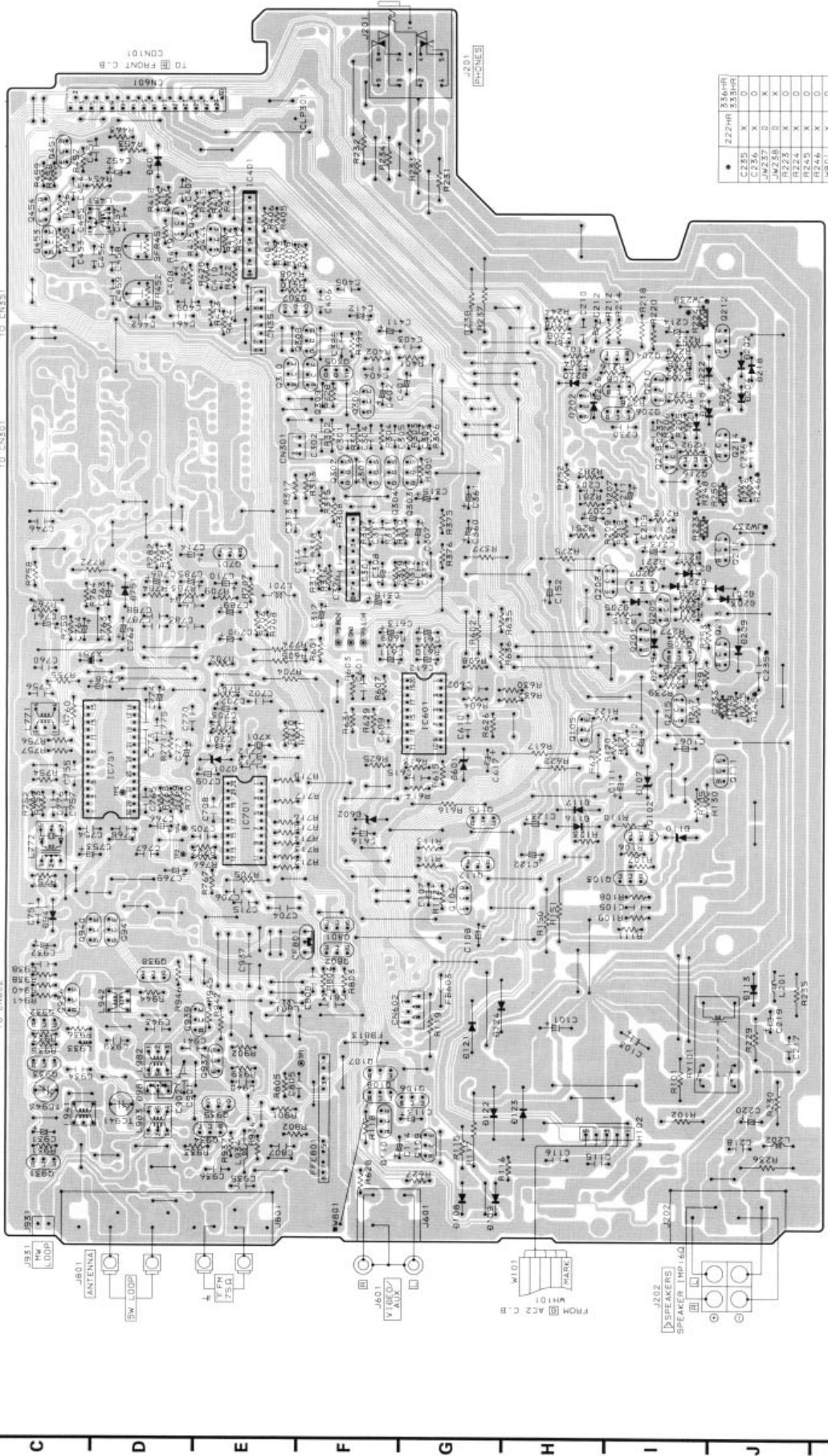
TO LG MECHANISM (420-1)

FCCS

TO CM602

TO CM501

TO CM501



	222HR	336HR
C285	X	O
C286	X	O
J4257	O	X
J4258	O	X
R224	X	O
R245	X	O
R246	X	O
WB51	X	O

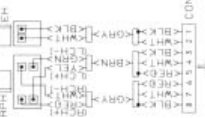
# A MAIN C.B

TO CG MECHANISM 14-20-11

FCCZ

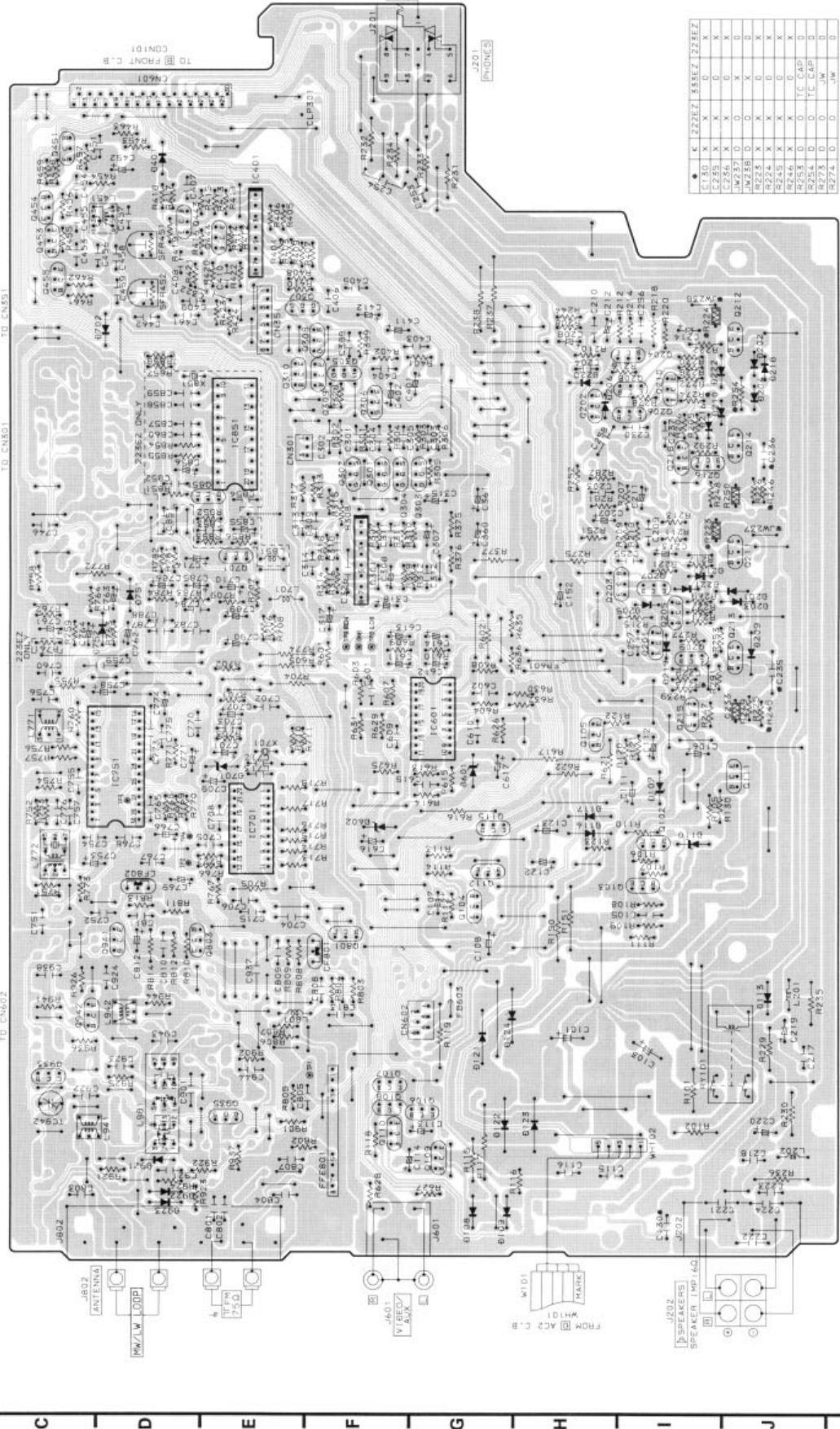
TO CN602

BECKZ



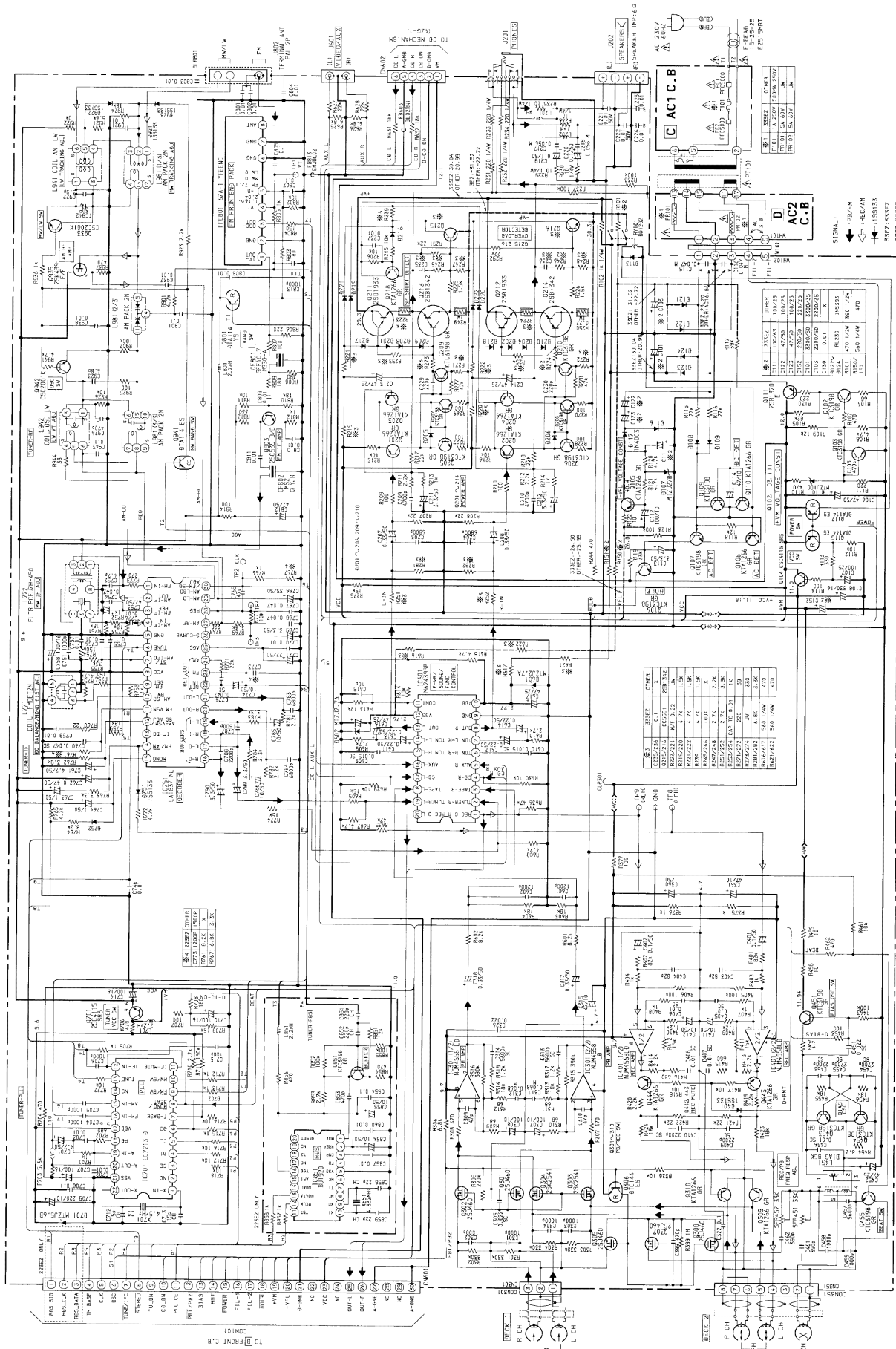
TO CN501

TO CN501

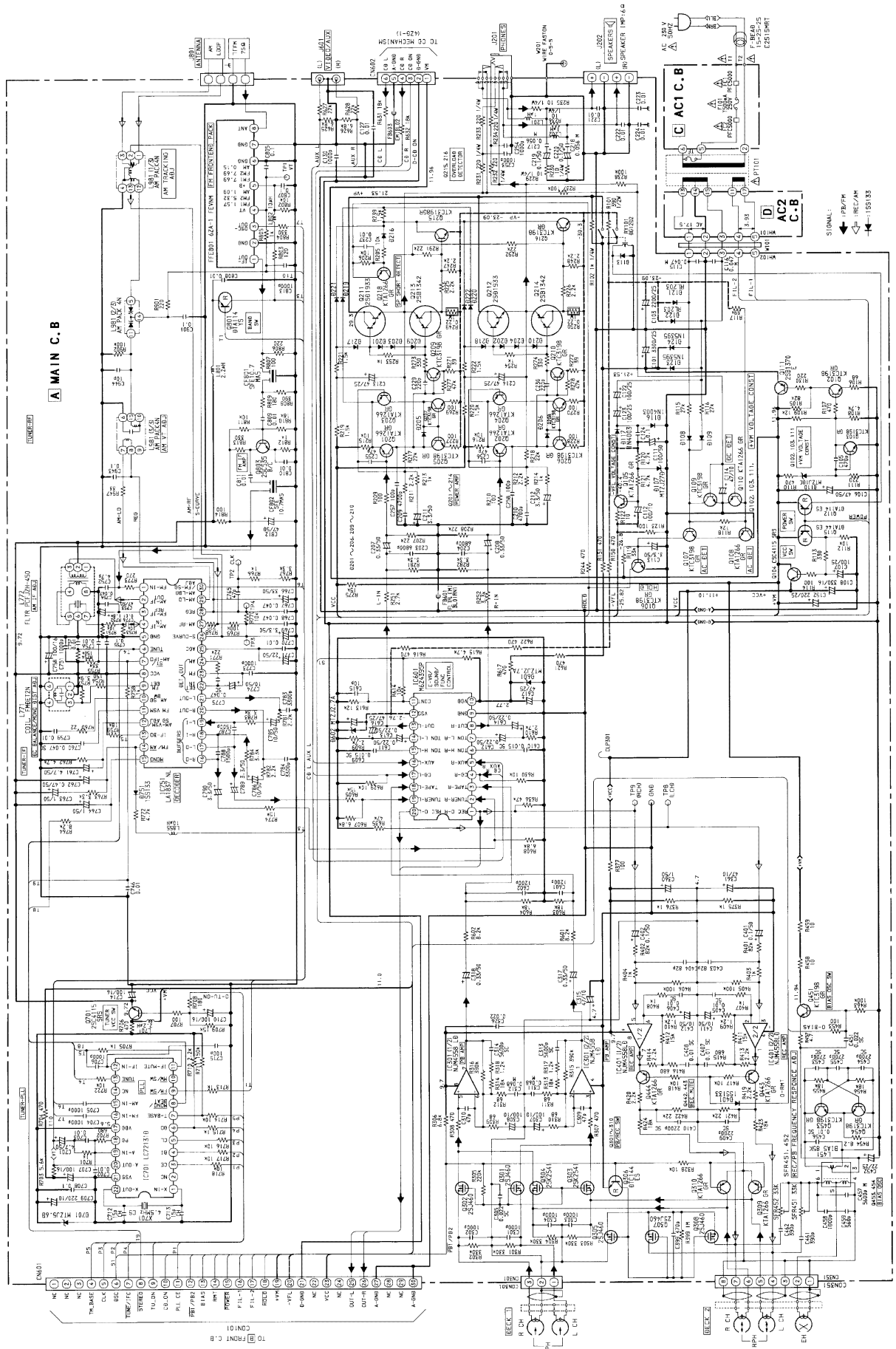


	C	Z	2	2	2	Z	2	2	Z	2	2	Z	2	2	Z	2	2	Z	2	2
C140	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
C256	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
JW237	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	
JW258	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	
J224	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
R245	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
R246	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
R253	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D		
R273	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D		
R274	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D		

SCHEMATIC DIAGRAM - 3 (MAIN : K.EZ)



SCHEMATIC DIAGRAM - 4 (MAIN : V)



1 2 3 4 5 6 7 8 9 10 11 12 13 14

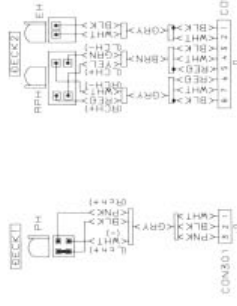
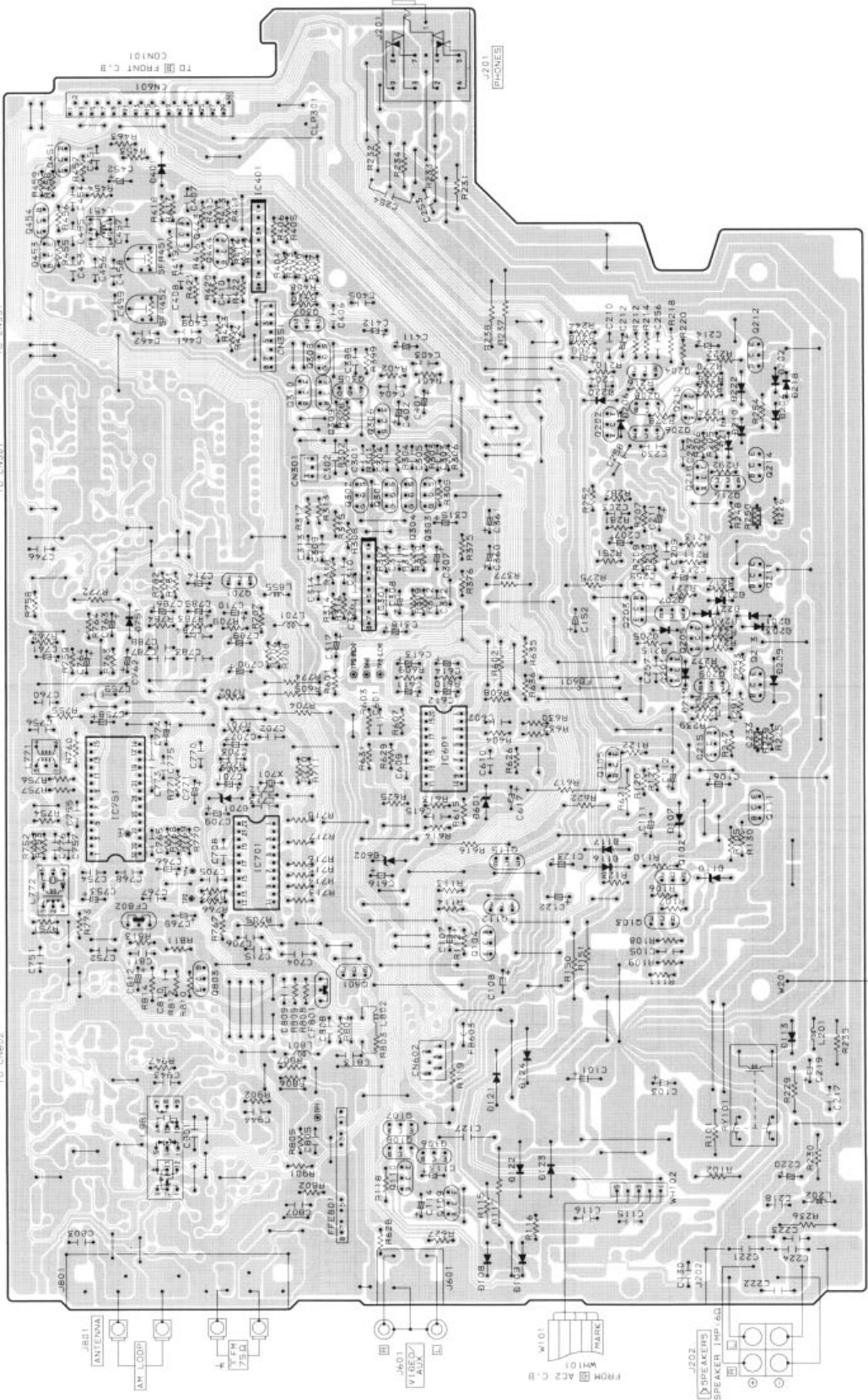
A

# A MAIN C.B

TO CB MECHANISM (420-13)



TO DM402



TO CN351

TO CN351

TO CN101

TO FRONT C.B

TO CN401

TO CN401

TO CN401

TO CN401

TO CN401

TO CN401

TO CN401

TO CN401

TO CN401

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TO CN401

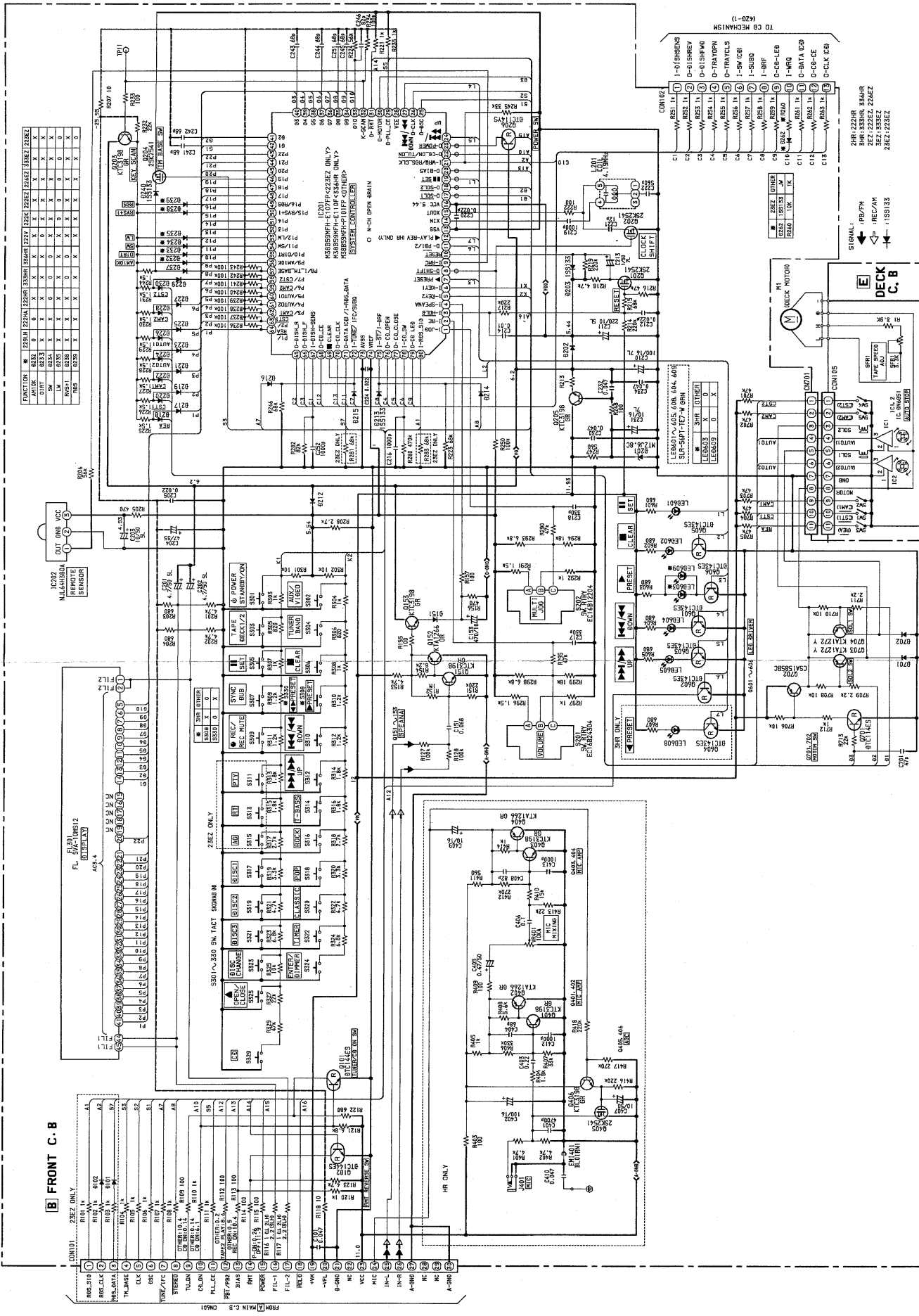
TO CN401

TO CN401

TO CN401

TO CN401

SCHEMATIC DIAGRAM - 5 (FRONT)

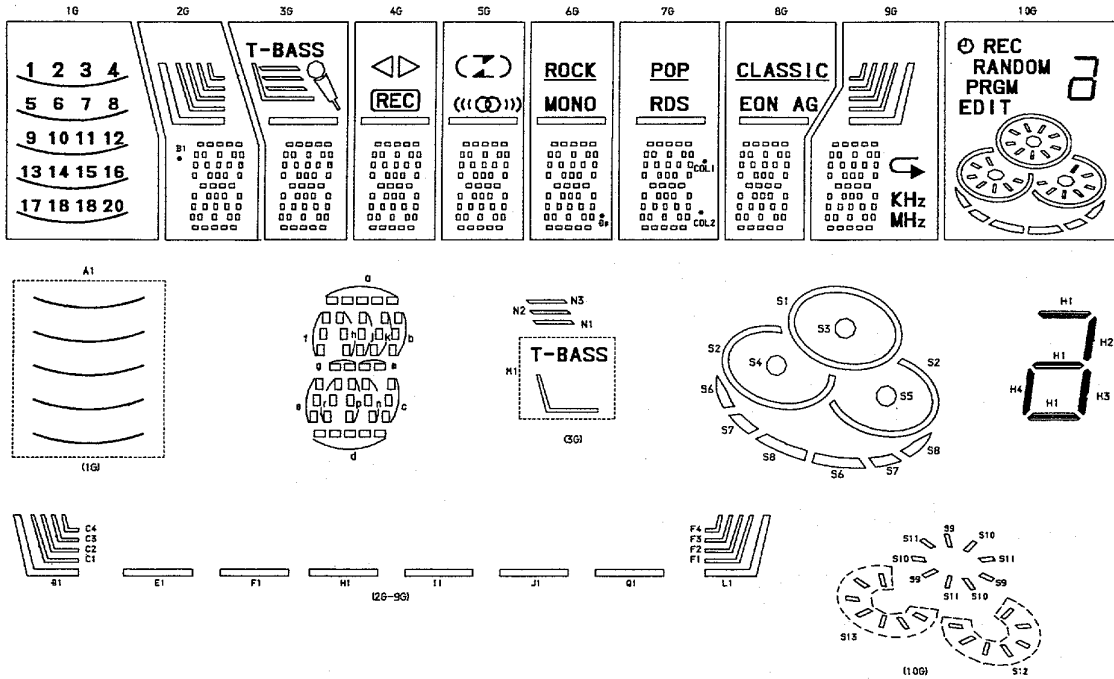






# FL GRID ASSIGNMENT & ANODE CONNECTION

## GRID ASSIGNMENT

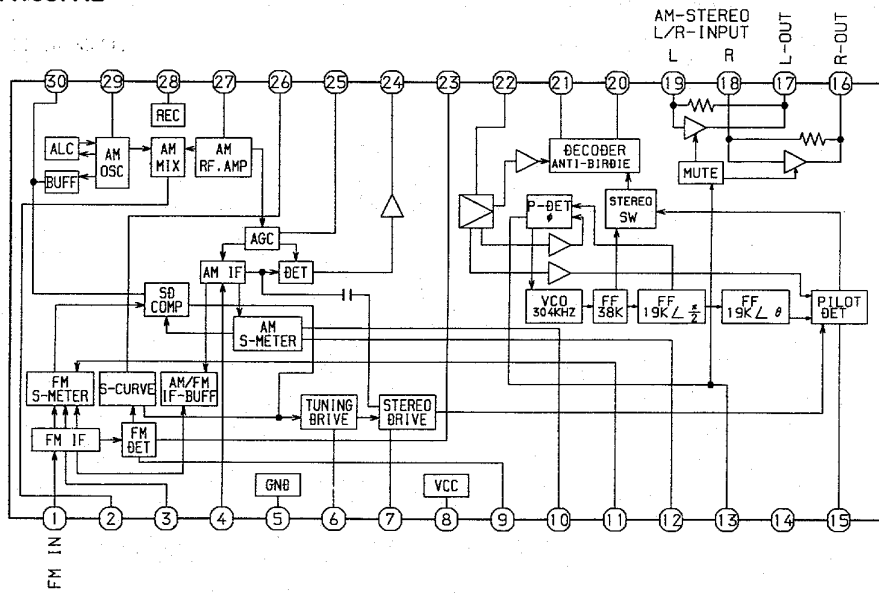


## ANODE CONNECTION

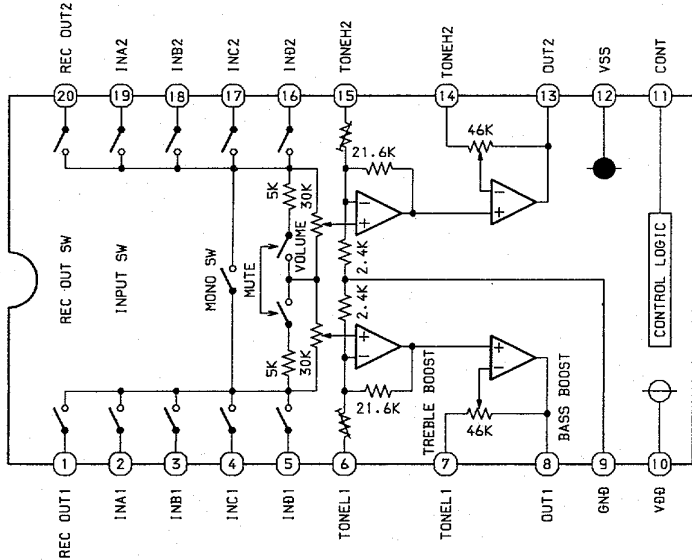
	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G
P1	20	d	d	d	d	d	d	d	d	S1
P2	19	n	n	n	n	n	n	n	n	S9
P3	18	p	p	p	p	p	p	p	p	S10
P4	17	r	r	r	r	r	r	r	r	S11
P5	16	e	e	e	e	e	e	e	e	S3
P6	15	c	c	c	c	c	c	c	c	S2
P7	14	g	g	g	g	g	g	g	g	S13
P8	13	m	m	m	m	m	m	m	m	S4
P9	12	f	f	f	f	f	f	f	f	S12
P10	11	b	b	b	b	b	b	b	b	S5
P11	10	k	k	k	k	k	k	k	k	S6
P12	9	j	j	j	j	j	j	j	j	S7
P13	8	h	h	h	h	h	h	h	h	S8
P14	7	a	a	a	a	a	a	a	a	EDIT
P15	6	θ1	E1	F1	H1	θp	COL2	Q1	MHz	PRGM
P16	5	C1	M1	REC	((∞))	I1	COL1	EON	KHz	RANDOM
P17	4	C2	N1	◀	⌒	MONO	J1	AG	↶	REC
P18	3	C3	N2	▶	⌒	—	RDS	—	L1	⌚
P19	2	C4	N3	/	⌒	ROCK	—	CLASSIC	F1	H1
P20	1	B1	/	/	/	POP	/	/	F2	H2
P21	A1	/	/	/	/	/	/	/	F3	H3
P22	/	/	/	/	/	/	/	/	F4	H4

# IC BLOCK DIAGRAM

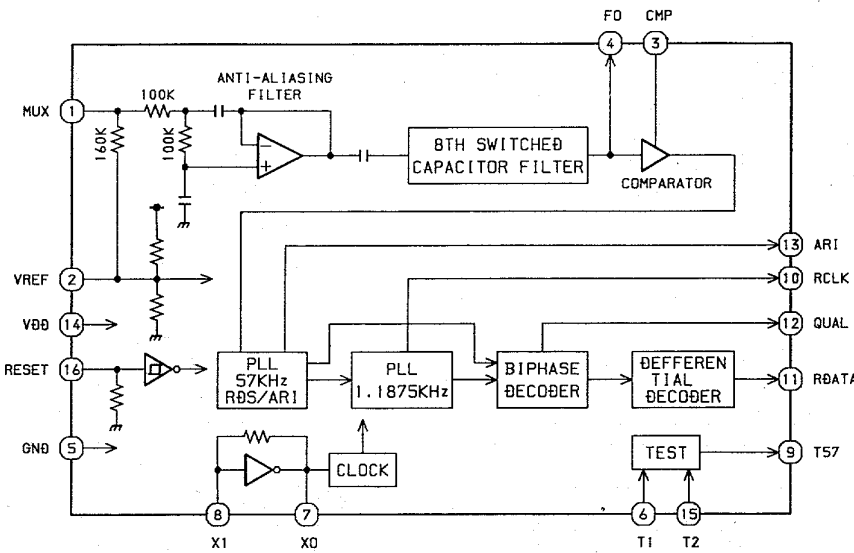
IC, LA1837NL

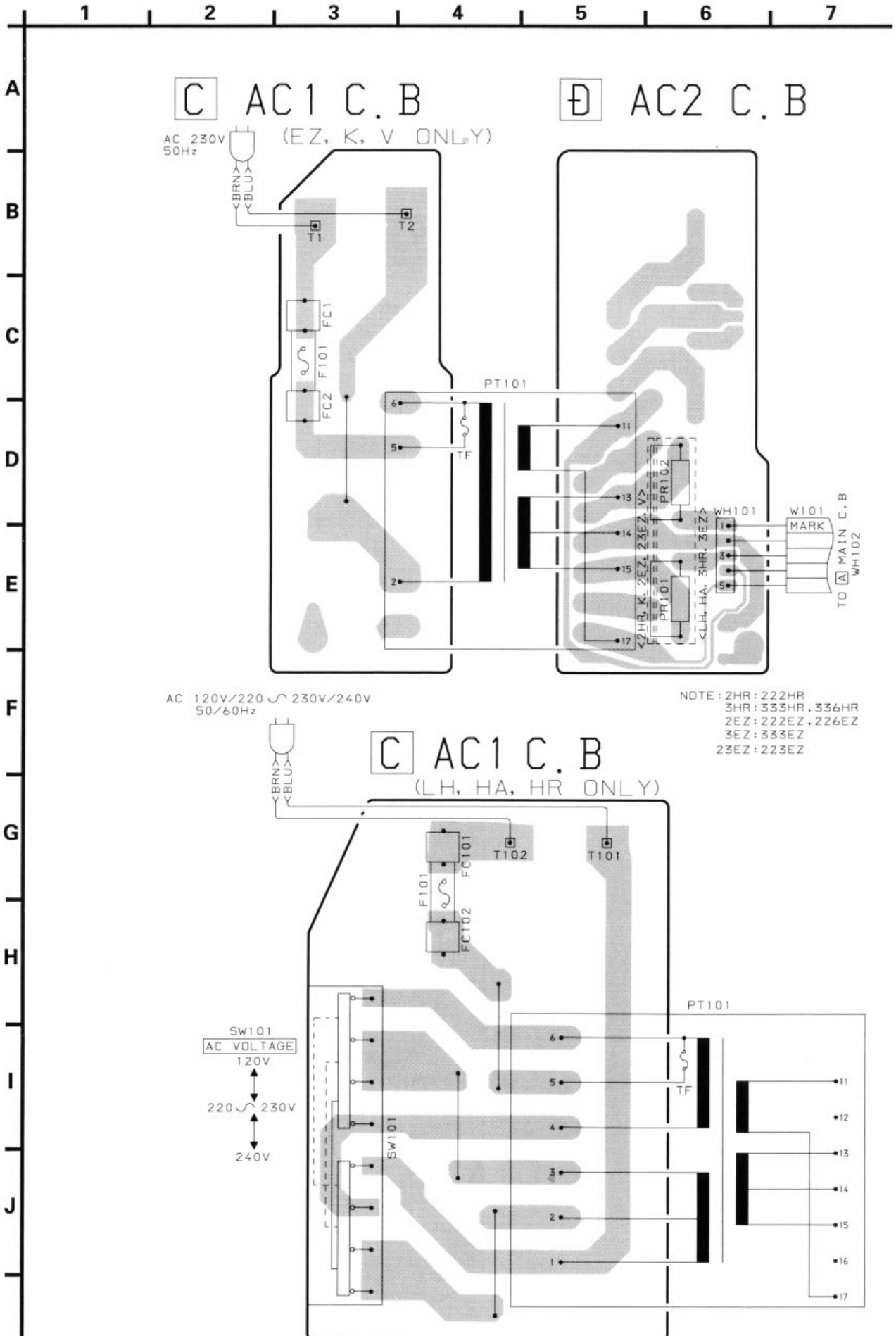


IC, M62439SP

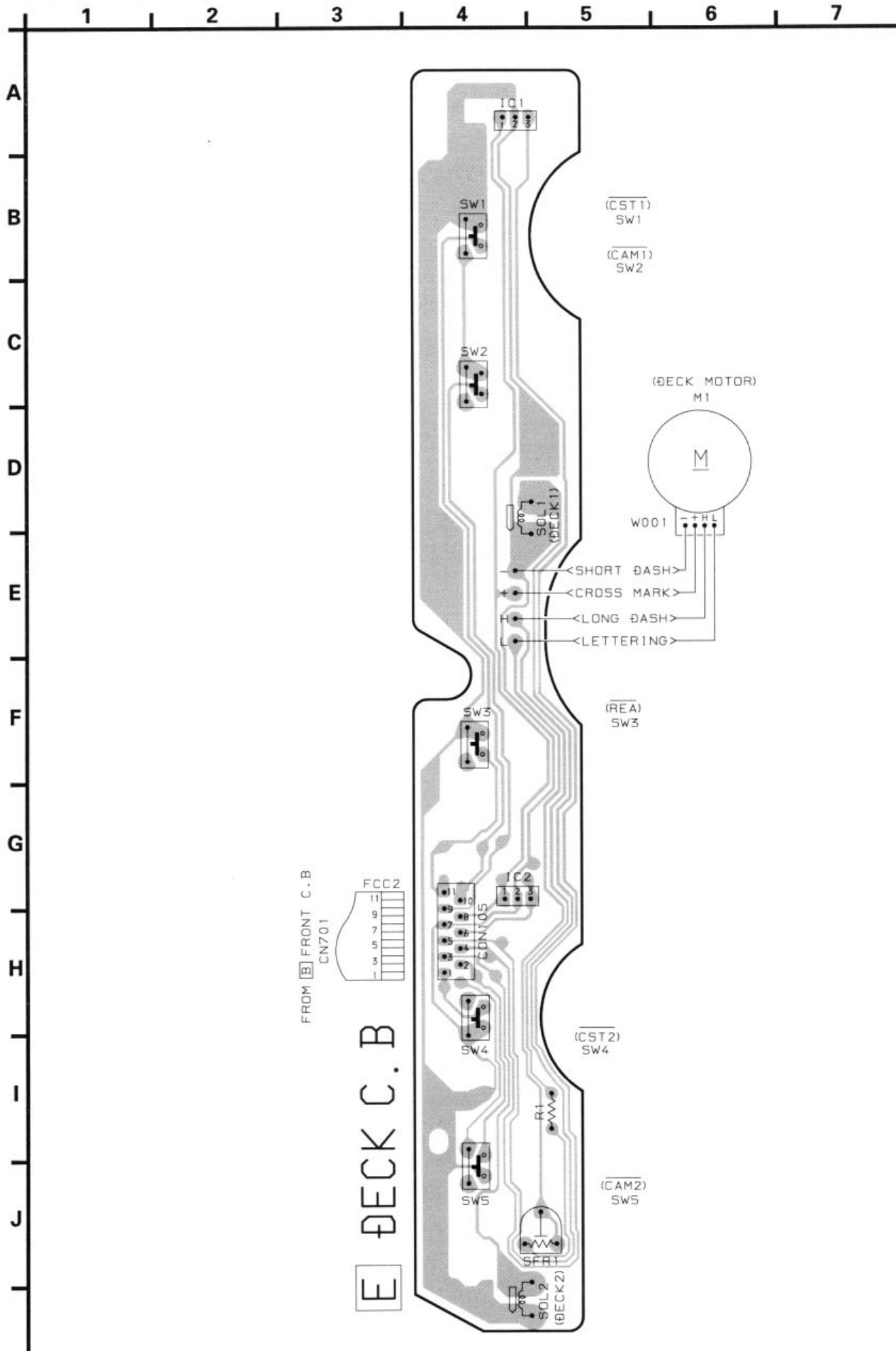


IC, BU1920FS





WIRING - 7 (DECK)



# IC DESCRIPTION

## IC, LC72131D

Pin No.	Pin Name	I/O	Description																								
1	XIN	I/O	A crystal oscillator (4.5MHz) is connected between these pins.																								
22	XOUT																										
2	NC	-	Not used.																								
3	CE	I	To enable the IC. Active "H".																								
4	DI	I	Serial data input from CPU ( $\mu$ P M38B59MFH-P101FP) when relevant key is operated. Active "H".																								
5	CL	I	Synchronization clock for serial data in (DI) or serial data out (DO).																								
6	DO	O	Serial data output to CPU ( $\mu$ P M38B59MFH).																								
7	T-BASE	O	Outputs a reference clock signal (8Hz) for the clock.																								
8	MONO / BEAT	O	Outputs "H" when MONO / BEAT is switched.																								
9	$\overline{\text{FM}} / \overline{\text{SW}}$	O	Output "L" or "H" as follows: <table border="1" style="margin-left: 20px;"> <thead> <tr> <th colspan="2">2 BAND</th> <th colspan="3">3 BAND</th> <th colspan="3">3 BAND</th> </tr> <tr> <th>AM</th> <th>FM</th> <th>LW</th> <th>MW</th> <th>FM</th> <th>MW</th> <th>SW</th> <th>FM</th> </tr> </thead> <tbody> <tr> <td>H</td> <td>L</td> <td>H</td> <td>H</td> <td>L</td> <td>H</td> <td>L</td> <td>L</td> </tr> </tbody> </table>	2 BAND		3 BAND			3 BAND			AM	FM	LW	MW	FM	MW	SW	FM	H	L	H	H	L	H	L	L
2 BAND		3 BAND			3 BAND																						
AM	FM	LW	MW	FM	MW	SW	FM																				
H	L	H	H	L	H	L	L																				
10	$\overline{\text{MW}}/\overline{\text{SW}}$	O	Outputs "L" or "H" as follows: <table border="1" style="margin-left: 20px;"> <thead> <tr> <th colspan="2">2 BAND</th> <th colspan="3">3 BAND</th> <th colspan="3">3 BAND</th> </tr> <tr> <th>AM</th> <th>FM</th> <th>LW</th> <th>MW</th> <th>FM</th> <th>MW</th> <th>SW</th> <th>FM</th> </tr> </thead> <tbody> <tr> <td>L</td> <td>L</td> <td>H</td> <td>L</td> <td>L</td> <td>L</td> <td>H</td> <td>L</td> </tr> </tbody> </table>	2 BAND		3 BAND			3 BAND			AM	FM	LW	MW	FM	MW	SW	FM	L	L	H	L	L	L	H	L
2 BAND		3 BAND			3 BAND																						
AM	FM	LW	MW	FM	MW	SW	FM																				
L	L	H	L	L	L	H	L																				
11	IF-MUTE	O	To control internal counter.																								
12	IF-IN	I	General purpose counter input.																								
13	$\overline{\text{TUNE}}$	I	Receives "L" when station is tuned.																								
14	NC	-	Not used.																								
15	AM-IN	I	Receives the AM local oscillator frequency signal.																								
16	FM-IN	I	Receives the FM local oscillator frequency signal.																								
17	VDD	-	Supply power to IC (+5V).																								
18	PD	O	PLL charge pump output.																								
19	A-IN	I	The MOS transistor for PLL active low pass filter.																								
20	A-OUT	O																									
21	VSS	-	Ground.																								

IC, M38B59MFH-E107FP/E110F/9101

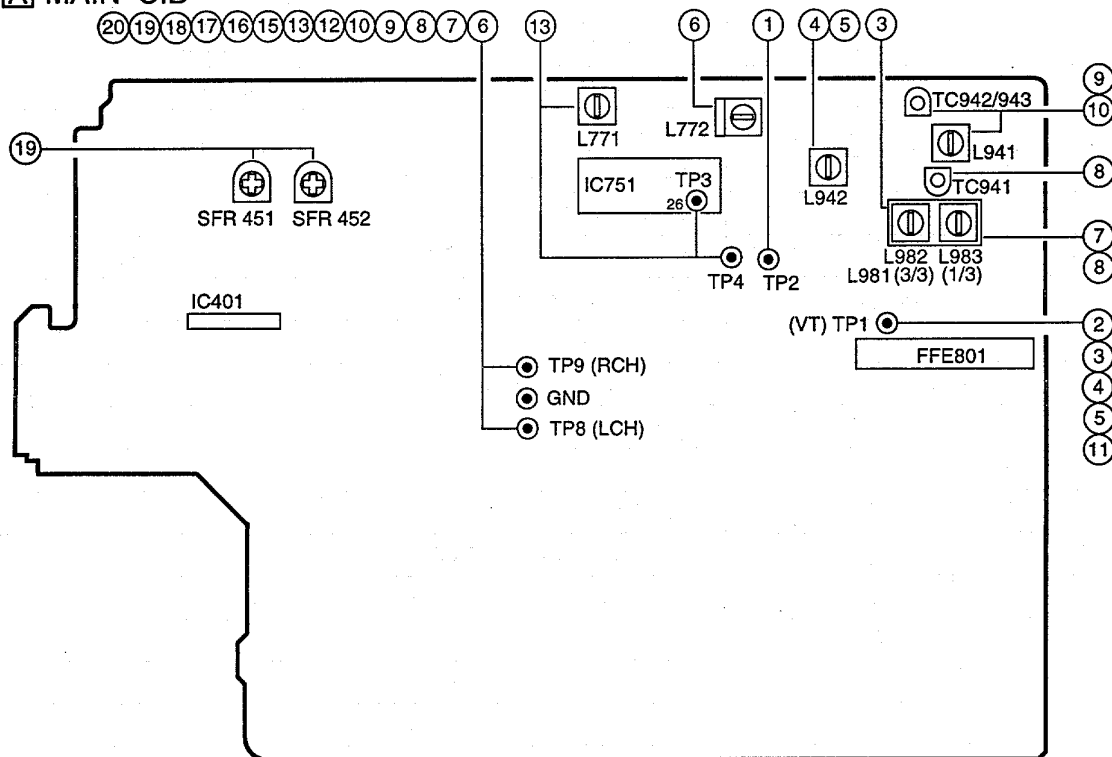
Pin No.	Pin Name	I/O	Description
1	I-JOG	I	Multi Jog A/D input.
2	I-RE	I	Volume A/D input.
3	I-HOLD	I	Power failure detection, "L" to stop clock and main memory.
4	I-SPEANA	I	A/D input for spectrum analyser level display.
5,6	I-KEY 2,1	I	KEY 2,1 A/D input.
7	►PRESET	O	►PRESET LED ON/OFF output.
8	O-SHIFT	O	Microprocessor clock shift output.
9	I-RMC	I	System remote control input.
10	I-RESET	I	System reset.
11	O-PB1/PB2	O	Playback DECK1 and DECK2 switch output.
12	◄PLAY-REV	O	◄ LED ON/OFF output. (HR only)
13	VSS	-	GND.
14,15	XIN, XOUT	I/O	4.19MHz oscillator circuit.
16	VCC	-	Power supply.
17	O-SOL1	O	DECK 1 solenoid output.
18	O-SOL2	O	DECK 2 solenoid output.
19	▯▯SET	O	▯▯SET LED ON/OFF output.
20	O-BIAS	O	DECK bias ON/OFF output.
21	I-WRQ/RDS_CLK	I	CD WRQ input / Tuner RDS clock input<223EZ>.
22	O-CD_ON/TU_ON	O	CD power ON/OFF output / Tuner power ON/OFF output.
23	O-POWER	O	System power supply ON/OFF output.
24	►►/►►UP	O	►►/►►UP LED ON/OFF output.
25	O-DSC	O	E-VR / SOUND / FUNCTION IC data output/ PLL shift register data output.
26	O-CLK	O	CLK for PLL shift register.
27	◄◄/◄◄DOWN	O	◄◄/◄◄DOWN LED ON/OFF output.
28	VEE	-	Power supply for FL display.
29	O-PLL_CE	O	PLL IC chip enable output.
30	O-MOTOR	O	DECK motor ON/OFF output.
31	O-RMT	O	DECK2 REC MUTE ON/OFF output.
32	K-SCAN	O	Key scan output.
33~42	G10~G1	O	FL grid G10~G1 output.
43~48	P22~P17	O	FL segment P22~P17 output.
49	P16/RDS	O/I	FL segment P16 output / RDS data input<223EZ>.
50	P15/RVS+1	O/I	FL segment P15 output / RVS+1 data input<333HR,336HR>.
51	P14	O	FL segment P14 output .
52	P13	O	FL segment P13 output.
53	P12/LW	O/I	FL segment P12 output / LW data input<K,EZ>.
54	P11/SW	O/I	FL segment P11 output / SW data input<HR>.
55	P10/OIRT	O/I	FL segment P10 output / OIRT data input<V>.
56	P9/AM10K	O/I	FL segment P9 output / AM10K data input<LH,HA>.
57	P8/I-TM_BASE	O/I	FL segment P8 output / TM-BASE data input.
58	P7/CST2	O/I	FL segment P7 output / DECK 2 cassette detect switch data input.

Pin No.	Pin Name	I/O	Description
59	P6/ $\overline{\text{CAM2}}$	O/I	FL segment P6 output / DECK2 CAM switch data input.
60	P5/AUTO1	O/I	FL segment P5 output / DECK1 AUTO stop switch data input.
61	P4/AUTO2	O/I	FL segment P4 output / DECK2 AUTO stop switch data input.
62	P3/ $\overline{\text{CAM1}}$	O/I	FL segment P3 output / DECK1 CAM stop switch data input.
63	P2/ $\overline{\text{CST1}}$	O/I	FL segment P2 output / DECK1 cassette detect switch data input.
64	P1/ $\overline{\text{REA}}$	O/I	FL segment P1 output / DECK2 side A record OK switch data input.
65	O-DISH_R	O	CD turntable reverse rotation output.
66	O-DISH_F	O	CD turntable forward rotation output.
67	I-DISH_SENS	I	CD turntable photo sensor input.
68	O-CD_CE	O	CD enable output.
69	■CLEAR	O	■CLEAR LED ON/OFF output.
70	O-CD_CLK	O	CD clock output.
71	O-CD/I-RDS_DATA	O/I	CD data output / Tuner RDS data input<223EZ>.
72	I-TUNE/IFC/SUBQ	I	Tuner TUNE input / Tuner IF count serial data input / CD SUBQ data input.
73	AVSS	-	GND.
74	VREF	-	Power supply.
75	I-ST/I-DRF	I	Tuner STEREO input / CD DRF input.
76	O-CD_OPEN	O	CD tray open data output.
77	O-CD_CLOSE	O	CD tray close data output.
78	I-CD_SW	I	CD mecha switch input.
79	O-CD_LED	O	CD flash window LED output.
80	I-RDS_SIG	I	Tuner RDS signal input<223EZ>.

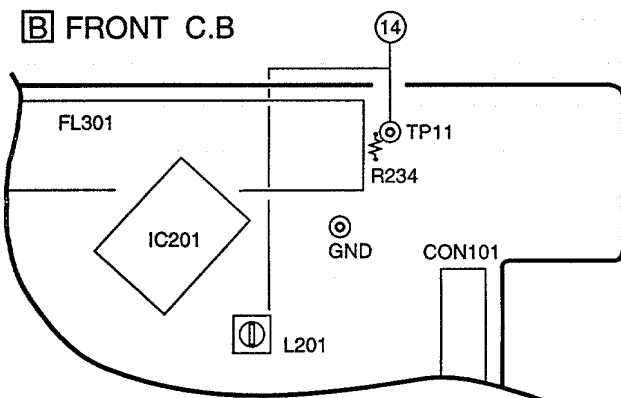


# ADJUSTMENT <TUNER / DECK>

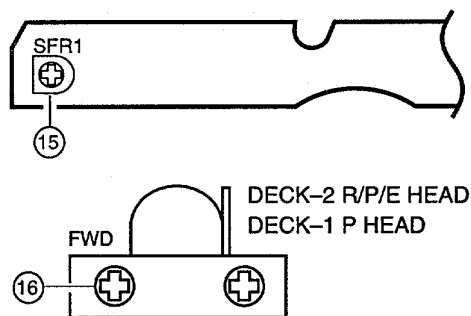
## A MAIN C.B



## B FRONT C.B



## E DECK C.B



### < TUNER SECTION >

#### 1. Clock Frequency Check

Settings : • Test point : TP2

Method : <HA,LH>

Set to AM 1710kHz and check that the test point is 2160kHz  $\pm$  45Hz.

<HR,K,V,EZ>

Set to AM 1602kHz and check that the test point is 2052kHz  $\pm$  45Hz.

#### 2. AM/MW VT Check

Settings : • Test point : TP1

Method : <HA,LH>

Set to AM 1710kHz and AM 530kHz and check that the test point is less than 8.5V(1710kHz) and more than 0.6V(530kHz).

<K,V,EZ>

Set to AM 1602kHz and AM 531kHz and check that

the test point is less than 8.0V(1602kHz) and more than 0.6V(531kHz).

#### 3. MW VT Adjustment <HR>

Settings : • Test point : TP1 (VT)

• Adjustment location : L982

Method : Set to MW 1710kHz and adjust L982 so that the test point becomes 8.0V  $\pm$  0.05V. Then check that the test point is more than 0.3V (530kHz).

#### 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 becomes 6.0V  $\pm$  0.05V. Then check that the test point is more than 0.3V (5.9MHz).

5. LW VT Adjustment <EZ,K>  
 Settings : • Test point : TP1 (VT)  
 • Adjustment location : L942  
 Method : Set to LW 144kHz and adjust L942 so that the test point is  $1.3V \pm 0.05V$ . Then check that the test point is less than 8.0V (290kHz).
6. AM /MW IF Adjustment  
 Settings : • Test point : TP8(Lch), TP9(Rch)  
 • Adjustment location : L772 ..... 999/1000kHz  
 Method : The output level at 999/1000kHz is adjusted to maximum by L772.
7. AM/MW Tracking Adjustment <HA,LH,K,V,EZ>  
 Settings : • Test point : TP8(Lch), TP9(Rch)  
 • Adjustment location : L981(1/3) .... 999/1000kHz  
 Method : The output level at 999/1000kHz is adjusted to maximum by L981(1/3).
8. MW Tracking Adjustment <HR>  
 Settings : • Test point : TP8(Lch), TP9(Rch)  
 • Adjustment location : L983 ..... 603kHz  
 TC941 ..... 1404kHz  
 Method : Set up TC941 to center before adjustment. The output level at 603kHz is adjusted to maximum by L983. Then the output level at 1404kHz is adjusted to maximum by TC941.
9. LW Tracking Adjustment <EZ,K>  
 Settings : • Test point : TP8(Lch), TP9(Rch)  
 • Adjustment location : L941 ..... 144kHz  
 TC942 ..... 290kHz  
 Method : Set up TC942 to center before adjustment. The output level at 144kHz is adjusted to maximum by L941. Then the level at 290kHz is adjusted to maximum by TC942.
10. SW Tracking Adjustment <HR>  
 Settings : • Test point : TP8(Lch), TP9(Rch)  
 • Adjustment location : L941 ..... 5.9MHz  
 TC943 ..... 17.9MHz  
 Method : Set up TC943 to center before adjustment. The output level at 5.9MHz is adjusted to maximum by L941. Then the output level at 17.9 MHz is adjusted to maximum by TC943.
11. FM VT Check  
 Settings : • Test point : TP1  
 Method : <HA,LH,K,EZ>  
 Set to FM 108.0MHz and check that the test point is less than 8.0V. Set to FM 87.5MHz and check that the test point is more than 0.5V.  
 <V>  
 Set to FM 108.0MHz and check that the test point is less than 9.5V. Set to FM 87.5MHz and check that the test point is more than 1.0V.
12. FM Tracking Check  
 Settings : • Test point : TP8(Lch), TP9(Rch)  
 Method : Set to FM 98.0MHz and check that the test point is less than  $9.0dB\mu V <HA, LH, HR> / 13.0dB\mu V <K, EZ> / 8.0dB\mu V <V>$ .
13. DC Balance / Mono Distortion Adjustment  
 Settings : • Test point : TP3, TP4 / TP8, TP9  
 • Adjustment location : L771 ..... 98.0MHz  
 • Input level : 60 dB $\mu$ V  
 Method : Set to FM 98.0MHz and adjust L771 so that the voltage between TP3 and TP4 becomes  $0V \pm 0.04V$ . Next, check that the distortion is less than 1.3%.
14.  $\mu$ -con OSC Adjustment  
 Settings : • Test point : TP11  
 • Adjustment location : L201  
 Method : Insert AC plug with pressing TUNER function key. Adjust L201 so that the frequency across the test point is 233.74 ~ 234.20Hz.
- < DECK SECTION >
15. Tape Speed Adjustment  
 Settings : • Test tape : TTA-100  
 • Test point : TP8, TP9  
 • Adjustment location : SFR1  
 Method : Play back the test tape and adjust SFR1 so that the frequency counter reads  $3000Hz \pm 5Hz$ .
16. Head Azimuth Adjustment (DECK 1, DECK 2)  
 Settings : • Test tape : TTA-330  
 • Test point : TP8, TP9  
 • Adjustment location : Azimuth adjustment screw  
 Method : Play back the 8kHz signal of the test tape and adjust screw so that the output becomes maximum. Perform on FWD PLAY and REV PLAY mode.
17. PB Frequency Response Check (DECK 1, DECK 2)  
 Settings : • Test tape : TTA-330  
 • Test point : TP8, TP9  
 Method : Play back the 315Hz and 8kHz signals of the test tape and check that the output ratio of the 8kHz signal with respect to that of the 315Hz signal is within 5.0dB.
18. PB Sensitivity Check (DECK 1, DECK 2)  
 Settings : • Test tape : TTA-200  
 • Test point : TP8, TP9  
 Method : Play back the test tape and check the signal level of the test point is  $110mV \pm 3.0dB$ .
19. REC/PB Frequency Response Adjustment  
 Settings : • Test tape : TTA-602  
 • Test point : TP8, TP9  
 • Input signal : 1kHz / 8kHz, -26dBV (LINE IN)  
 • Adjustment location : SFR451(LCH)  
 SFR452(RCH)  
 Method : Apply 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP8, TP9 becomes 7.5~9.5mV. Record and play back the 1kHz and 8kHz signals and adjust SFRs so that the output of the 8kHz signal becomes  $0dB \pm 0.5dB$  with respect to that of the 1kHz signal.
20. REC/PB Sensitivity Check  
 Settings : • Test tape : TTA-602  
 • Test point : TP8, TP9  
 • Input signal : 1kHz, -6dBV (LINE IN)  
 Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP8, TP9 becomes 75~95mV. Record and play back the 1kHz signals and check that the output is  $-1.0dB \pm 3.5dB$ .

# PRACTICAL SERVICE FIGURE

## <TUNER SECTION>

### <FM SECTION>

IHF Sensitivity : HA,LH,HR :  
(THD 3%) Less than 10dB $\mu$ V[at 87.5MHz]  
Less than 9dB[at 98.0/108.0MHz]  
V :  
Less than 12dB[at 70.0MHz]  
Less than 8.0dB[at 87.5/98.0/108.0MHz]  
K,EZ :  
Less than 14dB $\mu$ V[at 87.5MHz]  
Less than 13dB[at 98.0/108.0MHz]

### S/N 50dB Quieting sensitivity :

(Stereo) HA,LH,HR,V :  
Less than 35dB[at 98.0MHz]  
K,EZ :  
Less than 38dB[at 98.0MHz]  
Signal to noise ratio : More than 68dB (mono)[at 98.0MHz ]  
More than 66dB (stereo)[at 98.0MHz ]  
Distortion : Less than 1.2% (mono)[at 98.0MHz ]  
Less than 2.0% (stereo)[at 98.0MHz ]  
Stereo separation : HA,LH,HR,V :  
More than 25dB[at 98.0MHz ]  
K,EZ :  
More than 25dB[at 98.0MHz ]

### <AM/MW SECTION>

Sensitivity : Less than 60dB $\mu$ V [at 600/603kHz ]  
(S/N 20 dB) Less than 58dB $\mu$ V  
[at 999/1000/1400/1404kHz]  
Signal to noise ratio : More than 36dB(mono)[at 999/1000kHz]  
Distortion : Less than 1.5% (mono)[at 999/1000kHz]

### <SW SECTION> (HR)

Sensitivity : Less than 55dB $\mu$ V [at 5.9MHz]  
Less than 49dB $\mu$ V [at 12.0 MHz]  
Less than 42dB $\mu$ V [at 17.9MHz]  
Distortion : Less than 10% [at 12.0MHz]

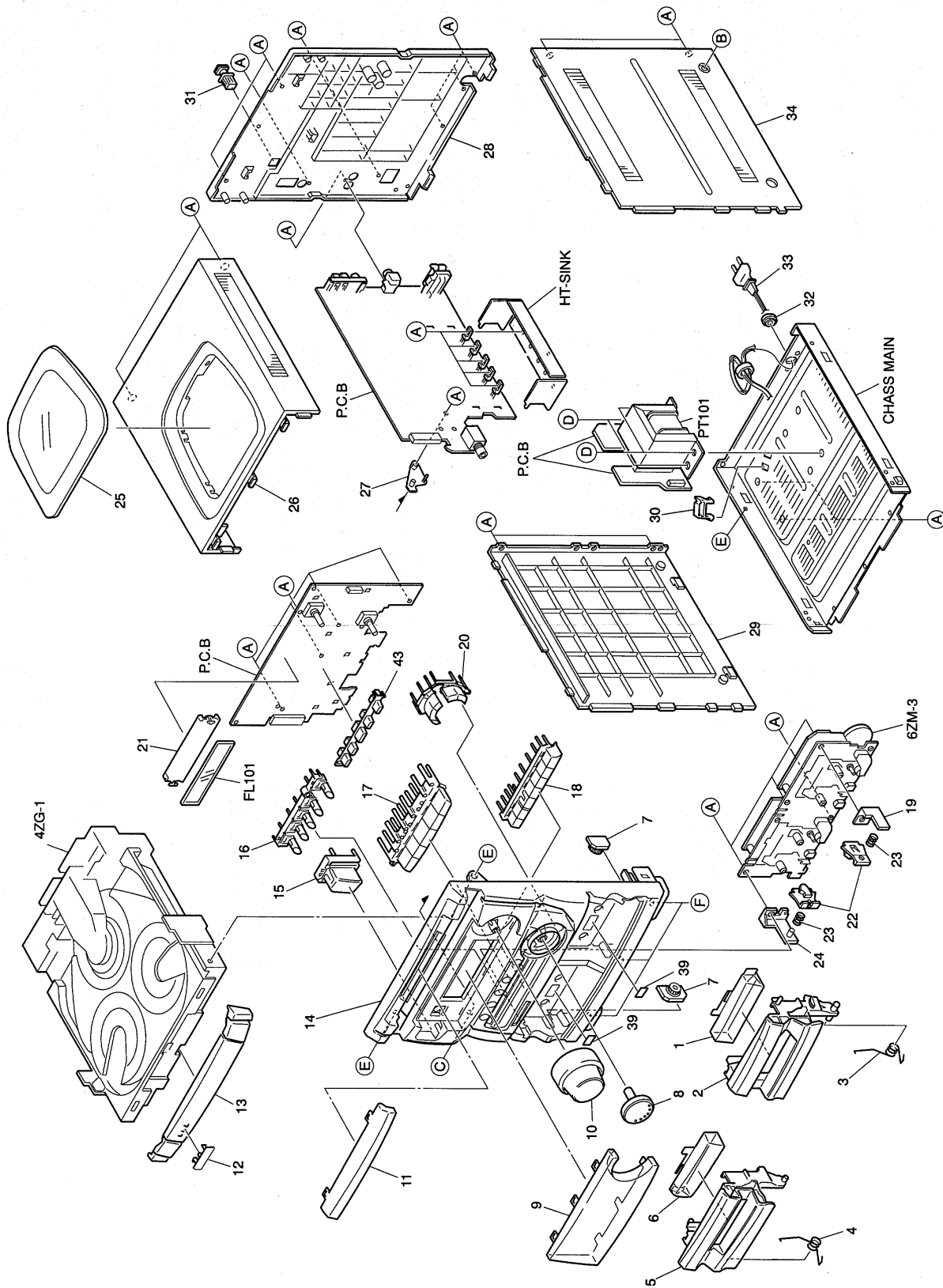
### <LW SECTION> (K,EZ)

Sensitivity : Less than 70dB [at 144kHz]  
Less than 66dB [at 198kHz]  
Less than 66dB [at 290kHz]

## <DECK SECTION>

Tape speed : 3000Hz  $\pm$  45Hz(TTA-100)  
Wow & flutter : Less than 0.25% (R.M.S)  
Take-up torque : 30 ~ 55g/cm (FWD, REV)  
F.F torque : 75 ~ 180g/cm  
REW torque : 75 ~ 130g/cm  
Back tension : 2 ~ 7g/cm  
PB Output level : 3.0V  $\pm$  3dB  
Distortion (REC/PB) : Less than 2.0% (TTA-602)  
Noise level (PB) : Less than 20mV (TTA-602)  
Noise level (REC/PB) : Less than 30mV(TTA-602)

MECHANICAL EXPLODED VIEW 1 / 1



# MECHANICAL PARTS LIST 1 / 1

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

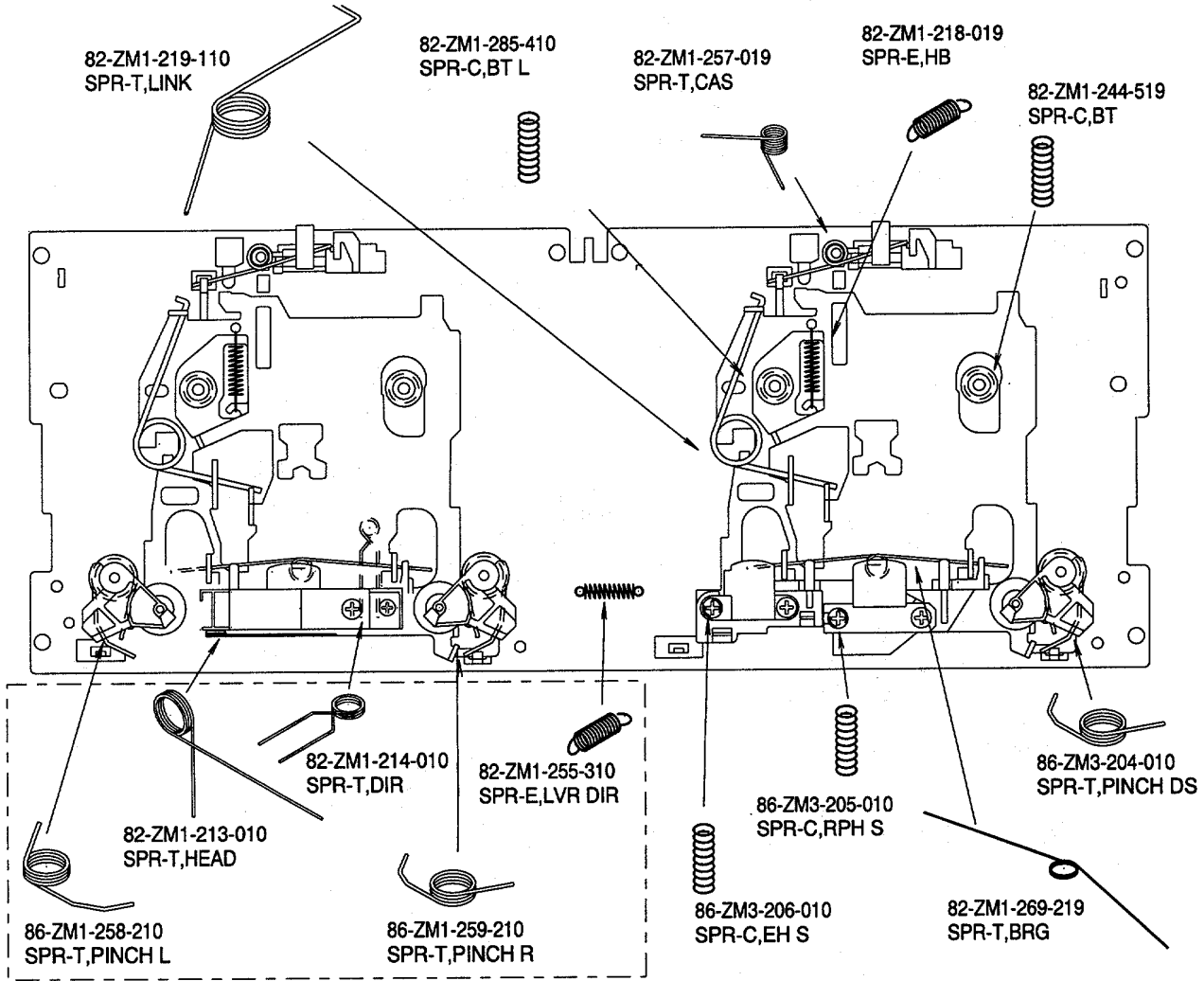
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-NF9-008-010		WINDOW,CASS 2
2	8Z-NF9-004-010		BOX,CASS 2<exp 26EZ>
2	8Z-NF9-054-010		BOX,CASS 2 B<26EZ>
3	8Z-NF5-219-010		SPR-T,EJECT 2 (SIN)
4	8Z-NF5-218-010		SPR-T,EJECT 1 (SIN)
5	8Z-NF9-003-010		BOX,CASS 1 1WAY<exp 26EZ,33/36HR>
5	8Z-NF9-053-010		BOX,CASS 1 1WAY B<26EZ>
5	8Z-NF9-032-010		BOX,CASS 1R<33/36HR>
6	8Z-NF9-007-010		WINDOW,CASS 1
7	87-NF8-220-010		DMPR,150
8	8Z-NF9-010-010		KNOB,RTRY JOG<exp 26EZ>
8	8Z-NF9-057-010		KNOB,RTRY JOG B<26EZ>
9	8Z-NF9-037-010		WINDOW,DISP EZ<K,2EZ,V>
9	8Z-NF9-048-010		WINDOW,DISP EZ S223<23EZ>
9	8Z-NF9-049-010		WINDOW,DISP EZ S226<26EZ>
9	8Z-NF9-055-010		WINDOW,DISP EZ S333<3EZ>
9	8Z-NF9-006-010		WINDOW,DISP H<22HR,HA>
9	8Z-NF9-063-010		WINDOW,DISP H S229<LH>
9	8Z-NF9-062-010		WINDOW,DISP H S333<LH,33HR>
9	8Z-NF9-050-010		WINDOW,DISP H S336<36HR>
10	8Z-NF9-009-010		KNOB,RTRY VOL<exp 26EZ>
10	8Z-NF9-056-010		KNOB,RTRY VOL B<26EZ>
11	8Z-NF9-005-010		WINDOW,CD
12	8Z-NE6-067-010		BADGE,AIWA 30N
13	8Z-NF9-052-010		PANEL,TRAY EZ B<26EZ>
13	8Z-NF9-002-010		PANEL,TRAY H<exp 26EZ>
14	8Z-NF9-036-010		CABI,FR EZ<23EZ>
14	8Z-NF9-051-010		CABI,FR EZ B<26EZ>
14	8Z-NF9-001-010		CABI,FR H<22HR,33HR>
14	8Z-NF9-064-010		CABI,FR H S333<36HR>
14	8Z-NF9-031-010		CABI,FR U<LH,K,HA,LH,V,2/3EZ>
15	8Z-NF9-011-010		KEY,POWER
16	8Z-NF9-012-010		KEY,FUN<exp 26EZ>
16	8Z-NF9-058-010		KEY,FUN B<26EZ>
17	8Z-NF9-013-010		KEY,ASSY OPE 1W<exp 26EZ,33/36HR>
17	8Z-NF9-059-010		KEY,ASSY OPE 1W B<26EZ>
17	8Z-NF9-033-010		KEY,ASSY OPE R<33/336HR>
18	8Z-NF9-016-010		KEY,CD<exp 26EZ>
18	8Z-NF9-061-010		KEY,CD B<26EZ>
19	8Z-NF9-018-010		KEY,RDS<23EZ>
20	8Z-NF9-017-010		KEY,GEQ
21	8Z-NF7-210-110		GUIDE,FL (*)
22	8Z-NF5-229-010		PLATE,LOCK
23	86-NF9-224-010		SPR-C,LOCK
24	87-NF4-216-010		HLDR,LOCK 1
25	86-NF2-001-010		WINDOW,TOP
26	8Z-NF9-042-010		PANEL,TOP V-2<exp 26EZ,36HR>
26	8Z-NF9-045-010		PANEL,TOP V-2 B<26EZ>
26	8Z-NF9-095-010		PANEL,TOP V-2 R<36HR>
27	88-NF5-208-010		HLDR,PWB-M N
28	8Z-NF9-205-010		HLDR,PWB MAIN<22HR,K,EZ,V>
29	8Z-NB8-011-110		PANEL,LEFT V-2<exp 26EZ>
29	8Z-NF9-046-010		PANEL,LEFT V-2 B<26EZ>
30	87-NF4-221-010		HLDR,CABLE< K,22EZ>
31	87-003-317-010		F-BEAD,F0H2515-LG7<K,EZ,V>
32	87-085-185-010		BUSHING, AC CORD (E)
33	87-A80-105-010		AC CORD ASSY,AZ<HA>
33	87-050-034-010		AC CORD ASSY,E<K,EZ>
33	87-050-079-010		AC-CORD ASSY,E<exp K,EZ,HA>
34	8Z-NF9-043-010		PANEL,RIGHT S V-2<exp 26EZ>
34	8Z-NF9-047-010		PANEL,RIGHT S V-2 B<26EZ>
35	84-2G1-245-210		CAP,OPTICAL
36	8Z-NF9-079-010		CABI,REAR EZBM S226<26EZ>
36	8Z-NF9-069-010		CABI,REAR EZSTE<22EZ>
36	8Z-NF9-029-010		CABI,REAR EZSTE S333<3EZ>
36	8Z-NF9-074-010		CABI,REAR EZSTM S223<23EZ>
36	8Z-NF9-023-010		CABI,REAR HRJSTM<22HR>
36	8Z-NF9-030-010		CABI,REAR HRJSTM S333<33HR>
36	8Z-NF9-088-010		CABI,REAR HRJSTM S336<36HR>
36	8Z-NF9-070-010		CABI,REAR KSTE<22K>
36	8Z-NF9-075-010		CABI,REAR LHJSCM S229<HA,LH>
36	8Z-NF9-026-010		CABI,REAR VJSTM<V>
38	8Z-NB8-240-010		COVER, PL
39	81-532-080-010		LABEL, CASS. COMPT<26EZ>
40	88-NF9-056-010		KNOB,RTRY MIC<HR>
41	8Z-NF9-204-010		PLATE,MIC<HR>
42	8Z-NF9-209-010		HLDR,RDS<K,EZ>
43	8Z-NF9-201-010		GUIDE,OPE 1W<22HR,23/26EZ,HA,LH,V>
43	8Z-NF9-202-010		GUIDE,OPE R<33/36HR>
A	87-067-703-010		TAPPING SCREW, BVT2+3-10
B	87-067-689-010		TAPPING SCREW, BVT+3-8
C	87-721-096-410		QT2+3-10 GLD<exp 33LH>
D	87-067-975-010		S-SCREW,IT+4-8
E	87-721-097-410		QT2+3-12 GLD
F	87-067-641-010		UTT2+3-8 (W/O SLOT)BL
G	87-NF4-224-010		S-SCW,IT3B+3-8<HA,LH,33/36HR,3EZ>
H	87-067-758-010		BVT2+3-12 W/O SLOT<23EZ>

\*NOTE: 2EZ=222EZ      2HR=222HR  
 3EZ=333EZ      33HR=333HR  
 23EZ=223EZ      36HR=336HR  
 26EZ=226EZ      exp=EXCEPT

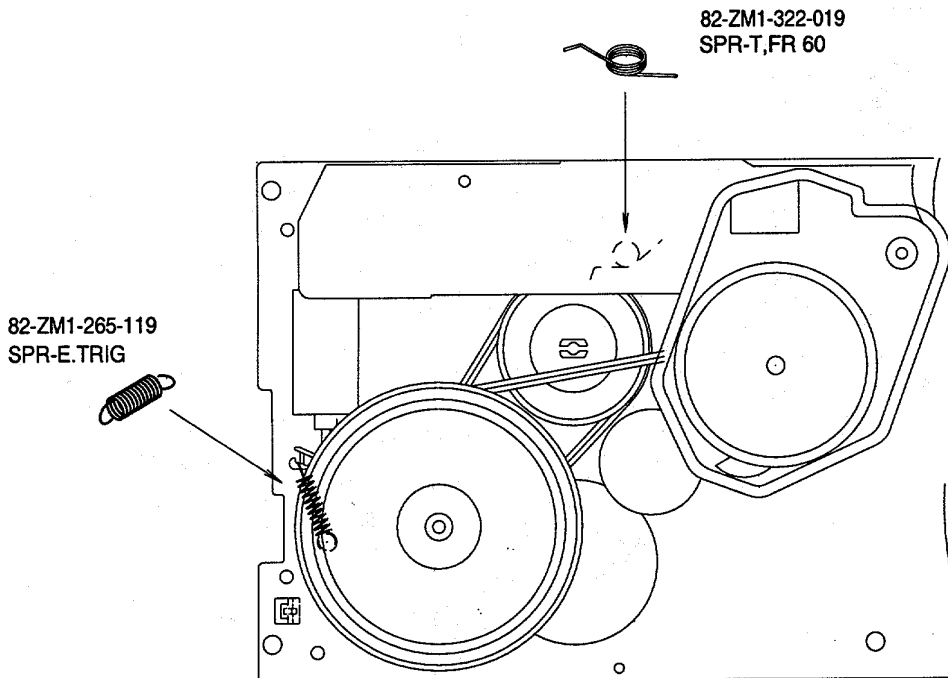
## COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange		

SPRING APPLICATION POSITION (6ZM3PR1, 6ZM3PR2)

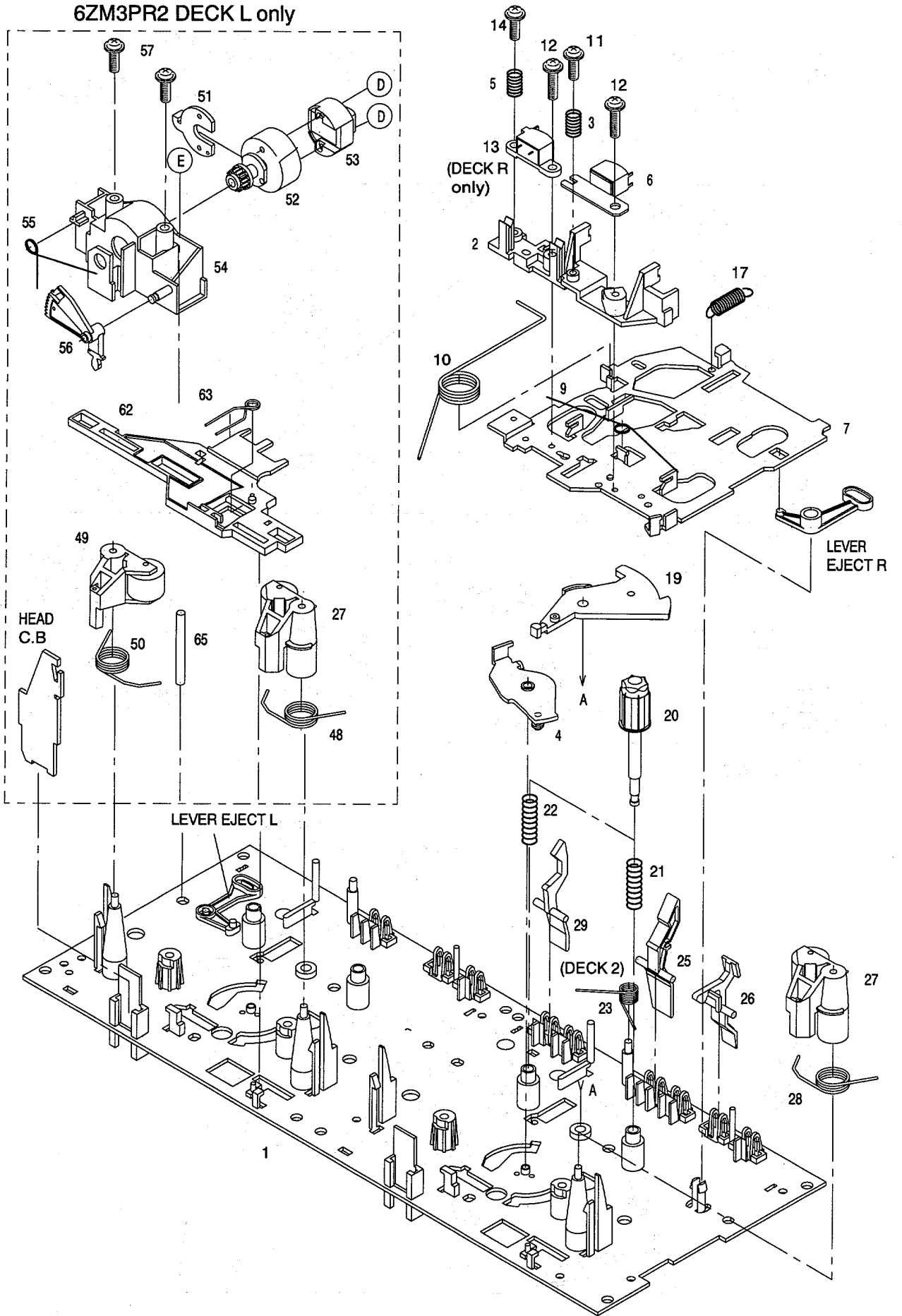


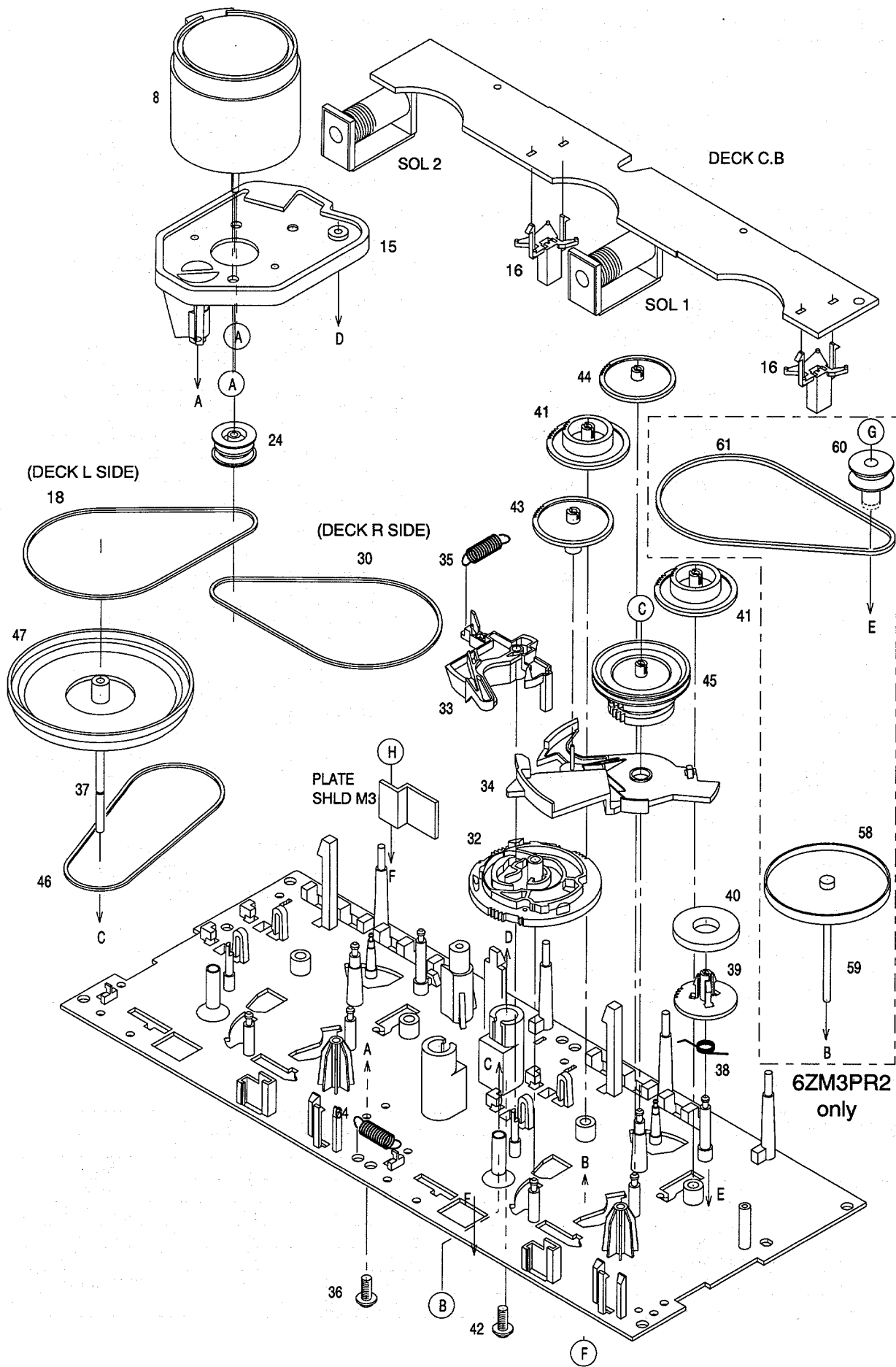
6ZM3PR2 only



TAPE MECHANISM EXPLODED VIEW 1 / 1 (6ZM3PR1, 6ZM3PR2)

6ZM3PR2 DECK L only







# TAPE MECHANISM PARTS LIST 1 / 1 (6ZM3PR1, 6ZM3PR2)

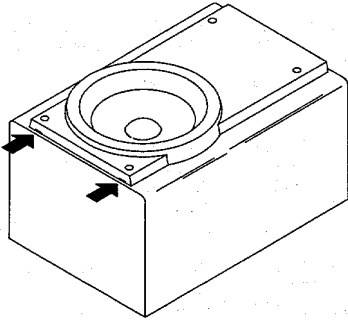
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	86-ZM3-212-010		CHAS ASSY,SS <6ZM3PR1>	37	82-ZM1-236-019		CAPSTAN N 2-41.5 <6ZM3PR1>
1	86-ZM3-215-010		CHAS ASSY,RS <6ZM3PR2>	37	82-ZM1-239-019		CAPSTAN N 2.2-41.7 <6ZM3PR2>
2	86-ZM3-202-010		BASE,HEAD S	38	82-ZM1-322-019		SPR-T,FR60
3	86-ZM3-205-010		SPR-C,RPH S	39	82-ZM1-220-219		GEAR,IDLER
4	82-ZM1-333-210		PLATE,LINK 2	40	82-ZM3-616-019		RING MAGNET 4
5	86-ZM3-206-010		SPR-C,EH S	41	82-ZM1-216-319		GEAR,REEL
6	87-A90-403-019		HEAD,RPH MS15R	42	86-ZM3-213-010		S-SCREW,HLDR,MOT 3
7	86-ZM3-201-010		CHAS,HEAD S(DECK L)	43	82-ZM1-225-219		GEAR,FR
7	82-ZM3-206-910		CHAS,HEAD(DECK R)	44	82-ZM1-226-019		GEAR,REW
8	87-045-347-019		MOT,SHU2L 70(M1)	45	82-ZM3-333-210		SLIP DISK ASSY 2 <6ZM3PR1>
9	82-ZM1-269-219		SPR-T,BRG	45	82-ZM3-333-310		SLIP DISK ASSY 2 <6ZM3PR2>
10	82-ZM3-323-119		SPR-T,LINK <6ZM3PR1>	46	82-ZM1-338-010		BELT FR4
10	82-ZM1-219-110		SPR-T,LINK <6ZM3PR2>	47	82-ZM1-349-019		FLY-WHL RW (DECK L)
11	86-ZM3-209-010		S-SCREW,ASIMUTHS	47	82-ZM3-338-010		FLY-WHL R3W (DECK R)
12	86-ZM3-207-010		S-SCREW,RPH	48	82-ZM1-259-210		SPR-T,PINCH R <6ZM3PR2>
13	87-A90-404-019		HEAD,EH LE15B	49	82-ZM1-341-110		LVR ASSY,PINCH L2 <6ZM3PR2>
14	86-ZM3-208-010		S-SCREW,EH	50	82-ZM1-258-210		SPR-T,PINCH L <6ZM3PR2>
15	86-ZM3-203-010		HLDR,MOTS	51	82-ZM1-314-110		PLATE,HEAD <6ZM3PR2>
16	82-ZM1-245-210		HLDR,IC	52	82-ZM1-208-310		HLDR,HEAD <6ZM3PR2>
17	82-ZM1-218-019		SPR-E,HB	53	87-A90-366-010		HEAD,PH YK50P-BF414 <6ZM3PR2>
18	86-ZM3-211-010		BELT,RS <6ZM3PR1>	54	82-ZM1-207-810		GUIDE TAPE <6ZM3PR2>
18	86-ZM3-214-010		BELT,SUB RR <6ZM3PR2>	55	82-ZM1-213-010		SPR-T,HEAD <6ZM3PR2>
19	82-ZM1-222-219		LVR,PLAY	56	82-ZM1-210-110		GEAR,HT <6ZM3PR2>
20	82-ZM1-217-419		REEL TABLE	57	86-ZM4-206-010		S-SCREW AZIMUTH L <6ZM3PR2>
21	82-ZM1-244-519		SPR-C,BT	58	82-ZM1-348-010		FLY-WHL,LW <6ZM3PR2>
22	82-ZM1-285-410		SPR-C,BT L	59	82-ZM1-236-019		CAPSTAN N 2-41.5 <6ZM3PR2>
23	82-ZM1-257-019		SPR-T,CAS	60	82-ZM3-335-210		PULLEY,COUPLER M3 <6ZM3PR2>
24	82-ZM3-221-010		PULLEY,MOT 2M	61	86-ZM1-206-010		BELT,MAIN L <6ZM3PR2>
25	82-ZM1-242-019		LVR,CAS	62	82-ZM1-266-110		LVR,DIR <6ZM3PR2>
26	82-ZM1-243-019		LVR,STOP	63	82-ZM1-214-010		SPR-T,DIR <6ZM3PR2>
27	82-ZM1-344-119		LVR ASSY,PINCH	64	82-ZM1-255-310		SPR-E,LVR DIR <6ZM3PR2>
28	86-ZM3-204-010		SPR-T,PINCHDS	65	82-ZM3-339-010		SHAFT,COUPLER N3 <6ZM3PR2>
29	82-ZM1-240-119		LVR,REC (DECK 2)	A	87-251-071-417		U+2.6-4
30	86-ZM3-210-010		BELT,RS	B	80-ZM6-243-019		SH,1.75-3.6-0.5 SLT
32	82-ZM3-305-119		GEAR,CAM M2	C	82-ZM3-334-010		PW,2.16-6-0.4 <6ZM3PR2>
33	82-ZM1-227-319		LVR,TRIG	D	80-ZM6-207-010		V+1.6-7 <6ZM3PR2>
34	82-ZM3-306-110		LVR,FR M2	E	85-ZM3-202-010		S-SCREW TG <6ZM3PR2>
35	82-ZM1-265-119		SPR-E,TRIG	F	82-ZM1-288-010		SH,1.63-3.2-0.5 SLT <6ZM3PR2>
36	85-ZM3-203-019		S-SCREW MOTOR M3 <6ZM3PR1>	G	87-B10-043-010		W-P,0.99-4-0.25 SLT <6ZM3PR2>
36	87-761-073-419		VFT2+2.6-6 W/O SLOT <6ZM3PR2>	H	87-571-032-410		VIT+2-3 <6ZM3PR2>

# SPEAKER DISASSEMBLY INSTRUCTIONS

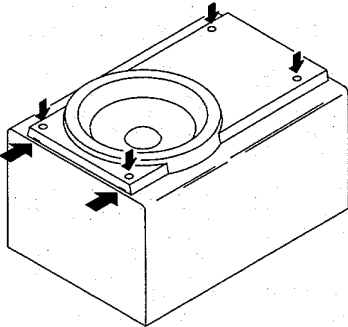
## Type.1

Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Remove the screws of each speaker unit and then remove the speaker units.



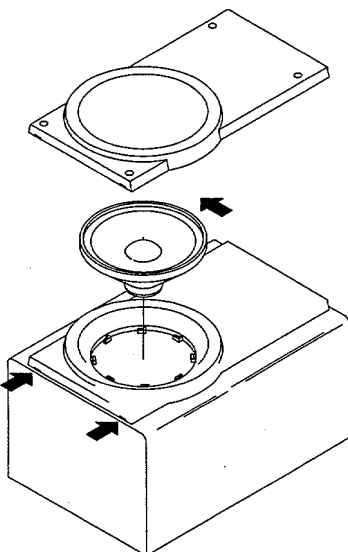
## Type.2

Remove the grill frame and four pieces of rubber caps by pulling out with a flat-bladed screwdriver. Remove the screws from hole where installed rubber caps. Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Remove the screws of each speaker unit and then remove the speaker units.

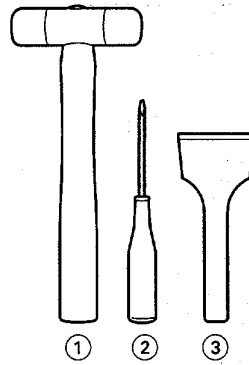


## Type.3

Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Turn the speaker unit to counter-clockwise direction while inserting a flat-bladed screwdriver into one of the hollows around speaker unit, and then remove the speaker unit. After replacing the speaker unit, install it turning to clockwise direction until "click" sound comes out.



## Type.4



### TOOLS

- ① Plastic head hammer
- ② (⊖) flat head screwdriver
- ③ Cut chisel

## How to Remove the PANEL, FR

1. Insert the (⊖) flat head screwdriver tip into the gap between the PANEL, FR and the PANEL, SPKR. Tap the head of the (⊖) flat head screwdriver with the plastic hammer head, and create the clearance as shown in Fig-1.
2. Insert the cut chisel in the clearance, and tap the head of the cut chisel with plastic hammer as shown in Fig-2, to remove the PANEL, FR.
3. Place the speaker horizontally. Tap head of the cut chisel with plastic hammer as shown in Fig-3, and remove the PANEL, FR completely.

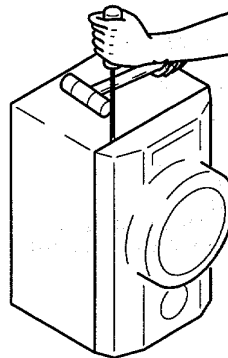


Fig-1

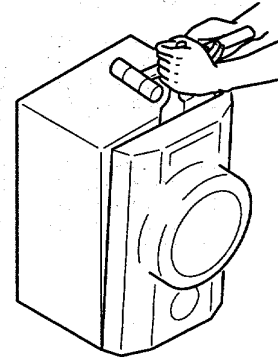


Fig-2

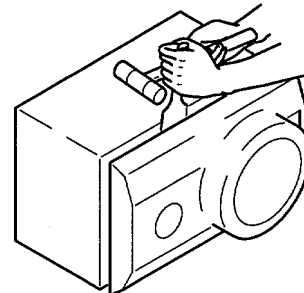


Fig-3

## How to Attach the PANEL, FR

Attach the PANEL, FR to the PANEL, SPKR. Tap the four corners of the PANEL, FR with the plastic hammer to fit the PANEL, FR into the PANEL, SPKR completely.

## SPEAKER PARTS LIST

(SX-NS222:YLSTCC,YJSTC,YSTC,YSTY1,YSTY2,YJSTC.

SX-NS223:YSTC,YSTY1,YSTY2.

SX-NS226:YBC

SX-SNS332:YLJSCM,YJSTC)

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

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-NSK-001-010		PANEL,FR
1	8Z-NSK-024-010		PANEL,FR<NS226YBC>
2	8Z-NSK-002-010		PANEL,BA
3	87-NSH-612-010		SPKR,CERAMIC ASSY
4	87-NS7-611-010		CORD,SPKR
5	87-NSJ-604-010		SPKR, W 120<SNS332YLJSCM>
5	87-NSJ-604-010		SPKR, 120<NS222YLSTCC,NS222YJSTC,NS332YJSTC,NS222YJSTC1>
5	86-NSZ-601-110		SPKR, 120<NS222YSTC,NS223YSTC,NS226YBC>
5	8Z-NSK-601-010		SPKR, 120<NS222YSTY1,NS222YSTY2,NS223YSTY2,NS223YSTY1>

## SPEAKER PARTS LIST (SX-NS552:YJSTC1)

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

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	87-NSH-612-010		SPKR,CERAMIC ASSY	6	8Z-NSH-003-010		PANEL,RING(W)
2	87-NS7-611-010		CORD,SPKR	7	8Z-NSH-007-010		PROTECTOR
3	8Z-NSH-004-010		GRILLE,FRAME ASSY	8	83-NS8-606-010		SPKR, T 50
4	8Z-NSH-001-010		PANEL,FR	9	8Z-NSJ-601-010		SPKR, W 130
5	8Z-NSH-002-010		PANEL,BA				

## SPEAKER PARTS LIST (SX-NAV224:YML)

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

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-NSW-002-010		GRILLE,FRAME ASSY	4	8Z-NSW-604-010		SPKR, W T 60
2	83-096-614-010		SPEAKER CODE	5	88-NS3-605-010		CAP
3	8Z-NSW-602-010		SPKR, W 140	6	8Z-NSW-009-010		CABI,M

## ACCESSORIES / PACKAGE LIST

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

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-NF9-901-110		IB,H(ECA)M<222HR>	2	87-006-269-010		AM LOOP ANT<222HR,333HR>
1	8Z-NF9-905-010		IB,K(E)E<222K>	2	87-A90-054-010		AM LOOP ANT-CON C<336HR>
1	8Z-NF9-906-010		IB,EZ(9L)E<222EZ>	3	87-043-106-010		ANT,FM 1007AWG<EZ,K>
1	8Z-NF9-907-010		IB,V(ER)M<222V>				
1	8Z-NF9-911-010		IB,H(ECA)M-333<333HR>	3	87-043-115-010		FEEDER-ANT,FM<EXCEPT EZ,K>
1	8Z-NF9-914-010		IB,H(ECA)M-336<336HR>	4	87-043-095-010		ANT,WIRE<HR>
1	8Z-NF9-916-010		IB,EZ(9L)E-223<223EZ>	5	87-A91-017-010		PLUG,CONVERSION JT-0476<HR>
1	8Z-NF9-926-010		IB,EZ(9L)E-333<333EZ>	6	8Z-NF8-702-010		RC UNIT,RC-ZAS02<333HR>
1	8Z-NF9-933-010		IB,LH(P)CCE-229<229LH>	6	8Z-NF8-701-110		RC UNIT,RC-ZAS02<336HR>
1	8Z-NF9-934-010		IB,HA(S)KIT<222HA>				
1	8Z-NF9-937-010		IB,EZ(9L)M<226EZ>	6	8Z-NF9-701-010		RC UNIT,ZAS02<LH,HA,V,222HR>
2	87-006-225-010		AM LOOP ANT NC2<EXCEPT HR>	6	8Z-NF9-702-010		RC UNIT,ZAS02<222EZ,223EZ,333EZ>
				6	8Z-NF9-703-010		RC UNIT,ZAS02<226EZ>

# 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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