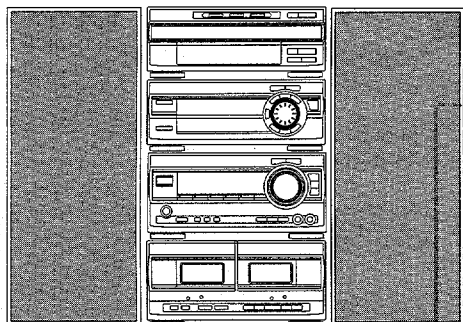


# aiwa



## XR-AVH1000



COMPACT DISC STEREO  
SYSTEM

- BASIC TAPE MECHANISM : 2ZM-3MK2 YPR4N
- BASIC CD MECHANISM : 4ZG-1 Z3DSHNM, Z4SHMD
- TYPE :EZ, K, HE

AMPLIFIER	CASSETTE DECK	GRAPHIC EQUALIZER	CD PLAYER	SPEAKERS	REMOTE CONTROL
MX-NAVH1000	FX-NH1000	GE-NAVH1000	DX-NH1000	SX-NAVH1000 SX-CR675	RC-7AS09

- If requiring information about the CD mechanism, see Service Manual of 4ZG-1, S/M Code No. 09-983-249-3OT.

MANUAL

SERVICE

## TABLE OF CONTENTS

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING .....	3
PRECAUTION TO REPLACE OPTICAL BLOCK .....	3
SPECIFICATIONS .....	4
ACCESSORIES / PACKAGE LIST .....	5
MODEL NO. MX-NAVH1000	
ELECTRICAL MAIN PARTS LIST .....	6 ~ 10
CHIP RESISTOR PART CODE .....	11
TRANSISTOR ILLUSTRATION .....	12
BLOCK DIAGRAM - 1 (TUNER: EZ, K) .....	13
BLOCK DIAGRAM - 2 (TUNER: HE) .....	14
BLOCK DIAGRAM - 3 (PROLOGIC) .....	15 ~ 16
BLOCK DIAGRAM - 4 (MAIN / FRONT) .....	17 ~ 19
SCHEMATIC DIAGRAM - 1 (MAIN) .....	20 ~ 22
WIRING - 1 (MAIN) .....	23 ~ 24
WIRING - 2 (FRONT) .....	25 ~ 26
SCHEMATIC DIAGRAM - 2 (FRONT) .....	27 ~ 28
SCHEMATIC DIAGRAM - 3 (TUNER: EZ, K) .....	29 ~ 30
WIRING - 3 (TUNER: EZ, K) .....	31
WIRING - 4 (TUNER: HE) .....	32
SCHEMATIC DIAGRAM - 4 (TUNER: HE) .....	33 ~ 34
WIRING - 5 (PROLOGIC) .....	35 ~ 36
SCHEMATIC DIAGRAM - 5 (PROLOGIC) .....	37 ~ 38
WIRING - 6 (AC1 / AC2) .....	39
SCHEMATIC DIAGRAM - 6 (TUNER FRONT END: HE) .....	40
IC BLOCK DIAGRAM .....	41 ~ 45
FL (10-BT-208GK) GRID ASSIGNMENT / ANODE CONNECTION .....	46 ~ 47
IC DESCRIPTION .....	48 ~ 50
ADJUSTMENT .....	51 ~ 52
PRACTICAL SERVICE FIGURE .....	53
MECHANICAL EXPLODED VIEW 1 / 1 .....	54
MECHANICAL PARTS LIST 1 / 1 .....	55
MODEL NO. DX-NH1000	
ELECTRICAL MAIN PARTS LIST .....	56
CHIP RESISTOR PART CODE .....	57
TRANSISTOR ILLUSTRATION .....	57
FL (6-BT-293GK) GRID ASSIGNMENT / ANODE CONNECTION .....	58
WIRING (MAIN / FRONT / KEY) .....	59 ~ 60
SCHEMATIC DIAGRAM (MAIN / FRONT / KEY) .....	61 ~ 62
IC DESCRIPTION .....	63 ~ 64
MECHANICAL EXPLODED VIEW 1 / 1 .....	65
MECHANICAL PARTS LIST 1 / 1 .....	66
MODEL NO. FD-NH1000	
ELECTRICAL MAIN PARTS LIST .....	67 ~ 68
CHIP RESISTOR PART CODE .....	68
TRANSISTOR ILLUSTRATION .....	68
BLOCK DIAGRAM (MAIN) .....	69 ~ 70
WIRING - 1 (MAIN) .....	71 ~ 72
SCHEMATIC DIAGRAM (MAIN) .....	73 ~ 74
WIRING - 2 (DECK) .....	75
ADJUSTMENT .....	76 ~ 77
PRACTICAL SERVICE FIGURE .....	77
IC BLOCK DIAGRAM - 1 .....	77
IC DESCRIPTION .....	78 ~ 79
IC BLOCK DIAGRAM - 2 .....	79
MECHANICAL EXPLODED VIEW 1 / 1 .....	80
MECHANICAL PARTS LIST 1 / 1 .....	81
SPRING APPLICATION POSITION .....	82
TAPE MECHANISM EXPLODED VIEW 1 / 1 .....	83 ~ 84
TAPE MECHANISM PARTS LIST 1 / 1 .....	85
MODEL NO. GE-NAVH1000	
ELECTRICAL MAIN PARTS LIST .....	86
CHIP RESISTOR PART CODE .....	87
TRANSISTOR ILLUSTRATION .....	87
FL (BJ624GK) GRID ASSIGNMENT / ANODE CONNECTION .....	88 ~ 89
IC BLOCK DIAGRAM .....	90
WIRING (MAIN) .....	91 ~ 92
SCHEMATIC DIAGRAM (MAIN) .....	93 ~ 94
IC DESCRIPTION .....	95
MECHANICAL EXPLODED VIEW 1 / 1 .....	96
MECHANICAL PARTS LIST 1 / 1 .....	97
SPEAKER DISASSEMBLY INSTRUCTION .....	98
SPEAKER PART LIST .....	99
REFERENCE NAME LIST .....	100

# 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 käytt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

## WARNING!

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.

## Precaution to replace Optical block

### (KSS-213F)

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

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

## CAUTION

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

## ATTENTION

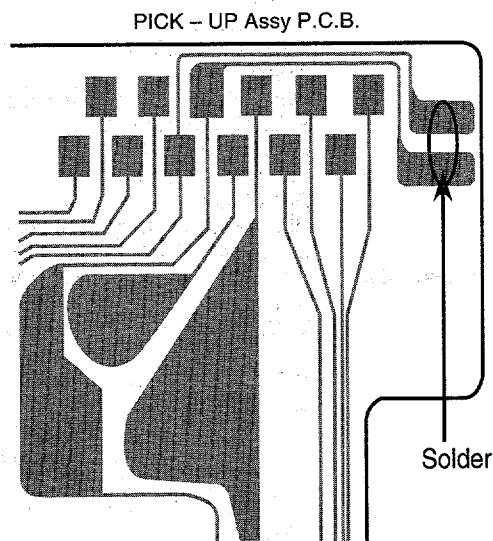
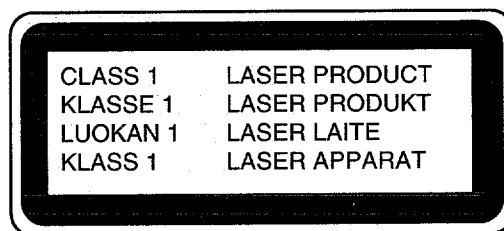
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

## 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.



# SPECIFICATIONS

## <STEREO RECEIVER MX-NAVH1000>

### <FM tuner section>

**Tuning range** 87.5 MHz to 108 MHz  
**Usable sensitivity (IHF)** K, EZ: 16.8 dBf  
 HE: 13.2 dBf  
**Antenna terminals** 75 ohms (unbalanced)

### <MW Tuner section>

**Tuning range** 531 kHz to 1602 kHz (9 kHz step)  
 530 kHz to 1710 kHz (10 kHz step)  
**Usable sensitivity** 350  $\mu$ V/m  
**Antenna** Loop antenna

### <LW Tuner section><K,EZ>

**Tuning range** 144 kHz to 290 kHz  
**Usable sensitivity** 1400  $\mu$ V/m  
**Antenna** Loop antenna

### <SW Tuner section><HE>

**Tuning range** 5.900 MHz to 17.900 MHz  
**Antenna** Wire antenna

### <Amplifier section>

**Power output**

**Front**  
 Rated: 65 W + 65 W  
 K,EZ: (6 ohms, T.H.D. 1 %, 1 kHz/DIN 45500)  
 HE: (1 kHz, T.H.D. 1 %, 6 ohms)  
 Reference: 80 W + 80 W  
 K,EZ: (6 ohms, T.H.D. 10 %, 1 kHz/DIN 45324)  
 HE: (1 kHz, T.H.D. 10 %, 6 ohms)  
 EZ: DIN MUSIC POWER:  
 150 W + 150 W

**Rear (Surround)**  
 Rated: 20 W + 20 W  
 K,EZ: (8 ohms, T.H.D. 1 %, 1 kHz/DIN 45500)  
 HE: (1 kHz, T.H.D. 1 %, 8 ohms)  
 K,EZ: Reference: 37 W + 37 W  
 HE: Reference: 25 W + 25 W  
 K,EZ: (8 ohms, T.H.D. 10 %, 1 kHz/DIN 45324)  
 HE: (1 kHz, T.H.D. 10 %, 8 ohms)  
 EZ: DIN MUSIC POWER:  
 46 W + 46 W

**Center**  
 Rated: 20 W  
 K,EZ: (8 ohms, T.H.D. 1 %, 1 kHz/DIN 45500)  
 HE: (1 kHz, T.H.D. 1 %, 8 ohms)  
 K,EZ: Reference: 37 W  
 HE: Reference: 25 W  
 K,EZ: (8 ohms, T.H.D. 10 %, 1 kHz/DIN 45324)  
 HE: (1 kHz, T.H.D. 10 %, 8 ohms)  
 EZ: DIN MUSIC POWER: 46 W

**Total harmonic distortion** 0.1 % (8 W, 1 kHz, 6 ohms, DIN AUDIO)

**Inputs**  
 VIDEO/AUX: 150 mV (adjustable)  
 MD: 150 mV (adjustable)  
 MIC 1, MIC 2: 1 mV (10 kohms)  
 5.1CH INPUT  
 FRONT (L,R): 400 mV  
 SURROUND (L,R): 400 mV  
 CENTER: 400 mV  
 SUB WOOFER: 400 mV

### Outputs

LINE OUT: 210 mV  
 SUB WOOFER: 800 mV  
 SPEAKERS: accept speakers of 6 ohms or more  
 SURROUND SPEAKERS: accept speakers of 8 ohms to 16 ohms  
 CENTER SPEAKER: accept speakers of 8 ohms or more

PHONES (stereo jack): accepts headphones of 32 ohms or more

### <General>

**Power requirements** K: 230 V – 240 V AC, 50 Hz  
 EZ: 230 V AC, 50 Hz  
 HE: 120 V/ 220V–230V/ 240 V AC switchable 50/60 Hz  
**Power consumption** K, HE: 155 W EZ: 135 W  
**Dimensions of main unit (W x H x D)** 260 x 121.5 x 345 mm  
**Weight of main unit** 5.8 kg

## <CASSETTE DECK FX-NH1000>

**Track format** 4 tracks, 2 channels stereo  
**Frequency response** Type II (high/CrO<sub>2</sub>) tape: 50 Hz – 16000 Hz  
 Type I (normal) tape: 50 Hz – 15000 Hz  
**Signal-to-noise ratio** 60 dB (Dolby B NR ON, Type II tape peak level)  
**Recording system** AC bias, AC erase<EZ, HE>  
**Heads** Deck 1: Playback head x 1  
 Deck 2: Recording/playback head x 1, erase head x 1  
**Dimensions of main unit (W x H x D)** 260 x 121.5 x 318 mm  
**Weight of main unit** 1.8 kg

## <CD PLAYER DX-NH1000>


**Laser** Semiconductor laser ( $\lambda = 780$  nm)  
**D-A converter** 1 bit dual  
**Signal-to-noise ratio** 85 dB (1 kHz, 0 dB)  
**Harmonic distortion** 0.05 % (1 kHz, 0 dB)  
**Wow and flutter** Unmeasurable  
**Dimensions of main unit (W x H x D)** 260 x 106 x 318 mm  
**Weight of main unit** 2.2 kg

## <GRAPHIC EQUALIZER GE-NAVH1000>

**Dimensions of main unit (W x H x D)** 260 x 100.5 x 322 mm  
**Weight** 1 kg

## <SPEAKER SYSTEM SX-NAVH1000>

**Cabinet type** 3 way (magnetic shielded type)  
**Speakers** Woofer: 140 mm cone type x 2  
 Tweeter: 60 mm cone type  
 Super tweeter: 20 mm ceramic type  
 6 ohms  
**Impedance** 6 ohms  
**Output sound pressure level** 88 dB/W/m  
**Dimensions (W x H x D)** K,EZ: 260 x 444 x 250 mm  
 HE: 222 x 444 x 250 mm  
**Weight** EZ,K: 6.0 kg  
 HE: 5.8 kg

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# ACCESSORIES / PACKAGE LIST

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

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	88-SPM-906-010		IB,E(9L)M<EZ>
1	88-SPM-901-010		IB,H(ECA)I<HE>
1	88-SPM-905-010		IB,K(E)M<K>
2	87-NFR-640-010		RC UNIT,RC-7AS09
3	87-043-095-010		WIRE ANTENNA<HE>
4	87-043-106-010		WIRE, FM ANT (Z)<K,EZ>
5	87-043-115-010		ANT,FEEDER FM<HE>
6	87-006-269-010		AM LOOP ANT (UN)<HE>
6	87-006-225-010		AM LOOP ANT NC2<K,EZ>
△ 7	87-099-789-010		PLUG,ADPTR IR44<HE>

MODEL NO.

# MX-NAVH1000

## 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							
	88-SL1-605-110		IC, UPD780228GF-026-3BA		87-A40-438-080		ZENER, MTZJ4.7A
	87-NF8-614-010		IC, SPS-442-1-W		87-A40-002-080		ZENER, MTZJ5.1C
	87-A20-853-010		C-IC, M62463FP		87-A40-270-080		C-DIODE, MC2838<EZ, K>
	87-017-917-080		IC, BU4066BCF		87-A40-234-080		ZENER, MTZJ5.6A
	87-A21-011-040		C-IC, M62445FP-600D		87-A40-466-080		ZENER, MTZJ2.7A
				MAIN C.B			
	87-A20-804-040		C-IC, NJM2152M	C101	87-016-520-090		CAP, E 3300-65
	87-017-888-080		IC, NJM4558MD	C102	87-016-520-090		CAP, E 3300-65
	87-A20-869-040		C-IC, M62449FP	C103	87-016-658-090		CAP, E 4700-35 SMG
	86-NF2-655-010		IC, LC72131D(Z)	C104	87-016-658-090		CAP, E 4700-35 SMG
	87-A20-913-010		IC, LA1837NL<K, EZ>	C105	87-012-368-080		C-CAP, S 0.1-50 F
	87-A20-438-010		IC, LA1837<HE>				
	88-NF5-615-040		C-IC, MSM6654A-521GS-KR1	C106	87-012-368-080		C-CAP, S 0.1-50 F
	87-A20-715-010		IC, M62439SP	C107	87-012-368-080		C-CAP, S 0.1-50 F
	87-017-726-080		IC, BU4052 BCF	C108	87-012-368-080		C-CAP, S 0.1-50 F
	87-A20-440-040		C-IC, BU1920FS<EZ>	C109	87-010-196-080		CHIP CAPACITOR, 0.1-25
				C110	87-010-196-080		CHIP CAPACITOR, 0.1-25
TRANSISTOR				C111	87-010-196-080		CHIP CAPACITOR, 0.1-25
	87-A30-076-080		C-TR, 2SC3052 F	C112	87-010-196-080		CHIP CAPACITOR, 0.1-25
	87-A30-104-080		C-TR, RT1N441C	C113	87-010-247-080		CAP, ELECT 100-50V
	89-213-702-010		TR, 2SB1370 (1.8W)	C114	87-010-385-080		CAP, ELECT 220-25V
	87-026-610-080		TR, KTC3198GR	C115	87-010-385-080		CAP, ELECT 220-25V
	87-A30-083-080		TR, CSD1489E				
	87-A30-075-080		C-TR, 2SA1235F	C116	87-010-247-080		CAP, ELECT 100-50V
	87-026-609-080		TR, KTA1266GR	C117	87-010-430-080		CAP, ELECT 100-63
	87-A30-087-080		C-FET, 2SK2158	C118	87-010-263-080		CAP, ELECT 100-10V
	87-A30-086-040		C-TR, CSD1306E	C119	87-010-260-080		CAP, ELECT 47-25V
	87-A30-107-080		C-TR, CMBT5401	C120	87-010-403-080		CAP, ELECT 3.3-50V
	87-A30-190-080		TR, CC5551				
	87-A30-097-010		TR, FN 1016	C121	87-010-174-080		CAP CHIP SL470P (K)
	87-A30-098-010		TR, FP 1016	C123	87-010-247-080		CAP, ELECT 100-50V
	87-A30-071-080		C-TR, RT1N 144C	C124	87-010-112-080		CAP, ELECT 100-16V
	87-A30-106-080		C-TR, CMBT5551	C125	87-010-235-080		CAP, E 470-16 SME
	87-A30-162-010		FET, 2SK2937	C130	87-010-399-010		CAP, ELECT 3300-35V
	87-A30-072-080		C-TR, RT1P 144C	C131	87-010-399-010		CAP, ELECT 3300-35V
	87-A30-073-080		C-TR, RT1N 141C	C132	87-012-368-080		C-CAP, S 0.1-50 F
	87-A30-074-080		C-TR, RT1P 141C	C133	87-012-368-080		C-CAP, S 0.1-50 F
	87-026-263-080		C-TR, RN1410	C190	87-018-209-080		CAP, TC-U 0.1-50 ZF
	87-A30-086-080		C-TR, CSD1306E	C201	87-010-322-080		C-CAP, S 100P-50 CH
	89-112-965-080		TR, 2SA1296 (0.75W)	C202	87-010-322-080		C-CAP, S 100P-50 CH
	87-026-226-080		CHIP-TR, DTA143EK	C209	87-010-403-080		CAP, ELECT 3.3-50V
	87-A30-109-010		TR, 2SD 2495	C210	87-010-403-080		CAP, ELECT 3.3-50V
	87-A30-108-010		TR, 2SB1626	C211	87-010-184-080		CAP CHIP S3300P
	87-A30-196-080		TR, 2SC4115SRS	C212	87-010-184-080		CAP CHIP S3300P
	89-327-143-080		TR, 2SC2714 (0.1W)				
	89-109-521-080		TR, 2SA952K	C213	87-010-186-080		CAP, CHIP 4700P
	89-503-602-080		C-FET, 2SK360E	C214	87-010-186-080		CAP, CHIP 4700P
				C215	87-010-404-080		CAP, ELECT 4.7-50V
				C216	87-010-404-080		CAP, ELECT 4.7-50V
				C217	87-010-260-080		CAP, ELECT 47-25V
				C218	87-010-260-080		CAP, ELECT 47-25V
				C219	87-A10-516-080		C-CAP, S 100P-200 J CH
DIODE				C220	87-A10-516-080		C-CAP, S 100P-200 J CH
	87-017-654-060		DIODE, GBU6J	C221	87-016-462-080		C-CAP, S 1-16 F
	87-017-447-010		DIODE, GBU4DL	C222	87-016-462-080		C-CAP, S 1-16 F
	87-A40-470-080		DIODE, 1SS254				
	87-A40-468-080		C-DIODE, HSM2836CTR	C223	87-010-405-080		CAP, ELECT 10-50V
	87-A40-469-080		C-DIODE, HSM2838CTR	C227	87-010-407-080		CAP, ELECT 33-50V
	87-070-274-080		DIODE, 1N4003 SEM	C231	87-010-186-080		CAP, CHIP 4700P
	87-A40-341-080		ZENER, MTZJ 36 A	C232	87-010-186-080		CAP, CHIP 4700P
	87-A40-345-080		ZENER, MTZJ10C	C233	87-010-401-080		CAP, ELECT 1-50V
	87-A40-004-080		ZENER, MTZJ16A	C234	87-010-401-080		CAP, ELECT 1-50V
	87-017-931-080		ZENER, MTZJ5.6B	C235	87-010-196-080		CHIP CAPACITOR, 0.1-25
	87-A40-370-090		DIODE, RK46-P20	C301	87-010-402-080		CAP, ELECT 2.2-50V
	87-070-136-080		ZENER, MTZJ5.1B	C302	87-010-402-080		CAP, ELECT 2.2-50V
	87-A40-488-080		DIODE, 1SS244	C303	87-010-178-080		CHIP CAP 1000P
	87-A40-442-080		ZENER, MTZJ9.1A	C304	87-010-178-080		CHIP CAP 1000P

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C305	87-010-404-080		CAP, ELECT 4.7-50V	C702	87-010-402-080		CAP, ELECT 2.2-50V
C306	87-010-404-080		CAP, ELECT 4.7-50V	C703	87-016-669-080		C-CAP,S 0.1-25 K B
C307	87-010-322-080		C-CAP,S 100P-50 CH	C704	87-016-669-080		C-CAP,S 0.1-25 K B
C308	87-010-322-080		C-CAP,S 100P-50 CH	C705	87-016-460-080		C-CAP,S 0.22-16 B
C309	87-010-405-080		CAP, ELECT 10-50V	C706	87-016-460-080		C-CAP,S 0.22-16 B
C310	87-010-405-080		CAP, ELECT 10-50V	C707	87-012-365-080		C-CAP,S 0.027-25VBK
C313	87-010-260-080		CAP, ELECT 47-25V	C708	87-012-365-080		C-CAP,S 0.027-25VBK
C314	87-010-260-080		CAP, ELECT 47-25V	C709	87-010-956-080		CHIP-CAP,S 0.068-25B
C315	87-A10-596-080		C-CAP,S 100P-100 J CH	C710	87-010-956-080		CHIP-CAP,S 0.068-25B
C316	87-A10-596-080		C-CAP,S 100P-100 J CH	C711	87-010-197-080		CAP, CHIP 0.01 DM
C317	87-010-544-080		CAP, ELECT 0.1-50V	C712	87-010-197-080		CAP, CHIP 0.01 DM
C318	87-010-544-080		CAP, ELECT 0.1-50V	C713	87-010-198-080		CAP, CHIP 0.022
C319	87-010-182-080		C-CAP,S 2200P-50 B	C714	87-010-198-080		CAP, CHIP 0.022
C321	87-012-145-080		CAP, CHIP S 270P CH	C715	87-010-183-080		C-CAP,S 2700P-50 B
C322	87-012-145-080		CAP, CHIP S 270P CH	C716	87-010-183-080		C-CAP,S 2700P-50 B
C323	87-016-462-080		C-CAP,S 1-16 ZF	C717	87-010-188-080		CAP,CHIP 6800P
C324	87-016-462-080		C-CAP,S 1-16 ZF	C718	87-010-188-080		CAP,CHIP 6800P
C351	87-010-402-080		CAP, ELECT 2.2-50V	C719	87-010-178-080		CHIP CAP 1000P
C352	87-010-178-080		CHIP CAP 1000P	C720	87-010-178-080		CHIP CAP 1000P
C353	87-010-404-080		CAP, ELECT 4.7-50V	C721	87-010-182-080		C-CAP,S 2200P-50 B
C354	87-010-322-080		C-CAP,S 100P-50 CH	C722	87-010-182-080		C-CAP,S 2200P-50 B
C355	87-010-405-080		CAP, ELECT 10-50V	C723	87-010-544-080		CAP, ELECT 0.1-50V
C357	87-010-260-080		CAP, ELECT 47-25V	C724	87-010-544-080		CAP, ELECT 0.1-50V
C358	87-A10-596-080		C-CAP,S 100P-100 J CH	C730	87-010-404-080		CAP, ELECT 4.7-50V
C359	87-010-544-080		CAP, ELECT 0.1-50V	C731	87-010-112-080		CAP, ELECT 100-16V
C360	87-012-145-080		CAP, CHIP S 270P CH	C735	87-010-322-080		C-CAP,S 100P-50 CH
C361	87-016-462-080		C-CAP,S 1-16 ZF	C736	87-010-322-080		C-CAP,S 100P-50 CH
C381	87-010-402-080		CAP, ELECT 2.2-50V	C737	87-010-322-080		C-CAP,S 100P-50 CH
C391	87-010-401-080		CAP, ELECT 1-50V	C738	87-010-196-080		CHIP CAPACITOR,0.1-25
C503	87-010-180-080		C-CER 1500P	C900	87-010-178-080		CHIP CAP 1000P
C504	87-010-180-080		C-CER 1500P	C901	87-010-182-080		C-CAP,S 2200P-50 B<K,EZ>
C509	87-018-131-080		CAP,TC-U 1000P-50 K	C902	87-010-182-080		C-CAP,S 2200P-50 B<K,EZ>
C510	87-018-131-080		CAP,TC-U 1000P-50 K	C903	87-010-196-080		CHIP CAPACITOR,0.1-25
C511	87-010-405-080		CAP, ELECT 10-50V	C904	87-010-196-080		CHIP CAPACITOR,0.1-25
C512	87-010-405-080		CAP, ELECT 10-50V	C905	87-010-196-080		CHIP CAPACITOR,0.1-25
C513	87-010-404-080		CAP, ELECT 4.7-50V	C906	87-010-196-080		CHIP CAPACITOR,0.1-25
C514	87-010-404-080		CAP, ELECT 4.7-50V	C907	87-010-190-080		S CHIP F 0.01
C519	87-012-142-080		CAP, S 0.33-16	C908	87-010-190-080		S CHIP F 0.01
C520	87-016-669-080		C-CAP,S 0.1-25 K B	C909	87-012-368-080		C-CAP,S 0.1-50 F
C521	87-016-083-080		C-CAP,S 0.15-16 RK	C910	87-012-368-080		C-CAP,S 0.1-50 F
C522	87-010-183-080		C-CAP,S 2700P-50 B	C920	87-012-157-080		C-CAP,S 330P-50 CH
C523	87-016-669-080		C-CAP,S 0.1-25 K B	C921	87-012-157-080		C-CAP,S 330P-50 CH
C531	87-010-405-080		CAP, ELECT 10-50V	C922	87-012-157-080		C-CAP,S 330P-50 CH
C532	87-010-374-080		CAP,E 47-10	C923	87-012-157-080		C-CAP,S 330P-50 CH
C533	87-010-263-080		CAP, ELECT 100-10V	C924	87-012-157-080		C-CAP,S 330P-50 CH<K,EZ>
C534	87-010-263-080		CAP, ELECT 100-10V	C925	87-012-157-080		C-CAP,S 330P-50 CH<K,EZ>
C535	87-010-195-080		C-CAP,S 0.068-25 F	C939	87-010-401-080		CAP, ELECT 1-50V
C536	87-012-142-080		CAP, S 0.33-16	C940	87-010-401-080		CAP, ELECT 1-50V
C537	87-010-196-080		CHIP CAPACITOR,0.1-25	C941	87-010-196-080		CHIP CAPACITOR,0.1-25
C538	87-010-404-080		CAP, ELECT 4.7-50V	C942	87-010-196-080		CHIP CAPACITOR,0.1-25
C539	87-010-404-080		CAP, ELECT 4.7-50V	C943	87-010-993-080		C-CAP,S 0.056-25 B
C540	87-010-314-080		C-CAP,S 22P-50V	C944	87-010-993-080		C-CAP,S 0.056-25 B
C541	87-010-314-080		C-CAP,S 22P-50V	C945	87-010-196-080		CHIP CAPACITOR,0.1-25
C542	87-010-314-080		C-CAP,S 22P-50V	C946	87-010-993-080		C-CAP,S 0.056-25 B
C545	87-010-196-080		CHIP CAPACITOR,0.1-25	C951	87-010-401-080		CAP, ELECT 1-50V
C601	87-010-545-080		CAP,E 0.22-50 SME	C952	87-010-263-080		CAP, ELECT 100-10V
C602	87-010-545-080		CAP,E 0.22-50 SME	C953	87-010-380-080		CAP, ELECT 47-16V
C603	87-010-182-080		C-CAP,S 2200P-50 B	CN611	87-099-212-010		CONN,5P 6216 V
C604	87-010-182-080		C-CAP,S 2200P-50 B	CN621	87-A60-063-010		CONN,04P V 96045-04C<EZ>
C605	87-010-369-080		C-CAP,S 0.033-25 K B	FB101	87-003-223-080		F-BEAD,BL02RN2
C606	87-010-369-080		C-CAP,S 0.033-25 K B	J901	87-A60-483-010		JACK,DIA6.3 BLK ST W/S KM
C607	87-010-405-080		CAP, ELECT 10-50V	J902	87-A60-617-010		TERMINAL,SP 4P (MSC)
C608	87-010-405-080		CAP, ELECT 10-50V	J903	87-A60-652-010		JACK,PIN 4P ORN/BLK
C609	87-010-374-080		CAP,E 47-10	J904	87-A60-684-010		JACK,PIN 6P OR/BLK/RED
C610	87-010-374-080		CAP,E 47-10	J905	87-A60-658-010		JACK,PIN 6P WHITE/RED
C611	87-010-405-080		CAP, ELECT 10-50V	L901	87-003-383-010		COIL,1UH-S
C612	87-010-112-080		CAP, ELECT 100-16V	L902	87-003-383-010		COIL,1UH-S
C613	87-010-184-080		CHIP CAPACITOR 3300P(K)	L911	87-003-383-010		COIL,1UH-S
C614	87-010-184-080		CHIP CAPACITOR 3300P(K)	L912	87-003-383-010		COIL,1UH-S
C701	87-010-402-080		CAP, ELECT 2.2-50V	L913	87-003-383-010		COIL,1UH-S

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
R237	87-A00-262-080		RES,M/F 0.15-2W J	J601	87-A60-651-010		JACK,3.5MO (NO)
R238	87-A00-262-080		RES,M/F 0.15-2W J	J602	87-A60-651-010		JACK,3.5MO (NO)
R239	87-A00-262-080		RES,M/F 0.15-2W J	LED301	87-A40-497-080		LED,SML11516C
R240	87-A00-262-080		RES,M/F 0.15-2W J	LED302	87-A40-497-080		LED,SML11516C
R331	87-022-050-080		RES,M/F 0.22-1W J	LED303	87-A40-497-080		LED,SML11516C
R332	87-022-050-080		RES,M/F 0.22-1W J	LED304	87-A40-497-080		LED,SML11516C
R333	87-022-050-080		RES,M/F 0.22-1W J	LED305	87-A40-497-080		LED,SML11516C
R334	87-022-050-080		RES,M/F 0.22-1W J	S301	87-A90-809-080		SW,TACT TSTA-2
R366	87-022-050-080		RES,M/F 0.22-1W J	S302	87-A90-809-080		SW,TACT TSTA-2
R367	87-022-050-080		RES,M/F 0.22-1W J	S303	87-A90-809-080		SW,TACT TSTA-2
R909	87-A00-126-080		RES M/F 220-1/WJ VIP	S304	87-A90-809-080		SW,TACT TSTA-2
R910	87-A00-126-080		RES M/F 220-1/WJ VIP	S305	87-A90-809-080		SW,TACT TSTA-2
R911	87-A00-126-080		RES M/F 220-1/WJ VIP	S306	87-A90-809-080		SW,TACT TSTA-2
R912	87-A00-126-080		RES M/F 220-1/WJ VIP	S307	87-A90-809-080		SW,TACT TSTA-2
RY101	87-A90-464-010		RELAY, DGL2D2-O(M)	S308	87-A90-809-080		SW,TACT TSTA-2
TH201	87-A90-221-080		C-THMS,100K	S309	87-A90-809-080		SW,TACT TSTA-2
TH202	87-A90-221-080		C-THMS,100K	S310	87-A90-809-080		SW,TACT TSTA-2
W101	85-NF5-628-010		F-CABLE 7P-2.5	S311	87-A90-809-080		SW,TACT TSTA-2
W611	88-905-281-110		FF-CABLE, 5P 1.25 280MM	S312	87-A90-809-080		SW,TACT TSTA-2
W621	88-904-151-110		FF-CABLE,4P 1.25 150MM<EZ>	S313	87-A90-809-080		SW,TACT TSTA-2
W906	88-908-071-110		FF-CABLE, 8P 1.25 70MM	S314	87-A90-809-080		SW,TACT TSTA-2
W907	88-911-121-110		FF-CABLE,11P 1.25	S315	87-A90-809-080		SW,TACT TSTA-2
				S316	87-A90-809-080		SW,TACT TSTA-2<EZ>
				S317	87-A90-809-080		SW,TACT TSTA-2<EZ>
				S318	87-A90-809-080		SW,TACT TSTA-2<EZ>
FRONT C.B							
C1	87-015-685-040		CAP,E 10-25 M 7L SRA	SW201	87-A90-535-010		SW,RTRY EC16B24304
C101	87-010-196-080		CHIP CAPACITOR,0.1-25	X201	87-A70-075-080		VIB,CER 4.19MHZ CRHF
C201	87-010-192-080		C-CAP,S 0.022-50 F	X801	87-A70-075-080		VIB,CER 4.19MHZ CRHF
C202	87-010-264-040		CAP,E 100-10 5L				
C203	87-010-490-040		CAP, ELECT 0.1-50	TUNER C.B			
C204	87-010-981-040		CAP,E 22-35 M 5L SRE	C701	87-010-260-080		CAP, ELECT 47-25V
C205	87-010-194-080		CAP, CHIP 0.047	C702	87-010-404-080		CAP, ELECT 4.7-50V
C206	87-010-405-040		CAP,E 10-50	C703	87-012-286-080		CAP, U 0.01-25
C207	87-010-194-080		CAP, CHIP 0.047	C704	87-012-286-080		CAP, U 0.01-25
C208	87-A10-189-040		CAP,E 220-10 5L	C709	87-012-195-080		C-CAP,U 100P-50CH
C209	87-010-071-040		CAP,E 1-50 5L	C711	87-010-263-080		CAP, ELECT 100-10V
C211	87-012-140-080		CAP 470P	C712	87-010-196-080		CHIP CAPACITOR,0.1-25
C220	87-016-669-080		C-CAP,S 0.1-25 K B	C713	87-012-286-080		CAP, U 0.01-25
C221	87-016-669-080		C-CAP,S 0.1-25 K B	C714	87-012-286-080		CAP, U 0.01-25
C222	87-010-401-040		CAP,E 1-50 SME	C715	87-012-195-080		C-CAP,U 100P-50 CH<K,EZ>
C241	87-010-178-080		CHIP CAP 1000P	C717	87-012-286-080		CAP, U 0.01-25
C242	87-018-115-080		C-CAP,S 47P-50 J SL	C719	87-012-286-080		CAP, U 0.01-25
C243	87-010-312-080		C-CAP,S 15P-50 CH	C720	87-012-195-080		C-CAP,U 100P-50CH
C244	87-018-113-080		C-CAP,S 33P-50 J SL	C721	87-012-176-080		CAP 15P
C247	87-016-669-080		C-CAP,S 0.1-25 K B	C722	87-012-176-080		CAP 15P
C248	87-010-192-080		C-CAP,S 0.022-50 F	C723	87-012-274-080		CHIP CAP,U 1000P-50B
C301	87-010-404-080		CAP, ELECT 4.7-50V	C725	87-012-274-080		CHIP CAP,U 1000P-50B
C302	87-010-404-080		CAP, ELECT 4.7-50V	C727	87-010-196-080		CHIP CAPACITOR,0.1-25
C601	87-010-405-040		CAP,E 10-50	C728	87-010-248-080		CAP, ELECT 220-10V
C602	87-010-176-080		C-CAP,S 680P-50 SL	C753	87-012-195-080		C-CAP,U 100P-50CH<K,EZ>
C603	87-018-133-080		CAP,TC-U 4700P-16 N	C755	87-012-286-080		CAP, U 0.01-25
C604	87-010-166-080		C-CAP,S 100P-50 SL	C756	87-012-286-080		CAP, U 0.01-25
C605	87-010-321-080		CHIP CAPACITOR,82P(J)	C757	87-012-188-080		C-CAP,U 47P-50 CH
C606	87-010-544-040		CAP,E 0.1-50 SME	C758	87-012-167-080		C-CAP,U 5P-50 CH
C608	87-010-166-080		C-CAP,S 100P-50 SL	C761	87-010-196-080		CHIP CAPACITOR,0.1-25
C609	87-010-545-040		CAP,E 0.22-50 SME	C762	87-012-286-080		CAP, U 0.01-25
C610	87-010-177-080		C-CAP,S 820P-50 SL	C763	87-010-829-080		CAP, U 0.047-16
C611	87-010-406-040		CAP,E 22-50 SME	C764	87-012-337-080		C-CAP,U 56P-50 CH<HE>
C614	87-010-248-040		CAP,E 220-10 SME	C765	87-012-286-080		CAP, U 0.01-25
C615	87-010-378-040		CAP,E 10-16	C766	87-012-286-080		CAP, U 0.01-25
C619	87-016-526-080		C-CAP,S 0.47-16 BK	C768	87-012-286-080		CAP, U 0.01-25
C801	87-010-263-040		CAP,E 100-10	C769	87-010-260-080		CAP, ELECT 47-25V
C802	87-010-196-080		CHIP CAPACITOR,0.1-25	C770	87-010-829-080		CAP, U 0.047-16
C803	87-010-405-040		CAP,E 10-50	C771	87-010-407-080		CAP, ELECT 33-50V
C804	87-010-159-080		C-CAP,S 27P-50 SL	C772	87-010-829-080		CAP, U 0.047-16
C805	87-010-159-080		C-CAP,S 27P-50 SL	C773	87-015-785-080		CHIP CAPACITOR, 0.1FZ-25Z
C807	87-018-131-080		CAP,TC-U 1000P-50 KB	C774	87-010-263-080		CAP, ELECT 100-10V
CN601	87-099-212-010		CONN,5P 6216 V	C775	87-010-404-080		CAP, ELECT 4.7-50V
FB601	87-008-372-080		FILTER, EMI BL OIRNI	C776	87-012-286-080		CAP, U 0.01-25<K,EZ>
FL301	88-SP1-610-010		FL,10-BT-208GK				



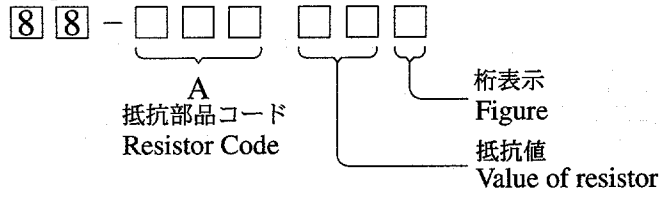


REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C802	87-010-401-080		CAP, ELECT 1-50V				
C805	87-010-154-080		CAP CHIP 10P				
C806	87-010-378-080		CAP, ELECT 10-16V				
C807	87-010-378-080		CAP, ELECT 10-16V				
C841	87-010-154-080		CAP CHIP 10P				
C851	87-010-374-080		CAP, ELECT 47-10V				
C852	87-010-374-080		CAP, ELECT 47-10V				
C853	87-010-196-080		CHIP CAPACITOR, 0.1-25				
C854	87-010-196-080		CHIP CAPACITOR, 0.1-25				
C855	87-010-374-080		CAP, ELECT 47-10V				
C856	87-010-196-080		CHIP CAPACITOR, 0.1-25				
C857	87-010-196-080		CHIP CAPACITOR, 0.1-25				
C858	87-010-374-080		CAP, ELECT 47-10V				
C881	87-010-260-080		CAP, ELECT 47-25V				
AC2 C.B				AC1 C.B			
△ C136	87-010-196-080		C-CAP, S 0.1-25 ZF<K,EZ>				
△ PR101	87-A90-195-080		PROTECTOR, 7A 491 SERIES 60V	△ F101	87-035-368-010		FUSE, 4A 250V T<HE>
△ PR102	87-A90-195-080		PROTECTOR, 7A 491 SERIES 60V	△ FC101	87-033-213-080		CLAMP, FUSE<HE>
△ PR103	87-026-682-080		PROTECTOR, 10A 491 SERIES 60V	△ FC102	87-033-213-080		CLAMP, FUSE<HE>
△ PR104	87-026-682-080		PROTECTOR, 10A 491 SERIES 60V	△ PT101	88-SPM-602-010		PT, HE<HE>
△ PR105	87-026-681-080		PROTECTOR, 5A 491 SERIES 60 V	△ PT101	88-SPM-604-010		PT, EZ<EZ>
△ PR106	87-026-681-080		PROTECTOR, 5A 491 SERIES 60 V	△ PT101	88-SPM-606-010		PT, K<K>
				△ T101	87-A60-317-010		TERMINAL, 1P MSC
				△ T102	87-A60-317-010		TERMINAL, 1P MSC
				AC1 SW C.B<HE>			
				△ S101	87-036-173-010		SW, SL 2-2-4 SDKG<HE>
				VM C.B			
				CONN 8P C.B			
				CN905	87-099-196-010		CONN, 8P 6216 V

○チップ抵抗部品コード/CHIP RESISTOR PART CODE

チップ抵抗部品コードの成り立ち

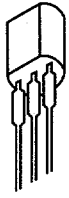
Chip Resistor Part Coding



チップ抵抗  
Chip resistor

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

# TRANSISTOR ILLUSTRATION (MX-NAVH1000)



ECB

KTA1266GR  
KTC3198GR



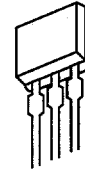
ECB

CC5551  
CSD1489B  
2SA952K



BCE

2SB1370  
FN1016  
FP1016



BCE

2SC4115S



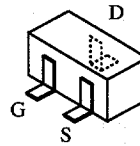
BCE

2SA1296

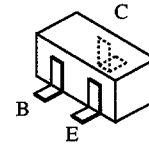


GDS

2SK2937



2SK2158

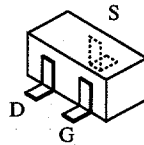


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2SA1235	CSD1306E
2SC3052	RT1N144C
RT1P144C	RT1P141C
CMBT5551	CMBT5401
2SC2714	RN1410
DTA143EK	



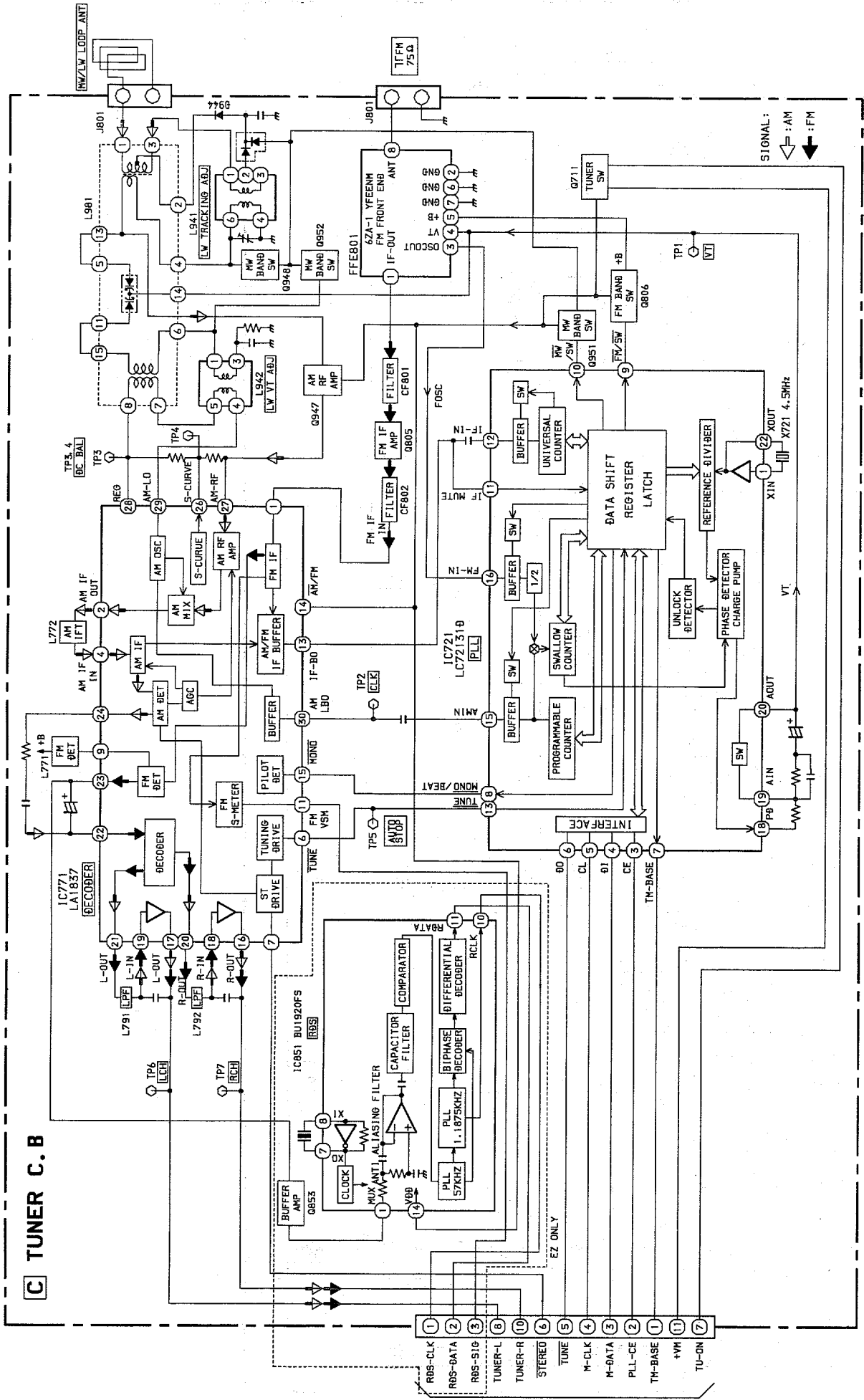
BCE

2SB1626  
2SD2495



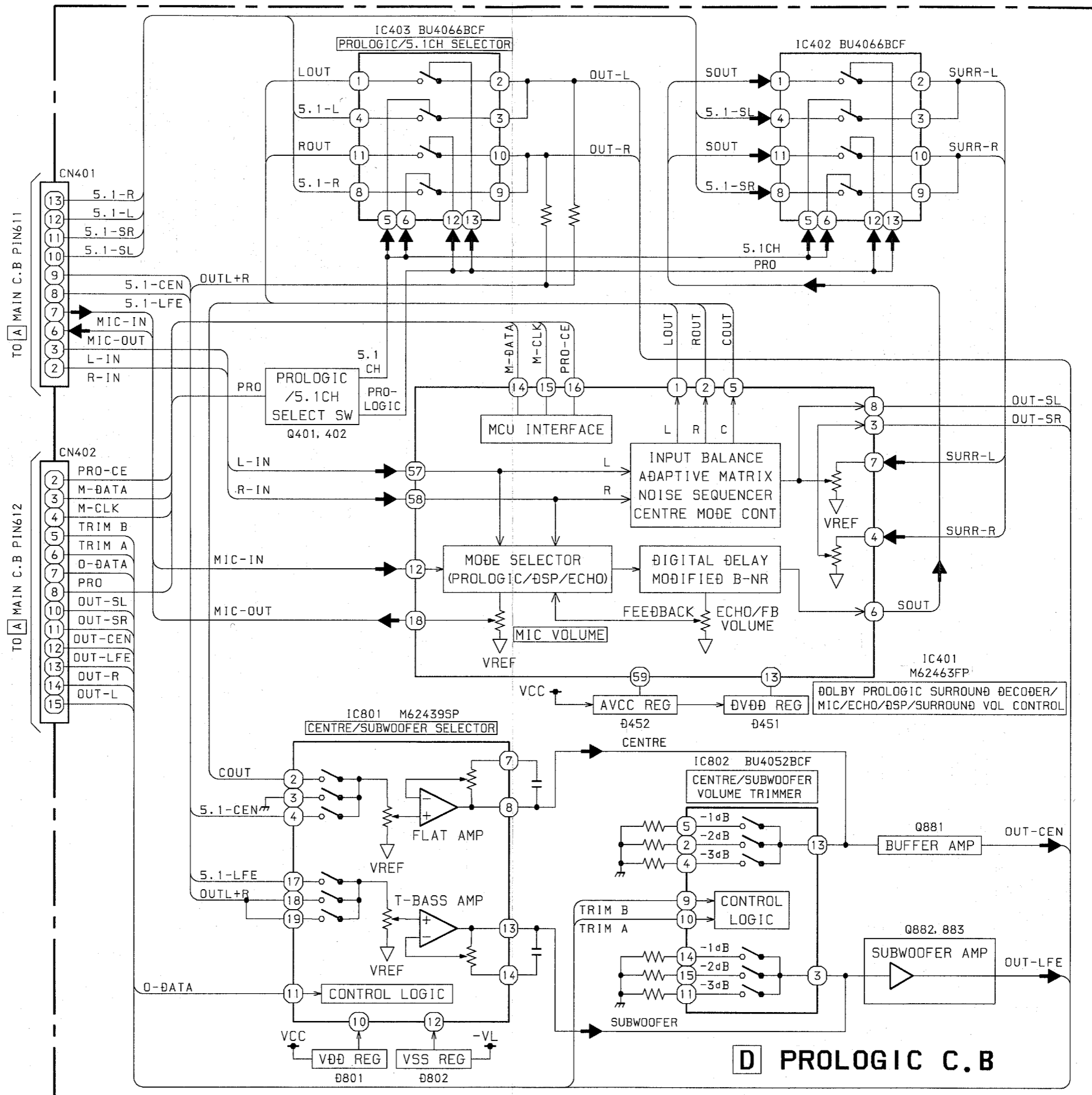
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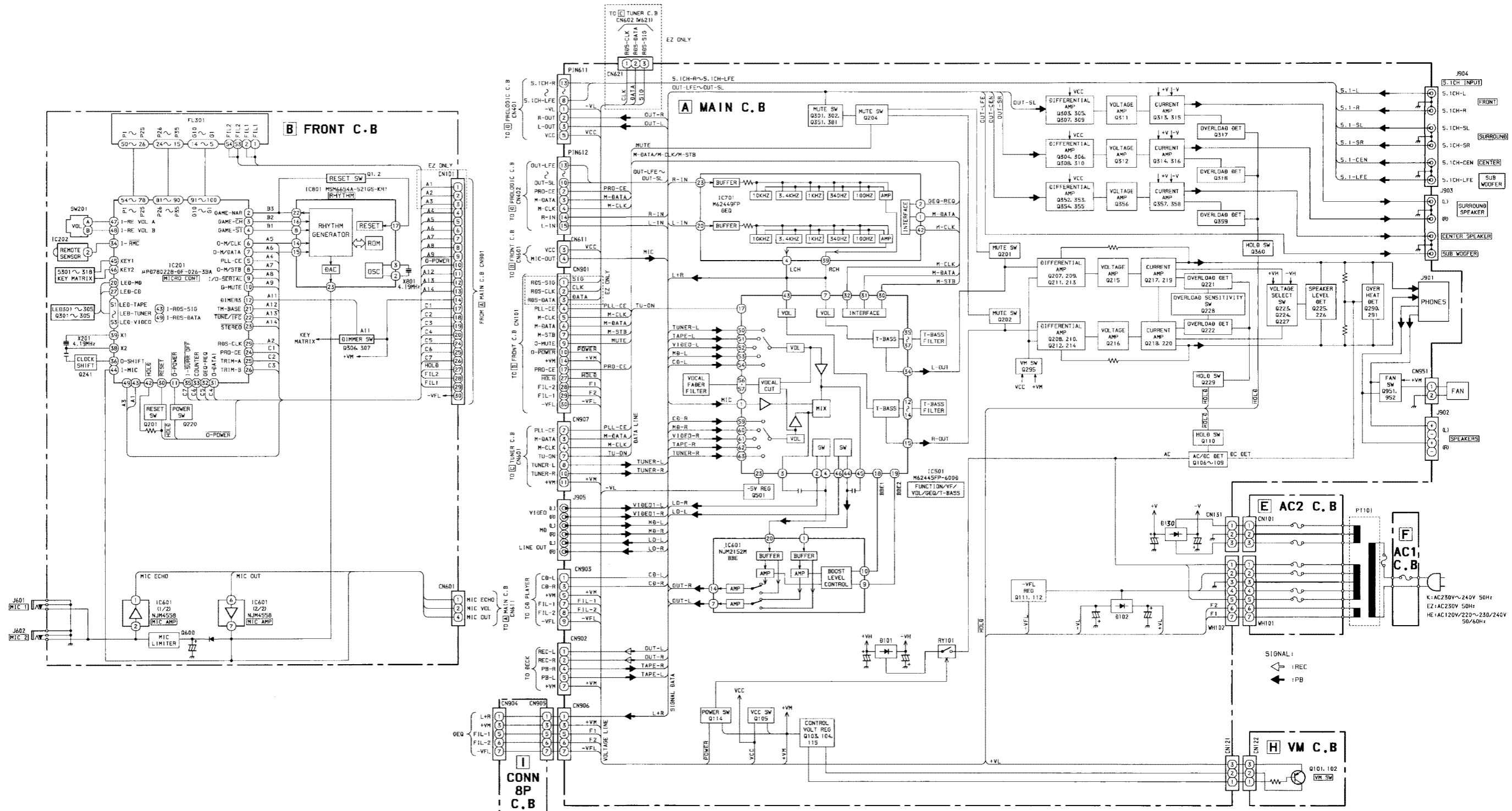
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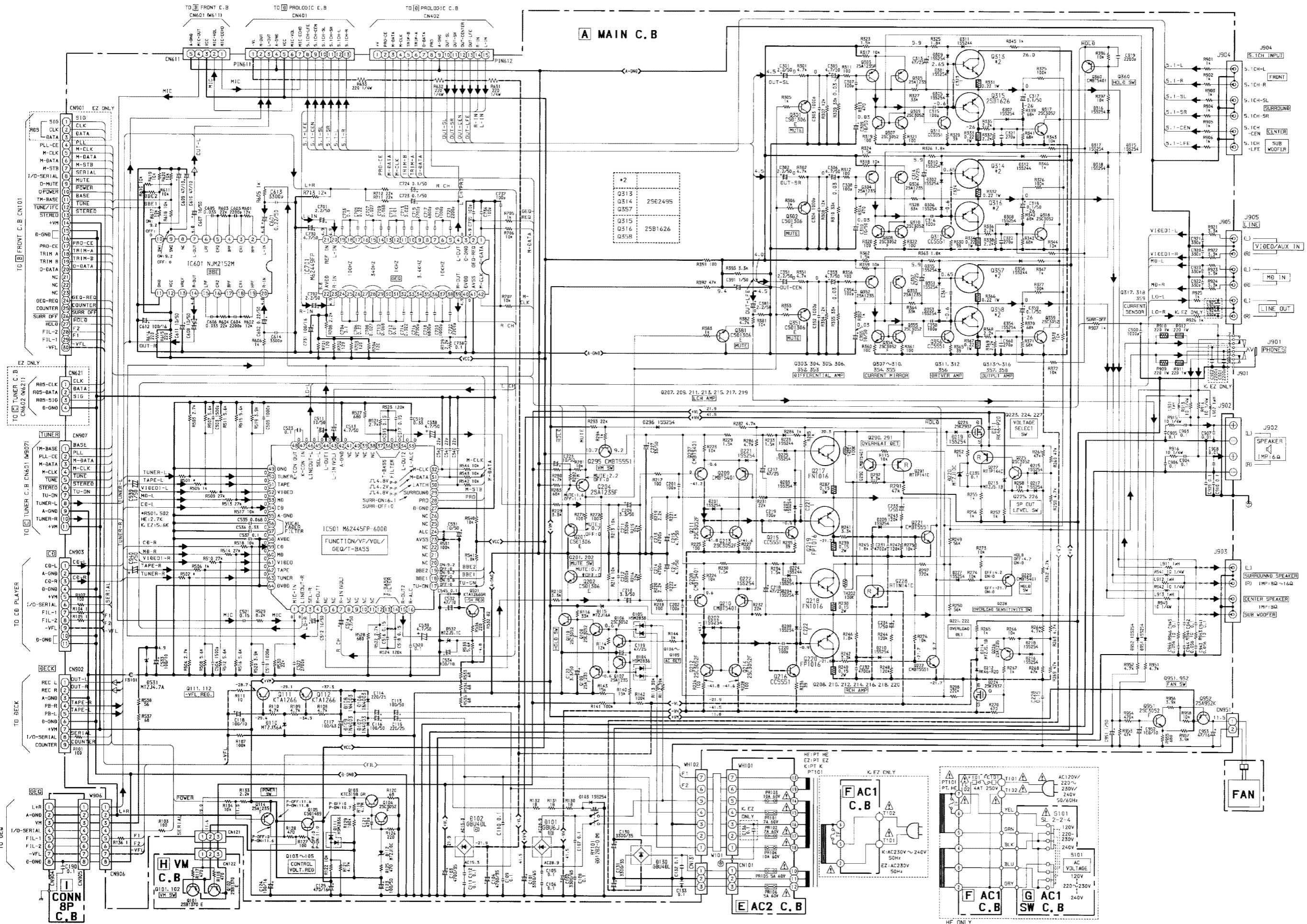
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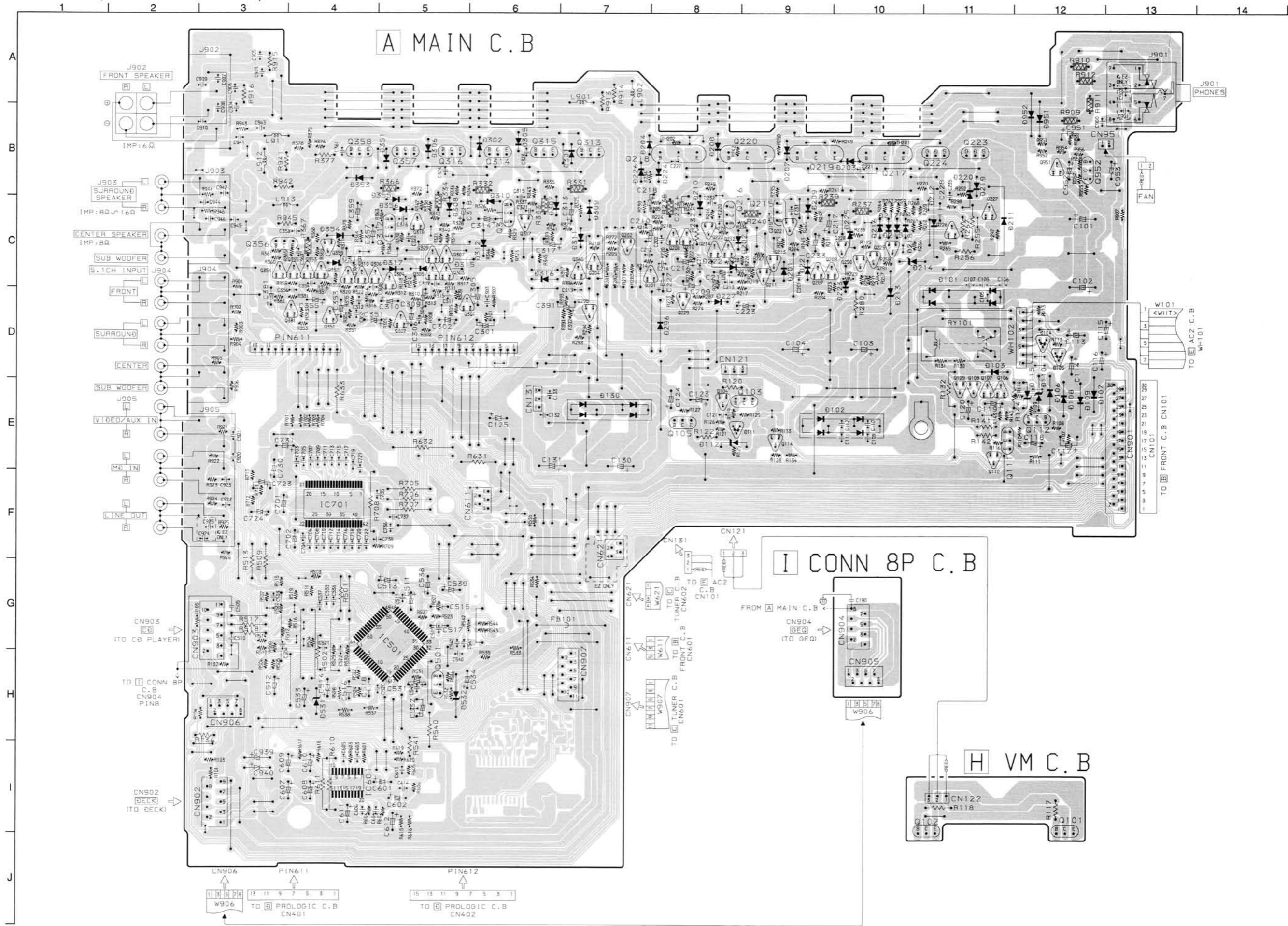










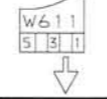


1 2 3 4 5 6 7 8 9 10 11 12 13 14

A  
B  
C  
D  
E  
F  
G  
H  
I  
J

**B FRONT C.B**

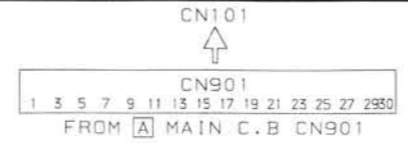
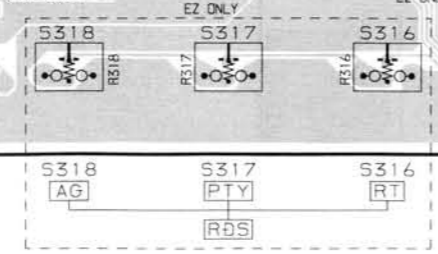
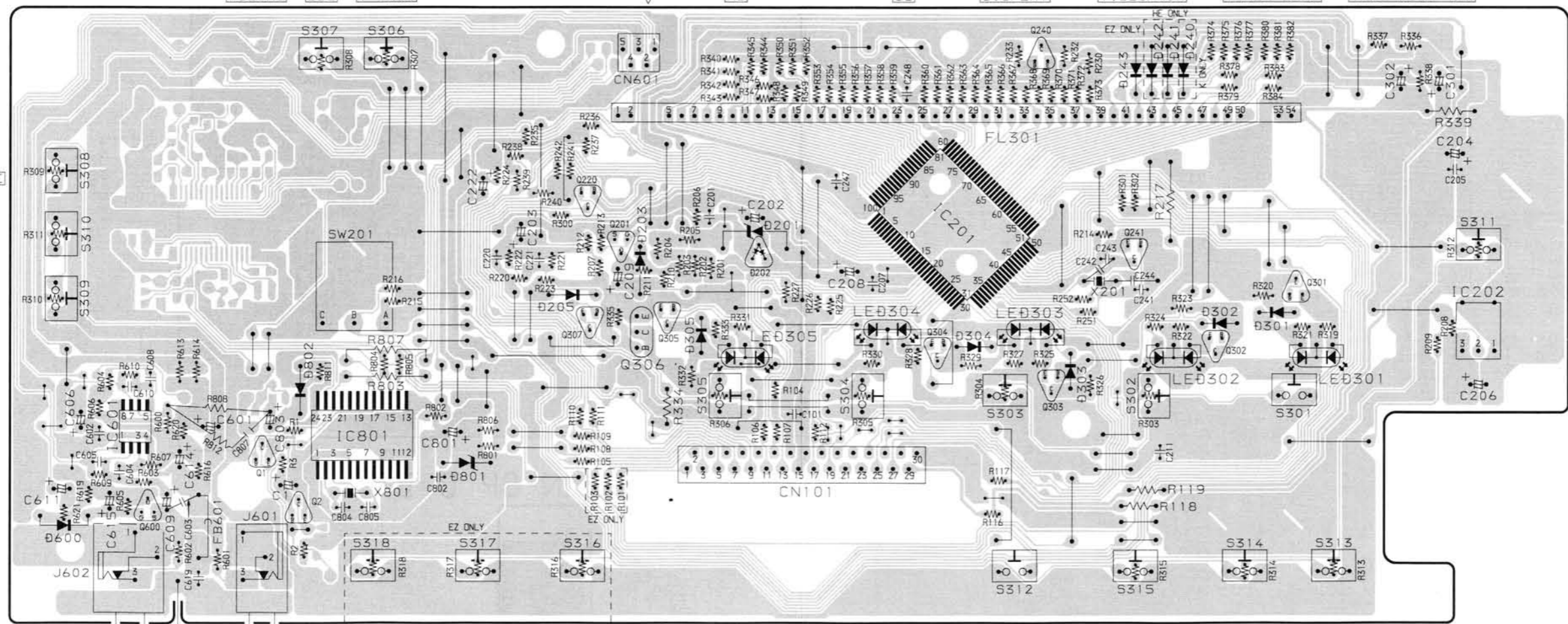
FROM **A** MAIN C.B CN611



- SW201 VOLUME
- S307 BBE
- S306 T-BASS
- LED305 S305 MD
- LED304 S304 CD
- FL301 DISPLAY
- LED303 S303 VIDEO/AUX
- LED302 S302 TUNER BAND
- LED301 S301 TAPE DECK 1/2

- S308 KARAOKE
- S310 ECHO
- S309 MIC

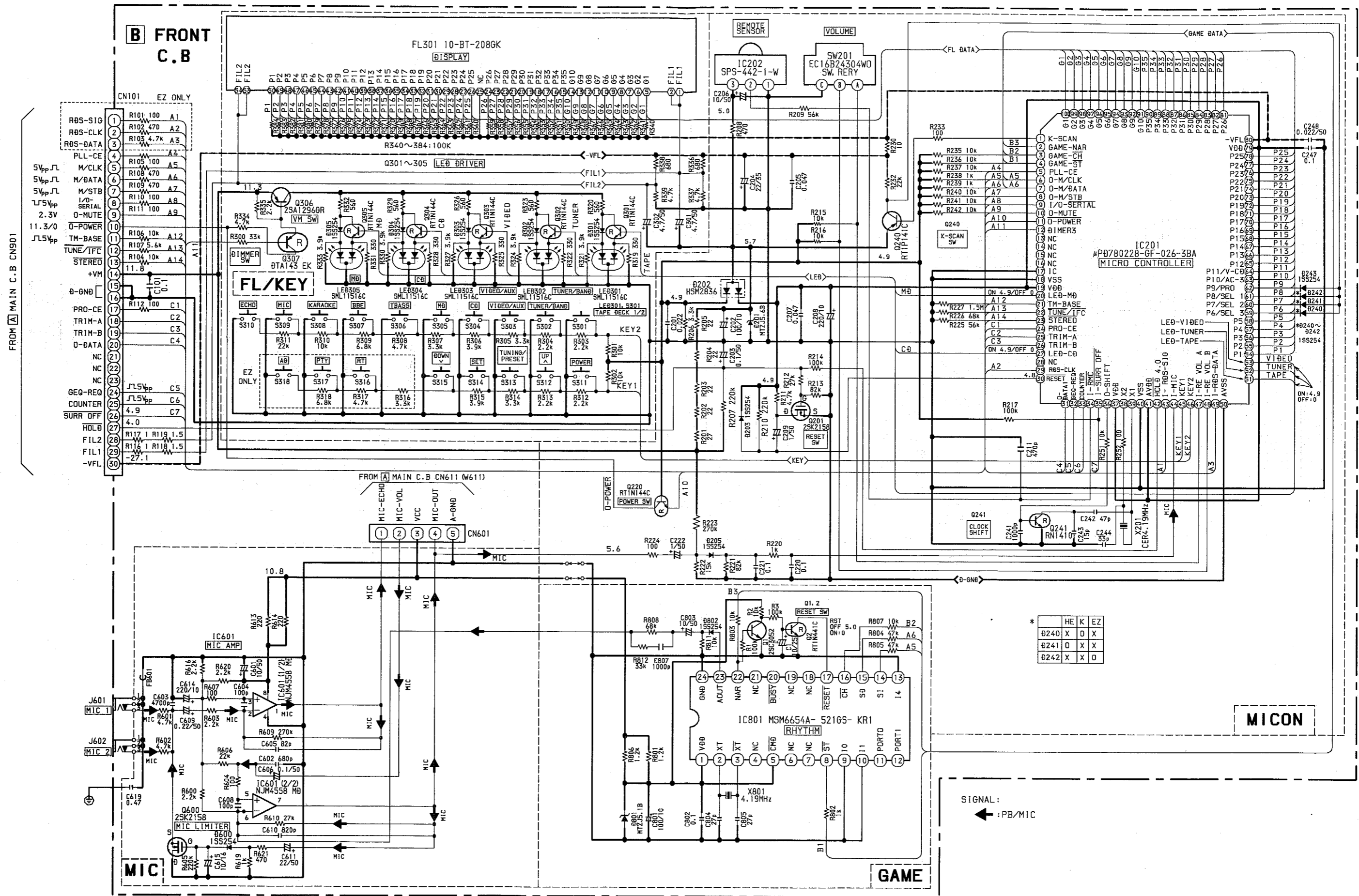
- S311 POWER
- IC202 REMOTE SENSOR

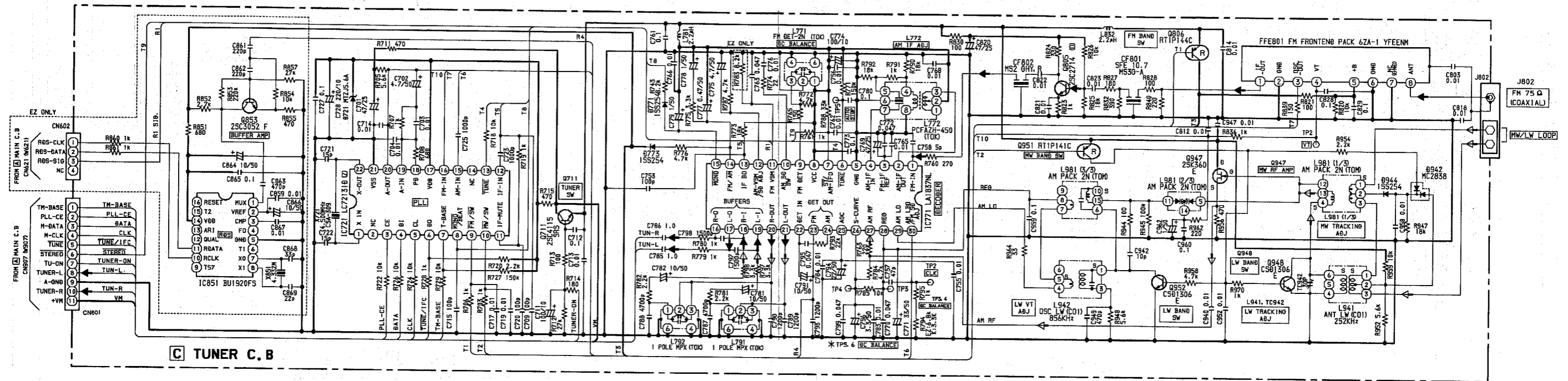


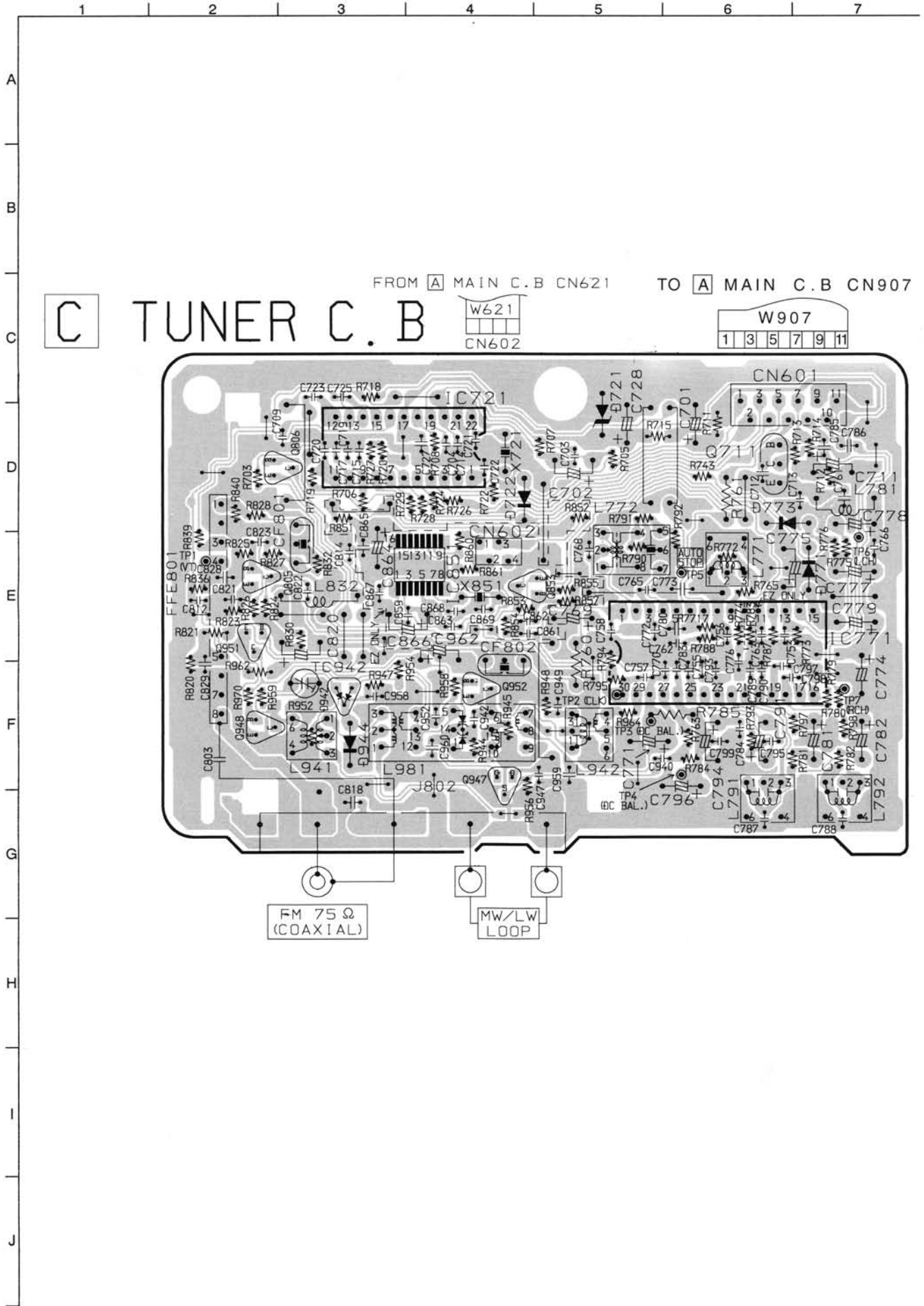
FROM **A** MAIN C.B CN901











FROM [A] MAIN C.B CN621 TO [A] MAIN C.B CN907

C TUNER C.B 

W621

  
CN602

W907					
1	3	5	7	9	11

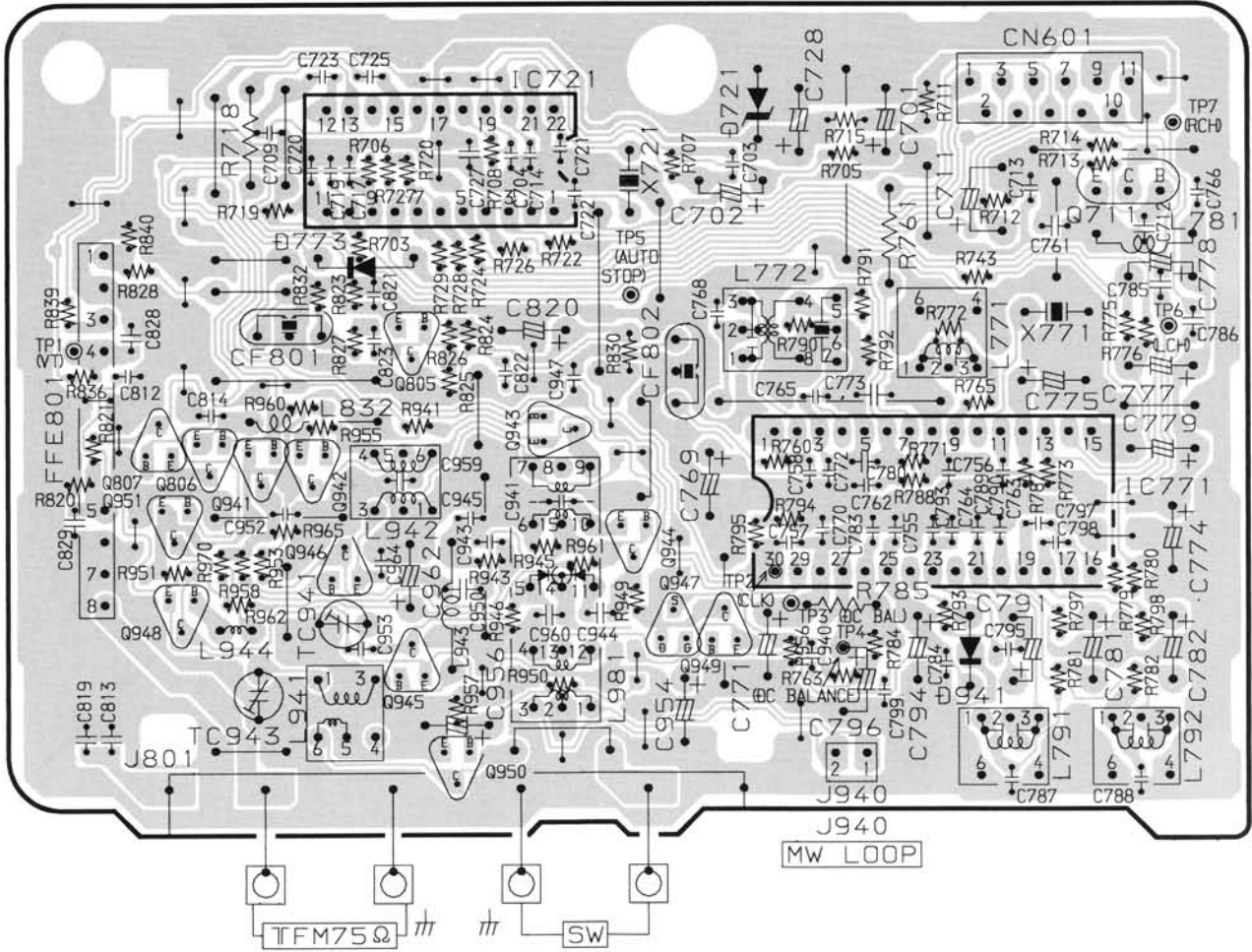
FM 75 Ω  
(COAXIAL)

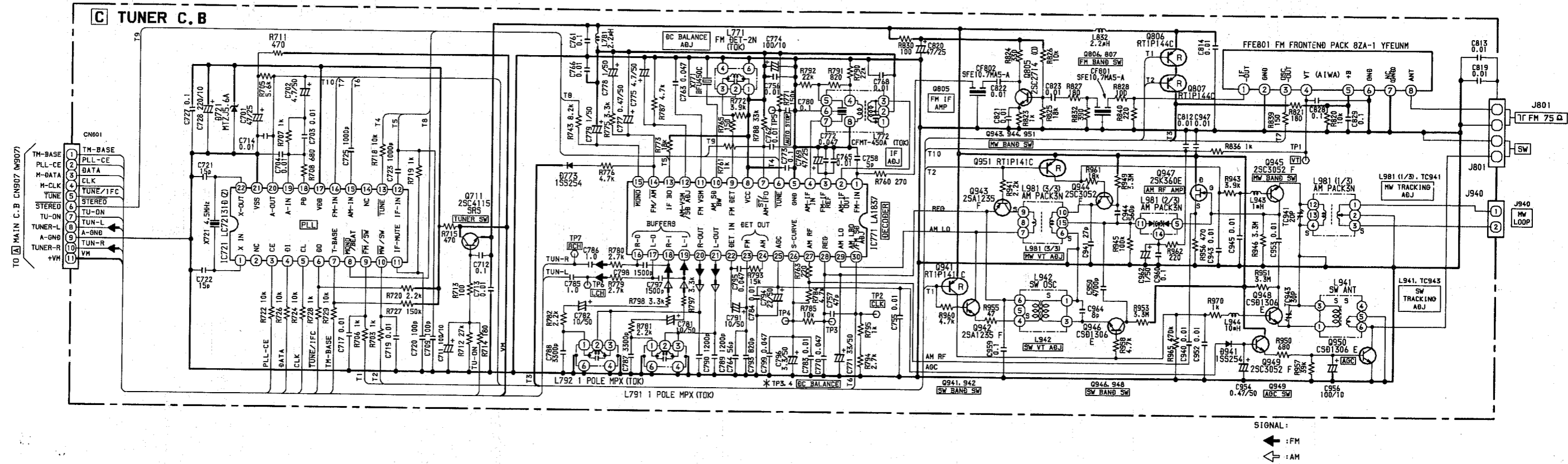
MW/LW  
LOOP

C TUNER C. B

TO A MAIN C. B CN907

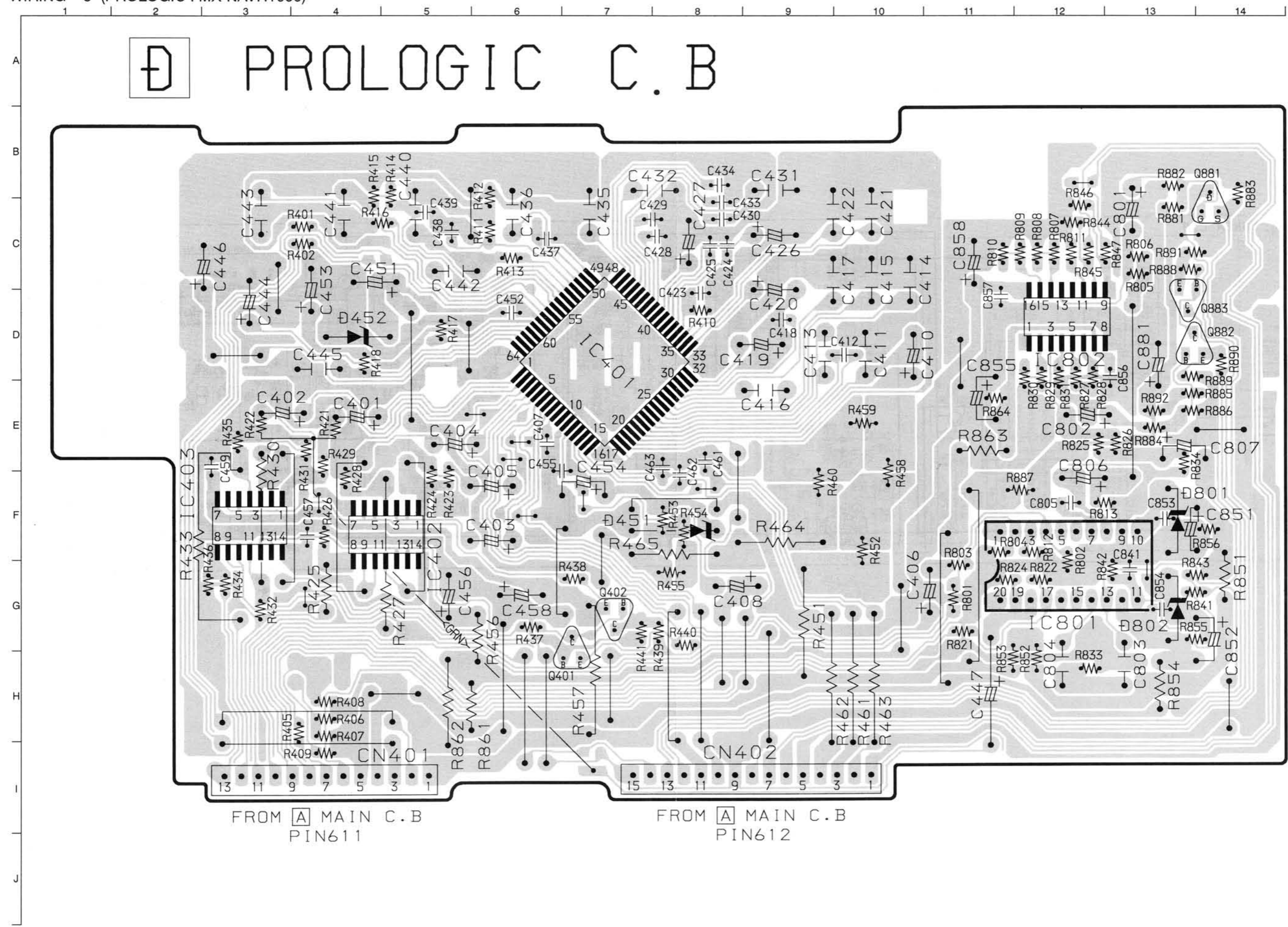
W907										
1	3	5	7	9	11					





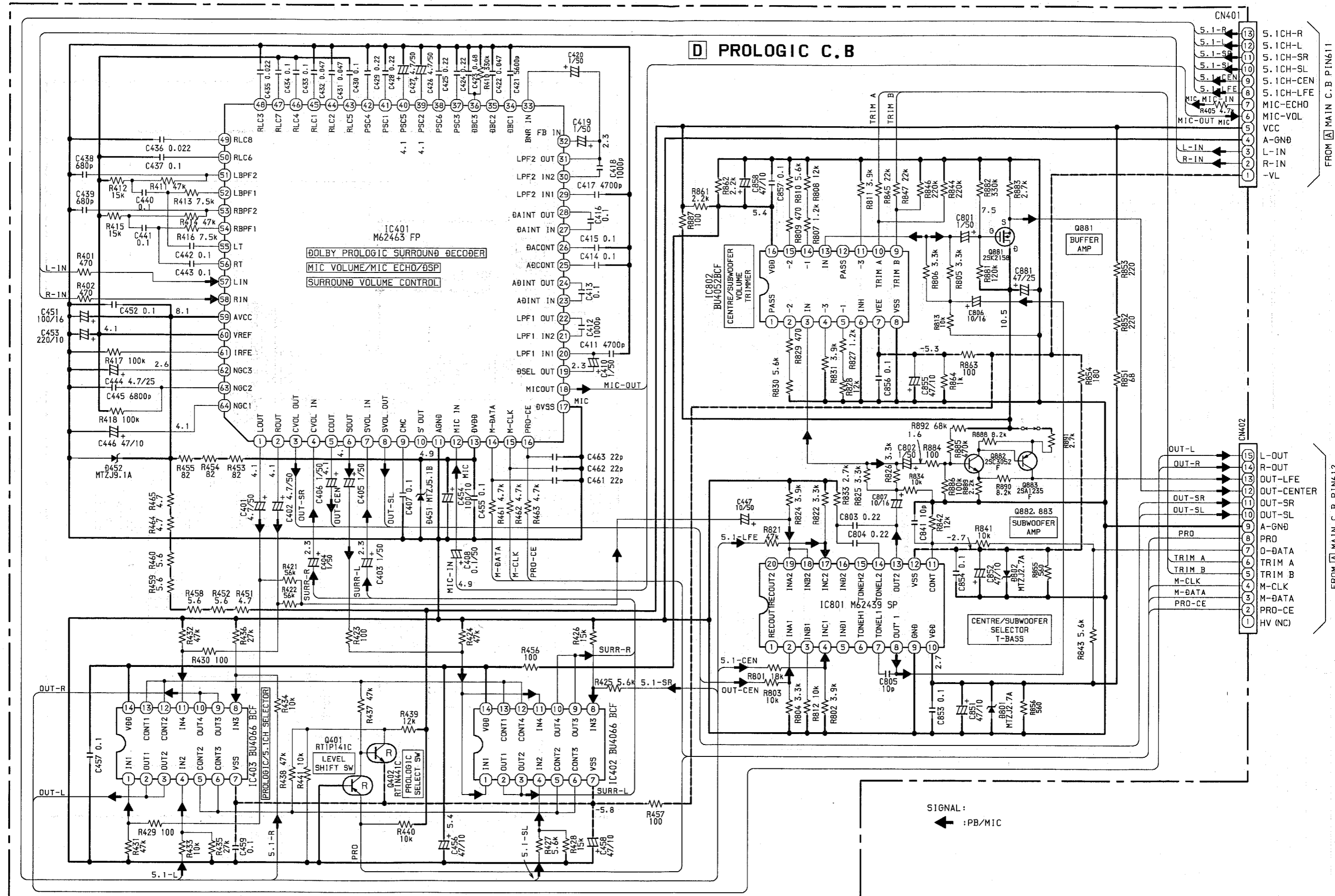


# PROLOGIC C.B

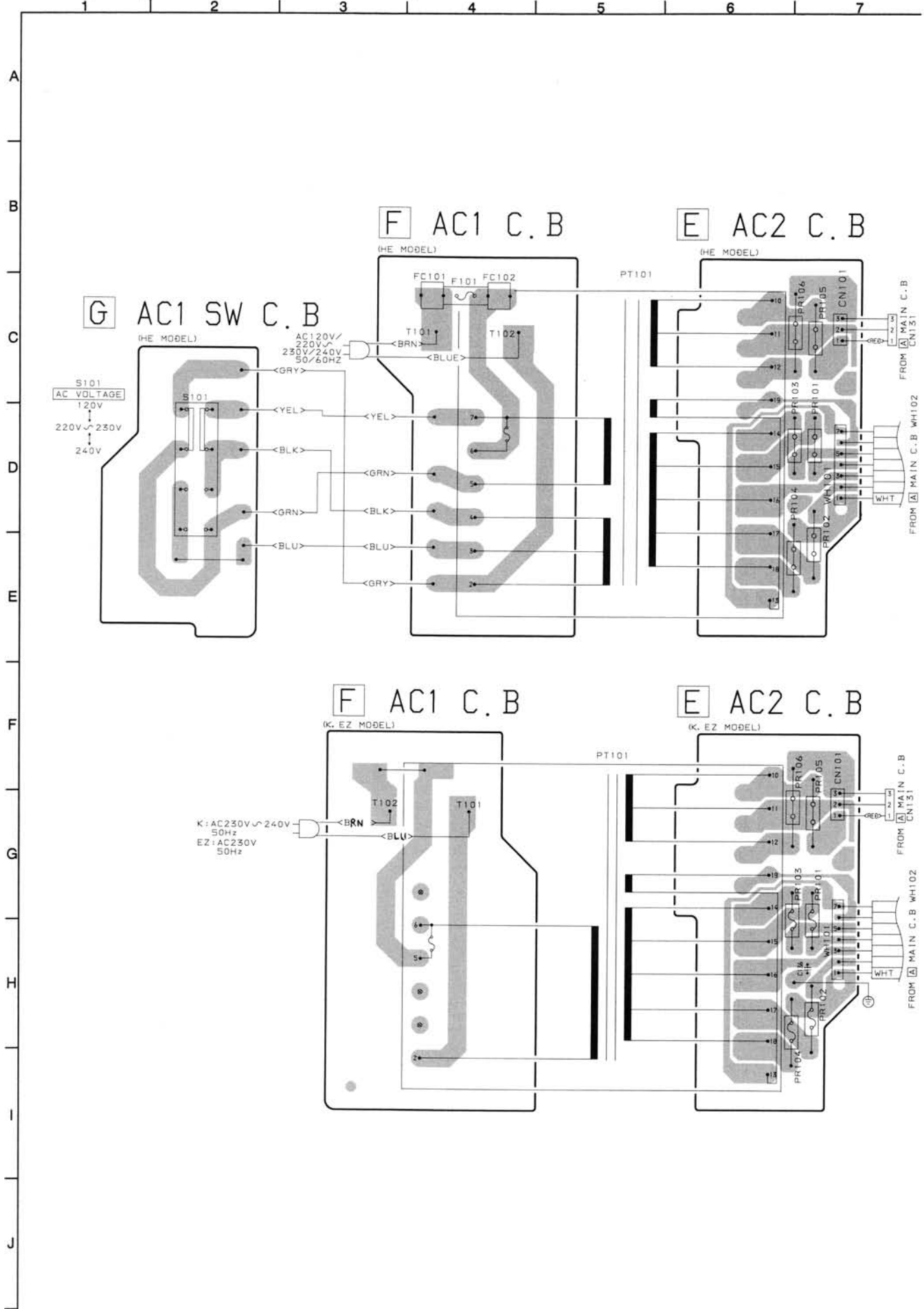


FROM [A] MAIN C.B  
PIN611

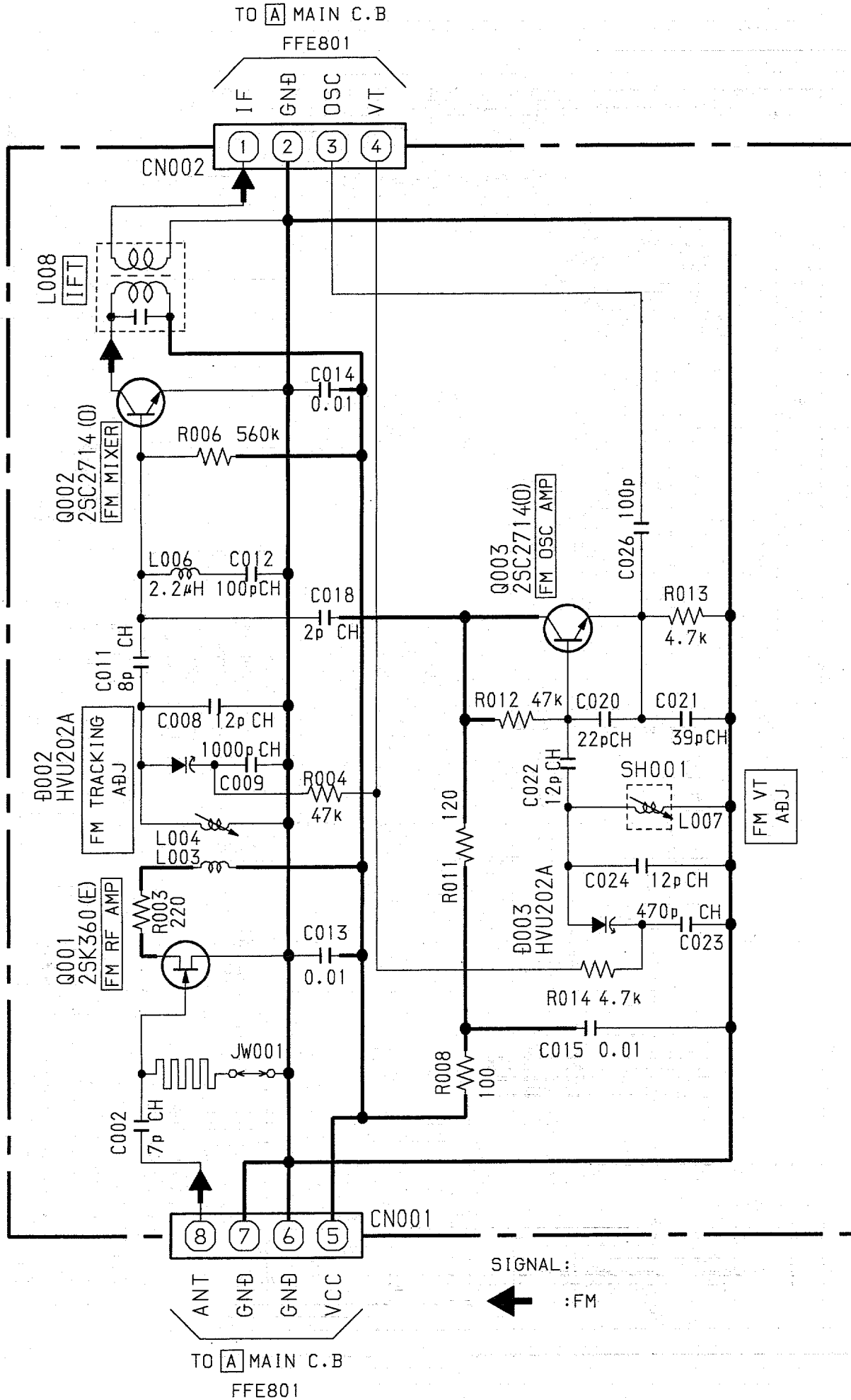
FROM [A] MAIN C.B  
PIN612



WIRING - 6 (AC1 / AC2 : MX-NAVH1000)

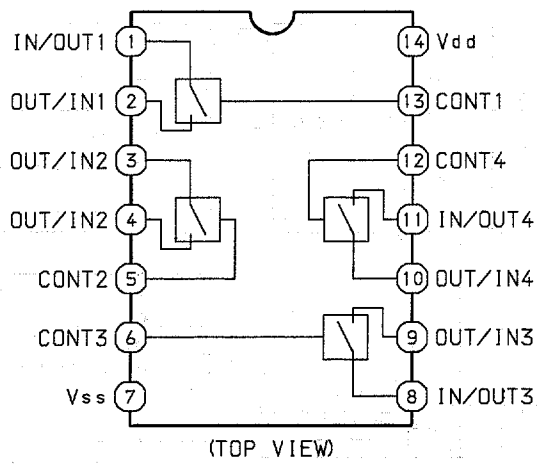


SCHEMATIC DIAGRAM - 6 (TUNER FRONT END : MX-NAVH1000 <HE>)

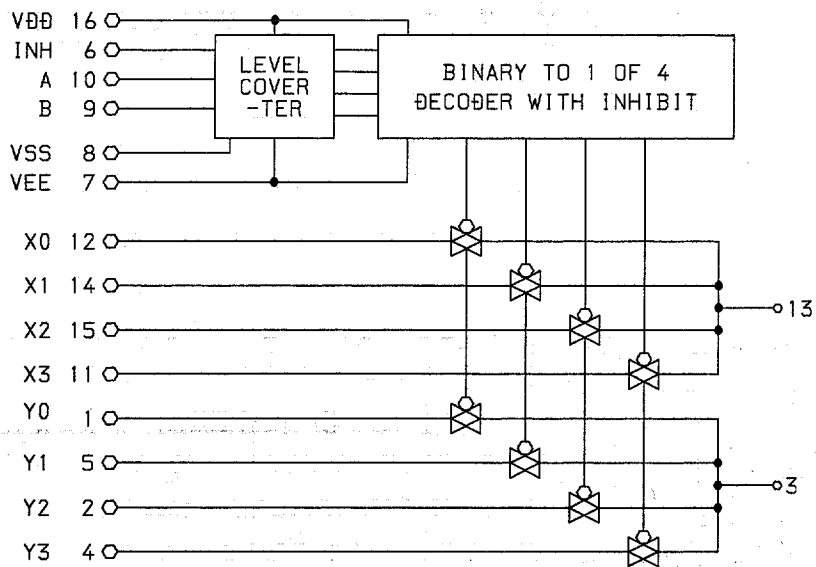


# IC BLOCK DIAGRAM (MX-NAVH1000)

IC, BU4066BCF



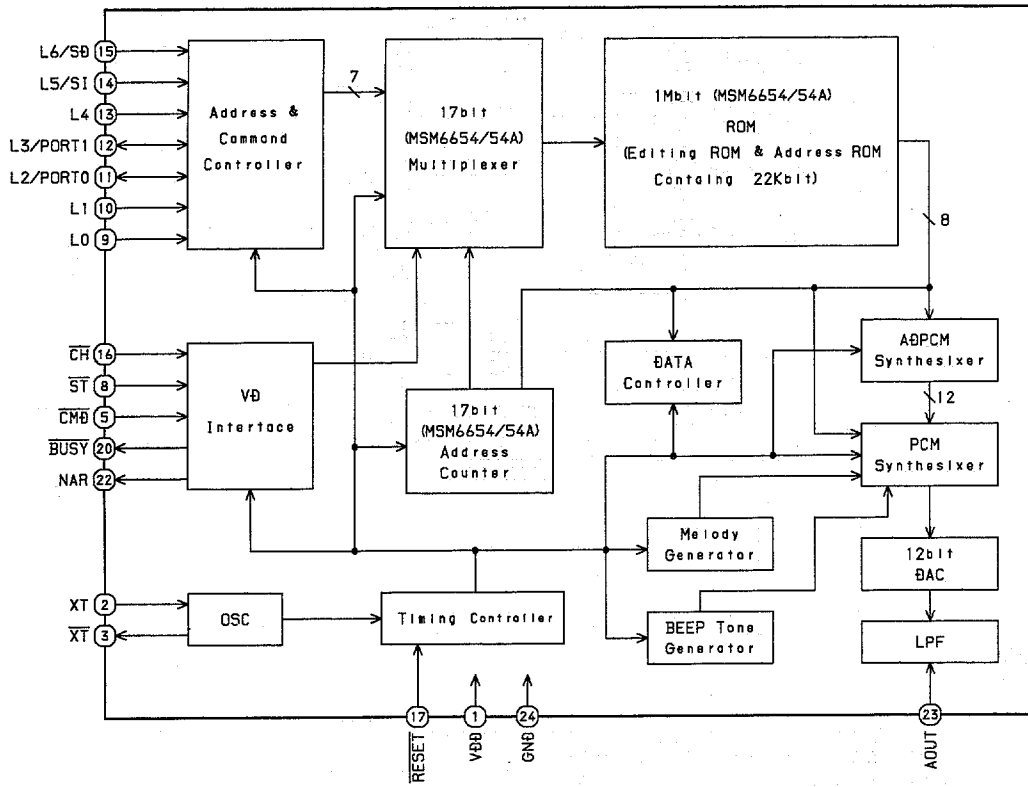
IC, BU4052BCF



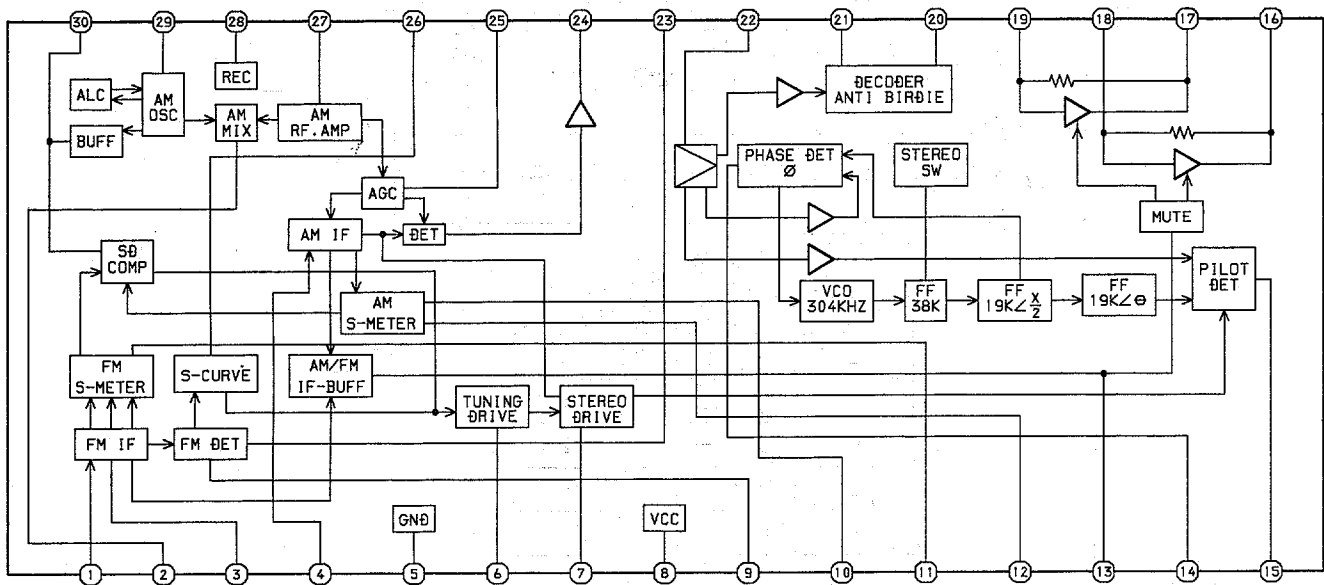
TRUTH TABLE

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

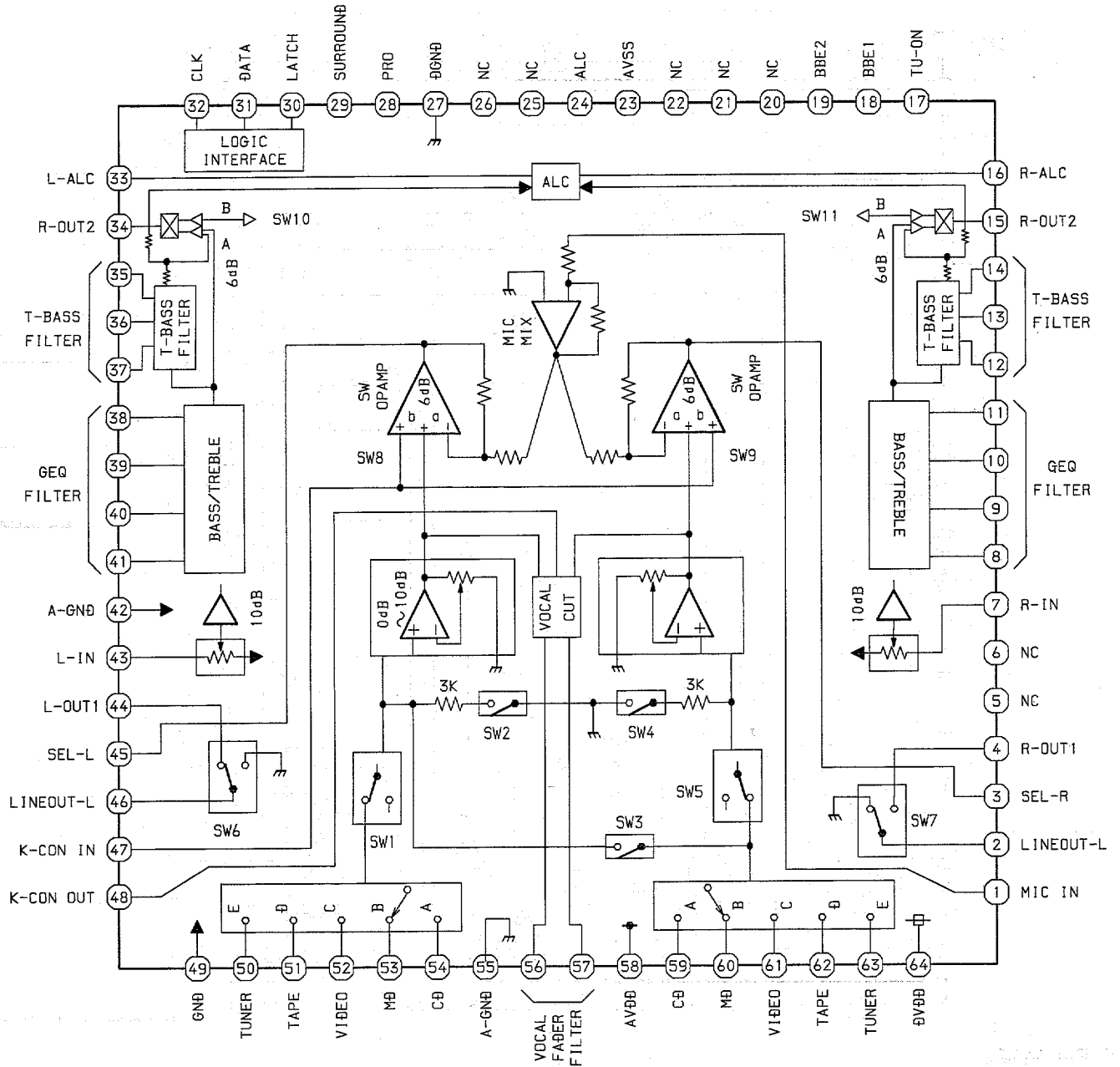
IC, MSM6654A-521GS-KRI



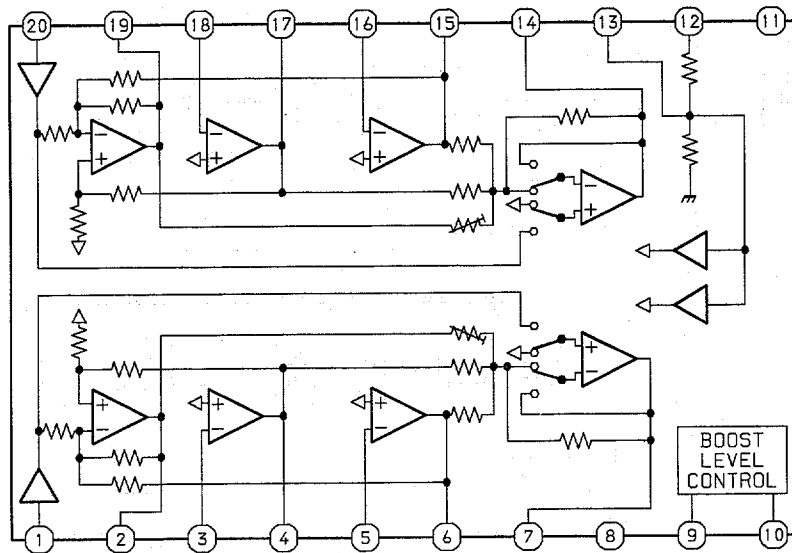
IC, LA1837



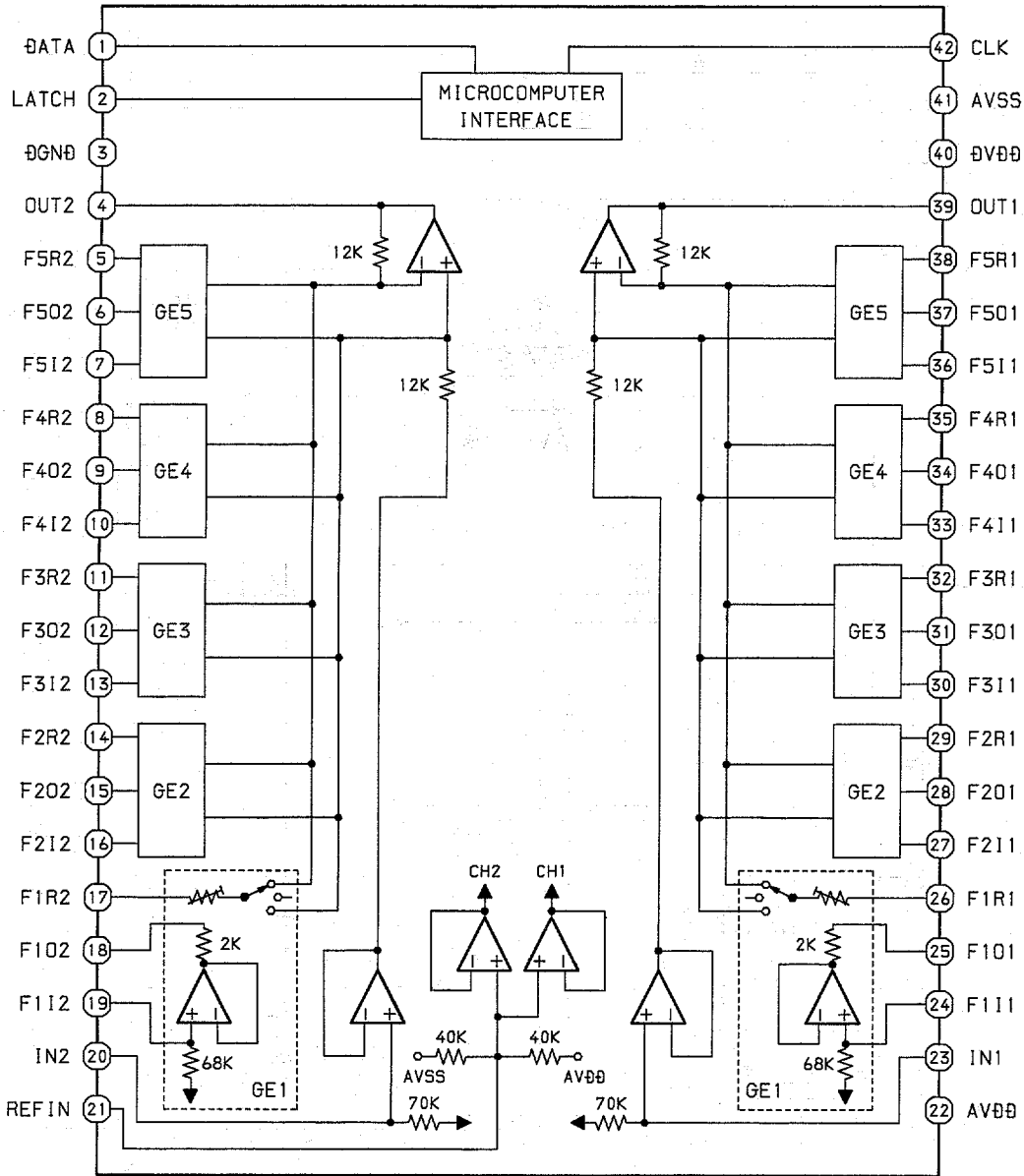
IC, M62445FP-600D



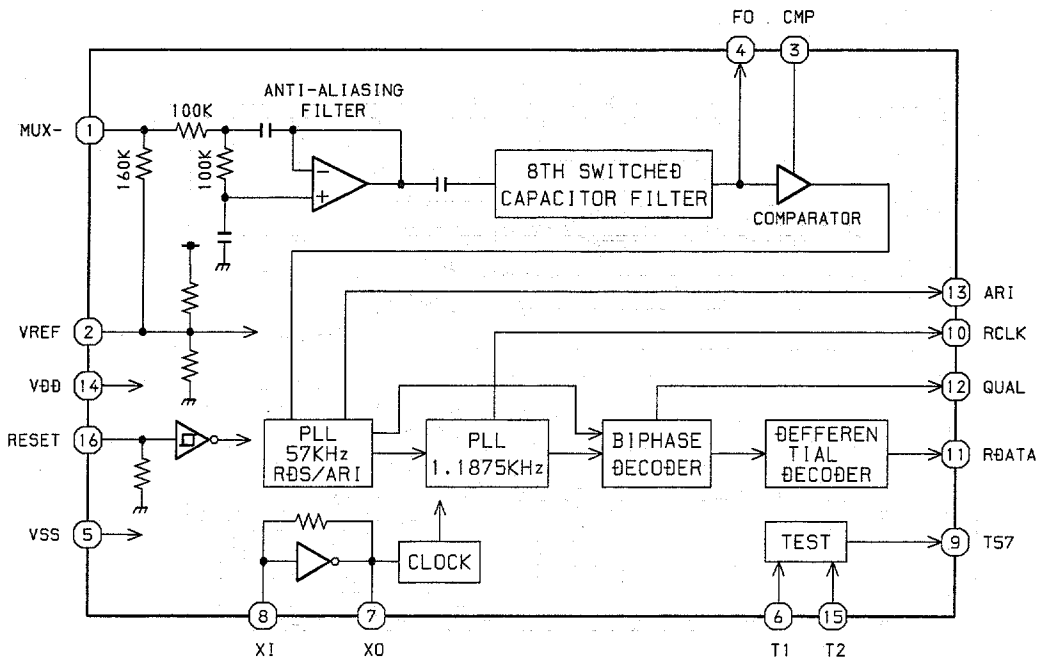
IC, NJM2152M



IC, M62449FP

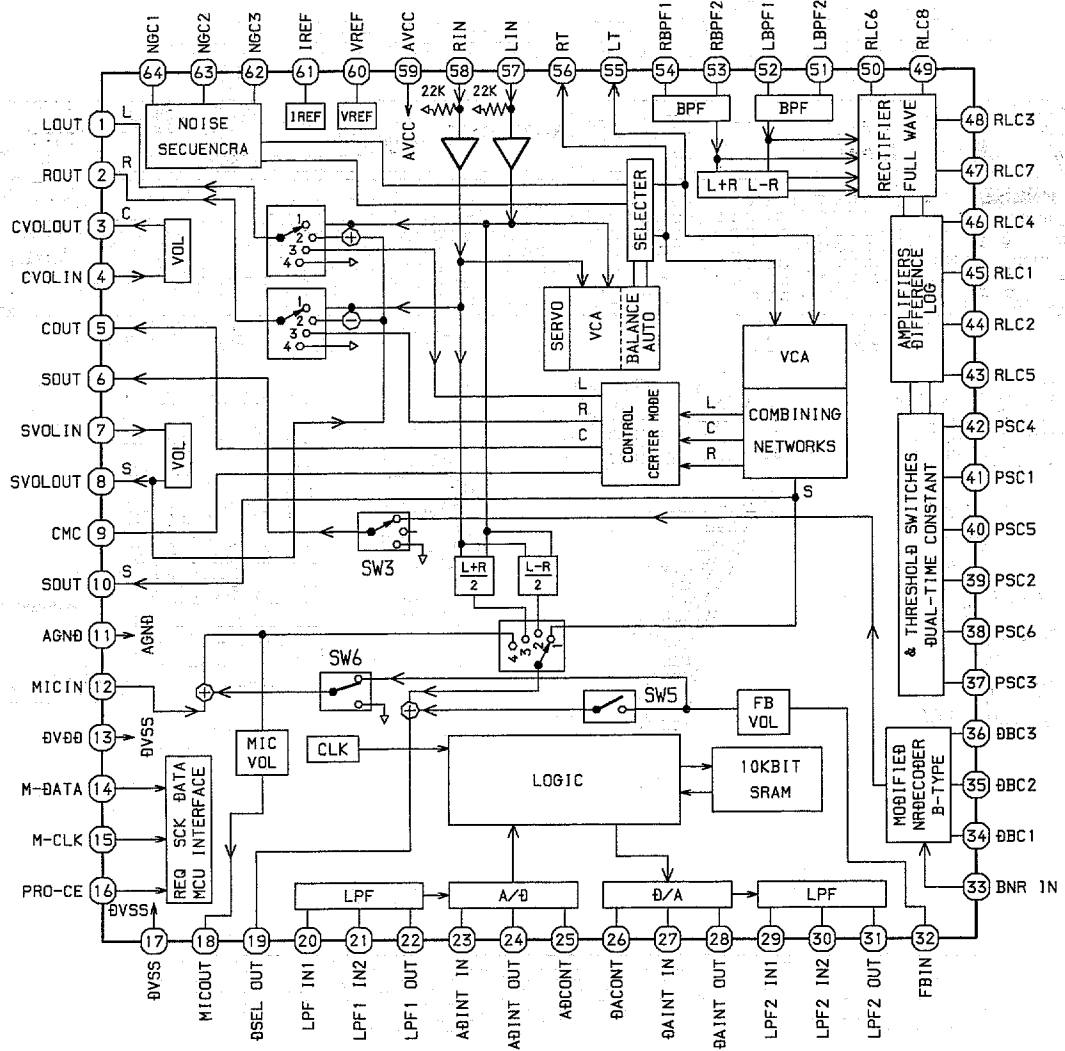


IC, BU1920FS

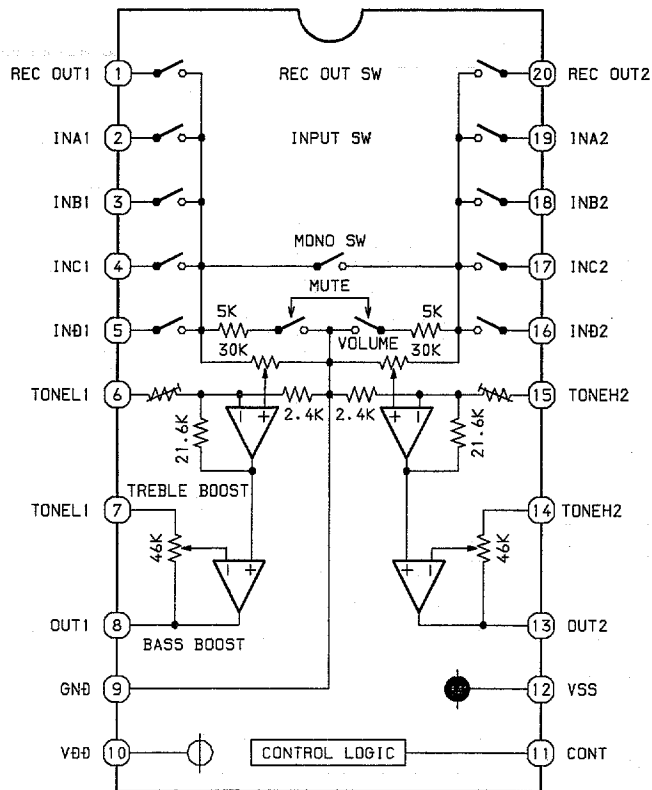




IC, M62463FP

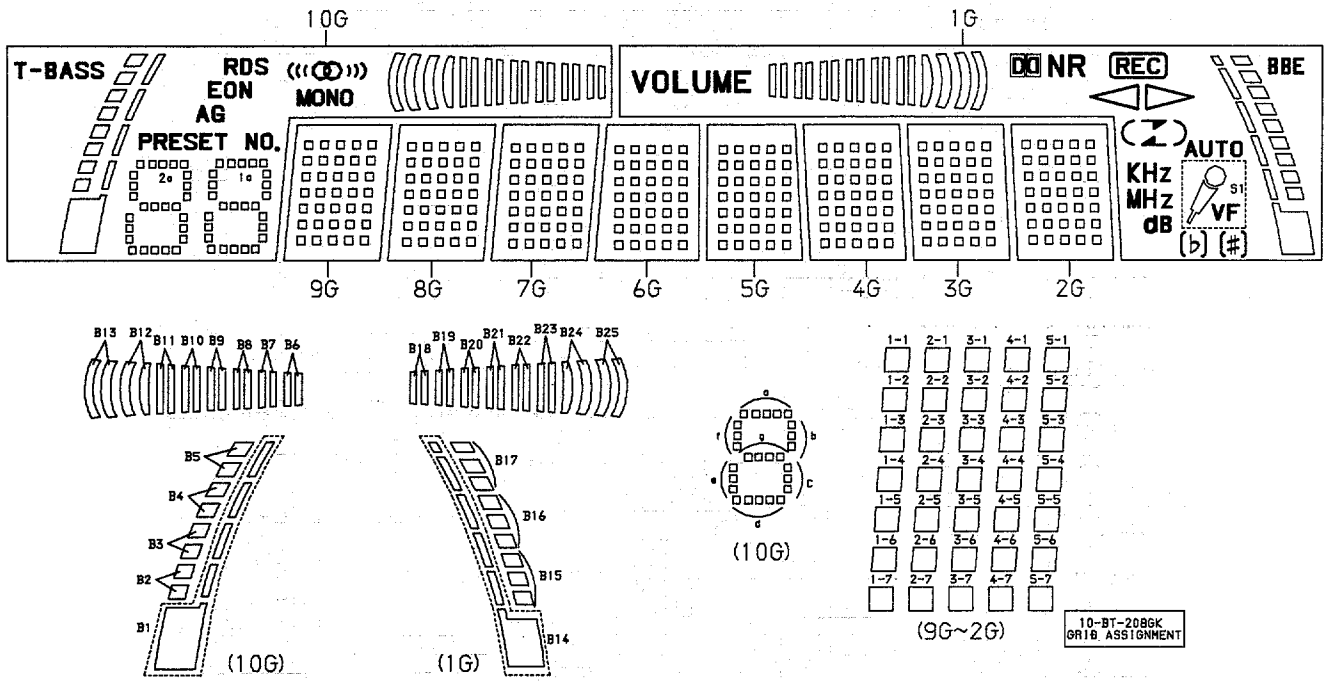


IC, M62439SP









# FL (10-BT-208GK) GRID ASSIGNMENT & ANODE CONNECTION (MX-NAVH1000)

## GRID ASSIGNMENT



ANODE CONNECTION

	10G	9G~2G	1G
P1	((((( )))	1-1	<b>VOLUME</b>
P2	B6	2-1	B18
P3	B7	3-1	B19
P4	B8	4-1	B20
P5	B9	5-1	B21
P6	B10	1-2	B22
P7	B11	2-2	B23
P8	B12	3-2	B24
P9	B13	4-2	B25
P10	<b>MONO</b>	5-2	
P11	<b>RDS</b>	1-3	
P12	<b>EON</b>	2-3	
P13	<b>AG</b>	3-3	
P14	○	4-3	
P15	<b>PRESET No.</b>	5-3	
P16	2a	1-4	)
P17	2f	2-4	<b>KHz</b>
P18	2b	3-4	<b>MHz</b>
P19	2g	4-4	<b>dB</b>
P20	2e	5-4	<b>( (b) )</b>
P21	2c	1-5	b
P22	2d	2-5	S1
P23	1a	3-5	<b>AUTO</b>
P24	1f	4-5	<b>#</b>
P25	1b	5-5	<b>( (#) )</b>
P26	1g	1-6	B14
P27	1e	2-6	B17
P28	1c	3-6	B16
P29	1d	4-6	B15
P30	<b>T-BASS</b>	5-6	<b>BBE</b>
P31	B1	1-7	-
P32	B2	2-7	-
P33	B3	3-7	-
P34	B4	4-7	-
P35	B5	5-7	-

# IC DESCRIPTION (MX-NAVH1000)

IC, UPD780228GF-026-3BA

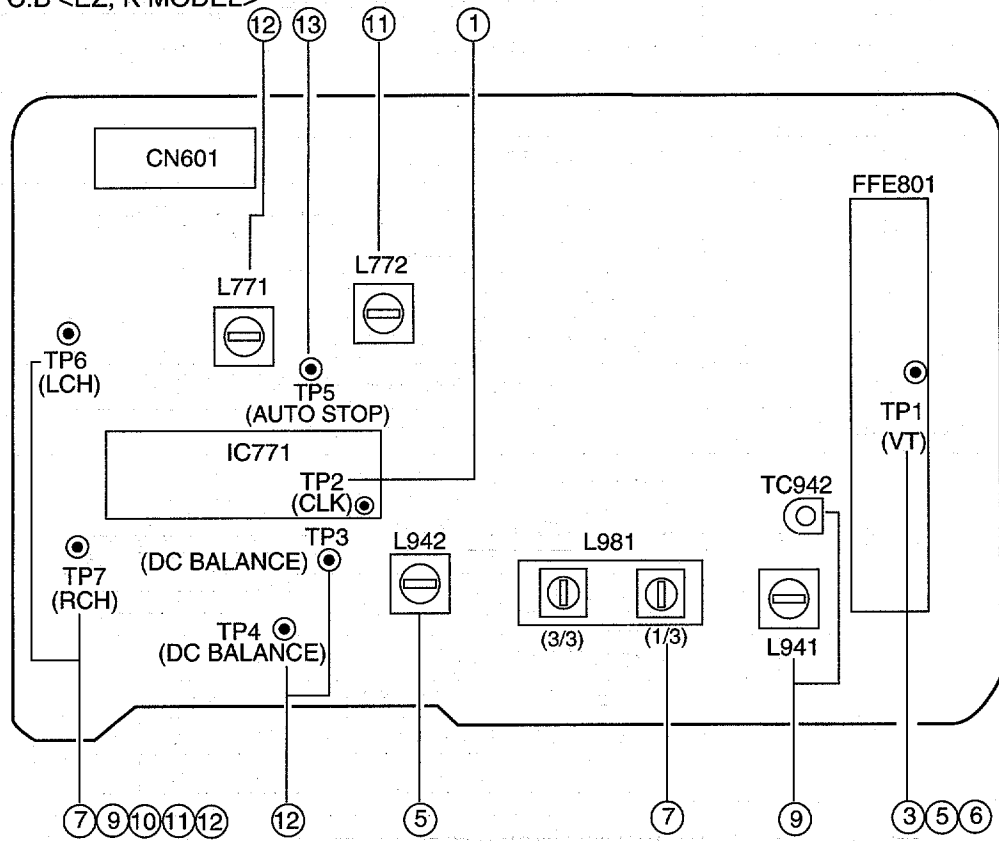
Pin No.	Pin Name	I/O	Description
1	K-SCAN	O	Output scan for segment input (Active "H").
2	GAME NAR	I	Input register signal to IC, MSM6654A.
3	GAME CH	O	Channel control output to IC, MSM6654A (H:1, L:2).
4	GAME ST	O	Strobe output to IC, MSM6654A.
5	PLL CE	O	PLL IC chip enable output.
6	O-M/CLK	O	Main clock output.
7	O-M/DATA	O	Main data output.
8	O-M/STB	O	Main strobe output.
9	I/O-SERIAL	I/O	Communication port for GEQ, CD and DECK.
10	O-MUTE	O	System mute (ON when "H").
11	O-POWER	O	System power supply (ON when "L").
12	DIMER 3	O	Dimmer control ("L" when 3).
13	NC	-	Not connected.
14	NC	-	Not connected.
15	NC	-	Not connected.
16	NC	-	Not connected.
17	IC	-	Connected to GND.
18	VSS	-	GND.
19	VDD	-	Power supply terminal.
20	LED-MD	O	MD LED output.
21	TM BASE	I	Time base input.
22	TUNE/IFC	I	Tuning detection input.
23	STEREO	I	Stereo detection input.
24	PRO CE	O	Output chip enable to IC, M62463FP (PROLOGIC model) and IC, M65849BFP (without PROLOGIC model).
25	TRIM A	O	Output 1dB trim data to IC, BU4052BCF.
26	TRIM B		
27	LED CD	O	CD LED output.
28	NC	-	Not connected.
29	RDS-CLK	I	RDS clock input.
30	RESET	I	Reset input.
31	O-DATA1	O	Control data output to IC, M62439FP.
32	GEQ-REQ	O	Latch output to IC, M62449FP.
33	COUNTER	I	Tape counter input.
34	I-RMC	I	Remote controller input (Active "L").
35	I-SURR-OFF	I	Stop surround function when using head phone.
36	O-SHIFT	O	Output for oscillated frequency shift.
37	VDD	-	Power supply terminal.
38	X2	-	4.19MHz oscillator circuit.
39	X1		
40	VSS	-	GND
41	AVDD	-	Power supply terminal.
42	HOLD	I	Power failure / over current detected input. 'H' : Normal operation. 'L' : Stop clock and main memory.

Pin No.	Pin Name	I/O	Description
43	I-RDS SIG	I	RDS signal input.
44	I-MIC	I	MIC input level detection.
45	I-KEY1	I	KEY1 input.
46	I-KEY2	I	KEY2 input.
47	I-RE VOL A	I	Rotary encoder A (VOL) input.
48	I-RE VOL B	I	Rotary encoder B (VOL) input.
49	I-RDS DATA	I	RDS data input.
50	AVSS	-	GND.
51	LED-TAPE	O	Tape LED output.
52	LED-TUNER	O	Tuner LED output.
53	LED-VIDEO	O	Video LED output.
54~58	P1~P5	O	FL segment output.
59	P6/SEL3	I/O	FL segment output / SEL3 input.
60	P7/SEL2	I/O	FL segment output / SEL2 input.
61	P8/SEL1	I/O	FL segment output / SEL1 input.
62	P9/PRO	I/O	FL segment output / PROLOGIC input.
63	P10/AC-3	I/O	FL segment output / AC-3 input.
64	P11/V-CD	I/O	FL segment output / V-CD input.
65~78	P12~P25	O	FL segment output.
79	VDD	-	Power supply terminal.
80	-VFL	-	Power FL display negative supply terminal.
81~90	P26~P35	O	FL segment output.
91~100	G10~G1	O	FL grid output.

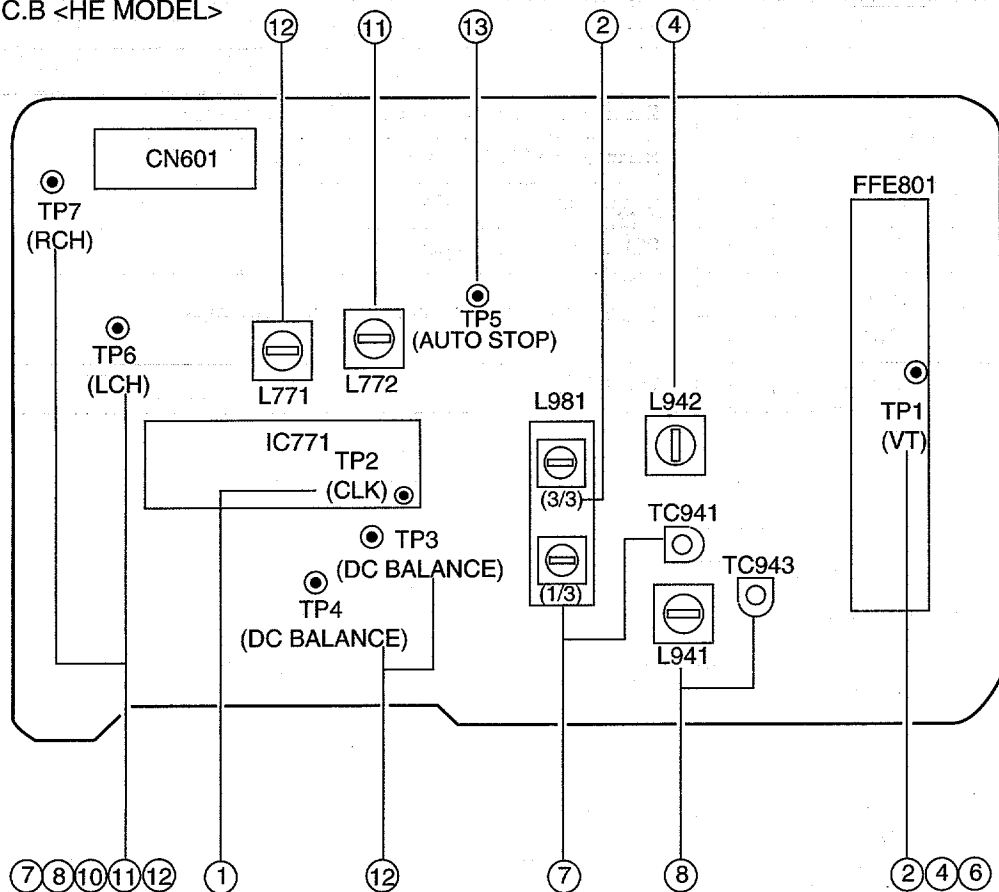
Pin No.	Pin Name	I/O	Description																								
1	XIN	I/O	A crystal oscillator (7.2MHz) is connected between these pins.																								
22	XOUT																										
2	NC	-	Not used.																								
3	CE	I	To enable the IC. Active "H".																								
4	DI	I	Digital data input from CPU when relevant key is operated. Active "H".																								
5	CL	I	To clock in the data DI.																								
6	DO	O	Digital data output to CPU.																								
7	T-BASE	O	Outputs a reference clock signal (8Hz) for the clock.																								
8	MONO / BEAT	O	Outputs "H" when BEAT is switched.																								
9	$\overline{\text{FM}} / \overline{\text{SW}}$	O	Outputs "L" or "H" as follows:																								
			<table border="1"> <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																				
<table border="1"> <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																				
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10	$\overline{\text{MW}}/\overline{\text{SW}}$	O	Outputs "L" or "H" as follows:																								
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			2 BAND		3 BAND			3 BAND																			
AM	FM	LW	MW	FM	MW	SW	FM																				
L	L	H	L	L	L	H	L																				
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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	IFIN	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	AIN	I	The MOS transistor for PLL active low pass filter.																								
20	AOUT	O																									
21	VSS	-	Ground.																								

# ADJUSTMENT <TUNER> (MX-NAVH1000)

## ☐ TUNER C.B <EZ, K MODEL>



## ☐ TUNER C.B <HE MODEL>



< TUNER SECTION >

1. Clock frequency Check  
 Settings : • Test point : TP2  
 Method : Set to AM 1602kHz and check that the test point is 2052kHz  $\pm$  45Hz.
2. MW VT Adjustment <HE>  
 Settings : • Test point : TP1 (VT)  
 • Adjustment location : L981 (3/3)  
 Method : Set to MW 1710kHz and adjust L981 (3/3) so that the test point becomes 7.5V  $\pm$  0.05V. Then check that the test point is more than 0.3V (530kHz).
3. MW VT Check <EZ,K>  
 Settings : • Test point : TP1 (VT)  
 Method : Set to MW 1602kHz and check that the test point is less than 8.0V and more than 0.6V (531kHz).
4. SW VT Adjustment <HE>  
 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. FM VT Check  
 Settings : • Test point : TP1 (VT)  
 Method : Set to FM 87.5MHz, 108.0MHz and check that the test point is more than 0.5V (87.5MHz) and less than 8.0V (108.0MHz).
- 7a. MW Tracking Adjustment <HE>  
 Settings : • Test point : TP6(Lch), TP7(Rch)  
 • Adjustment location :  
 L981 (1/3) ..... 603kHz  
 TC941 ..... 1404kHz  
 Method : Set up TC941 to center before adjustment, the level at 603kHz is adjust to maximum by L981 (1/3). Then the level at 1404kHz is adjust to maximum by TC941.
- 7b. MW Tracking Adjustment <EZ,K>  
 Settings : • Test point : TP6(Lch), TP7(Rch)  
 • Adjustment location :  
 L981(1/3) ..... 999kHz  
 Method : Set to AM 999kHz and adjust L981(1/3) to MAX.
8. SW Tracking Adjustment <HE>  
 Settings : • Test point : TP6(Lch), TP7(Rch)  
 • Adjustment location :  
 L941 ..... 5.9MHz  
 TC943 ..... 17.9MHz  
 Method : Set up TC943 to center before adjustment. The level at 5.9MHz is adjust to maximum by L941. Then the level at 17.9MHz is adjust to maximum by TC943.
9. LW Tracking Adjustment <EZ,K>  
 Settings : • Test point : TP6(Lch), TP7(Rch)  
 • Adjustment location :  
 L941 ..... 144kHz  
 TC942 ..... 290kHz  
 Method : Set up TC942 to center before adjustment. The level at 144kHz is adjust to maximum by L941. Then the level at 290kHz is adjust to maximum by TC942.
10. FM Tracking Check  
 Settings : • Test point : TP6(Lch), TP7(Rch)  
 Method : Set to FM 98.0MHz and check that the test point is less than 9dB (HE), less than 10dB (EZ,K).
11. AM(MW) IF Adjustment  
 Settings : • Test point : TP6(Lch), TP7(Rch)  
 • Adjustment location :  
 L772 ..... 450kHz
12. DC Balance / Mono Distortion Adjustment  
 Settings : • Test point : TP3, TP4 (DC Balance)  
 : TP6(Lch), TP7(Rch) (Distortion)  
 • Adjustment location : L771  
 • Input level : 54dB  
 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%.
13. Auto Stop Level Check  
 MW  
 • Input level : 52dB  
 • Test point : TP5  
 Method : Check auto stop at MW 999kHz and the level is 52 +10/-15dB.  
 FM  
 • Input level : 25dB  
 • Test point : TP5  
 Method : Check auto stop at FM 98.0MHz and the level is 25 dB  $\pm$  10 dB.



# PRACTICAL SERVICE FIGURE (MX-NAVH1000)

## <TUNER SECTION>

### <FM SECTION>

IHF Sensitivity : Less than 10 / 9 / 9dB (HE)  
(THD 3%) [at 87.5 / 98.0 / 108.0MHz (HE)]  
Less than 11 / 10 / 10dB (EZ,K)  
[at 87.5 / 98.0 / 108.0MHz (EZ,K)]

S/N 50dB Quieting sensitivity :  
Less than 35dB (HE)  
[at 98.0MHz (HE)]  
Less than 38dB (EZ,K)  
[at 98.0MHz (EZ,K)]

Signal to noise ratio : Mono : More than 72dB  
Stereo : More than 66dB [at 98.0MHz ]

Distortion : Mono : Less than 1.2%  
Stereo : Less than 2.0% [at 98.0MHz]

Auto stop level : 25dB  $\pm$  10dB [at 98.0MHz]

Stereo separation : HE : More than 30dB [at 98.0MHz]  
K : More than 22dB [at 98.0MHz]  
EZ : More than 20dB [at 98.0MHz]

Intermediate frequency : 10.7MHz

### <MW SECTION>

Sensitivity : Less than 60dB [at 603kHz]  
Less than 58dB [at 999kHz]  
Less than 58dB [at 1404kHz]

Signal to noise ratio : More than 36dB [at 999kHz]

Distortion : Less than 1.5% [at 999kHz]

Auto stop level : 52dB +10/-15dB [at 999kHz]

Intermediate frequency : 450kHz

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

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

Intermediate frequency : 450kHz

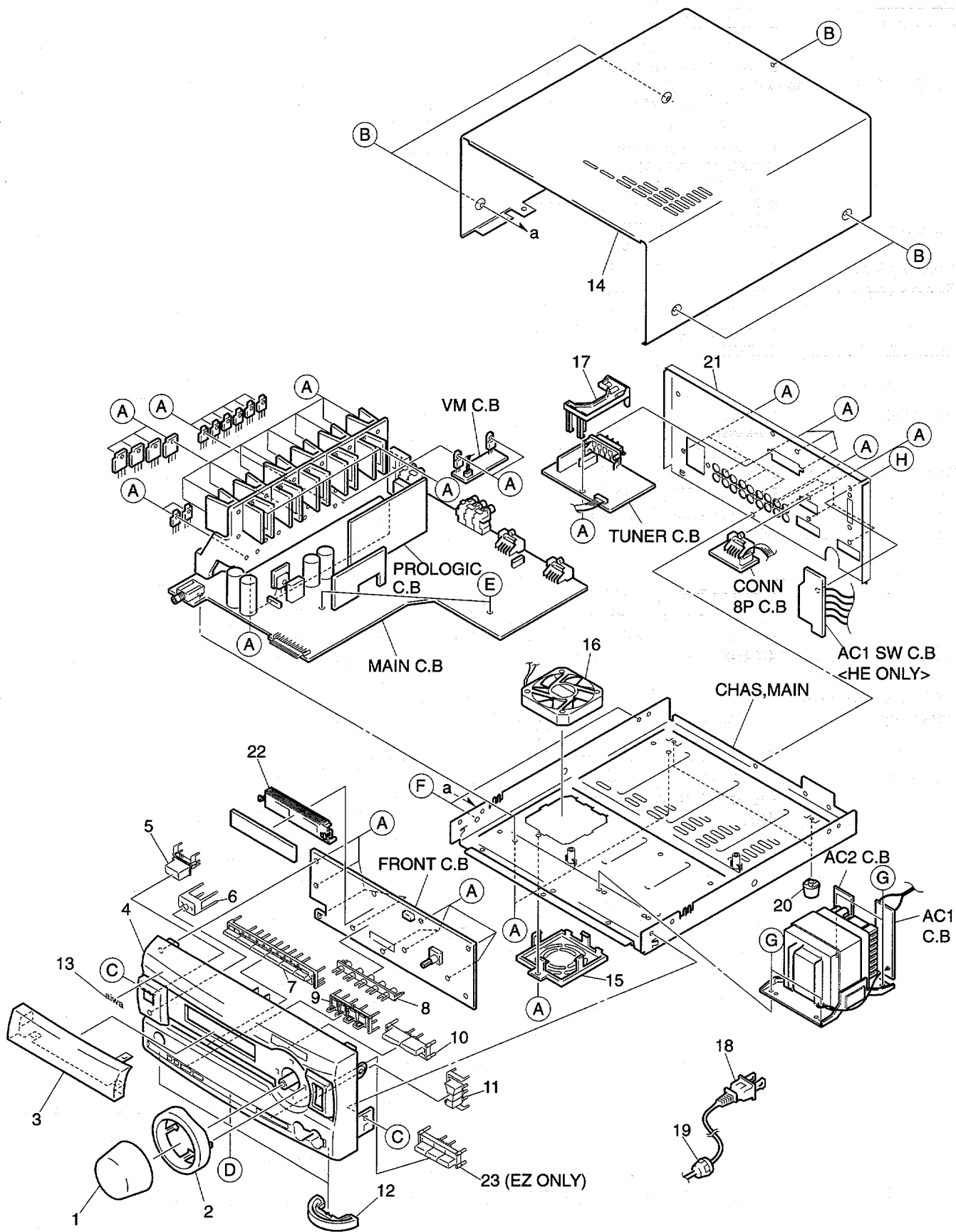
### <SW SECTION> (HE)

Sensitivity : Less than 51dB [at 5.9MHz]  
Less than 45dB [at 12.0 MHz]  
Less than 44dB [at 17.9MHz]

Overload Signal Distortion :  
Less than 10% [at 12.0MHz]

Intermediate frequency : 450kHz

MECHANICAL EXPLODED VIEW 1 / 1 (MX-NAVH1000)



# MECHANICAL PARTS LIST 1 / 1 (MX-NAVH1000)

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	88-SP1-010-010		KNOB, RTRY VOL	20	87-085-213-010		FOOT, H12.5
2	88-SP1-011-010		RING, VOL	21	88-SPM-035-010		PANEL, REAR EZSN<EZ>
3	88-SP1-004-010		WINDOW, DISPLAY	21	88-SPM-041-010		PANEL, REAR HES<HE>
4	88-SPM-001-010		CABI, FR<K, HE>	21	88-SPM-034-010		PANEL, REAR KSN<K>
4	88-SPM-018-010		CABI, FR EZ<EZ>	22	88-SX1-203-010		GUIDE, FL
5	88-SP1-006-010		KEY, POWER	23	88-SP1-009-010		KEY, RDS<EZ>
6	88-SP1-016-010		LENS, SENSOR	A	87-067-703-010		TAPPING SCREW, BVT2+3-10
7	88-SP1-015-010		KEY, ASSY FUN	B	87-067-641-010		UTT2+3-8(W/O SLOT)BL
8	88-SP1-211-010		GUIDE, FUN	C	87-591-094-410		TAPPING SCREW, QIT+3-6
9	88-SP1-012-010		KEY, TUNING	D	87-067-688-010		BVTT+3-6
10	88-SP1-007-010		KEY, BBE	E	87-B10-190-010		BVT2+3-22 W/O SLOT<EZ, HE>
11	88-SP1-008-010		KEY, KARAOKE	E	87-B10-191-010		VT2+3-22 W/O SLOT<K>
12	88-SU1-014-010		RING, FOOT	F	87-721-095-410		QT2+3-8GLD W/O SLOT
13	82-NE6-067-010		BADGE, AIWA 30N	G	87-078-019-010		S-SCREW, IT+4-6
14	88-SP1-002-010		CABI, STEEL	H	81-653-215-010		SPECIAL SCREW, VT2.6-8<HE>
15	88-SP1-208-010		COVER, FAN				
16	87-A90-796-010		FAN, F614R-12MC-15-300MM				
17	88-AR1-203-010		HLDR, TU				
18	87-050-079-010		AC-CORD ASSY, E				
19	87-085-185-010		BUSHING, AC CORD (E)				

MODEL NO.

# DX-NH1000

## ELECTRICAL MAIN PARTS LIST

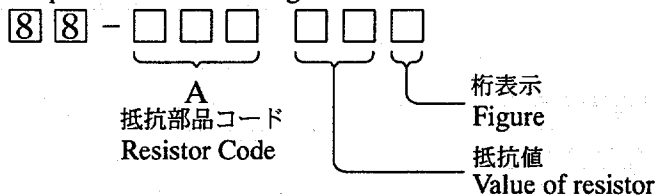
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC				LED203	87-A40-446-040		LED, SLP-7131F-81H-S-T1 P-GRN
	88-SX1-606-010	IC, UPD78046HGF-020-3B9		LED204	87-A40-446-040		LED, SLP-7131F-81H-S-T1 P-GRN
				S201	87-A90-809-080		SW, TACT TSTA-2
				S202	87-A90-809-080		SW, TACT TSTA-2
				S203	87-A90-809-080		SW, TACT TSTA-2
TRANSISTOR				S204	87-A90-809-080		SW, TACT TSTA-2
	89-324-123-080	C-TR, 2SC2412K S		W3	88-906-201-110		FF-CABLE, 6P 1.25
	87-026-263-080	C-TR, RN1410		X1	87-A70-075-080		VIB, CER 4.19MHZ CRHF
	87-A30-074-080	C-TR, RT1P 141C					
	87-A30-076-080	C-TR, 2SC3052F					
			KEY C.B				
DIODE				CN101	87-099-194-010		CONN, 6P 6216V
	87-A40-470-080	DIODE, 1SS254		LED101	87-A40-521-040		LED, SEL6513C TP5 PGRN
	87-070-136-080	ZENER, MTZJ5.1B		LED102	87-A40-521-040		LED, SEL6513C TP5 PGRN
				LED103	87-A40-521-040		LED, SEL6513C TP5 PGRN
				LED104	87-A40-521-040		LED, SEL6513C TP5 PGRN
MAIN C.B				LED105	87-A40-521-040		LED, SEL6513C TP5 PGRN
	CN302	87-099-194-010	CONN, 6P 6216V	LED106	87-A40-521-040		LED, SEL6513C TP5 PGRN
	CN303	87-099-015-010	CONN, 13P 6216V	S101	87-A90-809-080		SW, TACT TSTA-2
	FB301	87-008-372-080	FLTR, EMI BL01RN1	S102	87-A90-809-080		SW, TACT TSTA-2
	FB302	87-008-372-080	FLTR, EMI BL01RN1	S103	87-A90-809-080		SW, TACT TSTA-2
	FB303	87-008-372-080	FLTR, EMI BL01RN1				
	FB304	87-008-372-080	FLTR, EMI BL01RN1	S104	87-A90-809-080		SW, TACT TSTA-2
	FB305	87-008-372-080	FLTR, EMI BL01RN1	S105	87-A90-809-080		SW, TACT TSTA-2
	FB306	87-008-372-080	FLTR, EMI BL01RN1				
	FB307	87-008-372-080	FLTR, EMI BL01RN1				
	L301	87-005-152-080	COIL, 10UH				
	W301	88-SX1-610-010	CORD, FG 11P				
	W302	88-906-481-110	FF-CABLE, 6P 1.25 480MM				
	W303	88-913-121-110	FF-CABLE, 13P 1.25				
FRONT C.B							
	C1	87-010-263-040	CAP, E 100-10				
	C2	87-010-494-040	CAP, E 1-50 GAS				
	C3	87-010-496-040	CAP, E 3.3-50 GAS				
	C4	87-010-197-080	CAP, CHIP 0.01 DM				
	C5	87-010-190-080	C-CAP, S 0.01-50 ZF				
	C6	87-010-196-080	CHIP CAPACITOR, 0.1-25				
	C7	87-010-196-080	CHIP CAPACITOR, 0.1-25				
	C8	87-010-312-080	C-CAP, S 15P-50 CH				
	C9	87-010-318-080	CHIP CAP, S 47P-50 CH				
	C10	87-010-316-080	C-CAP, S 33P-50 CH				
	C11	87-018-134-080	CAPACITOR, TC-U 0.01-16				
	C12	87-010-197-080	CAP, CHIP 0.01 DM				
	C13	87-010-246-040	CAP, E 47-35 SME				
	C249	87-015-689-080	CAP, E 10-35 7L<Y>				
	C250	87-015-689-080	CAP, E 10-35 7L<Y>				
	C251	87-010-178-080	CHIP CAP 1000P				
	C252	87-010-178-080	CHIP CAP 1000P				
	C253	87-010-178-080	CHIP CAP 1000P				
	C254	87-010-178-080	CHIP CAP 1000P				
	C255	87-010-178-080	CHIP CAP 1000P				
	C256	87-010-178-080	CHIP CAP 1000P				
	C257	87-010-196-080	CHIP CAPACITOR, 0.1-25				
	CN3	87-099-194-010	CONN, 6P 6216V				
	FL201	88-SX1-609-010	FL, 6-BT-293GK				
	L1	87-005-152-080	COIL, 10UH				
	L2	87-005-152-080	COIL, 10UH				
	L3	87-005-152-080	COIL, 10UH				
	L5	87-005-152-080	COIL, 10UH				
	LED201	87-A40-446-040	LED, SLP-7131F-81H-S-T1 P-GRN				
	LED202	87-A40-446-040	LED, SLP-7131F-81H-S-T1 P-GRN				

○チップ抵抗部品コード/CHIP RESISTOR PART CODE

チップ抵抗部品コードの成り立ち

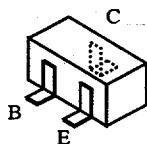
Chip Resistor Part Coding



チップ抵抗  
Chip resistor

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

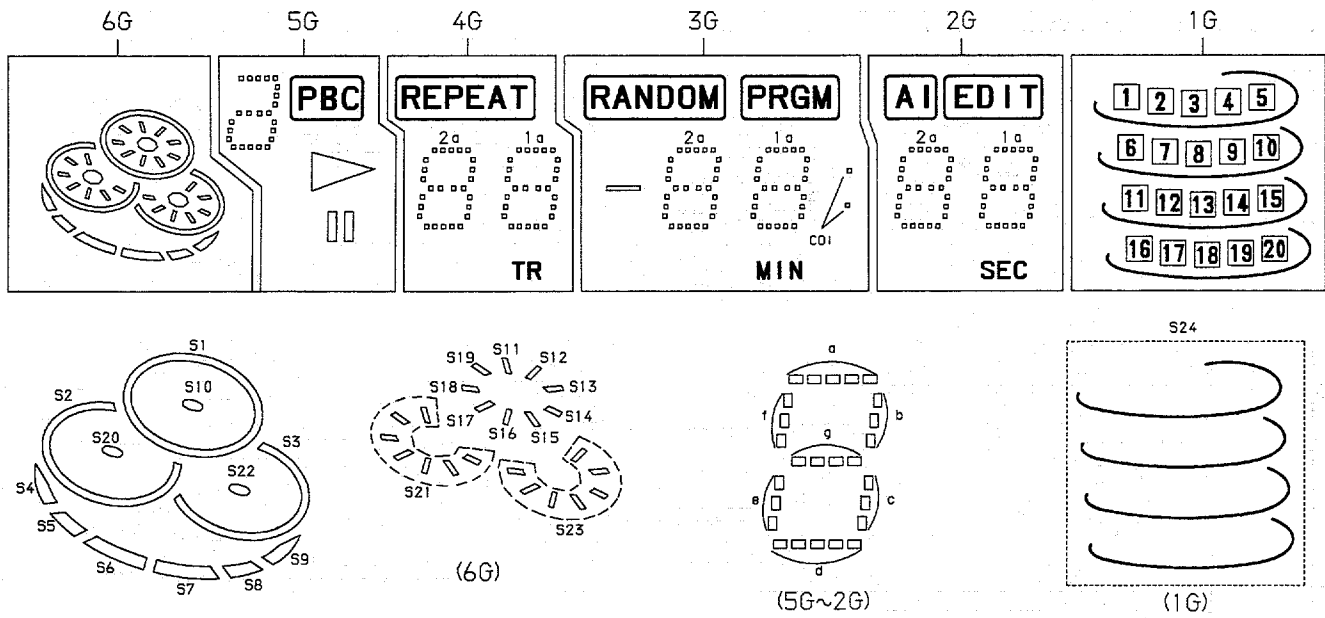
TRANSISTOR ILLUSTRATION (DX-NH1000)



- 2SC3052
- RT1P141C
- 2SC2412
- RN1410

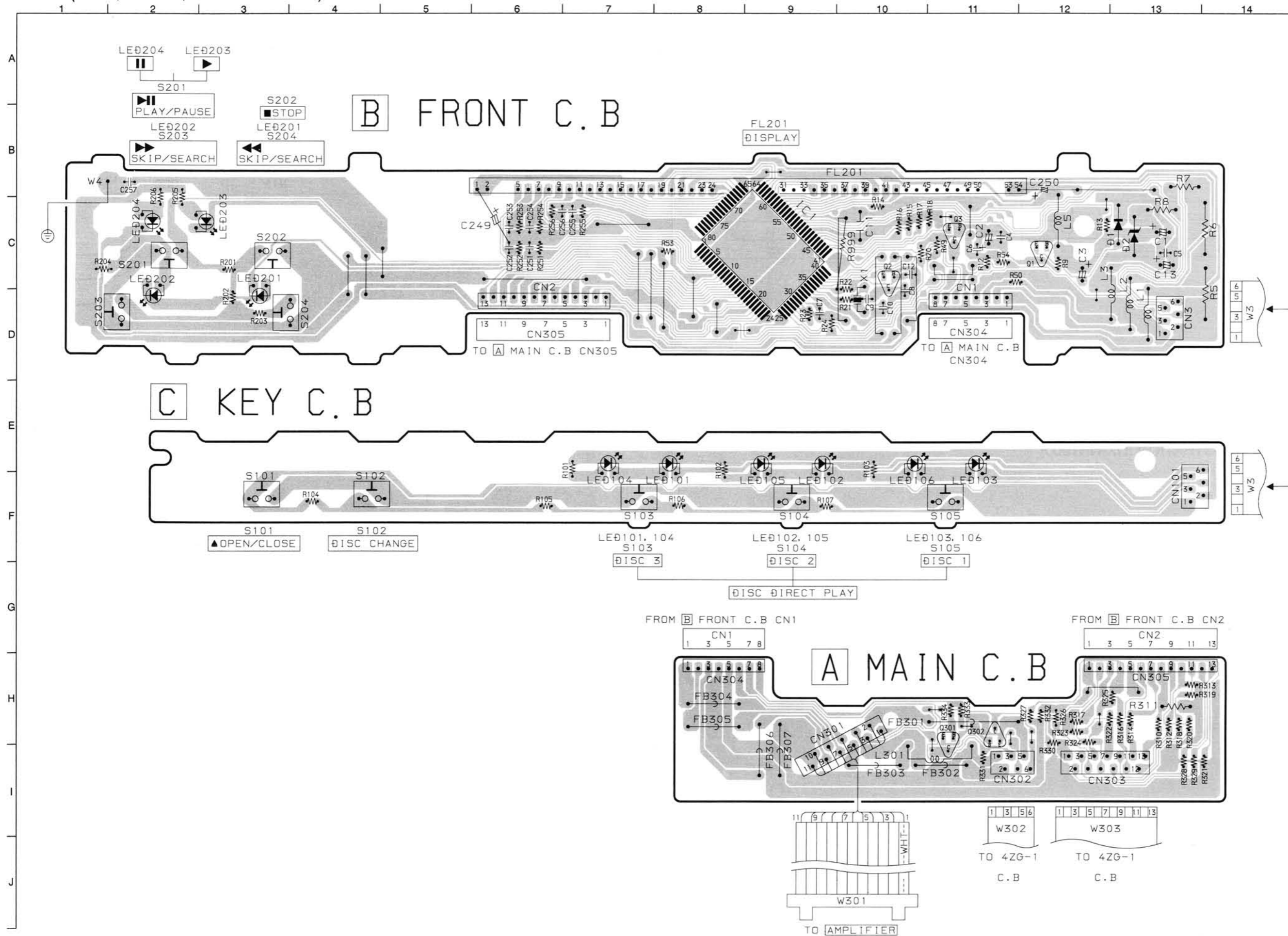
# FL (FL,6-BT-293GK) GRID ASSIGNMENT & ANODE CONNECTION (DX-NH1000)

## GRID ASSIGNMENT

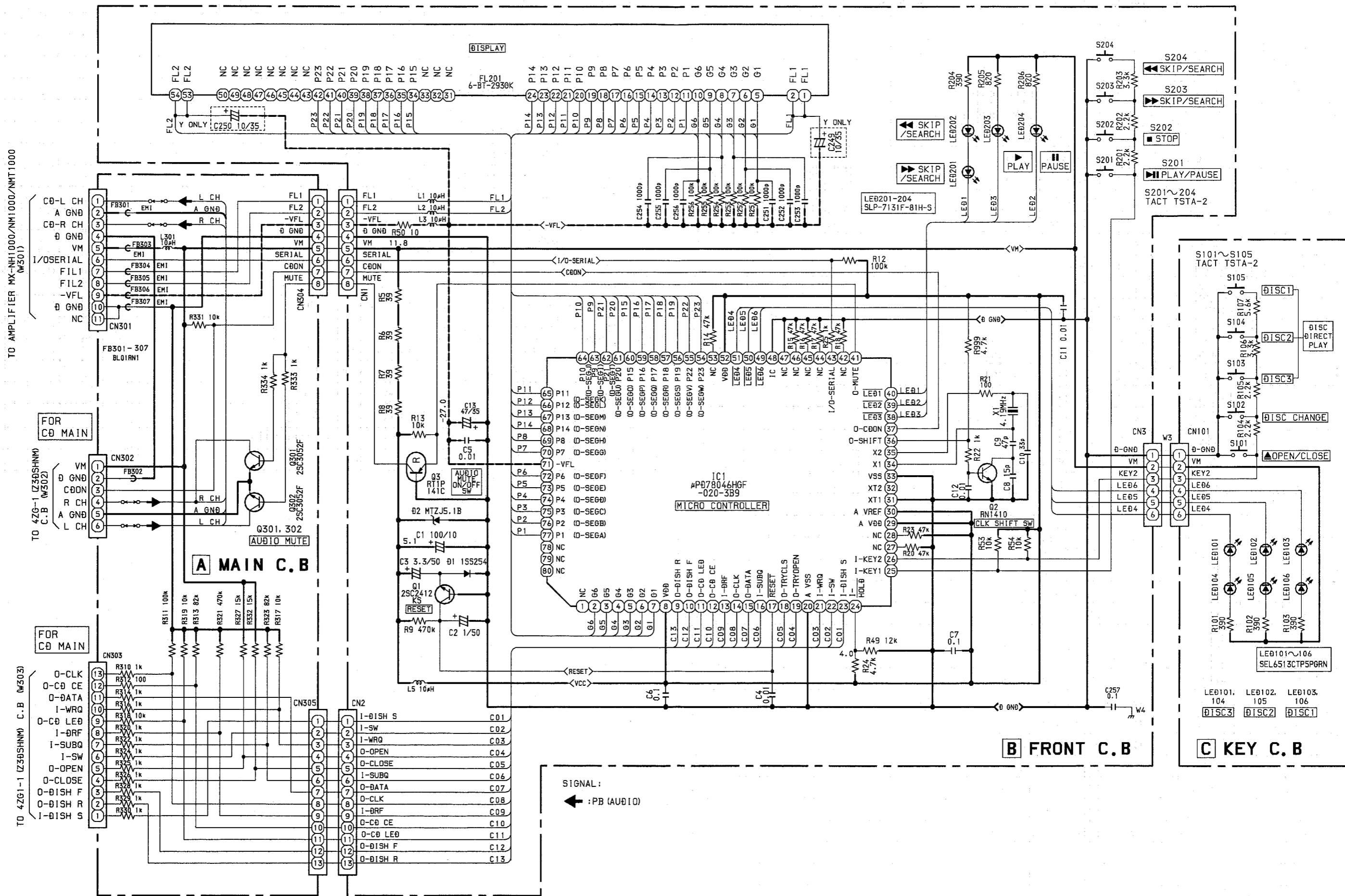


## ANODE CONNECTION

	6G	5G	4G	3G	2G	1G
P1	S10	a	1a	1a	1a	1
P2	S12	b	1b	1b	1b	2
P3	S11	-	1f	1f	1f	3
P4	S13	g	1g	1g	1g	4
P5	S19	c	1c	1c	1c	5
P6	S14	e	1e	1e	1e	6
P7	S18	d	1d	1d	1d	7
P8	S15	-	-	—	-	8
P9	S17	▷	2a	2a	2a	9
P10	S16	□□	2b	2b	2b	10
P11	S1	-	2f	2f	2f	11
P12	S20	-	2g	2g	2g	12
P13	S21	-	2c	2c	2c	13
P14	S2	-	2e	2e	2e	14
P15	S22	-	2d	2d	2d	15
P16	S23	-	TR	MIN	SEC	16
P17	S3	PBC	REPEAT	col	EDIT	17
P18	S4	(PBC)	(REPEAT)	PRGM	(EDIT)	18
P19	S5	-	-	(PRGM)	AI	19
P20	S6	-	-	RANDOM	(AI)	20
P21	S7	-	-	(RANDOM)	-	S24
P22	S8	-	-	-	-	-
P23	S9	-	-	-	-	-



SCHEMATIC DIAGRAM (MAIN / FRONT / KEY : DX-NH1000)





# IC DESCRIPTION (DX-NH1000)

IC, UPD78046HGF-020-3B9

Pin No.	Pin Name	I/O	Description
1	NC	-	Not connected.
2~7	G6~G1	O	FL grid output G6~G1.
8	VDD	-	Power supply terminal.
9	O-DISH R	O	CD turntable reverse rotation output.
10	O-DISH F	O	CD turntable forward rotation output.
11	O-CD LED	O	CD flash window LED ON/OFF output.
12	O-CD CE	O	CD chip enable output.
13	I-DRF	I	RF input level detection.
14	O-CLK	O	CD clock output.
15	O-DATA	O	CD data output.
16	I-SUBQ	I	CD subcode input.
17	RESET	I	Reset input.
18	O-TRYCLS	O	CD tray close output.
19	O-TRYOPN	O	CD tray open output.
20	A VSS	-	GND.
21	I-WRQ	I	CD WRQ output.
22	I-SW	I	CD motor key switch A/D input.
23	I-DISH S	I	CD turntable photo sensor A/D input.
24	I-HOLD	I	Power supply / voltage monitoring.
25	I-KEY1	I	Key1 A/D input.
26	I-KEY2	I	Key2 A/D input.
27	NC	-	Not used.
28	NC	-	Not used.
29	A VDD	-	Power supply terminal.
30	A VREF	-	Power supply terminal.
31	(XT1)	-	Connect to GND.
32	XT2	-	Connect to GND.
33	VSS	-	GND.
34	X1	-	4.19MHz oscillator circuit.
35	X2		
36	O-SHIFT	O	Micro controller clock shift output.
37	O-CD ON	O	Power supply output for CD circuit ("H": ON).
38	LED-3	O	Play LED output.
39	LED-2	O	Pause LED output.
40	LED-1	O	Skip LED output.
41	O-MUTE	O	CD Audio mute output.
42	NC	-	Not used.
43	I/O-SERIAL	I/O	Serial data input / output.
44~47	NC	-	Not used.
48	IC	-	Connect to GND.
49	LED6	O	Disc1 LED output.
50	LED5	O	Disc2 LED output.

Pin No.	Pin Name	I/O	Description
51	LED4	O	Disc3 LED output.
52	VDD	-	Power supply terminal.
53	NC	-	Not used.
54	P23 (O-SEG W)	O	FL segment output P23.
55	P22 (O-SEG V)	O	FL segment output P22.
56	P19 (O-SEG S)	O	FL segment output P19.
57	P18 (O-SEG R)	O	FL segment output P18.
58	P17 (O-SEG Q)	O	FL segment output P17.
59	P16 (O-SEG P)	O	FL segment output P16.
60	P15 (O-SEG O)	O	FL segment output P15.
61	P20 (O-SEG T)	O	FL segment output P20.
62	P21 (O-SEG U)	O	FL segment output P21.
63	P9 (O-SEG I)	O	FL segment output P9.
64	P10 (O-SEG J)	O	FL segment output P10.
65	P11 (O-SEG K)	O	FL segment output P11.
66	P12 (O-SEG L)	O	FL segment output P12.
67	P13 (O-SEG M)	O	FL segment output P13.
68	P14 (O-SEG N)	O	FL segment output P14.
69, 70, 72~77	P8~1 (O-SEG H~A)	O	FL segment output P8~P1.
71	-VFL	-	FL display negative supply terminal.
78~80	NC	-	Not connected.



# MECHANICAL PARTS LIST 1 / 1 (DX-NH1000)

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

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	88-SU1-014-010		RING, FOOT
2	88-SX1-004-010		WINDOW, DISPLAY
3	82-NE6-067-010		BADGE, AIWA 30N
4	88-SX1-001-010		CABI, FR
5	88-SX1-005-010		KEY, OPEN
6	88-SX1-010-010		KEY, ASSY DISC
7	88-SX1-203-010		GUIDE, FL
8	88-SX1-202-110		GUIDE, LED OPE
9	88-SX1-002-010		CABI, STEEL
10	86-NF6-007-010		WINDOW, TOP
11	88-SX1-003-010		PANEL, TRAY
12	84-ZG1-245-210		CAP, OPTICAL
13	88-SX1-024-110		CABI, REAR YSN<YSN>
13	88-SX1-021-110		CABI, REAR YS<YS>
14	88-SX1-015-110		KEY, ASSY OPE
A	87-067-703-010		TAPPING SCREW, BVT2+3-10
B	87-721-097-410		QT2+3-12 GLD
C	87-067-633-010		TAPPING SCREW, BVT2+3-8

MODEL NO.

# FX-NH1000

## 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				C372	87-010-179-080		CAP,CHIP S B1200P-50
	87-A20-455-010	IC,HA12211		C373	87-010-179-080		CAP,CHIP S B1200P-50
	87-A20-355-010	IC,CXA1553P		C374	87-010-179-080		CAP,CHIP S B1200P-50
	88-SW1-608-010	IC,M38503M4-062FP		C375	87-010-545-080		CAP,E 0.22-50
				C376	87-010-545-080		CAP,E 0.22-50
TRANSISTOR				C378	87-010-196-080		CHIP CAPACITOR,0.1-25
	87-A30-087-080	C-FET,2SK2158		C381	87-010-197-080		CAP,CHIP 0.01-25
	87-A30-074-080	C-TR,RT1P141C		C382	87-010-318-080		C-CAP,S 47P-50 CH
	87-026-610-080	TR,KTC3198GR		C383	87-010-197-080		CAP,CHIP 0.01-25
	87-A30-073-080	C-TR,RT1N141C		C384	87-010-402-080		CAP,E 2.2-50
	87-A30-076-080	C-TR,2SC3052F					
	89-112-965-080	TR,2SA1296		C385	87-010-184-080		C-CAP,S 3300P-50
	87-A30-085-070	C-TR,CSA1362GR		C386	87-010-196-080		CHIP CAPACITOR,0.1-25
	89-318-155-080	TR,2SC1815		C388	87-010-154-080		C-CAP,S 10P-50
	87-026-263-080	C-TR,RN1410		C601	87-015-997-010		CAP,ELECT 2200UF-16V
	87-A30-071-080	C-TR,RT1N144C		C602	87-010-381-080		CAP,E 330-16
DIODE				C603	87-010-101-080		CAP,E 220-16
	87-A40-470-080	DIODE,1SS254		C604	87-010-237-080		CAP,ELECT 1000-16V
	87-A40-269-080	C-DIODE,MC2836		C605	87-010-198-080		CAP,CHIP 0.022-25
	87-017-931-080	ZENER,MTZJ5.6B		C606	87-010-546-080		CAP,E 0.33-50
				C607	87-010-263-080		CAP,ELECT 100-10V
MIAN C.B				C609	87-010-196-080		CHIP CAPACITOR,0.1-25
C301	87-010-318-080	C-CAP,S 47P-50 CH		C610	87-010-320-080		CHIP CAP 68P-50
C302	87-010-318-080	C-CAP,S 47P-50 CH		C611	87-010-312-080		C-CAP,S 15P-50 CH
C303	87-012-157-080	C-CAP,S 330P-50 CH		C612	87-010-316-080		C-CAP,S 33P-50 CH
C304	87-012-157-080	C-CAP,S 330P-50 CH		C613	87-010-404-080		CAP,E 4.7-50
C305	87-012-145-080	CAP,CHIP S 270P-50		C614	87-010-197-080		CAP,CHIP 0.01-25
C306	87-012-145-080	CAP,CHIP S 270P-50		FB301	87-008-372-080		FILTER,EMI BL OIRNI
C307	87-010-196-080	CHIP CAPACITOR,0.1-25		FB601	87-008-372-080		FILTER,EMI BL OIRNI
C311	87-010-198-080	CAP,CHIP 0.022-25		FB602	87-008-372-080		FILTER,EMI BL OIRNI
C312	87-010-198-080	CAP,CHIP 0.022-25		FB603	87-008-372-080		FILTER,EMI BL OIRNI
C313	87-010-180-080	C-CAP,1500P-50		L301	87-A50-049-010		COIL,TRAP 85K(COI)
C314	87-010-180-080	C-CAP,1500P-50		L302	87-A50-049-010		COIL,TRAP 85K(COI)
C315	87-010-178-080	CHIP CAP 1000P-50		L351	87-007-342-010		COIL,OSC 85K BIAS
C316	87-010-178-080	CHIP CAP 1000P-50		L601	87-005-130-080		COIL,10UH
C317	87-012-142-080	CAP, S 0.33-16		L603	87-005-130-080		COIL,10UH
C318	87-012-142-080	CAP, S 0.33-16		SFR301	87-A90-636-080		SFR,33K H RH0638C LG
C319	87-012-141-080	C-CAP,S 0.22-16 Z F		SFR302	87-A90-636-080		SFR,33K H RH0638C LG
C320	87-012-141-080	C-CAP,S 0.22-16 Z F		SFR303	87-A90-636-080		SFR,33K H RH0638C LG
C321	87-012-141-080	C-CAP,S 0.22-16 Z F		SFR304	87-A90-636-080		SFR,33K H RH0638C LG
C322	87-012-141-080	C-CAP,S 0.22-16 Z F		SFR305	87-A90-637-080		SFR,47K H RH0638C LG
C324	87-010-260-080	CAP, ELECT 47-25V		SFR306	87-A90-637-080		SFR,47K H RH0638C LG
C325	87-010-370-080	CAP,E 330-6.3 SME		SFR351	87-A90-637-080		SFR,47K H RH0638C LG
C327	87-010-404-080	CAP,E 4.7-50		SFR352	87-A90-637-080		SFR,47K H RH0638C LG
C328	87-010-404-080	CAP,E 4.7-50		W501	88-915-161-110		FF-CABLE,15P-1.25
C332	87-010-196-080	CHIP CAPACITOR,0.1-25		W601	88-SW1-607-010		CORD,FG9P
C335	87-010-401-080	CAP,E 1-50		W701	88-904-331-110		FF-CABLE,4P 1.25 330MM
C336	87-010-401-080	CAP,E 1-50		W702	88-906-301-110		FF-CABLE,6P-1.25
C337	87-010-196-080	CHIP CAPACITOR,0.1-25		X601	87-A70-120-080		VIB,8.00MHZ
C339	87-010-196-080	CHIP CAPACITOR,0.1-25					
C340	87-010-196-080	CHIP CAPACITOR,0.1-25		FRONT-1 C.B			
C351	87-012-140-080	C-CAP,S 470P-50 CH		D702	87-002-787-080		LED,SEL 6215S RED
C352	87-012-140-080	C-CAP,S 470P-50 CH		S701	87-A90-809-080		SW,TACT TSTA-2
C356	87-010-260-080	CAP, ELECT 47-25V		S702	87-A90-809-080		SW,TACT TSTA-2
C357	87-010-197-080	CAP,CHIP 0.01-25		S703	87-A90-809-080		SW,TACT TSTA-2
C358	87-010-183-080	C-CAP,S 2700P-50 B		S704	87-A90-809-080		SW,TACT TSTA-2
C359	87-010-183-080	C-CAP,S 2700P-50 B					
C360	87-010-183-080	C-CAP,S 2700P-50 B		FRONT-2 C.B			
C370	87-010-196-080	CHIP CAPACITOR,0.1-25		D711	87-070-197-080		LED,SLP7118C-51-S-T1
C371	87-010-179-080	CAP,CHIP S B1200P-50		D712	87-070-197-080		LED,SLP7118C-51-S-T1
				D713	87-070-197-080		LED,SLP7118C-51-S-T1
				S711	87-A90-809-080		SW,TACT TSTA-2
				S712	87-A90-809-080		SW,TACT TSTA-2

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
S713	87-A90-809-080	SW, TACT	TSTA-2
S714	87-A90-809-080	SW, TACT	TSTA-2
S715	87-A90-809-080	SW, TACT	TSTA-2

HEAD-1 C.B

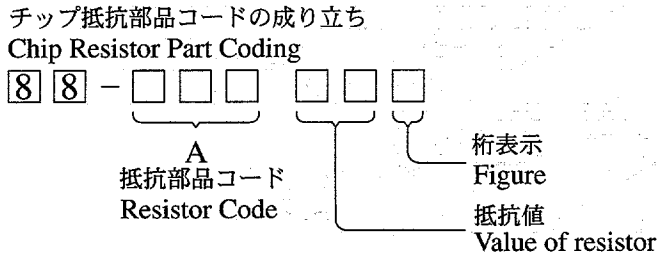
HEAD-2 C.B

85-ZM3-602-010 PWB, FLEX A

DECK C.B

	87-099-756-010	CONN, 15P 9604 S F
	82-ZM3-601-010	RBN, CORD 4P-75
SFR1	87-024-581-089	SFR, 3.3K DIA 6H
SOL1	82-ZM1-618-010	SOL ASSY, 27
SOL2	82-ZM1-626-010	SOL ASSY, 27K
SW1	87-036-110-010	SW, MICRO SPPB62
SW2	87-036-110-010	SW, MICRO SPPB62
SW3	87-036-110-010	SW, MICRO SPPB62
SW4	87-036-110-010	SW, MICRO SPPB62
SW6	87-036-110-010	SW, MICRO SPPB62
SW7	87-A90-248-010	SW, MICRO ESE11SH2CXQ
SW8	87-A90-248-010	SW, MICRO ESE11SH2CXQ
SW9	87-A90-248-010	SW, MICRO ESE11SH2CXQ

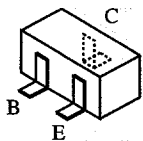
チップ抵抗部品コード/CHIP RESISTOR PART CODE



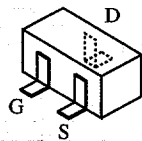
チップ抵抗  
Chip resistor

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	1608	±5%	CJ		1.6	0.8	0.45	108
1/10W	2125	±5%	CJ		2	1.25	0.45	118
1/8W	3216	±5%	CJ		3.2	1.6	0.55	128

TRANSISTOR ILLUSTRATION (FX-NH1000)



2SC3052  
CSA1362  
RN1410  
RT1N141C  
RT1N144C  
RT1P141C



2SK2158



KTC3198  
2SA1296  
2SC1815

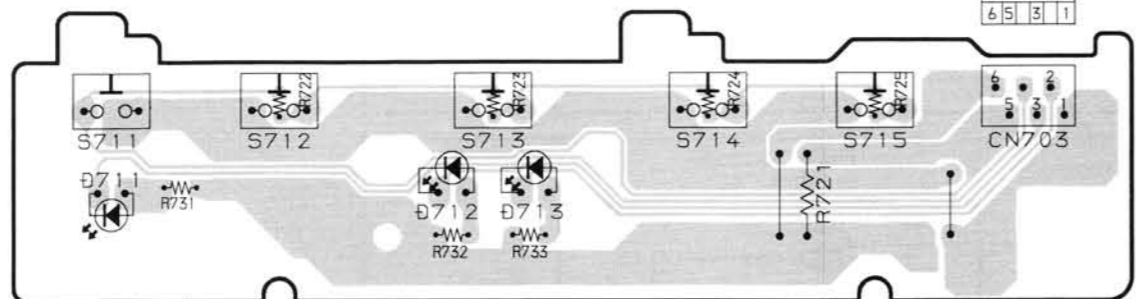


1 2 3 4 5 6 7 8 9 10 11 12 13 14

A  
B  
C  
D  
E  
F  
G  
H  
I  
L

C FRONT-2 C.B

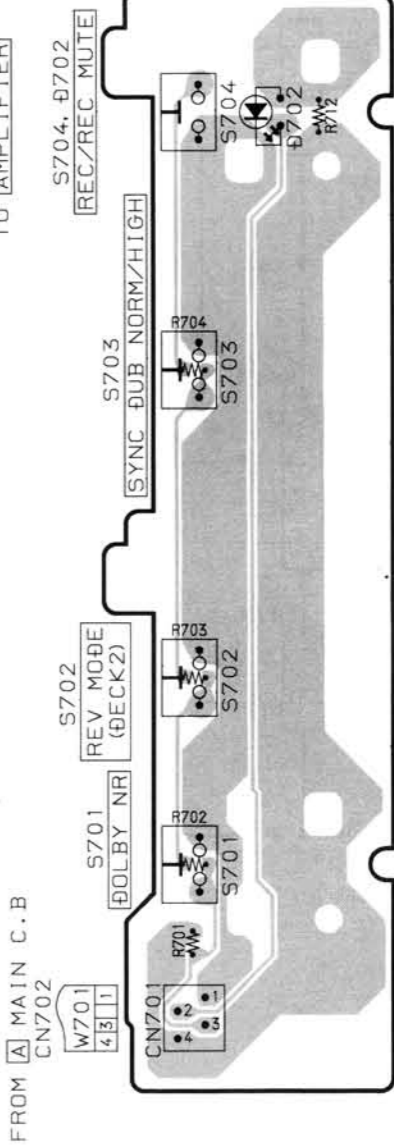
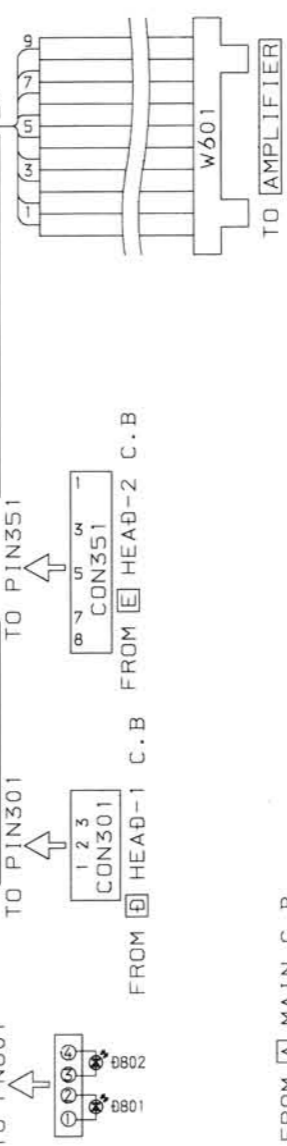
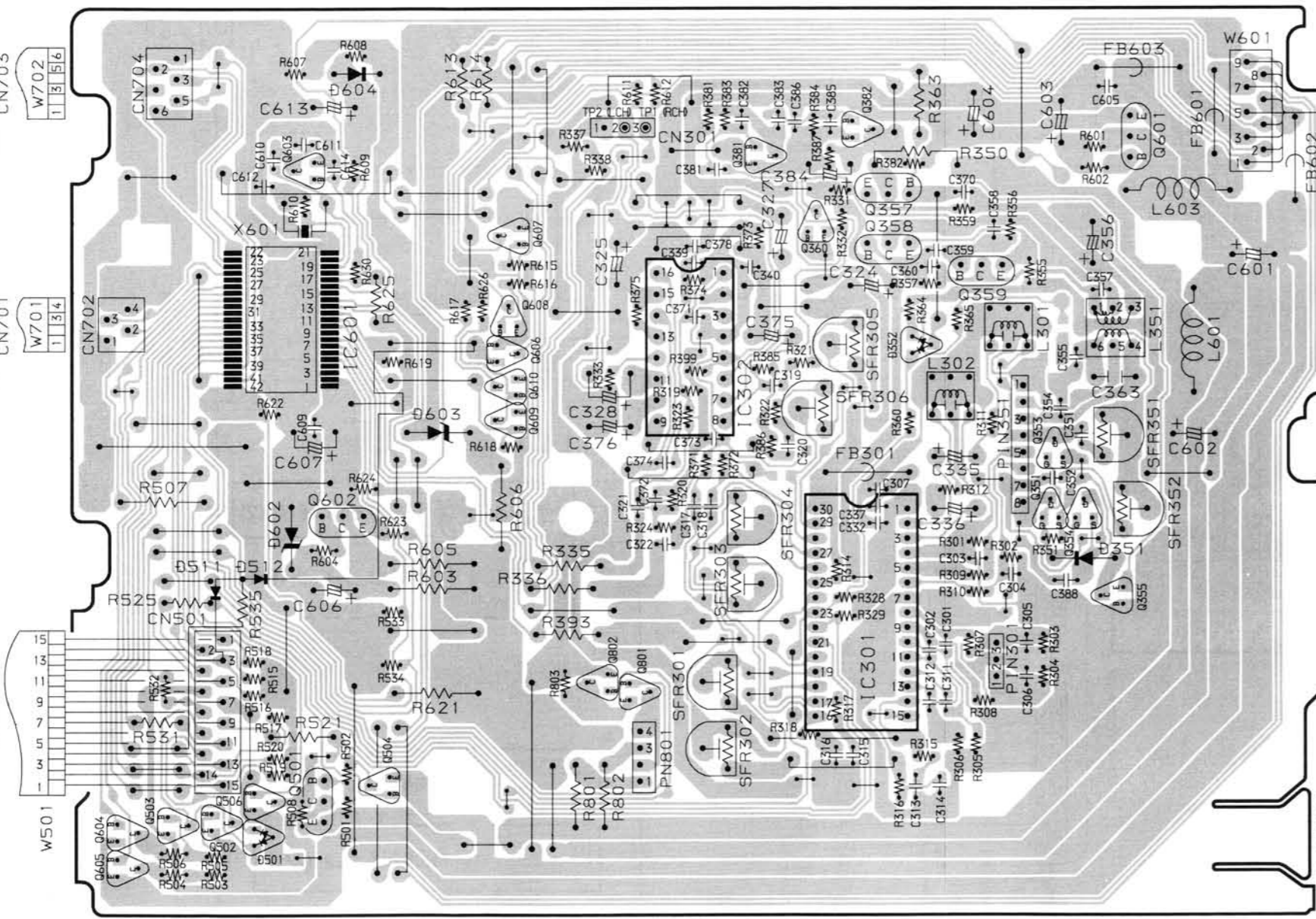
FROM A MAIN C.B CN704



S711, D711 S712, D712 S713, D712, D713 S714, D713 S715  
 || PAUSE    <<<< MS    <> PLAY/DIR    >>>> MS    ■ STOP

A MAIN C.B

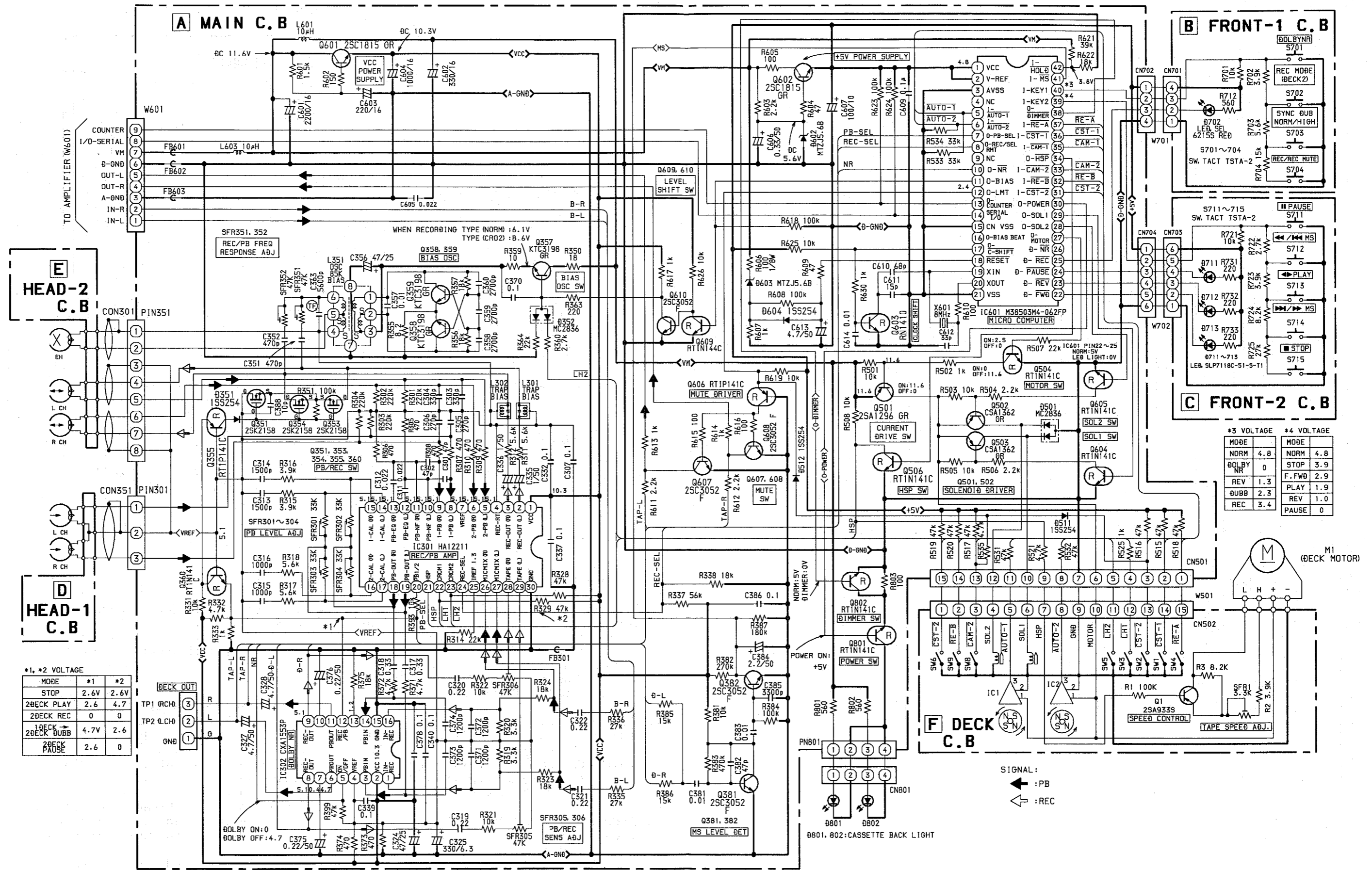
TO DECK C.B CN502  
 TO FRONT-1 C.B CN701  
 TO FRONT-2 C.B CN703



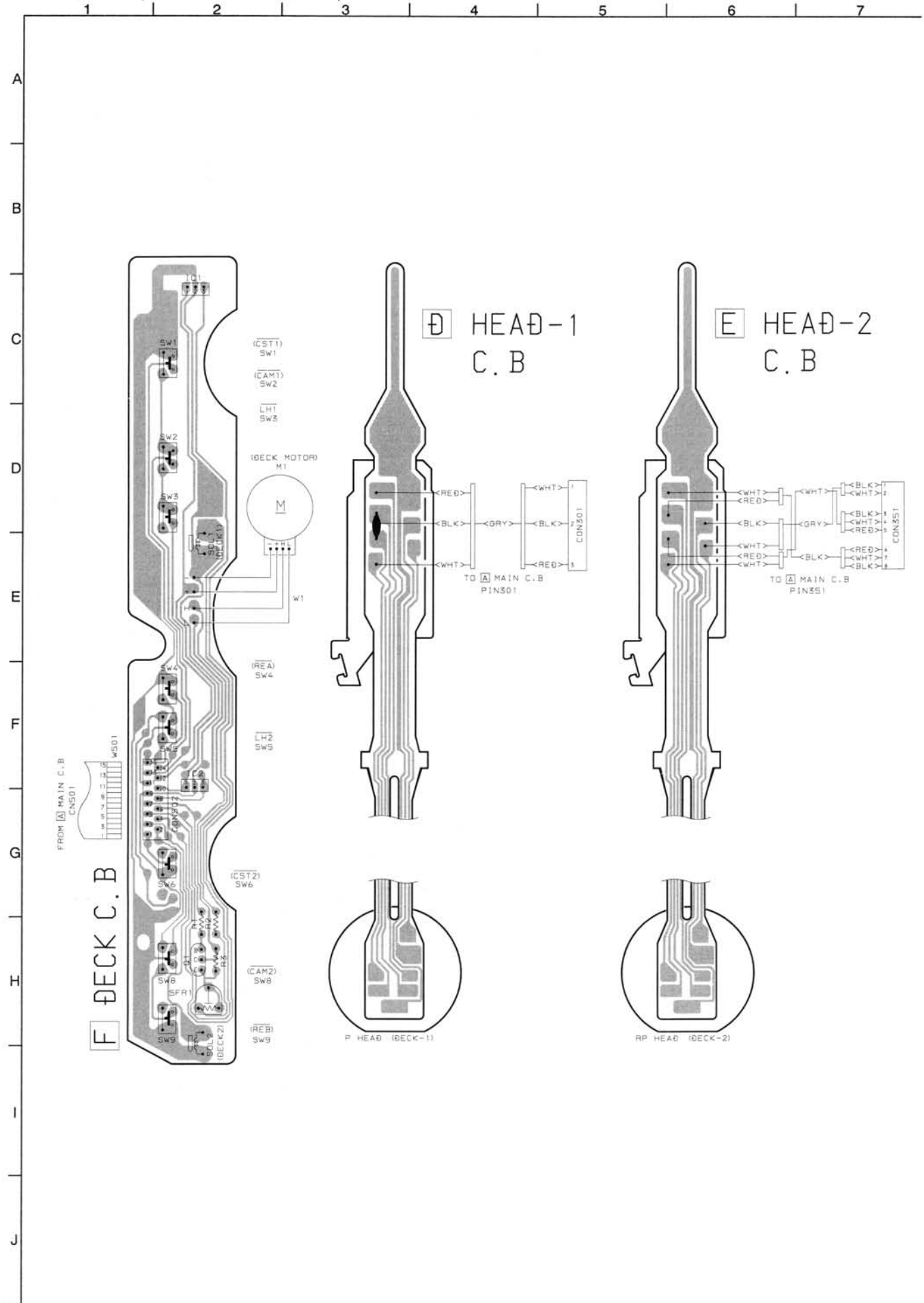
B FRONT-1 C.B



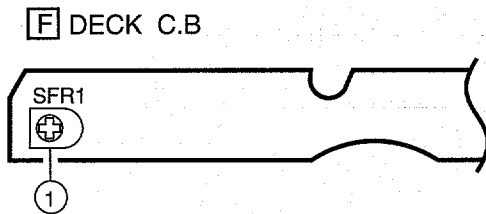
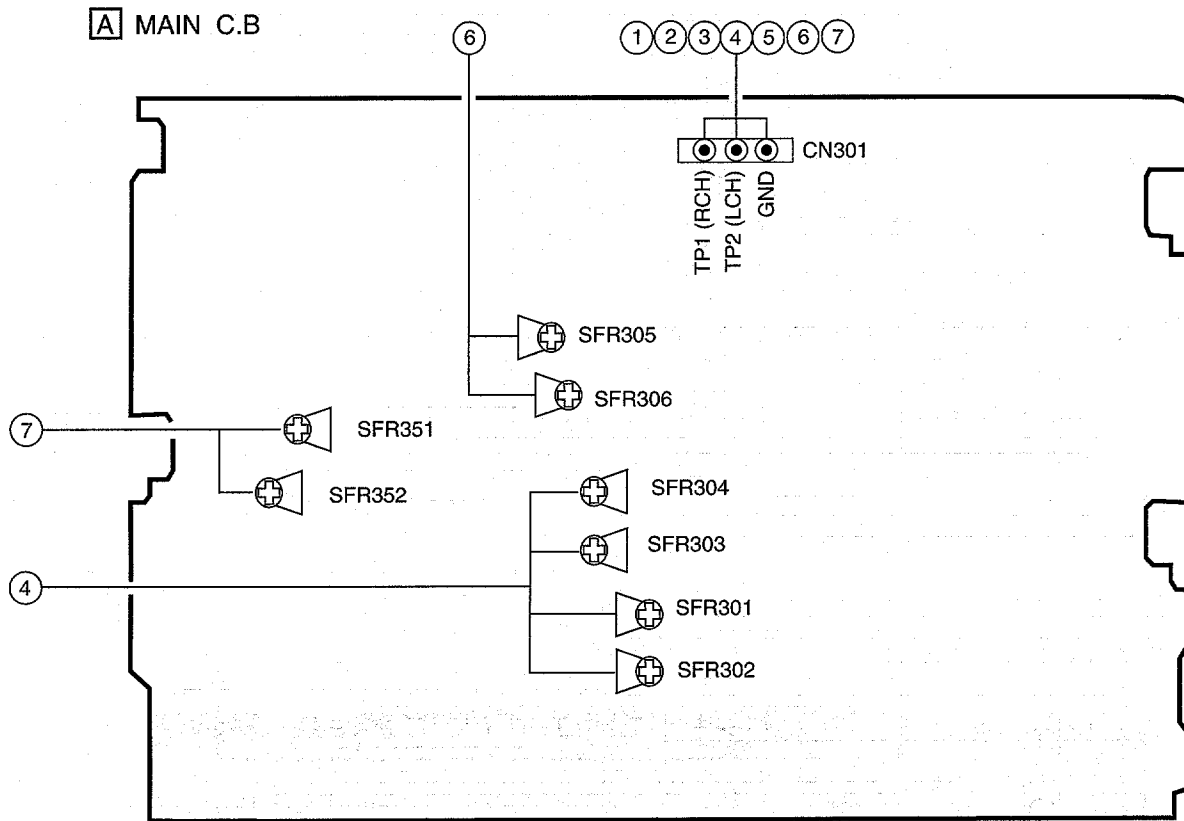
SCHEMATIC DIAGRAM (MAIN : FX-NH1000)



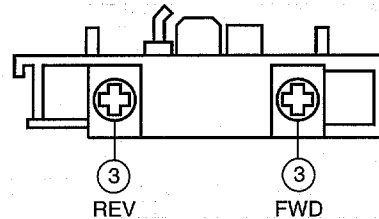
WIRING - 2 (DECK : FX-NH1000)



# ADJUSTMENT (FX-NH1000)



DECK-1 P, DECK-2R/P/E HEAD HEAD



## < DECK SECTION >

1. **Tape Normal Speed Adjustment (DECK1, DECK2)**  
 Settings : • Test tape : TTA-100 (Tape center)  
 • Test point : TP1 (Rch), TP2 (Lch)  
 • Adjustment location : SFR1  
 Method : Play back the test tape and adjust SFR1 so that the test point becomes 3000Hz  $\pm$  5Hz (FWD). Then check REV speed is 3000Hz  $\pm$  45Hz.
2. **High Speed Check (DECK1, DECK2)**  
 Settings : • Test tape : TTA-100 (Tape center)  
 • Test point : TP1 (Rch), TP2 (Lch)  
 Method : After normal speed adjustment, play back (High speed) the test tape. Then check tape speed is 6000Hz  $\pm$  400Hz (FWD).
3. **Head Azimuth Adjustment (DECK1, DECK2)**  
 Settings : • Test tape : TTA-300  
 • Test point : TP1 (Rch), TP2 (Lch)  
 • Adjustment location : Head azimuth adjustment screw  
 Method : Play back the 10kHz signal of the test tape and adjust screw so that the output becomes maximum. Next, perform on each FWD PLAY and REV PLAY mode.
4. **PB Sensitivity Adjustment (DECK1, DECK2)**  
 Settings : • Test tape : TTA-200  
 • Test point : TP1 (Rch), TP2 (Lch)  
 • Adjustment location : SFR301 (DECK1, Lch)  
 SFR302 (DECK1, Rch)  
 SFR303 (DECK2, Lch)  
 SFR304 (DECK2, Rch)  
 Method : Play back the test tape and adjust SFRs so that the output level of the test point becomes 245mV (DECK2), 260mV (DECK1).
5. **PB Frequency Response Check (DECK1, DECK2)**  
 Settings : • Test tape : TTA-300  
 • Test point : TP1 (Rch), TP2 (Lch)  
 Method : Play back the 315Hz and 10kHz signals of the test tape and check that the output ratio of the 10kHz signal with respect to that of the 315Hz signal is 0dB. Next, check that the Lch and Rch difference level of 10kHz signal is less than 2dB.
6. **REC/PB Sensitivity Adjustment (DECK2)**  
 Settings : • Test tape : TTA-602  
 • Test point : TP1 (Rch), TP2 (Lch)

**PRACTICAL SERVICE FIGURE (FX-NH1000)**  
**<DECK SECTION>**

- Input signal : 1kHz (LINE IN)
- Adjustment location : SFR305 (Lch)  
SFR306 (Rch)

**Method :** Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP1, TP2 becomes 0dB (17mV). Record and play back the 1kHz signals and adjust SFRs so that the output is 0dB ± 0.5dB.

**7. REC/PB Frequency Response Adjustment (DECK2)**

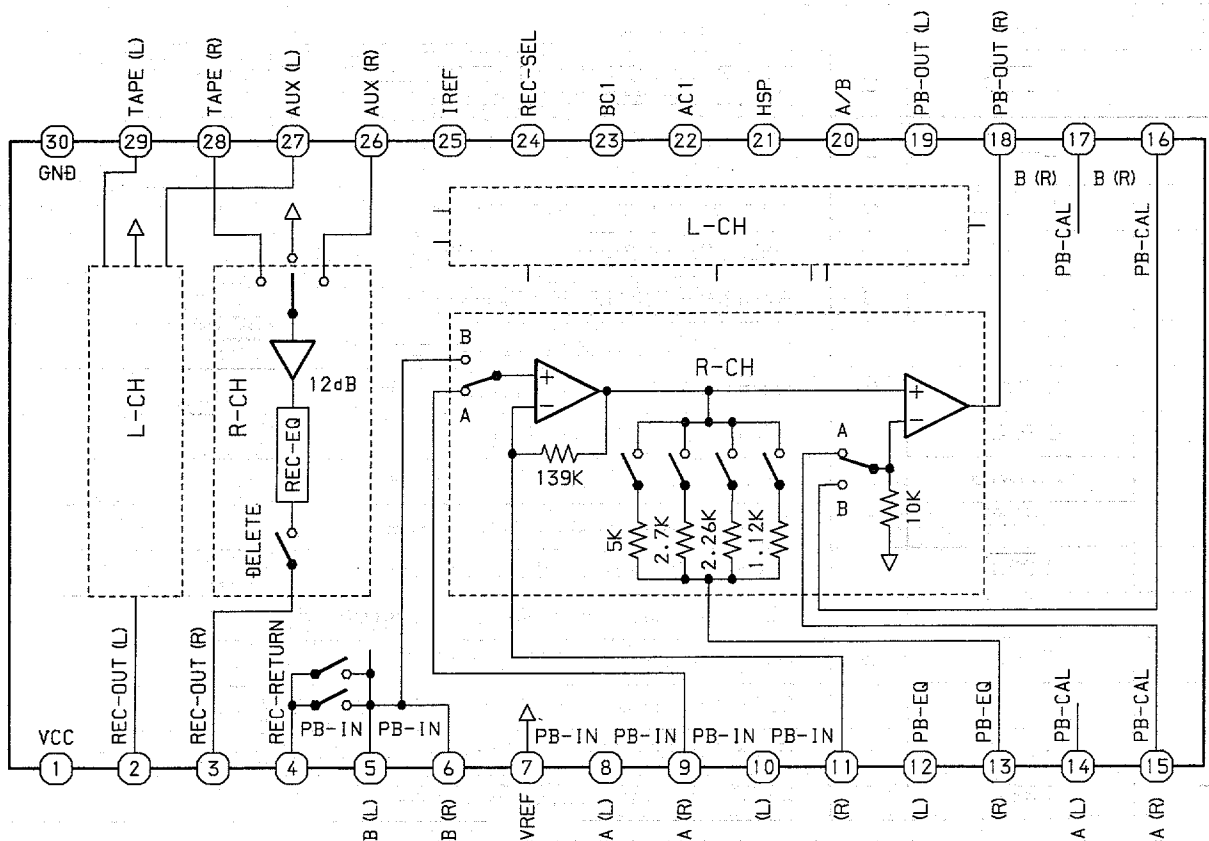
- Settings :**
- Test tape : TTA-602
  - Test point : TP6 (Lch), TP5 (Rch)
  - Input signal : 1kHz / 10kHz (LINE IN)
  - Adjustment location : SFR351 (Lch)  
SFR352 (Rch)

**Method :** Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP1, TP2 becomes 0dB (17mV). Record and play back the 1kHz and 10kHz signals and adjust SFRs so that the output level of the 10kHz signals becomes 0dB ± 0.5dB with respect to that of the 1kHz signal.

- Tape speed : 3000Hz ± 45Hz
- Wow & flutter : Less than 0.21% (W.R.M.S DECK 1, 2)
- Pinch roller pressure : 270 ~ 330g (FWD, REV)
- Take-up torque : 30 ~ 55g-cm (FWD, REV)
- F.F & REW torque : 75 ~ 180g-cm (FWD)  
75 ~ 130g-cm (REW)
- Back tension : 3 ± 4g-cm (DECK 1, 2)
- PB Output level : 230mV ± 1dB
- REC/PB Output level : 0dB ± 1dB (NORMAL, CrO2)
- Distortion (REC/PB) : Less than 2.0% (NORMAL, CrO2)
- Noise level (PB) : Less than 1.8mV (NORMAL, ALL FUNCTION OFF)
- Noise level (REC/PB) : Less than 2.0mV (NORMAL, ALL FUNCTION OFF)
- Erasing ratio : More than 60dB (at 125Hz, 10VU)
- Test tape : NORMAL : TTA-602  
CrO2 : TTA-615

**IC BLOCK DIAGRAM - 1 (FX-NH1000)**

IC, HA12211



# IC DESCRIPTION

IC, M38503M4-062FP

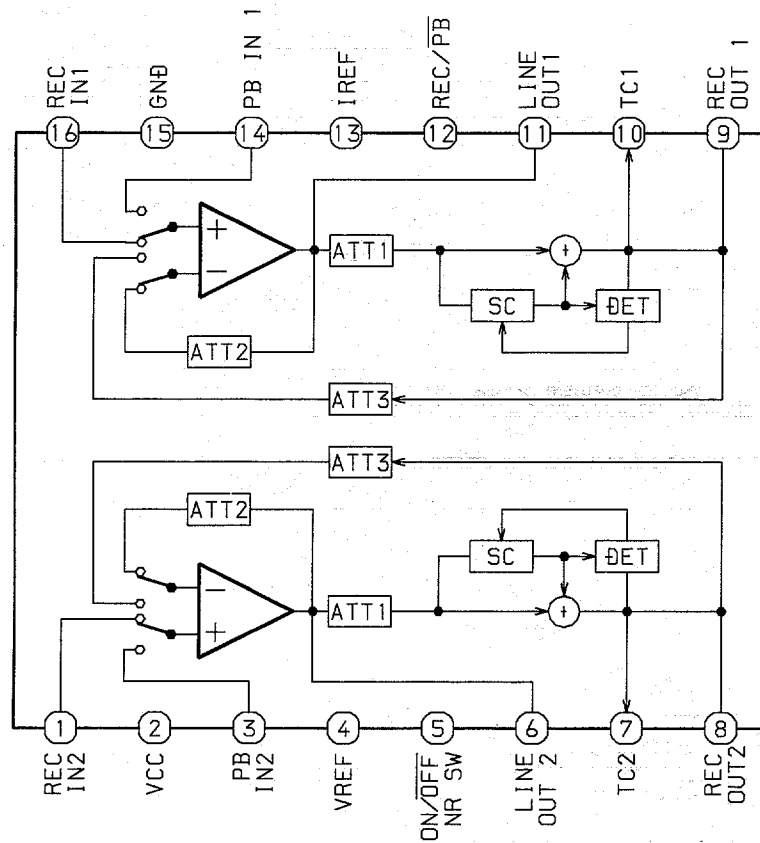
Pin No.	Pin Name	I/O	Description												
1	VCC	-	IC power supply.												
2	V-REF	-	Connected to VCC.												
3	AVSS	-	Connected to GND.												
4	NC	-	Not connected.												
5	I-AUTO1	I	Input of DECK 1 reel platform pulse.												
6	I-AUTO2	I	Input of DECK 2 reel platform pulse.												
7	O-PB-SEL	O	Three-state output. *2												
8	O-REC-SEL	O													
			<table border="1"> <thead> <tr> <th></th> <th>O-REC-SEL</th> <th>O-PB-SEL</th> </tr> </thead> <tbody> <tr> <td>L</td> <td>TAPE</td> <td>DECK 2 REC</td> </tr> <tr> <td>H</td> <td>REC IN</td> <td>DECK 2 PB</td> </tr> <tr> <td>Hi-Z</td> <td>REC MUTE</td> <td>DECK 1 PB</td> </tr> </tbody> </table>		O-REC-SEL	O-PB-SEL	L	TAPE	DECK 2 REC	H	REC IN	DECK 2 PB	Hi-Z	REC MUTE	DECK 1 PB
	O-REC-SEL	O-PB-SEL													
L	TAPE	DECK 2 REC													
H	REC IN	DECK 2 PB													
Hi-Z	REC MUTE	DECK 1 PB													
9	NC	O	Not connected.												
10	O-NR	O	When DOLBY-B NR is ON: "L".												
11	O-BIAS	O	BIAS control.												
12	O-LMT	O	Output LINE MUTE. When MUTE: "H".												
13	O-COUNTER	O	Output tape counter data.												
14	SERIAL I/O	I/O	Serial I/O terminal.												
15	CN VSS	-	Connected to GND.												
16	O-B BEAT	O	For bias beat changeover. When in operation: "H". Initial: "L".												
17	O-C SHIFT	O	While clock shift: "L"												
18	RESET	I	RESET signal input pin.												
19	XIN	I	Crystal oscillation pin. (8MHz)												
20	XOUT	O	Crystal oscillation pin. (8MHz)												
21	VSS	-	Connected to GND.												
22	D-FWD	O	When Power is ON: "L" under STOP status. When FWD operates: flashing ("L" ↔ "H" repeated). While FF: fast flashing.												
23	D-RVS	O	When Power is ON: "L" under STOP status. When RVS operates: flashing ("L" ↔ "H" repeated). While REW: fast flashing.												
24	D-PAUSE	O	When Power is ON: "L" under STOP status. While PAUSE: flashing ("L" ↔ "H" repeated).												
25	D-RES	O	While REC, DUBBING: "L". While REC, MUTE: flashing.												
26	D-NR	O	When NR is ON: "L". (Not Connected)												
27	O-MOTOR	O	When MOTOR is in operation or power on (500msec): "H".												
28	O-SOL2	O	When DECK 2 solenoid is in operation: "H".												
29	O-SOL1	O	When DECK 1 solenoid is in operation: "H".												
30	O-POWER	O	When POWER of AMPLIFIER is ON: "H"												
31	I-CST2	I	DECK 2 cassette detection. When cassette exists: "L".												
32	I-REB	I	DECK 2 side B REC enable. When recordable: "L".												
33	I-CAM2	I	DECK 2 mechanism cam. When switch is ON: "L".												
34	O-HSP	O	Output high speed signal. High speed: "L".												
35	I-CAM1	I	DECK 1 mechanism cam. When switch is ON: "L".												
36	I-CST1	I	DECK 1 cassette detection. When cassette exists: "L".												
37	I-REA	I	DECK 2 side A REC enable. When recordable: "L"												

Pin No.	Pin Name	I/O	Description
38	O-DIMMER	O	Ordinarily "H". When AMPLIFIER is in DIMMER 1 or 2 mode: "L".
39	I-KEY2	I	KEY input 2. AD input.
40	I-KEY1	I	KEY input 1. AD input.
41	I-MS	I	MS input. AD input.
42	I-HOLD	I	System power supply monitor. AD input.

\*PINs 22, 23, 24, 25, and 26 should be "H" when AMPLIFIER is in DIMMER 2 mode.

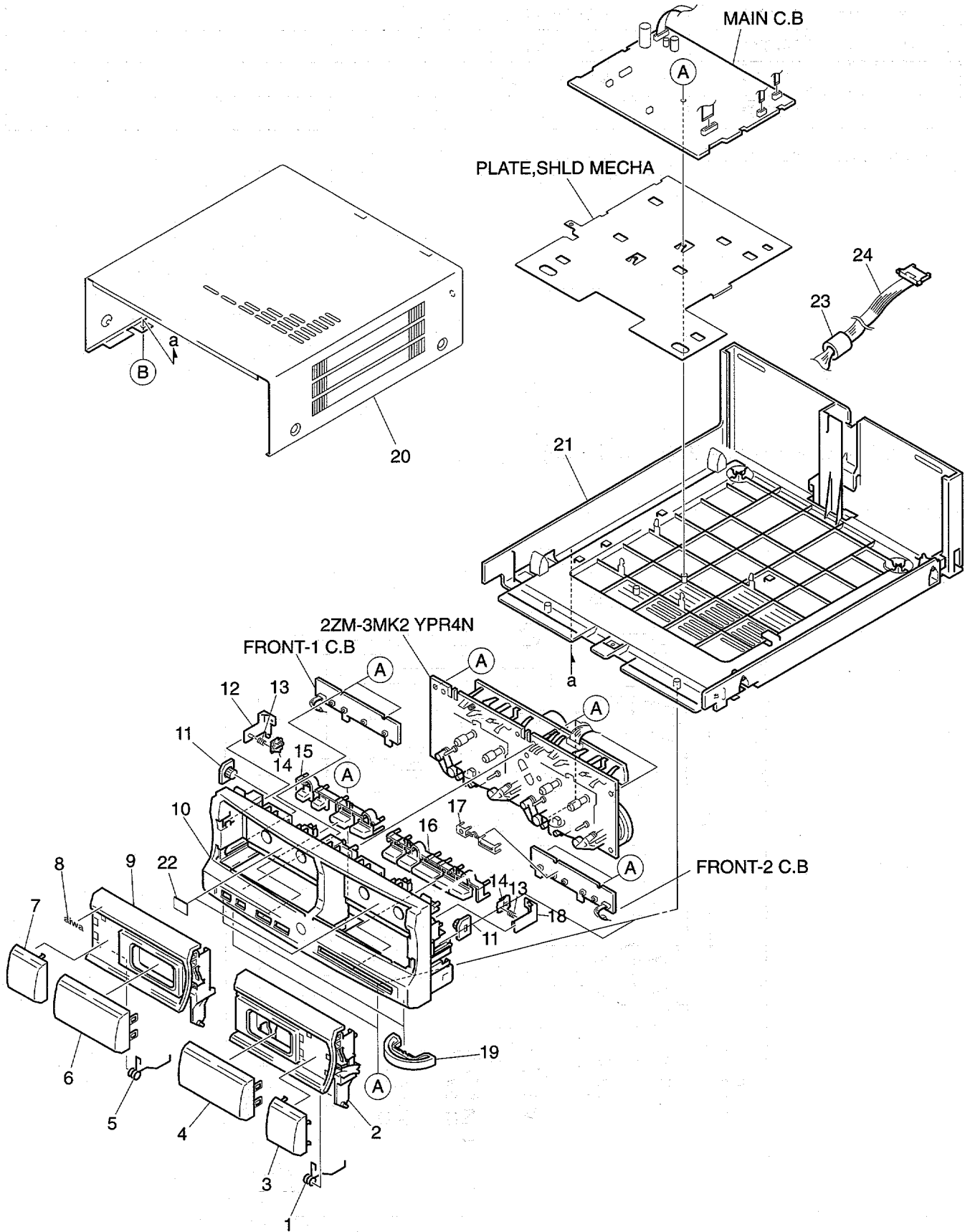
## IC BLOCK DIAGRAM – 2 (FX-NH1000)

IC, CXA1553P



ATT:Attenuator  
 SC:Side Chain  
 DET:Detector

MECHANICAL EXPLODED VIEW 1 / 1 (FX-NH1000)



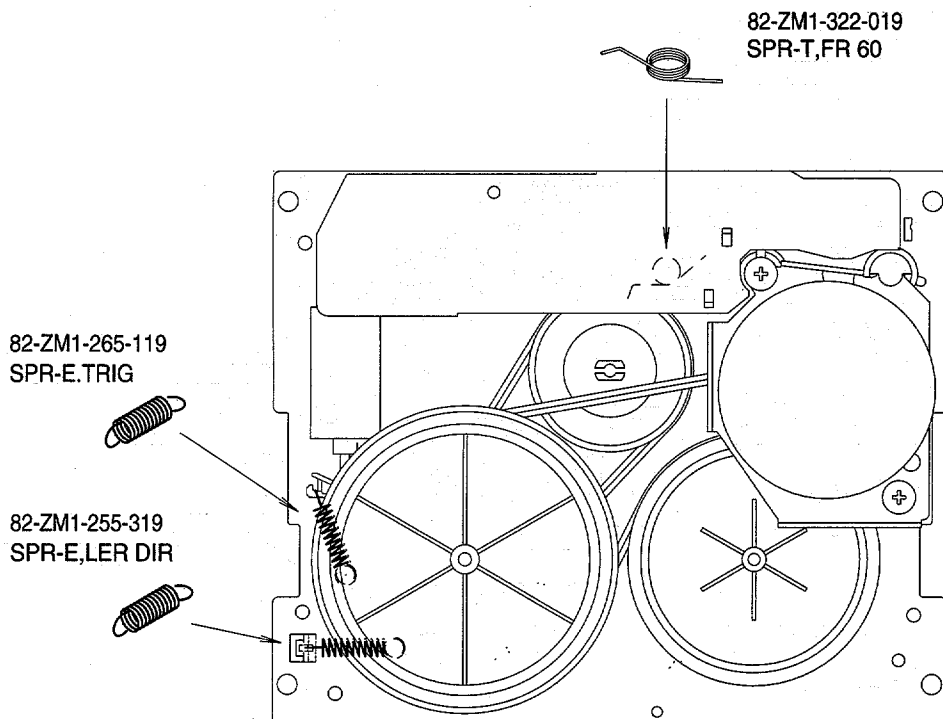
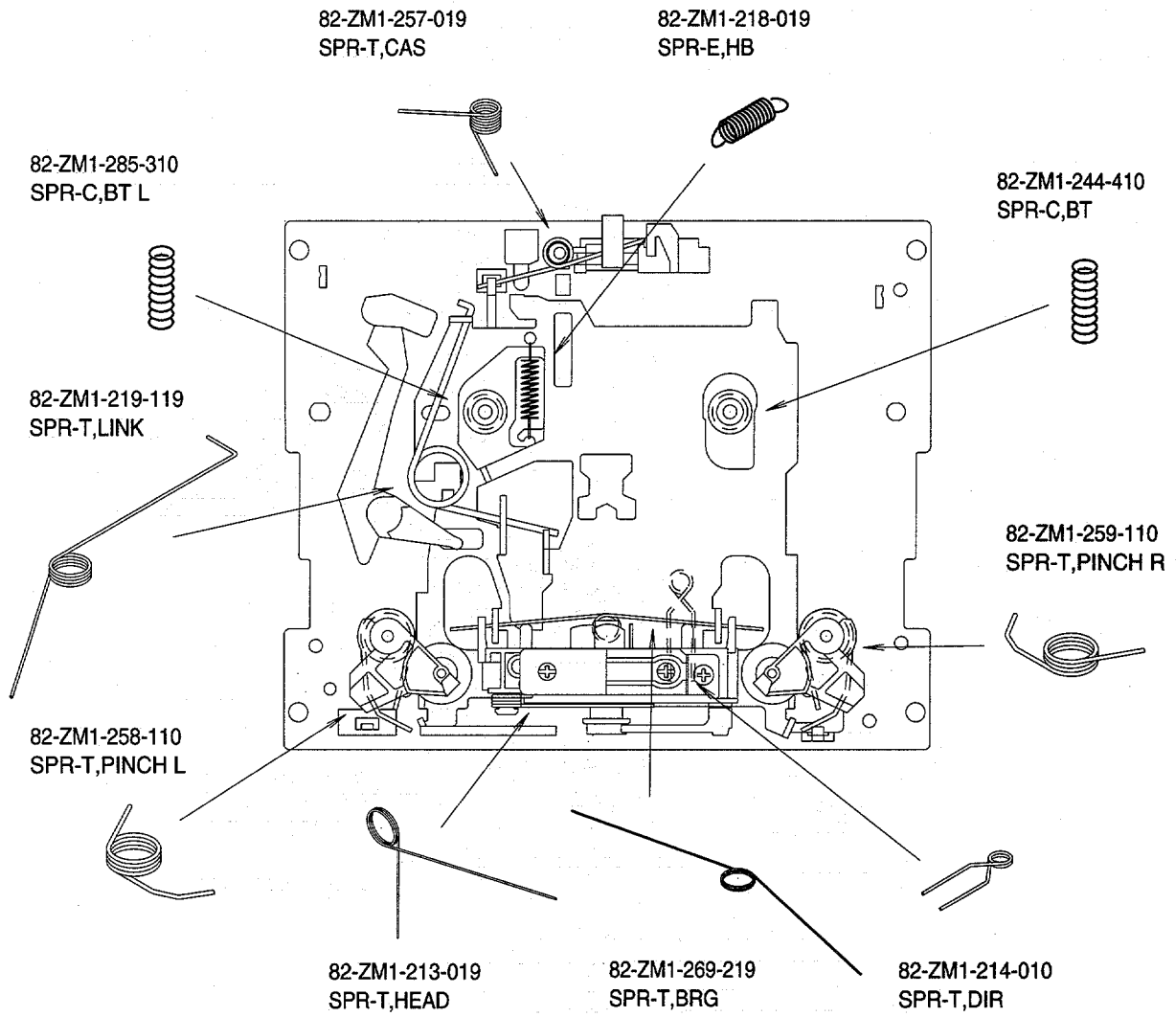
# MECHANICAL PARTS LIST 1 / 1 (FX-NH1000)

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

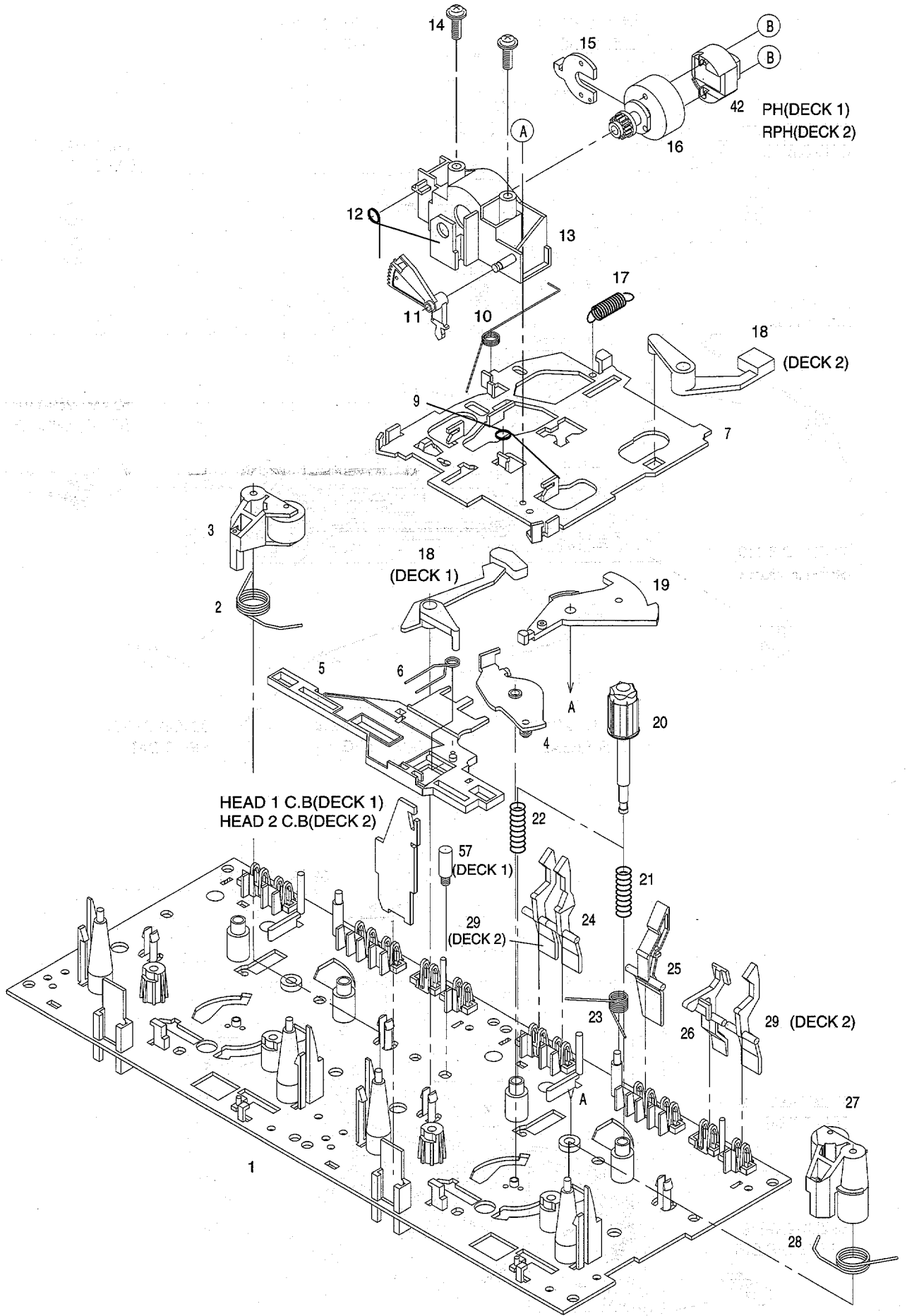
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	82-NF5-219-010		SPR-T,EJECT 2 (SIN)	16	88-SW1-014-010		KEY,ASSY OPE
2	88-SW1-004-010		BOX,CASS 2	17	88-SW1-201-010		GUIDE,LED OPE
3	88-SW1-020-010		PLATE,CASS 2	18	87-NF4-217-010		HLDR,LOCK 2
4	88-SW1-006-010		WINDOW,CASS 2	19	88-SU1-014-010		RING,FOOT
5	82-NF5-218-010		SPR-T,EJECT 1 (SIN)	20	88-SW1-002-010		CABI,STEEL
6	88-SW1-005-010		WINDOW,CASS 1	21	88-SW1-023-110		CABI,REAR YS<YS>
7	88-SW1-019-010		PLATE,CASS 1	21	88-SW1-026-110		CABI,REAR YSN<YSN>
8	87-B00-002-010		BADGE,AIWA 30 ABS SIL	22	81-532-080-010		LABEL,CASS. COMPT
9	88-SW1-003-010		BOX,CASS 1	23	87-003-317-010		F-BEAD,15-25-15 E251
10	88-SW1-001-010		CABI,FR	24	88-SW1-607-010		CORD,FG9P
11	87-NF8-220-010		DMPR,150	A	87-067-703-010		TAPPING SCREW, BVT2+3-10
12	87-NF4-216-010		HLDR,LOCK 1	B	87-067-633-010		BVT2+3-8 W/O SLOT
13	86-NF9-224-010		SPR-C,LOCK				
14	82-NF5-229-010		PLATE,LOCK				
15	88-SW1-015-010		KEY,ASSY REC				



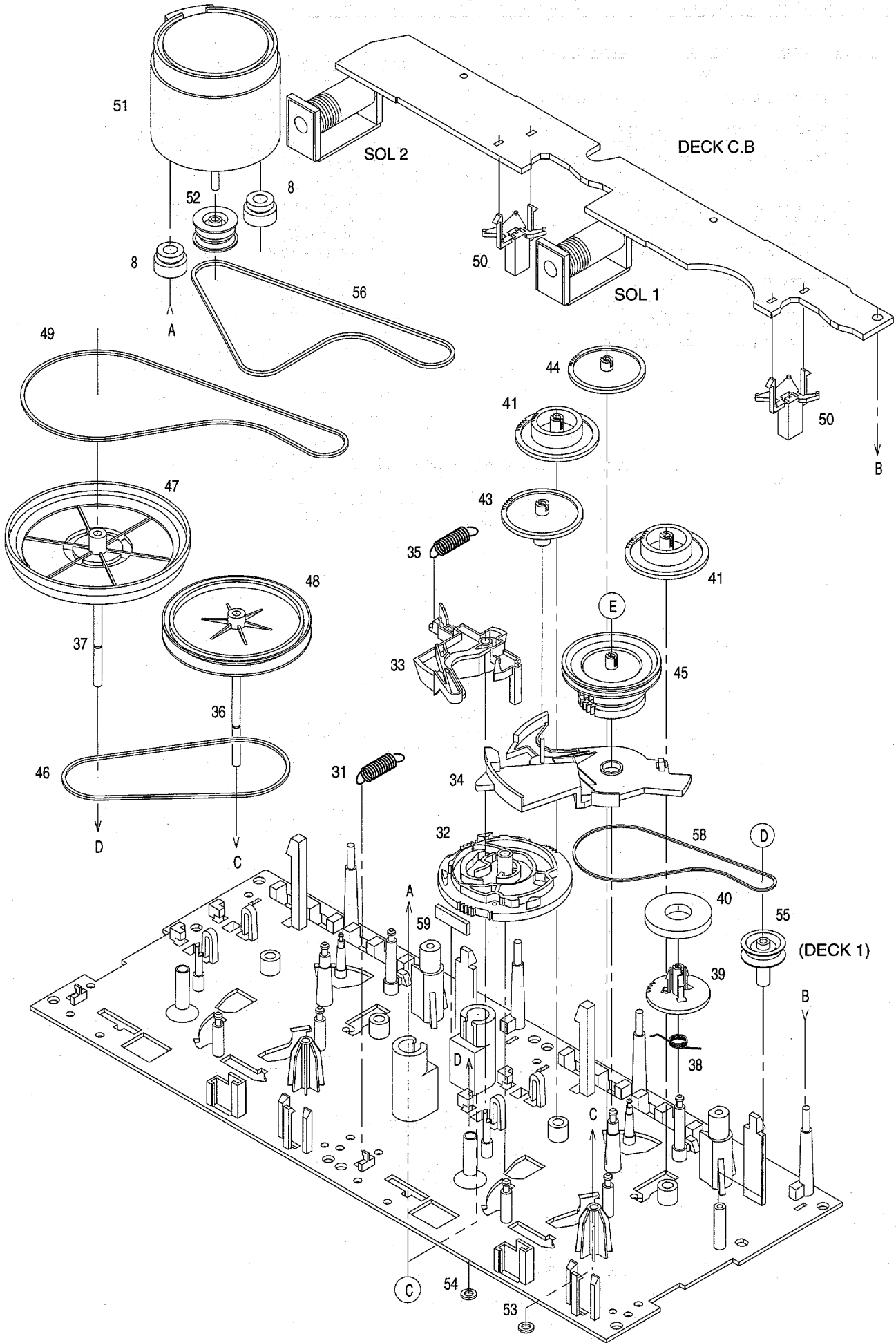
# SPRING APPLICATION POSITION (FX-NH1000)



TAPE MECHANISM EXPLODED VIEW 1 / 2 (FX-NH1000)



TAPE MECHANISM EXPLODED VIEW 2 / 2 (FX-NH1000)



# TAPE MECHANISM PARTS LIST 1 / 1 (FX-NH1000)

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	82-ZM3-301-519		CHAS ASSY,M2	36	82-ZM1-236-019		CAPSTAN N 2-41.5
2	82-ZM1-258-110		SPR-T,PINCH L	37	82-ZM1-239-019		CAPSTAN N 2.2-41.7
3	82-ZM1-341-110		LVR ASSY,PINCH L2	38	82-ZM1-322-019		SPR-T,FR60
4	82-ZM1-333-010		PLATE, LINK 2	39	82-ZM1-220-219		GEAR, IDLER
5	82-ZM1-266-11K		LVR, DIR	40	82-ZM3-616-019		RING MAGNET 4
6	82-ZM1-214-010		SPR-T, DIR	41	82-ZM1-216-31K		GEAR, REEL
7	82-ZM1-206-81K		CHAS, HEAD	42	87-A90-319-010		HEAD, PH HADKH2 FPC
8	82-ZM3-307-019		CUSH-G, DIA3.7-8-3.2	42	87-A90-320-010		HEAD, RPH HADKH5 FPC
9	82-ZM1-269-219		SPR-T, BRG	43	82-ZM1-225-21K		GEAR, FR
10	82-ZM1-219-119		SPR-T, LINK	44	82-ZM1-226-019		GEAR, REW
11	82-ZM1-210-119		GEAR, H T	45	82-ZM3-333-310		SLIP DISK ASSY 2
12	82-ZM1-213-019		SPR-T, HEAD	46	82-ZM1-338-010		BELT FR4
13	82-ZM1-207-619		GUIDE, TAPE	47	82-ZM1-349-110		FLY-WHL, R W(DECK 2)
14	86-ZM4-206-010		S-SCREW, AZIMUTH	47	82-ZM3-338-110		FLY-WHL, R3 W(DECK 1)
15	82-ZM1-314-119		PLATE, HEAD	48	82-ZM1-348-010		FLY-WHL, L W(DECK 2)
16	82-ZM1-208-119		HLDR, HEAD	48	82-ZM1-348-010		FLY-WHL, L W(DECK 1)
17	82-ZM1-218-019		SPR-E, HB	49	82-ZM3-329-210		BELT, SBU R2
18	82-ZM1-263-110		LVR, EJECT L (DECK 1)	50	82-ZM1-245-210		HLDR, IC
18	82-ZM1-264-010		LVR, EJECT R (DECK 2)	51	87-045-347-019		MOT, SHU2L 70 (M1)
19	82-ZM1-222-21K		LVR, PLAY	52	82-ZM3-221-010		PULLEY, MOT 2M
20	82-ZM1-217-319		REEL TABLE	53	82-ZM1-288-019		SH, 1.63-3.2-0.5 SLT
21	82-ZM1-244-510		SPR-C, BT	54	80-ZM6-243-019		SH, 1.75-3.6-0.5 SLT
22	82-ZM1-285-310		SPR-C, BT L	55	82-ZM3-335-210		PULLEY, COUPLER M3 (DECK 1)
23	82-ZM1-257-019		SPR-T, CAS	56	82-ZM3-337-010		BELT, SBU MOT 2
24	82-ZM1-241-319		LVR, MC	57	82-ZM3-339-010		SHAFT, COUPLER N3 (DECK 1)
25	82-ZM1-242-019		LVR, CAS	58	86-ZM1-206-010		BELT, MAIN L
26	82-ZM1-243-019		LVR, STOP	59	82-ZM3-340-010		SH, BELT D2
27	82-ZM1-344-110		LVR ASSY, PINCH R2	A	85-ZM3-202-010		S-SCREW, TG
28	82-ZM1-259-110		SPR-T, PINCH R	B	80-ZM6-207-019		V+1.6-7
29	82-ZM1-240-11K		LVR, REC (DECK 2)	C	82-ZM3-318-019		S-SCRW MOTOR M2
31	82-ZM1-255-319		SPR-E, LVR DIR	D	87-B10-043-010		W-P, 0.99-4-0.25 SLT
32	82-ZM3-305-01K		GEAR, CAM M2	E	82-ZM3-334-010		PW, 2.16-6-0.4
33	82-ZM1-227-21K		LVR, TRIG				
34	82-ZM3-306-11K		LVR, FR M2				
35	82-ZM1-265-119		SPR-E, TRIG				

MODEL NO.

# GE-NAVH1000

## ELECTRICAL MAIN PARTS LIST

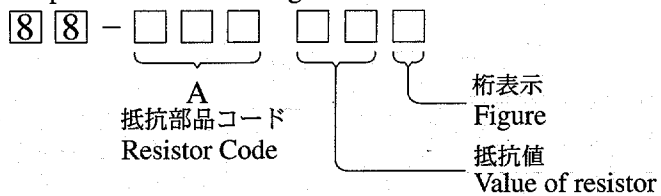
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC				LED219	87-070-201-080		LED, SLP9118C-51-S-T1
	88-SU1-603-010	IC, LC866448W-5H57		LED220	87-070-201-080		LED, SLP9118C-51-S-T1
	87-A20-083-010	IC, BA3835S		S301	87-A90-095-080		SW, TACT EVQ11G04M
				S302	87-A90-095-080		SW, TACT EVQ11G04M
				S303	87-A90-894-010		SW, RTRY EC12E444 ENCORDER
TRANSISTOR				S304	87-A90-095-080		SW, TACT EVQ11G04M
	87-026-263-080	C-TR, RN1410		S305	87-A90-095-080		SW, TACT EVQ11G04M
	87-A30-073-080	C-TR, RT1N 141C		S306	87-A90-095-080		SW, TACT EVQ11G04M
				S307	87-A90-095-080		SW, TACT EVQ11G04M
				S308	87-A90-095-080		SW, TACT EVQ11G04M
DIODE				S309	87-A90-095-080		SW, TACT EVQ11G04M
	87-070-136-080	ZENER, MTZJ5.1B		S310	87-A90-095-080		SW, TACT EVQ11G04M
	87-017-931-080	ZENER, MTZJ 5.6B		S311	87-A90-095-080		SW, TACT EVQ11G04M
	87-A40-470-080	DIODE, 1SS254		S312	87-A90-095-080		SW, TACT EVQ11G04M
				S313	87-A90-095-080		SW, TACT EVQ11G04M
MAIN C.B				W101	88-SU1-608-010		CORD, FG 8P
				X101	87-A70-070-080		VIB, CER 5.76MHZ CRHF
C101	87-010-550-040	CAP, E 100-6.3 GAS					
C103	87-010-497-040	CAP, E 4.7-35 GAS					
C105	87-010-312-080	C-CAP, S 15P-50 CH					
C106	87-010-320-080	CHIP CAP 68P					
C107	87-010-316-080	C-CAP, S 33P-50 CH					
C108	87-010-196-080	CHIP CAPACITOR, 0.1-25					
C109	87-010-196-080	CHIP CAPACITOR, 0.1-25					
C110	87-012-368-080	C-CAP, S 0.1-50 F					
C111	87-015-682-040	CAP E 22-16 M 7L					
C120	87-010-196-080	CHIP CAPACITOR, 0.1-25					
C203	87-010-497-040	CAP, E 4.7-35 GAS					
C204	87-012-369-080	C-CAP, S 0.047-50F					
C301	87-010-196-080	CHIP CAPACITOR, 0.1-25					
C401	87-010-196-080	CHIP CAPACITOR, 0.1-25					
C402	87-010-196-080	CHIP CAPACITOR, 0.1-25					
C403	87-010-196-080	CHIP CAPACITOR, 0.1-25					
C404	87-010-196-080	CHIP CAPACITOR, 0.1-25					
C405	87-010-196-080	CHIP CAPACITOR, 0.1-25					
C406	87-010-196-080	CHIP CAPACITOR, 0.1-25					
C407	87-012-158-080	C-CAP, S 390P-50 CH					
CNI01	87-A90-808-010	HLDR, WIRE 8-1.5 SD-51016					
FB101	87-008-372-080	FILTER, EMI BL OIRNI					
FL201	88-SU1-605-010	FL, BJ624GK					
L101	87-005-152-080	COIL, 10UH					
L102	87-005-130-080	COIL, 10UH					
L103	87-005-130-080	COIL, 10UH					
L104	87-005-152-080	COIL, 10UH					
LED201	87-017-350-080	LED, SEL1550CM					
LED202	87-017-350-080	LED, SEL1550CM					
LED203	87-017-350-080	LED, SEL1550CM					
LED204	87-017-350-080	LED, SEL1550CM					
LED205	87-017-350-080	LED, SEL1550CM					
LED206	87-017-350-080	LED, SEL1550CM					
LED207	87-017-350-080	LED, SEL1550CM					
LED208	87-017-350-080	LED, SEL1550CM					
LED209	87-017-350-080	LED, SEL1550CM					
LED210	87-017-350-080	LED, SEL1550CM					
LED211	87-017-350-080	LED, SEL1550CM					
LED212	87-017-350-080	LED, SEL1550CM					
LED213	87-070-201-080	LED, SLP9118C-51-S-T1					
LED214	87-070-201-080	LED, SLP9118C-51-S-T1					
LED215	87-070-201-080	LED, SLP9118C-51-S-T1					
LED216	87-070-201-080	LED, SLP9118C-51-S-T1					
LED217	87-070-201-080	LED, SLP9118C-51-S-T1					
LED218	87-070-201-080	LED, SLP9118C-51-S-T1					

○チップ抵抗部品コード/CHIP RESISTOR PART CODE

チップ抵抗部品コードの成り立ち

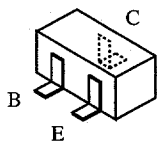
Chip Resistor Part Coding



チップ抵抗  
Chip resistor

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

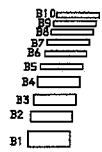
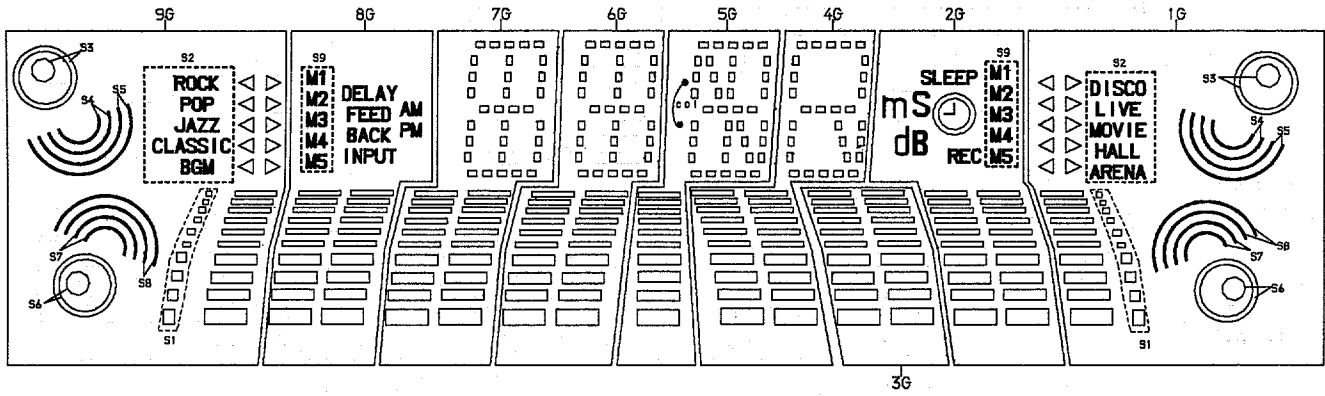
TRANSISTOR ILLUSTRATION (GE-NAVH1000)



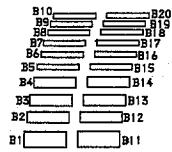
RN1410  
RT1N141C

# FL (BJ624GK) GRID ASSIGNMENT & ANODE CONNECTION (GE-NAVH1000)

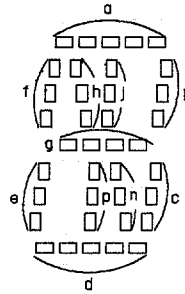
## GRID ASSIGNMENT



(9G, 5G, 1G)



(8G~6G, 4G~2G)



(7G~4G)

BJ624GK  
GRID ASSIGNMENT

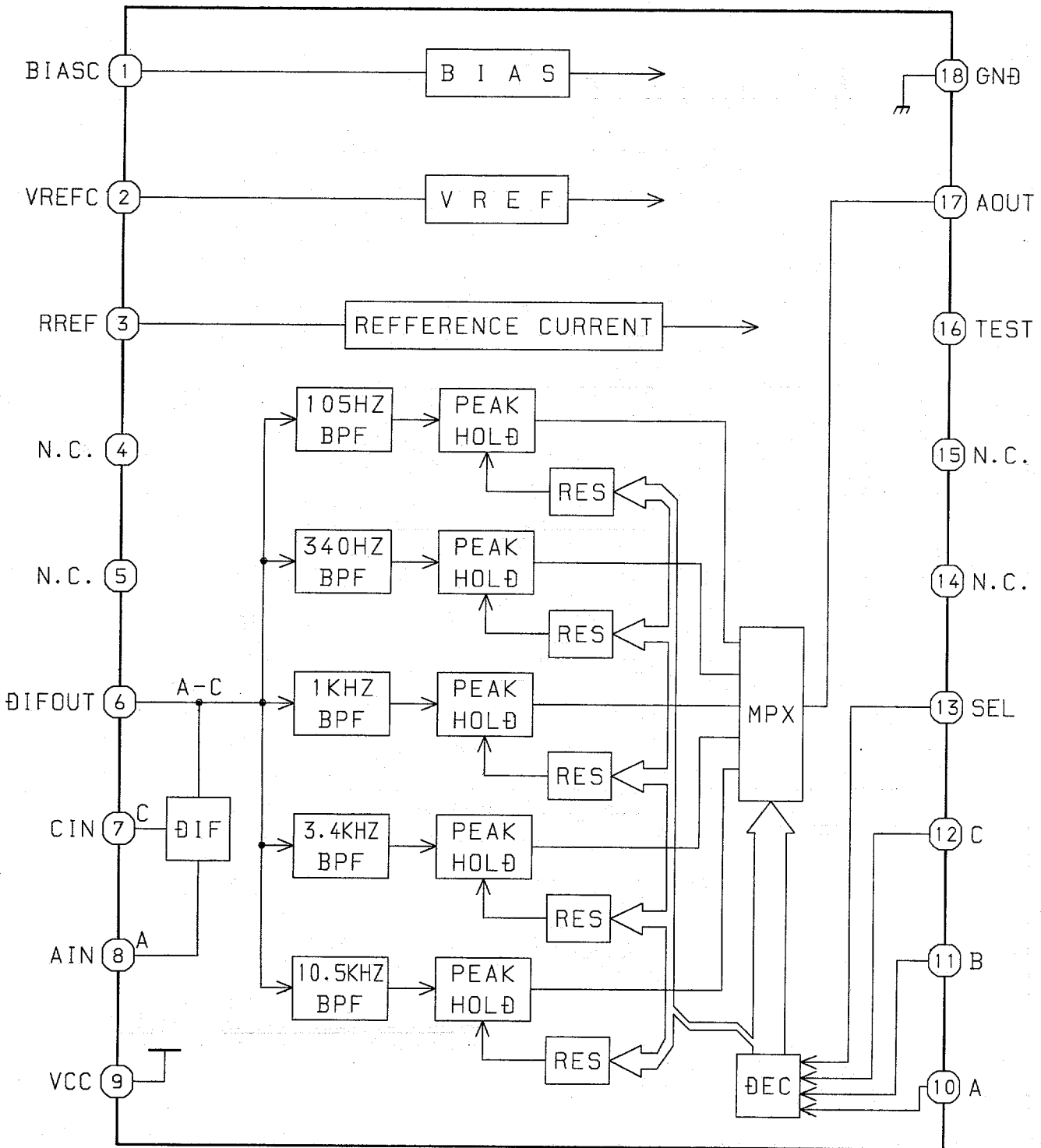
ANODE CONNECTION

	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	▷ [M1]	—	a	a	a	a	—	—	[M1] ◁
P2	▷ [M2]	S9	b	b	b	b	—	S9	[M2] ◁
P3	▷ [M3]	<b>DELAY</b>	f	f	f	f	—	<b>SLEEP</b>	[M3] ◁
P4	▷ [M4]	<b>FEED BACK</b>	g	g	g	g	—	⊙	[M4] ◁
P5	▷ [M5]	<b>INPUT</b>	c	c	c	c	—	<b>REC</b>	[M5] ◁
P6	(ROCK) ◁	<b>AM</b>	e	e	e	e	—	<b>mS</b>	▷ (DISCO)
P7	(POP) ◁	<b>PM</b>	d	d	d	d	—	<b>dB</b>	▷ (LIVE)
P8	S1	B11	B11	B11	h	B11	B11	B11	S1
P9	B1	B1	B1	B1	B1	B1	B1	B1	B1
P10	S6	B12	B12	B12	n	B12	B12	B12	S6
P11	B2	B2	B2	B2	B2	B2	B2	B2	B2
P12	S7	B13	B13	B13	col(L)	B13	B13	B13	S7
P13	B3	B3	B3	B3	B3	B3	B3	B3	B3
P14	S8	B14	B14	B14	col(T)	B14	B14	B14	S8
P15	B4	B4	B4	B4	B4	B4	B4	B4	B4
P16	S3	B15	B15	B15	—	B15	B15	B15	S3
P17	B5	B5	B5	B5	B5	B5	B5	B5	B5
P18	S4	B16	B16	B16	—	B16	B16	B16	S4
P19	B6	B6	B6	B6	B6	B6	B6	B6	B6
P20	S5	B17	B17	B17	—	B17	B17	B17	S5
P21	B7	B7	B7	B7	B7	B7	B7	B7	B7
P22	S2	B18	B18	B18	—	B18	B18	B18	S2
P23	B8	B8	B8	B8	B8	B8	B8	B8	B8
P24	(JAZZ) ◁	B19	B19	B19	—	B19	B19	B19	▷ (MOVIE)
P25	B9	B9	B9	B9	B9	B9	B9	B9	B9
P26	(CLASSIC) ◁	B20	B20	B20	—	B20	B20	B20	▷ (HALL)
P27	B10	B10	B10	B10	B10	B10	B10	B10	B10
P28	(BGM) ◁	—	j.p	j.p	j.p	n	—	—	▷ (ARENA)

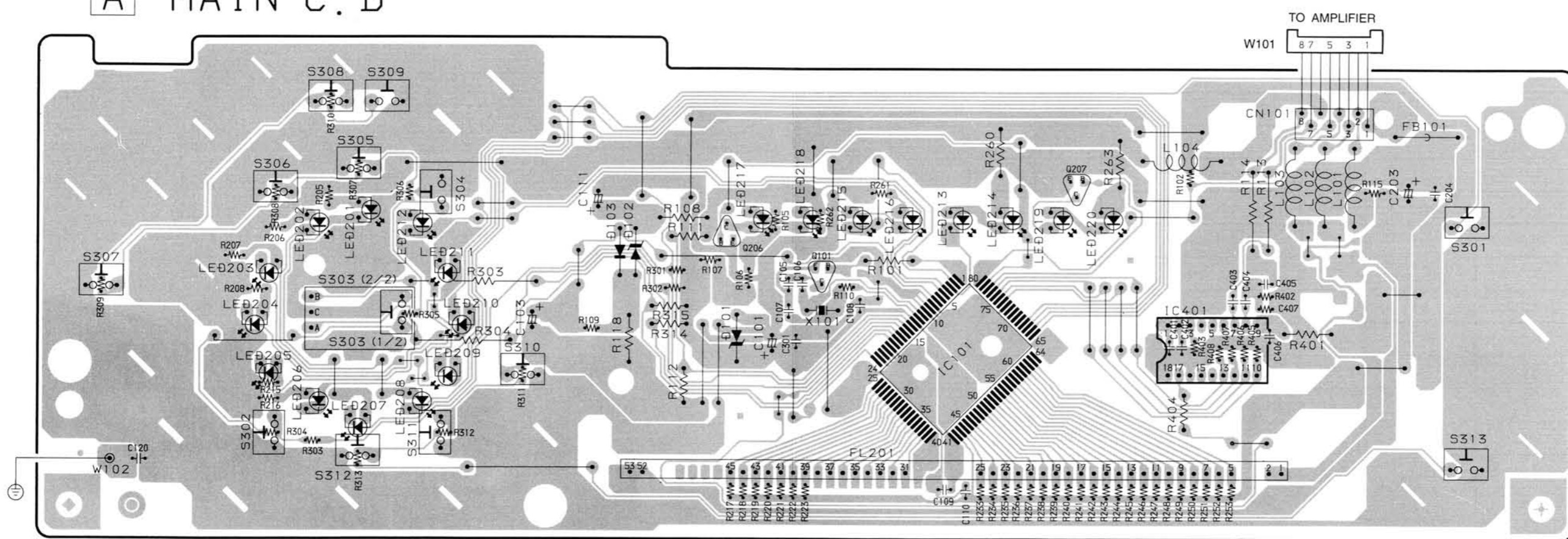


IC BLOCK DIAGRAM (GE-NAVH1000)

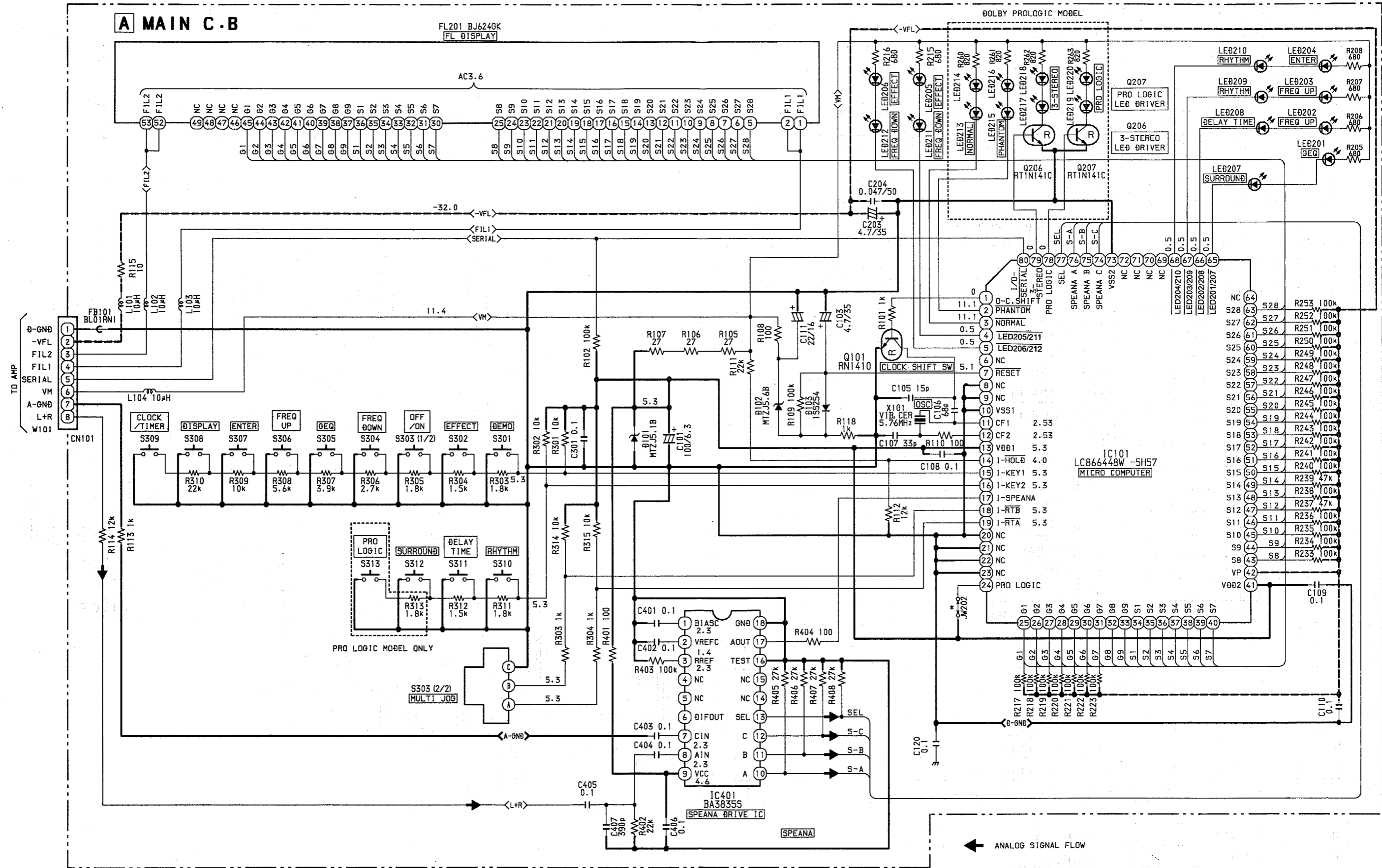
IC, BA3835S



A MAIN C.B



- |                              |                          |                                |                             |                       |                          |              |
|------------------------------|--------------------------|--------------------------------|-----------------------------|-----------------------|--------------------------|--------------|
| S307, LED204<br>ENTER        | S308<br>DISPLAY          | S309<br>CLOCK/TIMER            | LED217, 218<br>3-STEREO     | FL201<br>FL DISPLAY   | LED219, 220<br>PRO LOGIC | S301<br>DEMO |
| S306, LED202, 203<br>FREQ UP | S305, LED201<br>GEQ      | S304, LED211, 212<br>FREQ DOWN | LED215, 216<br>PHANTOM      | LED213, 214<br>NORMAL | S313<br>DOLBY PRO LOGIC  |              |
| LED205, 206, S302<br>EFFECT  | S303 (2/2)<br>MULTI JOG  | S303 (1/2)<br>OFF/ON           |                             |                       |                          |              |
|                              | S312, LED207<br>SURROUND | S311, LED208<br>DELAY TIME     | S310, LED209, 210<br>RHYTHM |                       |                          |              |

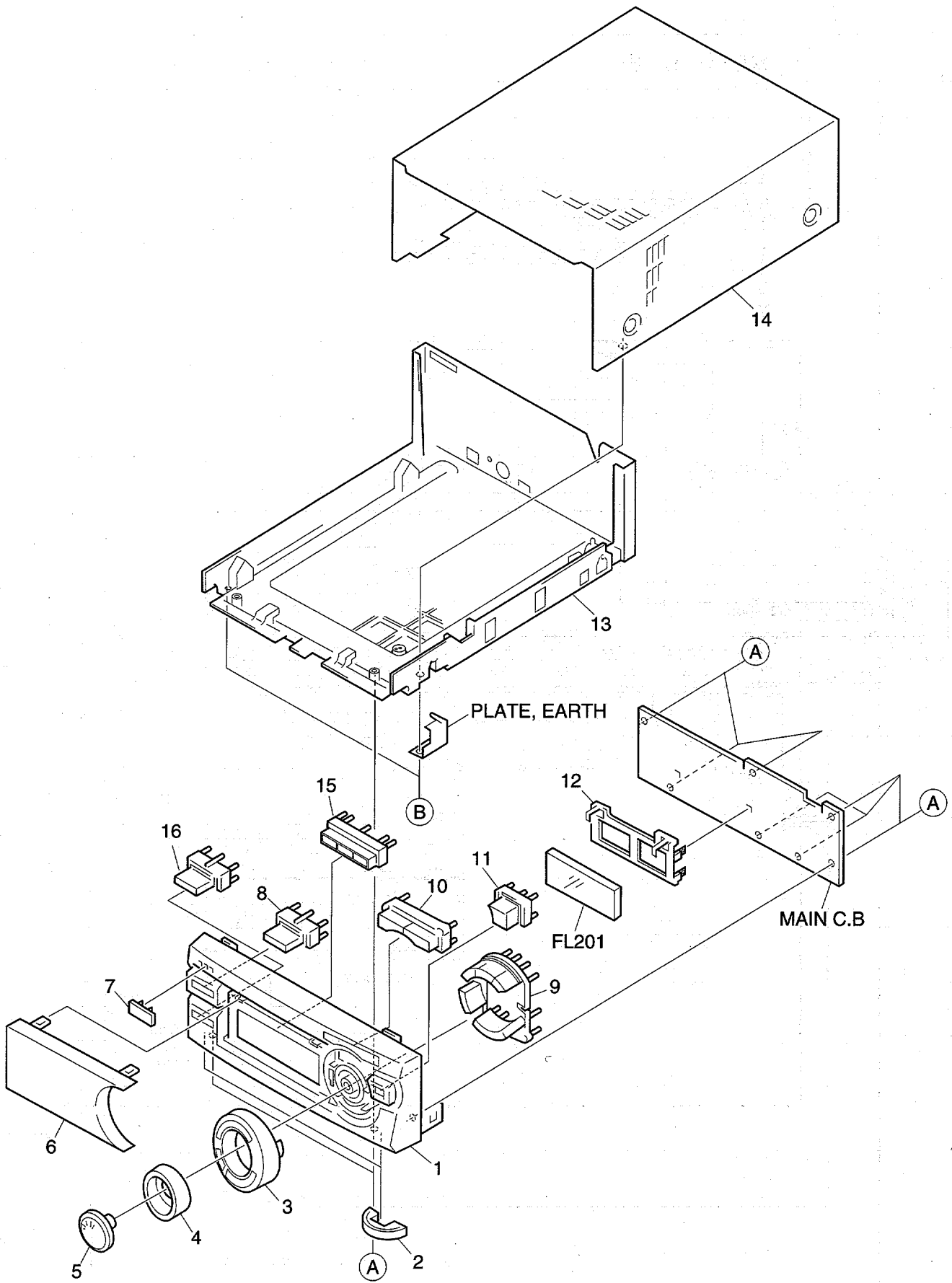


# IC DESCRIPTION (GE-NAVH1000)

IC, LC866448W-5H57

Pin No.	Pin Name	I/O	Description
1	O-C.SHIFT	O	Micro computer clock shift output.
2	$\overline{\text{PHANTOM}}$	O	PHANTOM LED output.
3	$\overline{\text{NORMAL}}$	O	Normal LED output.
4	$\overline{\text{LED205 / 211}}$	O	LED205 / 211 $\overline{\text{ON}}$ / OFF output.
5	$\overline{\text{LED206 / 212}}$	O	LED206 / 212 $\overline{\text{ON}}$ / OFF output.
6	N.C	-	Not used.
7	$\overline{\text{RESET}}$	I	Reset input.
8	N.C	-	Not used.(Connected to GND)
9	N.C	-	Not used.(Connected to GND)
10	VSS 1	-	GND.
11	CF 1	-	Connected to crystal oscillator(5.76MHz).
12	CF 2	-	
13	VDD 1	-	Power supply.
14	$\overline{\text{I-HOLD}}$	I	System power supply monitor AD input. 'H' : Normal operation. 'L' : to stop clock and main memory
15	I-KEY 1	I	KEY 1 AD input.
16	I-KEY 2	I	KEY 2 AD input.
17	I-SPEANA	I	Spectrum analyzer level AD input.
18	$\overline{\text{I-RTB}}$	I	Jog rotary encoder (B) input.
19	$\overline{\text{I-RTA}}$	I	Jog rotary encoder (A) input.
20 ~ 23	N.C	-	Not used.(Connected to GND)
24	PROLOGIC	I	Input prologic switch "H" when prologic, "L" when not prologic.
25 ~ 33	G1 ~ G9	O	FL grid output.
34 ~ 40	S1 ~ S7	O	FL segment output.
41	VDD 2	-	Connected to GND.
42	VP	-	Power FL display negative supply terminal.
43 ~ 63	S8 ~ S28	O	FL segment output.
64	N.C	-	Not connected.
65	$\overline{\text{LED201 / 207}}$	O	LED201 / 207 $\overline{\text{ON}}$ / OFF output.
66	$\overline{\text{LED202 / 208}}$	O	LED202 / 208 $\overline{\text{ON}}$ / OFF output.
67	$\overline{\text{LED203 / 209}}$	O	LED203 / 209 $\overline{\text{ON}}$ / OFF output.
68	$\overline{\text{LED204 / 210}}$	O	LED204 / 210 $\overline{\text{ON}}$ / OFF output.
69 ~ 72	N.C	-	Not connected.
73	VSS 2	-	GND.
74	SPEANA C	O	Spectrum analyzer band switch output C.
75	SPEANA B	O	Spectrum analyzer band switch output B.
76	SPEANA A	O	Spectrum analyzer band switch output A.
77	SEL	O	Spectrum analyzer band switch output.
78	PROLOGIC	O	Prologic LED output.
79	3-STEREO	O	3 STEREO LED output.
80	I/O - $\overline{\text{SERIAL}}$	I/O	Input / output serial data for communication.

MECHANICAL EXPLODED VIEW 1 / 1 (GE-NAVH1000)



# MECHANICAL PARTS LIST 1/1(GE-NAVH1000)

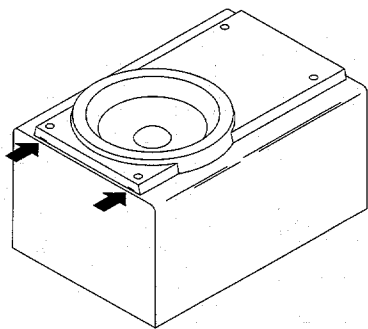
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	88-SUM-001-010		CABI, FR
2	88-SU1-014-010		RING, FOOT
3	88-SU1-006-010		PANEL, JOG
4	88-SU1-005-010		REFLECTOR, JOG
5	88-SU1-007-010		KNOB, RTRY JOG
6	88-SU1-004-010		WINDOW, DISPLAY
7	87-B00-002-010		BADGE, AIWA 30 ABS SIL
8	88-SU1-012-010		KEY, DEMO
9	88-SU1-008-010		KEY, GEQ
10	88-SU1-009-010		KEY, TIMER
11	88-SU1-010-010		KEY, ENTER
12	88-SU1-201-010		GUIDE, FL
13	88-SUM-024-110		CABI, REAR YS<YS>
13	88-SUM-027-110		CABI, REAR YSN<YSN>
14	88-SU1-002-010		CABI, STEEL
15	88-SUM-202-010		GUIDE, PRO
16	88-SUM-011-010		KEY, PRO
A	87-067-703-010		TAPPING SCREW, BVT2+3-10
B	87-067-633-010		BVT2+3-8 W/O SLOT

# SPEAKER DISASSEMBLY INSTRUCTIONS

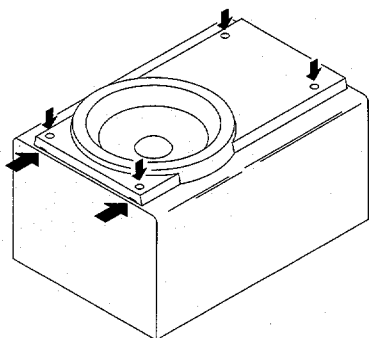
## Type.1

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.



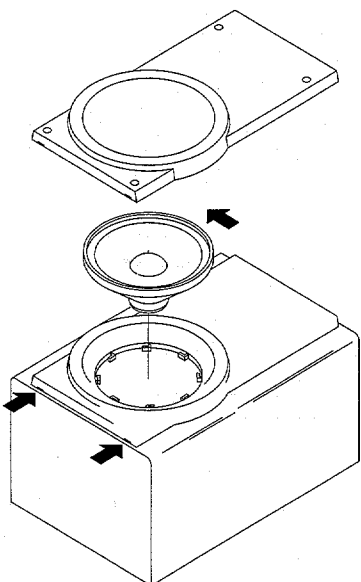
## Type.2

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.

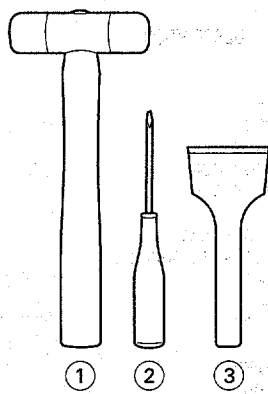


## Type.3

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.

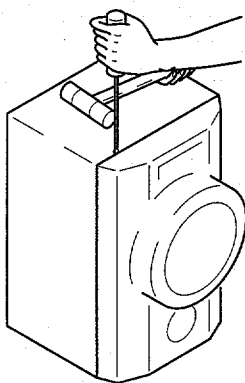


Fig-1

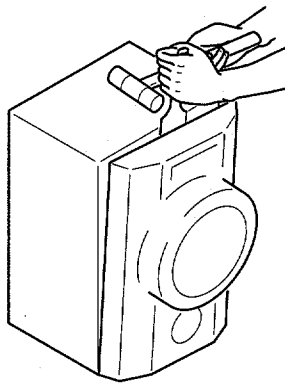


Fig-2

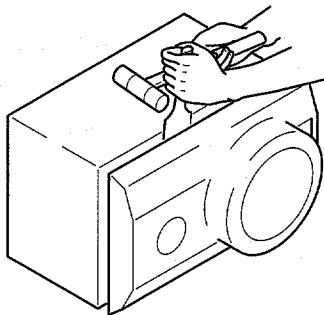


Fig-3

## 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.

**SX-NAVH1000 (YJBL, YJTL, YTNL, YBNL, YLTL)  
SPEAKER PARTS LIST**

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

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	83-MS2-603-110		SPKR, T 60
2	87-NSY-610-010		SPKR CORD
3	88-SSM-003-010		PANEL, FR
4	88-SSM-004-010		PANEL, TW
5	88-SSM-005-010		GRILLE, FRAME ASSY<YJBL, YJTL, YLTL>
5	88-SSM-016-010		GRILLE, FRAME E ASSY<YBNL, YTNL>
6	88-SSM-010-010		PROTECTOR, TW
7	88-SSM-602-010		SPKR, W 140
8	88-SSM-610-010		SPKR, CERAMIC ASSY
9	88-SSM-611-010		TERMINAL, ASSY

**SX-CR675 (YSTNC, YJSTNC)  
SPEAKER PARTS LIST**

NOTE: This SX-CR675 speaker contains SX-C605 (center speaker) and SX-R275 (rear speaker).

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

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	87-YS3-001-010		PANEL, FRONT ST (C605)
2	87-YS3-003-010		GRILLE, FRAME ASSY (C605)
3	83-NSM-010-010		SPEAKER CORD (C605)
4	87-YS7-602-010		SPKR, 100 (C605)
5	87-YS1-001-010		CABI, REAR (R275)
6	87-YS1-004-010		GRILLE FRAME ASSY (R275)
7	87-YS1-002-010		GRILLE, FRAME (R275)
8	81-VSA-009-010		CORD BUSH (R275)
9	87-YS6-002-010		SPKR, CORD Y (R275)
10	87-YS6-601-010		SPKR, 100 (R275)
11	87-010-384-010		CAP, E 100-25 SME (R275)
12	87-YS8-901-010		IB, YJ (ECA) O<YJ>
12	87-YS8-906-010		IB, Y (9L) O<Y>



# 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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