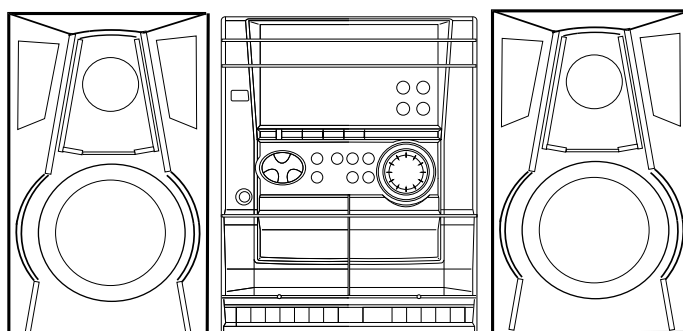




**NSX-AJ10** U  
**NSX-SZ10** LH  
**NSZ-SZ10E** HA



# SERVICE MANUAL

COMPACT DISC STEREO  
CASSETTE RECEIVER

BASIC TAPE MECHANISM : ZZM-2 PR1NM / PR1NC  
BASIC CD MECHANISM : AZG-1

SYSTEM	CD CASSEIVER	SPEAKER	CD MECHANISM	REMOTE CONTROLLER
NSX-AJ10	CX-NAJ10	SX-NAJ12	ZD8RNDC	RC-ZAS02
NSX-SZ10	CX-NSZ10	SX-NSZ15	ZD8RNDC	
NSX-SZ10E	CX-NSZ10E	SX-NSZ15	ZD8RNDM	

- This Service Manual is the "Revision Publishing" and replaces "Simple Manual" NSX-AJ10(U)/NSX-SZ10(LH), (S/M Code No. 09-99C-424-8T1).
- If requiring information about the CD mechanism, see Service Manual of AZG-1 ZD8RNDM, (S/M Code No. 09-001-335-3N6) and AZG-1 ZD8RNDC, (S/M Code No. 09-001-335-3NA).

**aiwa**  
S/M Code No. 09-003-424-8R1

REVISION

DATA

## SPECIFICATIONS <HA,LH>

<b>&lt;FM tuner section&gt;</b>		<b>&lt;Compact disc player section&gt;</b>	
<b>Tuning range</b>	87.5 MHz to 108 MHz	<b>Laser</b>	Semiconductor laser ( $\lambda = 780 \text{ nm}$ )
<b>Usable sensitivity (IHF)</b>	13.2 dBf	<b>D-A converter</b>	1 bit dual
<b>Antenna terminals</b>	75 ohms (unbalanced)	<b>Signal-to-noise ratio</b>	85 dB (1 kHz, 0 dB)
		<b>Harmonic distortion</b>	0.05 % (1 kHz, 0 dB)
<b>&lt;AM tuner section&gt;</b>		<b>&lt;Speaker system SX-NSZ15&gt;</b>	
<b>Tuning range</b>	530 kHz to 1710 kHz (10 kHz step) 531 kHz to 1602 kHz (9 kHz step)	<b>Speaker System</b>	2 way, bass reflex (magnetic shielded type)
<b>Usable sensitivity</b>	350 $\mu\text{V/m}$	<b>Speaker units</b>	Woofer: 120 mm cone type Tweeter: 20mm ceramic type
<b>Antenna</b>	Loop antenna		
<b>&lt;Amplifier section&gt;</b>		<b>Impedance</b>	6 ohms
<b>Power output</b>	Rated 28 W + 28 W (1 kHz, T.H.D. 1 %, 6 ohms) Reference 35 W + 35 W (1 kHz, T.H.D. 10 %, 6 ohms)	<b>Sensitivity</b>	86 dB/W/m
		<b>Dimensions (W x H x D)</b>	220 x 324 x 204 mm
<b>Total harmonic distortion</b>	0.1 % (14 W, 1 kHz, 6 ohms, DIN AUDIO)	<b>Weight</b>	2.0 kg
<b>Inputs</b>	VIDEO/AUX: 500 mV	<b>&lt;General&gt;</b>	
<b>Outputs</b>	SPEAKERS: accept speakers of 6 ohms or more PHONES (stereo jack): accepts headphones of 32 ohms or more	<b>Power requirements</b>	120 V/220-230 V/240 V AC (switchable), 50/60 Hz
		<b>Power consumption</b>	55 W
		<b>Power consumption in standby mode</b>	With power-economizing mode off : 12 W With power-economizing mode on : 0.9 W
<b>&lt;Cassette deck section&gt;</b>		<b>Dimensions of main unit (W x H x D)</b>	260 x 324 x 346 mm
<b>Track format</b>	4 tracks, 2 channels stereo	<b>Weight of main unit</b>	5.7 kg
<b>Frequency response</b>	50 Hz – 8000 Hz		
<b>Recording system</b>	AC bias		
<b>Heads</b>	Deck 1 : Recording/playback head x 1, erase head x 1 Deck 2 : Playback head x 1		

• Design and specifications are subject to change without notice.

## SPECIFICATIONS <U>

<b>&lt;FM tuner section&gt;</b>		<b>&lt;Compact disc player section&gt;</b>	
<b>Tuning range</b>	87.5 MHz to 108 MHz	<b>Laser</b>	Semiconductor laser ( $\lambda = 780 \text{ nm}$ )
<b>Usable sensitivity (IHF)</b>	13.2 dBf	<b>D-A converter</b>	1 bit dual
<b>Antenna terminals</b>	75 ohms (unbalanced)	<b>Signal-to-noise ratio</b>	85 dB (1 kHz, 0 dB)
		<b>Harmonic distortion</b>	0.05 % (1 kHz, 0 dB)
<b>&lt;AM tuner section&gt;</b>		<b>&lt;Speaker system SX-NAJ12&gt;</b>	
<b>Tuning range</b>	530 kHz to 1710 kHz (10 kHz step) 531 kHz to 1602 kHz (9 kHz step)	<b>Speaker System</b>	2 way, bass reflex (magnetic shielded type)
<b>Usable sensitivity</b>	350 $\mu\text{V/m}$	<b>Speaker units</b>	Woofer: 120 mm cone type Tweeter: 20mm ceramic type
<b>Antenna</b>	Loop antenna		
<b>&lt;Amplifier section&gt;</b>		<b>Impedance</b>	6 ohms
<b>Power output</b>	Rated 10 W + 10 W (50 Hz to 20 kHz, T.H.D. 1 %, 6 ohms) Reference 15 W + 15 W (1 kHz, T.H.D. 10 %, 6 ohms)	<b>Sensitivity</b>	86 dB/W/m
		<b>Dimensions (W x H x D)</b>	220 x 324 x 235 mm
<b>Total harmonic distortion</b>	0.1 % (6 W, 1 kHz, 6 ohms, DIN AUDIO)	<b>Weight</b>	2.0 kg
<b>Inputs</b>	VIDEO/AUX: 500 mV	<b>&lt;General&gt;</b>	
<b>Outputs</b>	SPEAKERS: accept speakers of 6 ohms or more PHONES (stereo jack): accepts headphones of 32 ohms or more	<b>Power requirements</b>	120 V AC, 60 Hz
		<b>Power consumption</b>	38 W
		<b>Power consumption in standby mode</b>	With power-economizing mode off : 8.0 W With power-economizing mode on : 0.9 W
<b>&lt;Cassette deck section&gt;</b>		<b>Dimensions of main unit (W x H x D)</b>	260 x 324 x 346 mm
<b>Track format</b>	4 tracks, 2 channels stereo	<b>Weight of main unit</b>	5.7 kg
<b>Frequency response</b>	50 Hz – 8000 Hz		
<b>Recording system</b>	AC bias		
<b>Heads</b>	Deck 1 : Recording/playback head x 1, erase head x 1 Deck 2 : Playback head x 1		

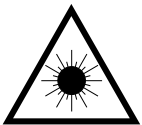
• Design and specifications are subject to change without notice.

## 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 käyttäjän turvallisuusluokan 1 ylitävälle näkymättömälle lasersäteilylle.

### WARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvisning, kan användaren utsättas för osynlig laserstrålning, 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

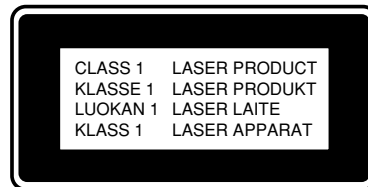
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

### 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.

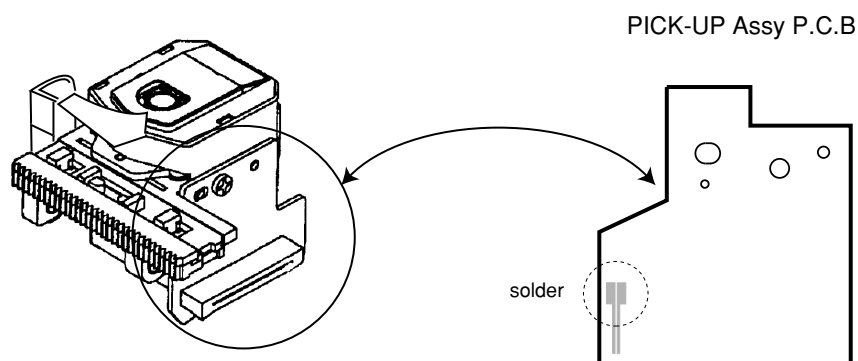
The CLASS 1 LASER PRODUCT label is located on the rear exterior.



## Precaution to replace Optical block (KSM-880CAB)

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 the right figure.



## 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.

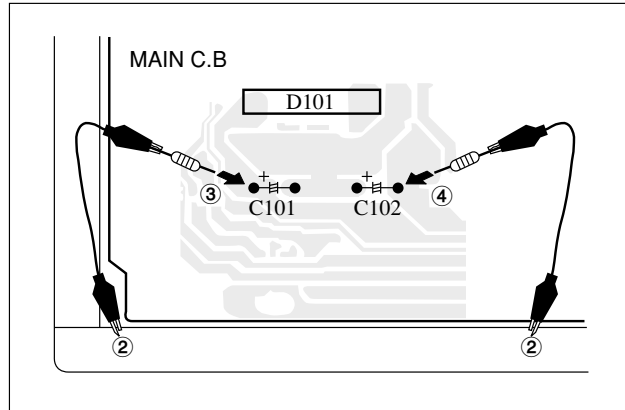


Fig-1

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.

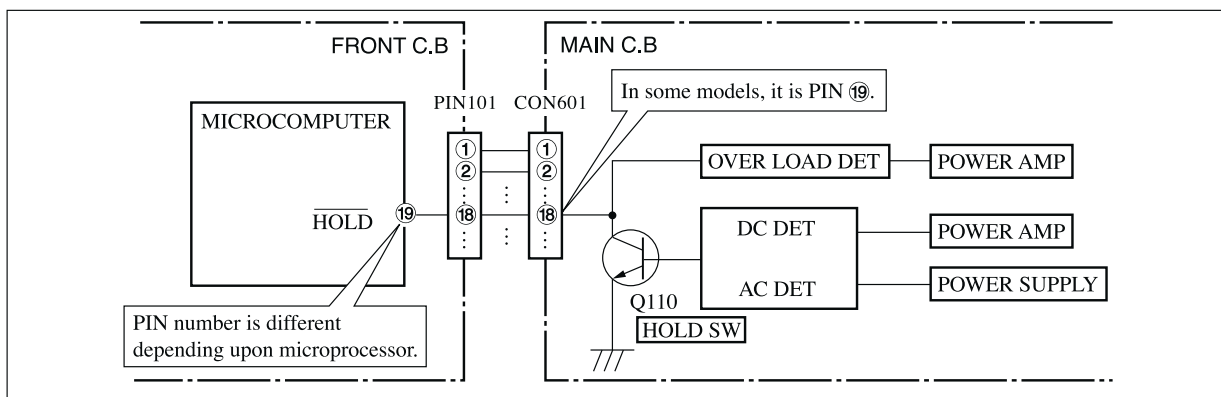


Fig-2-1

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.

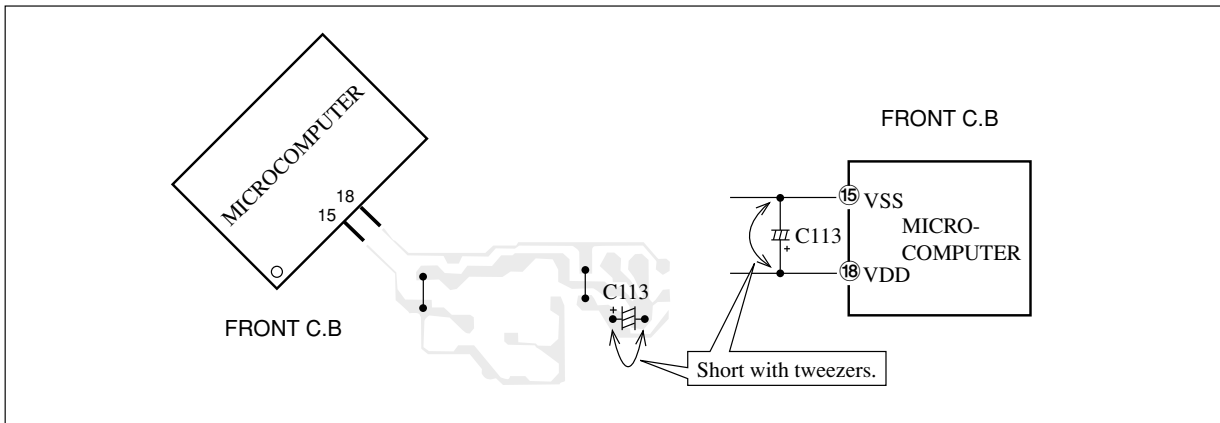


Fig-2-2

- 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

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC				C26	87-010-406-080		CAP, ELECT 22-50<U>
	8A-MA6-651-010		C-IC,M38B59MFH-E250FP<U,LH>	C30	87-010-247-080		CAP, ELECT 100-50V<LH,HA>
	8A-NFA-615-010		C-IC,M38B57MCH-E236FP<HA>	C30	87-010-384-080		CAP, ELECT 100-25 M 11L SME<U>
	87-A21-397-010		IC,STK490-070<LH,HA>	C31	87-010-263-080		CAP, ELECT 100-10V
	87-A21-419-040		C-IC,NJM14558MD-TE2	C32	87-010-197-080		CAP, CHIP 0.01 DM
	87-A21-443-040		C-IC,M62495AFP	C33	87-010-263-080		CAP, ELECT 100-10V<U>
	87-A21-415-010		IC,LA1843	C34	87-010-247-080		CAP, ELECT 100-50V
	87-070-127-110		IC,LC72131 D	C35	87-010-406-080		CAP, ELECT 22-50
	87-A21-482-010		IC,RPM6938-H4	C36	87-010-381-080		CAP, ELECT 330-16V
				C38	87-A11-567-080		C-CAP,S 0.01-50 K B
TRANSISTOR				C50	87-010-384-080		CAP, ELECT 100-25 M 11L SME<U>
	87-026-609-080		TR,KTA1266GR	C60	87-010-403-080		CAP, ELECT 3.3-50V
	89-213-702-010		TR,2SB1370 (1.8W)	C97	87-010-196-080		CHIP CAPACITOR,0.1-25<LH,HA>
	87-026-610-080		TR,KTC3198GR	C100	87-018-127-080		CAP TC-U 470P
	87-A30-076-080		C-TR,2SC3052F	C101	87-010-183-080		C-CAP,S 2700P-50 B<LH,HA>
	87-A30-075-080		C-TR,2SA1235F	C101	87-010-185-080		C-CAP,S 3900P-50 KB<U>
	87-A30-255-010		C-TR,2SB1342<U>	C102	87-010-183-080		C-CAP,S 2700P-50 B<LH,HA>
	87-A30-256-010		TR,2SD1933<U>	C102	87-010-185-080		C-CAP,S 3900P-50 KB<U>
	87-A30-190-080		TR,CC5551<U>	C103	87-010-545-080		CAP, ELECT 0.22-50V
	87-026-245-080		TR,DTC114ES<LH,HA>	C104	87-010-545-080		CAP, ELECT 0.22-50V
	87-A30-198-080		TR,KTC3199GR<LH,HA>	C105	87-010-178-080		CHIP CAP 1000P<LH,HA>
	87-A30-090-080		FET,2SK2541	C105	87-010-186-080		CAP,CHIP 4700P<U>
	87-A30-484-080		C-TR,KRA102S	C106	87-010-178-080		CHIP CAP 1000P<LH,HA>
	87-A30-468-080		C-TR,KRC102S-RTK	C106	87-010-186-080		CAP,CHIP 4700P<U>
	87-A30-107-070		C-TR,CMBT5401<LH,HA>	C107	87-010-404-080		CAP, ELECT 4.7-50V<LH,HA>
	87-A30-106-040		C-TR,CMBT5551<LH,HA>	C107	87-010-403-080		CAP, ELECT 3.3-50V<U>
	87-A30-091-080		FET,2SJ460	C108	87-010-404-080		CAP, ELECT 4.7-50V<LH,HA>
	87-A30-062-080		C-TR,KRC104S	C108	87-010-403-080		CAP, ELECT 3.3-50V<U>
	87-A30-318-080		TR,CSA952K<HA>	C111	87-010-391-080		CAP,E 10-35 SME<LH,HA>
	89-333-317-880		TR,2SC3331 (0.5W)	C111	87-010-406-080		CAP, ELECT 22-50<U>
	87-A30-234-080		TR,CSC4115BC	C112	87-010-391-080		CAP,E 10-35 SME<LH,HA>
	89-327-143-080		TR,2SC2714 (0.1W)	C112	87-010-406-080		CAP, ELECT 22-50<U>
	87-A30-489-080		C-TR,KRA107S	C113	87-010-405-080		CAP, ELECT 10-50V<LH,HA>
DIODE				C113	87-012-156-080		C-CAP, S 220P-50 J CH<U>
	87-A40-736-080		DIODE,1N4148M (SEM) <U,LH>	C114	87-010-197-080		CAP, CHIP 0.01 DM
	87-020-465-080		DIODE,1SS133 (110MA) <HA>	C120	87-010-197-080		CAP, CHIP 0.01 DM
	87-A40-455-080		DIODE,RL203 GW<LH,HA>	C125	87-012-368-080		C-CAP,S 0.1-50 F<LH,HA>
	87-A40-553-080		DIODE,1N4003 LES	C125	87-010-196-080		CHIP CAPACITOR,0.1-25<U>
	87-A40-774-080		ZENER,UZ24BSD	C126	87-012-368-080		C-CAP,S 0.1-50 F<LH,HA>
	87-A40-764-080		ZENER,UZ10BSC	C126	87-010-196-080		CHIP CAPACITOR,0.1-25<U>
	87-A40-313-080		C-DIODE,MC 2840<LH,HA>	C127	87-012-368-080		C-CAP,S 0.1-50 F<LH,HA>
	87-A40-270-080		C-DIODE,MC2838	C127	87-010-196-080		CHIP CAPACITOR,0.1-25<U>
	87-A40-269-080		C-DIODE,MC2836	C128	87-012-368-080		C-CAP,S 0.1-50 F<LH,HA>
	87-A40-768-080		ZENER,UZ16BSA<LH,HA>	C128	87-010-196-080		CHIP CAPACITOR,0.1-25<U>
	87-A40-752-080		ZENER,UZ6.2BSC	C129	87-A10-592-080		C-CAP,S 0.015-50 K B<LH,HA>
	87-A40-739-080		ZENER,UZ2.7BSA	C130	87-A10-592-080		C-CAP,S 0.015-50 K B<LH,HA>
	87-017-149-080		ZENER,HZS6A2L	C131	87-010-197-080		CAP, CHIP 0.01 DM<LH,HA>
	87-A40-535-080		DIODE,1N5393-GOODARK<U>	C132	87-010-197-080		CAP, CHIP 0.01 DM<LH,HA>
MAIN C.B				C133	87-010-186-080		CAP,CHIP 4700P
C3	87-010-196-080		CHIP CAPACITOR,0.1-25<LH,HA>	C140	87-010-182-080		C-CAP,S 2200P-50 B
C4	87-010-196-080		CHIP CAPACITOR,0.1-25<LH,HA>	C183	87-010-387-080		CAP,E 470-25 SME<U>
C5	87-010-196-080		CHIP CAPACITOR,0.1-25<LH,HA>	C184	87-010-403-080		CAP, ELECT 3.3-50V<U>
C6	87-010-196-080		CHIP CAPACITOR,0.1-25<LH,HA>	C200	87-018-195-080		CAP TC-U 1200P
C9	87-010-196-080		CHIP CAPACITOR,0.1-25	C300	87-018-195-080		CAP TC-U 1200P
C10	87-010-196-080		CHIP CAPACITOR,0.1-25	C301	87-010-179-080		CAP,CHIP S B1200P
C11	87-010-196-080		CHIP CAPACITOR,0.1-25	C302	87-010-179-080		CAP,CHIP S B1200P
C12	87-010-196-080		CHIP CAPACITOR,0.1-25	C303	87-010-178-080		CHIP CAP 1000P
C19	87-A10-627-000		CAP,E 2200-50 M SMG<LH,HA>	C304	87-010-178-080		CHIP CAP 1000P
C20	87-A10-627-000		CAP,E 2200-50 M SMG<LH,HA>	C305	87-010-198-080		CAP, CHIP 0.022
C21	87-016-495-000		CAP,E 3300-25 M SMG	C307	87-010-263-080		CAP, ELECT 100-10V
C22	87-016-495-000		CAP,E 3300-25 M SMG<LH,HA>	C308	87-010-263-080		CAP, ELECT 100-10V
C22	87-A10-011-090		CAP,E 2200-25 SMG<U>	C311	87-010-598-080		C-CAP,S 0.068-16VRK
C25	87-010-385-080		CAP, ELECT 220-25V<LH,HA>	C312	87-010-598-080		C-CAP,S 0.068-16VRK
C25	87-010-407-080		CAP, ELECT 33-50 M 11L SME<U>	C313	87-010-188-080		CAP,CHIP 6800P
C26	87-010-247-080		CAP, ELECT 100-50V<LH,HA>	C314	87-010-188-080		CAP,CHIP 6800P
				C315	87-010-263-080		CAP, ELECT 100-10V
				C317	87-010-546-080		CAP, ELECT 0.33-50V
				C318	87-010-546-080		CAP, ELECT 0.33-50V

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C326	87-010-198-080		CAP, CHIP 0.022	C821	87-010-405-080		CAP, ELECT 10-50V
C327	87-010-196-080		CHIP CAPACITOR, 0.1-25	C823	87-010-177-080		C-CAP, S 820P-50 SL
C360	87-010-401-080		CAP, ELECT 1-50V	C824	87-010-405-080		CAP, ELECT 10-50V
C399	87-012-140-080		CAP 470P	C825	87-010-596-080		CAP, S 0.047-16
C401	87-010-544-080		CAP, ELECT 0.1-50V	C842	87-010-197-080		CAP, CHIP 0.01 DM
C402	87-010-544-080		CAP, ELECT 0.1-50V	C844	87-010-197-080		CAP, CHIP 0.01 DM
C405	87-010-197-080		CAP, CHIP 0.01 DM	C851	87-010-197-080		CAP, CHIP 0.01 DM
C406	87-010-197-080		CAP, CHIP 0.01 DM	C852	87-010-197-080		CAP, CHIP 0.01 DM
C407	87-010-197-080		CAP, CHIP 0.01 DM	C853	87-010-197-080		CAP, CHIP 0.01 DM
C408	87-010-197-080		CAP, CHIP 0.01 DM	C858	87-010-196-080		CHIP CAPACITOR, 0.1-25
C409	87-010-182-080		C-CAP, S 2200P-50 B	C859	87-010-196-080		CHIP CAPACITOR, 0.1-25
C410	87-010-182-080		C-CAP, S 2200P-50 B	C860	87-010-197-080		CAP, CHIP 0.01 DM
C411	87-010-405-080		CAP, ELECT 10-50V	C959	87-010-196-080		CHIP CAPACITOR, 0.1-25
C412	87-010-405-080		CAP, ELECT 10-50V	C960	87-010-196-080		CHIP CAPACITOR, 0.1-25
C452	87-010-382-080		CAP, ELECT 22-25V	C961	87-010-152-080		C-CAP, S 8P-50 CH
C453	87-010-183-080		C-CAP, S 2700P-50 B	C963	87-015-785-080		CHIP CAPACITOR, 0.1FZ-25Z
C454	87-010-183-080		C-CAP, S 2700P-50 B	C971	87-010-381-080		CAP, ELECT 330-16V
C455	87-010-183-080		C-CAP, S 2700P-50 B	C972	87-010-404-080		CAP, ELECT 4.7-50V
C456	87-010-197-080		CAP, CHIP 0.01 DM	C973	87-010-197-080		CAP, CHIP 0.01 DM
C460	87-010-196-080		CHIP CAPACITOR, 0.1-25	C974	87-010-197-080		CAP, CHIP 0.01 DM
C461	87-012-158-080		C-CAP, S 390P-50 CH	C979	87-010-322-080		C-CAP, S 100P-50 CH
C462	87-012-158-080		C-CAP, S 390P-50 CH	C982	87-010-196-080		CHIP CAPACITOR, 0.1-25
C605	87-010-179-080		CAP, CHIP S B1200P	C983	87-010-197-080		CAP, CHIP 0.01 DM
C606	87-010-179-080		CAP, CHIP S B1200P	C984	87-010-197-080		CAP, CHIP 0.01 DM
C609	87-010-213-080		C-CAP, S 0.015-50 B	C987	87-010-197-080		CAP, CHIP 0.01 DM
C610	87-010-213-080		C-CAP, S 0.015-50 B	C993	87-010-178-080		CHIP CAP 1000P
C611	87-010-545-080		CAP, ELECT 0.22-50V	C995	87-010-178-080		CHIP CAP 1000P
C612	87-010-545-080		CAP, ELECT 0.22-50V	C997	87-010-196-080		CHIP CAPACITOR, 0.1-25
C613	87-010-545-080		CAP, ELECT 0.22-50V	C999	87-A11-155-080		CAP, TC U 0.01-16 Z F
C614	87-010-545-080		CAP, ELECT 0.22-50V	CF831	87-008-261-010		FILTER, SPE10.7MA5-A
C615	87-010-154-080		CAP CHIP 10P	CF832	87-008-261-010		FILTER, SPE10.7MA5-A
C616	87-010-385-080		CAP, ELECT 220-25V<LH, HA>	CN301	87-A60-620-010		CONN, 3P V 2MM JMT
C616	87-010-248-080		CAP, ELECT 220-10<U>	CN351	87-A60-625-010		CONN, 8P V 2MM JMT
C617	87-010-385-080		CAP, ELECT 220-25V<LH, HA>	CN601	87-099-719-010		CONN, 30P TYK-B(X)
C617	87-010-248-080		CAP, ELECT 220-10<U>	CN602	87-099-194-010		CONN, 6P 6216V
C618	87-010-405-080		CAP, ELECT 10-50V	CNA1	8A-NF8-653-010		CONN ASSY, 9P TID-A(480)<LH, HA>
C630	87-016-669-080		C-CAP, S 0.1-25 K B	FFE831	A8-8ZA-193-070		8ZA-1 YFEUNC<U, LH>
C669	87-010-322-080		C-CAP, S 100P-50 CH<LH, HA>	FFE831	A8-8ZA-190-030		8ZA-1 FEUNM<HA>
C670	87-010-322-080		C-CAP, S 100P-50 CH<LH, HA>	J101	87-A60-602-010		JACK, DIA6.3 BLK ST W/SW TC
C677	87-010-197-080		CAP, CHIP 0.01 DM	J203	87-A60-238-010		TERMINAL, SP 4P (MSC)<HA, LH>
C771	87-010-263-080		CAP, ELECT 100-10V	J602	87-A60-881-010		JACK, PIN 2P MSP 242V05 PBSN
C772	87-010-197-080		CAP, CHIP 0.01 DM	J831	87-A60-202-010		TERMINAL, ANT 4P MSP-154V-02
C782	87-010-197-080		CAP, CHIP 0.01 DM	L101	87-003-383-010		COIL, 1UH-S
C783	87-010-197-080		CAP, CHIP 0.01 DM	L102	87-003-383-010		COIL, 1UH-S
C784	87-010-197-080		CAP, CHIP 0.01 DM	L451	87-007-342-010		COIL, OSC 85K BIAS
C785	87-010-197-080		CAP, CHIP 0.01 DM	L801	87-A50-540-010		COIL, FM DET (TOK)
C786	87-010-197-080		CAP, CHIP 0.01 DM	L802	87-A91-551-010		FLTR, PCFJZH-450 L(TOK)
C788	87-010-149-080		C-CAP, S 5P-50 CH	L811	87-005-847-080		COIL, 2.2UH (CECS)
C789	87-A12-052-080		C-CAP, S 0.033-25 J B	L832	87-005-847-080		COIL, 2.2UH (CECS)
C790	87-A12-052-080		C-CAP, S 0.033-25 J B	L951	8A-NF8-667-010		COIL, AM PACK 4(TOK)
C791	87-010-196-080		CHIP CAPACITOR, 0.1-25	R131	87-A00-258-080		RES, M/F 0.22-1W J<LH, HA>
C792	87-010-197-080		CAP, CHIP 0.01 DM	R132	87-A00-258-080		RES, M/F 0.22-1W J<LH, HA>
C793	87-010-404-080		CAP, ELECT 4.7-50V	R653	87-A11-144-080		CAP, TC U 0.1-50 K B<HA>
C795	87-010-197-080		CAP, CHIP 0.01 DM	R654	87-A11-144-080		CAP, TC U 0.1-50 K B<HA>
C796	87-010-197-080		CAP, CHIP 0.01 DM	R790	87-010-197-080		CAP, CHIP 0.01 DM
C797	87-010-405-080		CAP, ELECT 10-50V	R991	87-010-322-080		C-CAP, S 100P-50 CH
C798	87-010-197-080		CAP, CHIP 0.01 DM	R993	87-010-322-080		C-CAP, S 100P-50 CH
C799	87-010-407-080		CAP, ELECT 33-50V	R995	87-010-322-080		C-CAP, S 100P-50 CH
C800	87-012-369-080		C-CAP, S 0.047-50F	WH1	87-A90-510-010		HLDR, WIRE 2.5-9P<LH, HA>
C801	87-010-403-080		CAP, ELECT 3.3-50V	WH1	87-A90-460-010		HLDR, WIRE 2.5-7P<U>
C802	87-012-369-080		C-CAP, S 0.047-50F	X991	87-A70-061-010		VIB, XTAL 4.500MHZ CSA-309
C803	87-010-198-080		CAP, CHIP 0.022				
C804	87-010-263-080		CAP, ELECT 100-10V				
C807	87-010-400-080		CAP, ELECT 0.47-50V				
C808	87-010-401-080		CAP, ELECT 1-50V	FRONT C.B			
C809	87-010-401-080		CAP, ELECT 1-50V	C101	87-010-196-080		CHIP CAPACITOR, 0.1-25
C810	87-010-196-080		CHIP CAPACITOR, 0.1-25	C102	87-012-369-080		C-CAP, S 0.047-50F
C814	87-010-197-080		CAP, CHIP 0.01 DM	C103	87-010-374-040		CAP, ELECT 47-10
C815	87-010-403-080		CAP, ELECT 3.3-50V	C104	87-A10-797-040		CAP, E 47-35 M 5L SRM
C816	87-010-403-080		CAP, ELECT 3.3-50V	C105	87-010-192-080		C-CAP, S 0.022-50 F
				C107	87-010-196-080		CHIP CAPACITOR, 0.1-25

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C108	87-010-178-080		CHIP CAP 1000P	WH181	87-A90-460-010		HLDR, WIRE 2.5-7P<U>
C109	87-012-369-080		C-CAP, S 0.047-50F				
C110	87-010-197-080		CAP, CHIP 0.01 DM				
C111	87-010-196-080		CHIP CAPACITOR, 0.1-25				
C113	87-010-178-080		CHIP CAP 1000P				
C114	87-010-154-080		CAP CHIP 10P				
C115	87-010-175-080		CAP 560P				
C116	87-010-400-040		CAP, E 0.47-50				
C117	87-016-460-080		C-CAP, S 0.22-16 B				
C118	87-A10-189-040		CAP, E 220-10				
C119	87-A10-189-040		CAP, E 220-10				
C120	87-012-156-080		C-CAP, S 220P-50 CH				
C123	87-010-196-080		CHIP CAPACITOR, 0.1-25				
C124	87-010-196-080		CHIP CAPACITOR, 0.1-25				
C125	87-010-405-040		CAP, E 10-50				
C126	87-010-196-080		CHIP CAPACITOR, 0.1-25				
C129	87-010-374-040		CAP, E 47-10				
C210	87-012-156-080		C-CAP, S 220P-50 CH				
C212	87-010-404-040		CAP, E 4.7-50 SME				
C213	87-010-404-040		CAP, E 4.7-50 SME				
C701	87-010-384-040		CAP, E 100-25 SME				
CN101	87-099-720-010		CONN, 30P TYK-B(P)				
CN701	87-A60-673-010		CONN, 9P H 2MM JMT				
CN801	87-099-015-010		CONN, 13P 6216V<HA>				
CN801	87-A60-055-010		CONN, 13P 9604V<U, LH>				
FL201	8A-NFA-604-010		FL, 10-BT-224GNK				
L101	87-A50-050-010		COIL, CLK 4.19M(COI)				
LED101	87-A40-317-080		LED, SLR-342VCT31 RED				
S101	87-A91-555-010		SW, RTRY EC12E24504				
S301	87-A90-164-080		SW, TACT SKQAB(N)				
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)				
S306	87-A90-164-080		SW, TACT SKQAB(N)				
S307	87-A90-164-080		SW, TACT SKQAB(N)				
S308	87-A90-164-080		SW, TACT SKQAB(N)				
S309	87-A90-164-080		SW, TACT SKQAB(N)				
S321	87-A90-164-080		SW, TACT SKQAB(N)				
S322	87-A90-164-080		SW, TACT SKQAB(N)				
S323	87-A90-164-080		SW, TACT SKQAB(N)				
S324	87-A90-164-080		SW, TACT SKQAB(N)				
S325	87-A90-164-080		SW, TACT SKQAB(N)				
S326	87-A90-164-080		SW, TACT SKQAB(N)				
S327	87-A90-164-080		SW, TACT SKQAB(N)				
S328	87-A90-164-080		SW, TACT SKQAB(N)				
S329	87-A90-164-080		SW, TACT SKQAB(N)				
S330	87-A90-164-080		SW, TACT SKQAB(N)				
S331	87-A90-164-080		SW, TACT SKQAB(N)				
SFR701	87-024-431-080		SFR, 3.3K RH063EC<HA>				
SFR701	87-024-351-080		SFR, 3.3K DJAA03<U, LH>				
PT C.B							
C1	87-010-387-080		CAP, E 470-25 SME<LH, HA>				
C31	87-010-403-080		CAP, ELECT 3.3-50V<LH, HA>				
C183	87-010-387-080		CAP, ELECT 470-25 M<U>				
C184	87-010-403-080		CAP, ELECT 3.3-50V<U>				
CN1	87-A61-110-010		CONN, 9P V TID-A<LH, HA>				
△ PT1	8A-NFA-609-010		PT, ANF-A LH<LH, HA>				
△ PT1	8A-NFA-607-010		PT, ANF-A U<U>				
△ PT2	8A-NF8-673-010		PT, SUB ANF-8 (H) KAMI<LH, HA>				
△ PT181	8A-NF8-661-010		PT, SUB ANF-8 (U) <U>				
△ RY1	87-A91-281-010		RELAY, AC DC12V OSA-SS-212DM5<LH, HA>				
△ RY181	87-A90-976-010		RELAY, AC12V SDT-S-112LMR<U>				
△ S1	87-A90-165-010		SW, SL 1-2-3 SWS2301<LH, HA>				
△ T1	87-A60-317-010		TERMINAL, 1P MSC<LH, HA>				
△ T2	87-A60-317-010		TERMINAL, 1P MSC<LH, HA>				
△ T181	87-A60-317-010		TERMINAL, 1P MSC<U>				
△ T182	87-A60-317-010		TERMINAL, 1P MSC<U>				

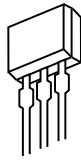


# TRANSISTOR ILLUSTRATION



E C B

CSA952  
CSC4115  
KTA1266  
KTC3198  
KTC3199



S D G

2SJ460  
2SK2541



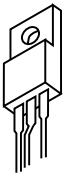
E C B

DTC114ES



B C E

2SB1370  
2SB1342  
2SD1933



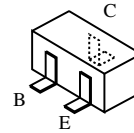
B C E

2SC3331



E B C

CC5551



2SA1235    KRA102  
2SC2714    KRA107  
2SC3052    KRC102  
CMBT5401   KRC104  
CMBT5551

## ○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



A  
抵抗部品コード  
Resistor Code

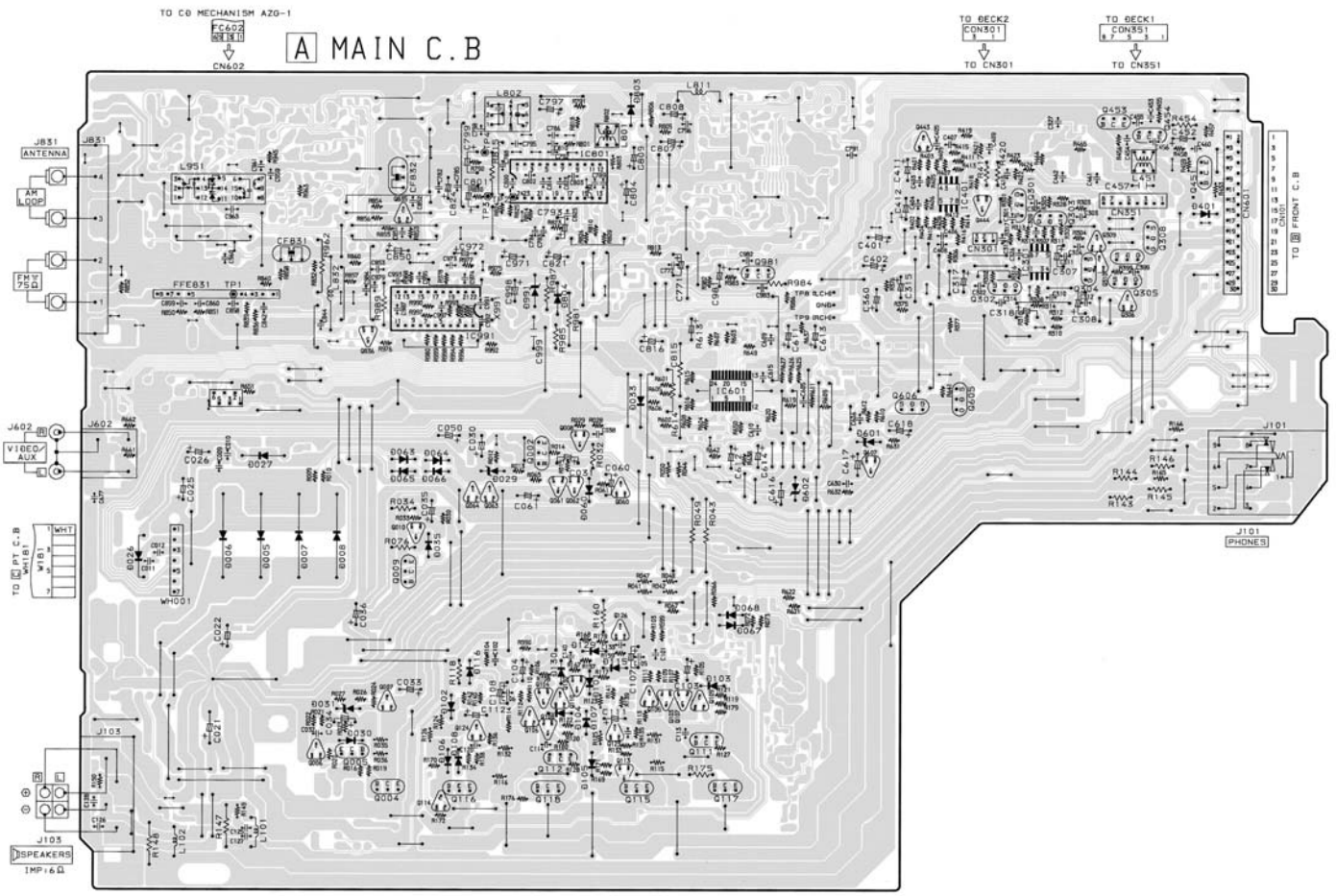
桁表示  
Figure  
抵抗値  
Value of resistor

## チップ抵抗 Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法/Dimensions (mm)			抵抗コード : A Resistor Code : A	
				外形/Form	L	W		t
1/16W	1005	± 5%	CJ		1.0	0.5	0.35	104
1/16W	1608	± 5%	CJ		1.6	0.8	0.45	108
1/10W	2125	± 5%	CJ		2	1.25	0.45	118
1/8W	3216	± 5%	CJ		3.2	1.6	0.55	128

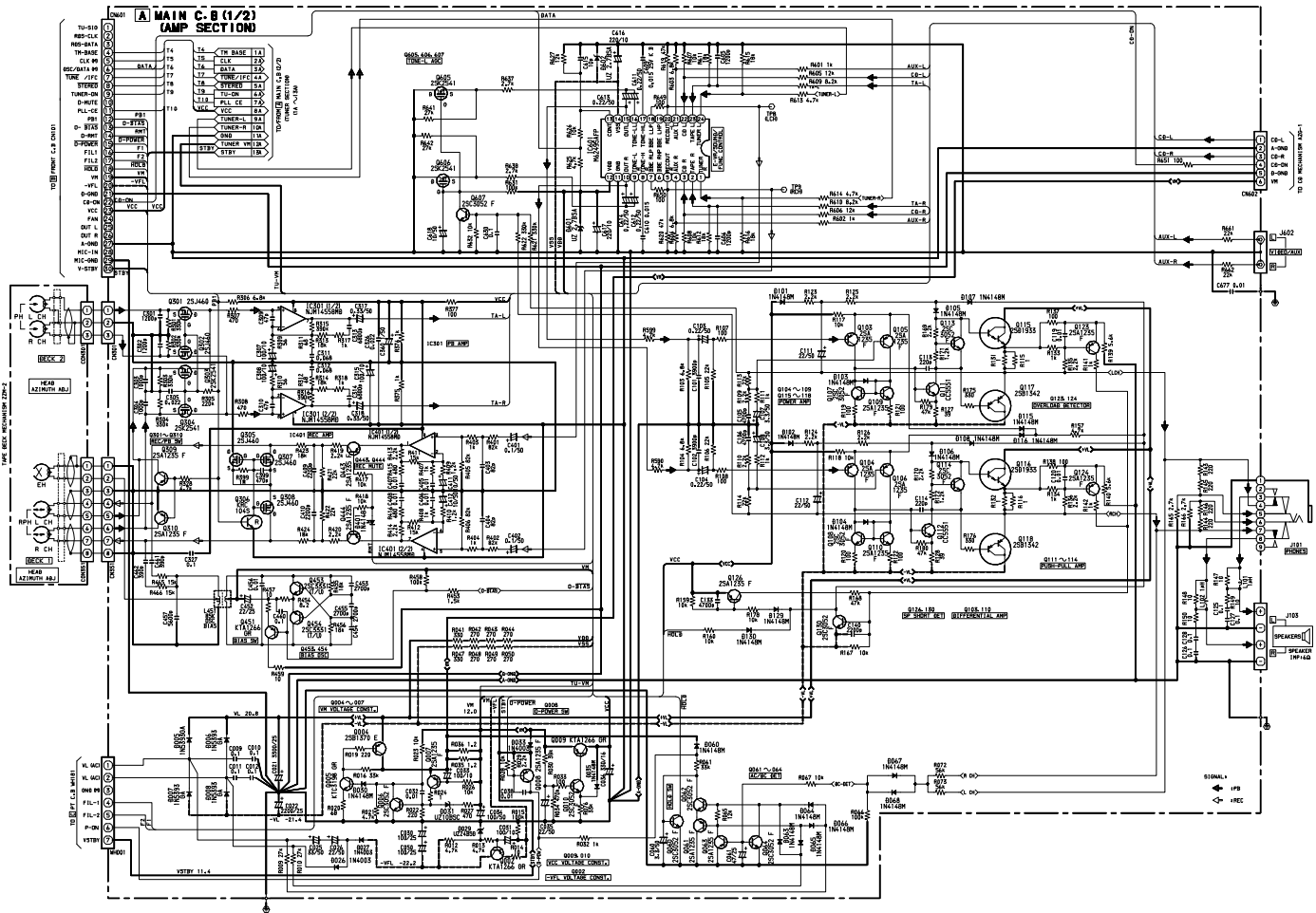
WIRING - 1 (MAIN) <U>

32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1



A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
K  
L  
M  
N  
O  
P  
Q  
R  
S  
T  
U

SCHMATIC DIAGRAM - 1 (MAIN : 1/2) <U>



SCHEMATIC DIAGRAM - 2 (MAIN : 2/2) <U>

