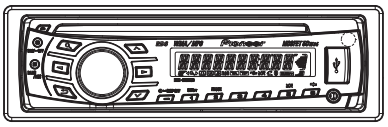
Pioneer

Service Manual



DEH-2350UB/XNES

ORDER NO.
CRT4632

CD RDS RECEIVER

DEH-2350UB/XNES
DEH-2350UBG/XNES
DEH-2350UBSW/XNES
DEH-2350UB/XSES
DEH-2350UB/XNES1

This service manual should be used together with the following manual(s):

Model No.	Order No.	Mech. Module	Remarks
CX-3269	CRT4488	S11.1STD-DOUT	CD Mech. Module : Circuit Descriptions, Mech. Descriptions, Disassembly

For details, refer to "Important Check Points for Good Servicing".

PIONEER CORPORATION 1-1, Shin-ogura, Saiwai-ku, Kawasaki-shi, Kanagawa 212-0031, Japan
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PIONEER EUROPE NV Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936

K-ZZZ OCT. 2010 Printed in Japan

SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer.
Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty.
If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

Where in a manufacturer's service documentation, for example in circuit diagrams or lists of components, a symbol is used to indicate that a specific component shall be replaced only by the component specified in that documentation for safety reasons, the following symbol shall be used:

⚠

● **Safety Precautions for those who Service this Unit.**
When checking or adjusting the emitting power of the laser diode exercise caution in order to get safe, reliable results.

Caution:
1. **During repair or tests, minimum distance of 13 cm from the focus lens must be kept.**
2. **During repair or tests, do not view laser beam for 10 seconds or longer.**

CAUTION:
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

CAUTION
This product is a class 1 laser product classified under the Safety of laser products, IEC 60825-1:2007, and contains a class 1M laser module. To ensure continued safety, do not remove any covers or attempt to gain access to the inside of the product. Refer all servicing to qualified personnel.

CLASS 1 LASER PRODUCT

CAUTION—CLASS 1M INVISIBLE LASER RADIATION WHEN OPEN, DO NOT VIEW DIRECTLY WITH OPTICAL INSTRUMENTS.

WARNING!

The AEL (accessible emission level)of the laser power output is less than CLASS 1 but the laser component is capable of emitting radiation exceeding the limit for CLASS 1.
A specially instructed person should do servicing operation of the apparatus.

Laser diode characteristics

Wave length : 785 nm to 814 nm

Maximum output : 1 190 µW(Emitting period : unlimited)

Additional Laser Caution

Transistors Q101 in PCB drive the laser diodes.
When Q101 is shorted between their terminals, the laser diodes will radiate beam.
If the top cover is removed with no disc loaded while such short-circuit is continued, the naked eyes may be exposed to the laser beam.

CAUTION

Danger of explosion if battery is incorrectly replaced.
Replaced only with the same or equivalent type recommended by the manufacture.
Discord used batteries according to the manufacture's instructions.

[Important Check Points for Good Servicing]

In this manual, procedures that must be performed during repairs are marked with the below symbol.
Please be sure to confirm and follow these procedures.

1. Product safety

Please conform to product regulations (such as safety and radiation regulations), and maintain a safe servicing environment by following the safety instructions described in this manual.

① Use specified parts for repair.

Use genuine parts. Be sure to use important parts for safety.

② Do not perform modifications without proper instructions.

Please follow the specified safety methods when modification(addition/change of parts) is required due to interferences such as radio/TV interference and foreign noise.

③ Make sure the soldering of repaired locations is properly performed.

When you solder while repairing, please be sure that there are no cold solder and other debris.
Soldering should be finished with the proper quantity. (Refer to the example)

④ Make sure the screws are tightly fastened.

Please be sure that all screws are fastened, and that there are no loose screws.

⑤ Make sure each connectors are correctly inserted.

Please be sure that all connectors are inserted, and that there are no imperfect insertion.

⑥ Make sure the wiring cables are set to their original state.

Please replace the wiring and cables to the original state after repairs.
In addition, be sure that there are no pinched wires, etc.

⑦ Make sure screws and soldering scraps do not remain inside the product.

Please check that neither solder debris nor screws remain inside the product.

⑧ There should be no semi-broken wires, scratches, melting, etc. on the coating of the power cord.

Damaged power cords may lead to fire accidents, so please be sure that there are no damages.
If you find a damaged power cord, please exchange it with a suitable one.

⑨ There should be no spark traces or similar marks on the power plug.

When spark traces or similar marks are found on the power supply plug, please check the connection and advise on secure connections and suitable usage. Please exchange the power cord if necessary.

⑩ Safe environment should be secured during servicing.

When you perform repairs, please pay attention to static electricity, furniture, household articles, etc. in order to prevent injuries.
Please pay attention to your surroundings and repair safely.

2. Adjustments

To keep the original performance of the products, optimum adjustments and confirmation of characteristics within specification.
Adjustments should be performed in accordance with the procedures/instructions described in this manual.

3. Lubricants, Glues, and Replacement parts

Use grease and adhesives that are equal to the specified substance.
Make sure the proper amount is applied.

4. Cleaning

For parts that require cleaning, such as optical pickups, tape deck heads, lenses and mirrors used in projection monitors, proper cleaning should be performed to restore their performances.

5. Shipping mode and Shipping screws

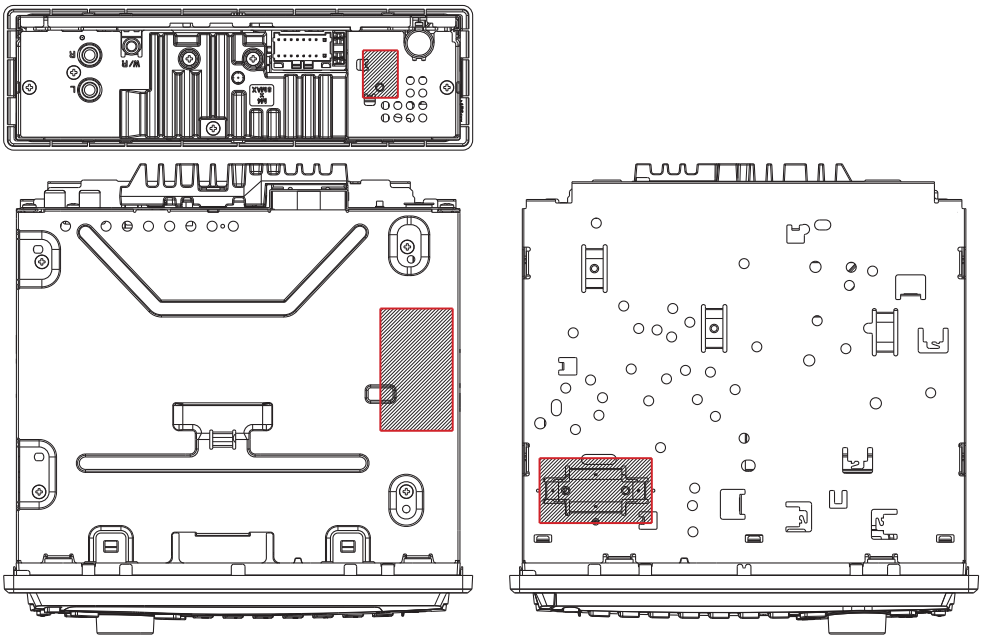
To protect products from damages or failures during transit, the shipping mode should be set or the shipping screws should be installed before shipment. Please be sure to follow this method especially if it is specified in this manual.

CONTENTS

1. SERVICE PRECAUTIONS

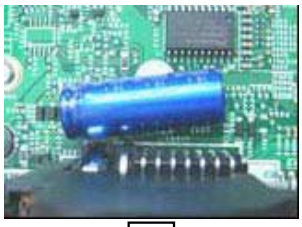
1.1 SERVICE PRECAUTIONS

1. You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.
2. Before disassembling the unit, be sure to turn off the power. Unplugging and plugging the connectors during power-on mode may damage the ICs inside the unit.
3. To protect the pickup unit from electrostatic discharge during servicing, take an appropriate treatment (shorting-solder) by referring to "the DISASSEMBLY".
4. After replacing the pickup unit, be sure to check the grating.
5. Be careful in handling ICs. Some ICs such as MOS type are so fragile that they can be damaged by electrostatic induction.
6. ▨ area and a heat sink becomes hot areas. Be careful not to burn yourself.



7. Software update
   The software of this product is stored in IC671.
   Please replace IC671 when making the version upgrade of software.
8. How to Handle Infrared Deteching unit for Remote Control of Grille
   The infrared deteching unit for remote control of keyboard unit is not fixed with cushion, etc.
   When external force is applied on the infrared deteching unit for remote control, the light receiving sensitivity might be deteriorated since the lead bents and attaching angle of the light receiving part may be varied.
   Please do not apply external force onto the infrared deteching unit for remote control. If any external force is applied by mistake, please confirm whether lead bending may exist or not.
   If the lead is bent, please correct the angle between the lead and the light receiving part to be 90 degrees or replace the infrared deteching unit for remote control (GP1UXC14RK).

9. Capacitor Bond Lock
   Silicon Glue (GEM1017)
   Place the capacitor in the center of the silk print, and confirm it does not touch to the connector. Then, apply silicon glue.



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1.2 NOTES ON SOLDERING

- For environmental protection, lead-free solder is used on the printed circuit boards mounted in this unit.
  Be sure to use lead-free solder and a soldering iron that can meet specifications for use with lead-free solders for repairs accompanied by reworking of soldering.

- Compared with conventional eutectic solders, lead-free solders have higher melting points, by approximately 40°C.
  Therefore, for lead-free soldering, the tip temperature of a soldering iron must be set to around 373°C in general, although the temperature depends on the heat capacity of the PC board on which reworking is required and the weight of the tip of the soldering iron.

Compared with eutectic solders, lead-free solders have higher bond strengths but slower wetting times and higher melting temperatures (hard to melt/easy to harden).

The following lead-free solders are available as service parts:
- Parts numbers of lead-free solder:
  GYP1006 1.0 in dia.
  GYP1007 0.6 in dia.
  GYP1008 0.3 in dia.

2. SPECIFICATIONS

2.1 SPECIFICATIONS

General

Rated power source ..... 14.4 V DC (allowable voltage range: 12.0 V to 14.4 V DC)
Grounding system ..... Negative type
Maximum current consumption ..... 10.0 A
Backup current ..... 4.0 mA or less
Dimensions (W × H × D):
DIN
Chassis ..... 178 mm × 50 mm × 165 mm
Nose ..... 188 mm × 58 mm × 17 mm
D
Chassis ..... 178 mm × 50 mm × 165 mm
Nose ..... 170 mm × 46 mm × 17 mm
Weight ..... 1.2 kg

Audio

Maximum power output ..... 50 W × 4
Continuous power output ..... 22 W × 4 (50 Hz to 15 000 Hz, 5 % THD, 4 Ω load, both channels driven)
Load impedance ..... 4 Ω (4 Ω to 8 Ω allowable)
Preout maximum output level ..... 2.0 V
Tone controls:
Bass
Frequency ..... 100 Hz
Gain ..... ±12 dB
Mid
Frequency ..... 1 kHz
Gain ..... ±12 dB
Treble
Frequency ..... 10 kHz
Gain ..... ±12 dB
Subwoofer (mono):
Frequency ..... 50/63/80/100/125 Hz
Slope ..... –18 dB/oct
Gain ..... +6 dB to –24 dB
Phase ..... Normal/Reverse

CD player

System ..... Compact disc audio system
Usable discs ..... Compact disc
Signal-to-noise ratio ..... 94 dB (1 kHz) (IEC-A network)
Number of channels ..... 2 (stereo)
WMA decoding format ..... Ver. 7, 7.1, 8, 9, 10, 11, 12 (2ch audio) (Windows Media Player)
MP3 decoding format ..... MPEG-1 & 2 Audio Layer 3
WAV signal format ..... Linear PCM & MS ADPCM (Non-compressed)

USB

USB standard specification ..... USB 2.0 full speed
Maximum current supply ..... 500 mA
USB Class ..... MSC (Mass Storage Class)
File system FAT12, FAT16, FAT32
WMA decoding format ..... Ver. 7, 7.1, 8, 9, 10, 11, 12 (2ch audio) (Windows Media Player)
MP3 decoding format ..... MPEG-1 & 2 Audio Layer 3
WAV signal format ..... Linear PCM & MS ADPCM (Non-compressed)

FM tuner

Frequency range ..... 87.5 MHz to 108.0 MHz
Usable sensitivity ..... 9 dBf (0.8 µV/75 Ω, mono, S/N: 30 dB)
Signal-to-noise ratio ..... 72 dB (IEC-A network)

AM tuner

Frequency range ..... 531 kHz to 1 602 kHz (9 kHz)
530 kHz to 1 640 kHz (10 kHz)
Usable sensitivity ..... 25 µV (S/N: 20 dB)
Signal-to-noise ratio ..... 62 dB (IEC-A network)

SW tuner (DEH-2350UBSW)

Frequency range ..... 2 300 kHz to 7 735 kHz (2 300 kHz to 2 495 kHz, 2 940 kHz to 4 215 kHz, 4 540 kHz to 5 175 kHz, 5 820 kHz to 6 455 kHz, 7 100 kHz to 7 735 kHz)
9 500 kHz to 21 975 kHz (9 500 kHz to 10 135 kHz, 11 580 kHz to 12 215 kHz, 13 570 kHz to 13 870 kHz, 15 100 kHz to 15 735 kHz, 17 500 kHz to 17 985 kHz, 18 015 kHz to 18 135 kHz, 21 340 kHz to 21 975 kHz)
Usable sensitivity ..... 28 µV (S/N: 20 dB)
Signal-to-noise ratio ..... 62 dB (IEC-A network)

Infrared remote control

Wavelength ..... 940 nm ±50 nm
Output ..... typ; 12 mw/sr per Infrared LED

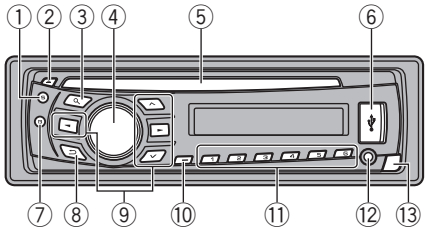
Note

Specifications and the design are subject to modifications without notice. ▣

2.2 DISC/CONTENT FORMAT

2.3 PANEL FACILITIES

Head unit

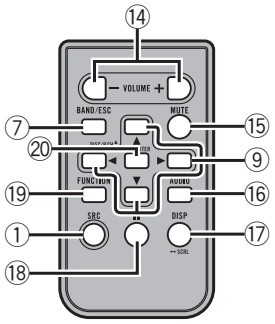


	Part		Part
①	**S (SRC/OFF)**	⑧	⮌ (Back/display/scroll)
②	▲ (eject)	⑨	▲/▼/◀/▶
③	🔍 (list)	⑩	🕘 **/DISP OFF**
④	**MULTI-CONTROL (M.C.)**	⑪	**1** to **6**
⑤	Disc loading slot	⑫	AUX input jack (3.5 mm stereo jack)
⑥	USB port	⑬	Detach button
⑦	**B (BAND/ESC)**		

CAUTION

- Use an optional Pioneer USB cable (CD-U50E) to connect the USB audio player/USB memory as any device connected directly to the unit will protrude out from the unit and may be dangerous.
- Do not use unauthorized products.■

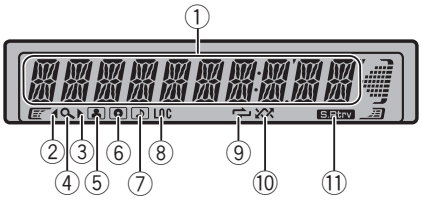
Remote control



	Part	Operation
⑭	**VOLUME**	Press to increase or decrease volume.
⑮	**MUTE**	Press to mute. Press again to unmute.
⑯	**AUDIO**	Press to select an audio function.
⑰	**DISP/SCRL**	Press to select different displays. Press and hold to scroll through the text information.
⑱	**II**	Press to pause or resume playback.
⑲	**FUNCTION**	Press to select functions. Press and hold to recall the initial setting menu when the sources are off.
⑳	**LIST/ ENTER**	Press to display the disc title, track title, folder, or file list depending on the source. While in the operating menu, press to control functions.

■

Display indication

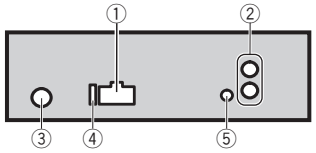


	Indicator	State
①	Main display section	• Tuner: band and frequency • Program service name • Built-in CD player and USB: elapsed playback time and text information
②	◀	An upper tier of folder or menu exists.
③	▶	A lower tier of folder or menu exists.
④	🔍 (list)	The list function is operated.
⑤	👤 (artist)	The disc (track) artist name is displayed.
⑥	💿 (disc)	The disc (album) name is displayed.
⑦	♪ (song)	The track (song) name is displayed. A playable audio file has been selected while operating the list.
⑧	**LOC**	The local seek tuning is on.
⑨	🔁 (repeat)	Track or folder repeat is on.
⑩	🔀 (random)	Random play is on.
⑪	S.Rtrv (sound retriever)	The sound retriever function is on.

■

2.4 CONNECTION DIAGRAM

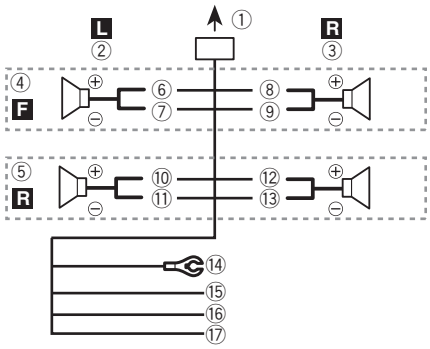
This unit



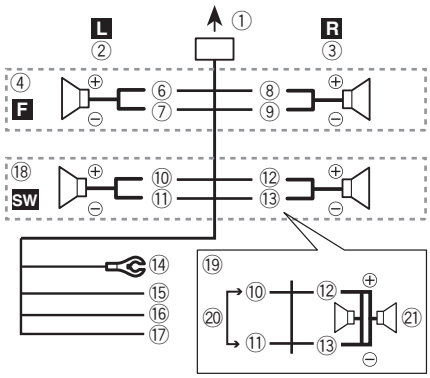
① Power cord input
② Rear output or subwoofer output
③ Antenna input
④ Fuse (10 A)
⑤ Wired remote input
Hard-wired remote control adaptor can be connected (sold separately).

Power cord

Perform these connections when not connecting a rear speaker lead to a subwoofer.



Perform these connections when using a subwoofer without the optional amplifier.



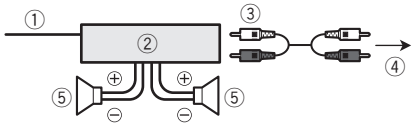
① To power cord input
② Left
③ Right
④ Front speaker
⑤ Rear speaker
⑥ White
⑦ White/black
⑧ Gray
⑨ Gray/black
⑩ Green
⑪ Green/black
⑫ Violet
⑬ Violet/black
⑭ Black (chassis ground)
Connect to a clean, paint-free metal location.
⑮ Yellow
Connect to the constant 12 V supply terminal.
⑯ Red
Connect to terminal controlled by ignition switch (12 V DC).
⑰ Blue/white
Connect to system control terminal of the power amp or auto-antenna relay control terminal (max. 300 mA 12 V DC).
⑱ Subwoofer (4 Ω)
⑲ When using a subwoofer of 70 W (2 Ω), be sure to connect the subwoofer to the violet and violet/black leads of this unit. Do not connect anything to the green and green/black leads.
⑳ Not used.
㉑ Subwoofer (4 Ω)× 2

Notes

- With a 2 speaker system, do not connect anything to the speaker leads that are not connected to speakers.
- Change the initial setting of this unit. Refer to **SW CONTROL** (rear output and subwoofer setting).
The subwoofer output of this unit is monaural.

Power amp (sold separately)

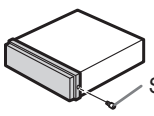
Perform these connections when using the optional amplifier.



① System remote control
Connect to Blue/white cable.
② Power amp (sold separately)
③ Connect with RCA cable (sold separately)
④ To Rear output or subwoofer output
⑤ Rear speaker or subwoofer ▣

Fastening the front panel

If you do not plan to detach the front panel, the front panel can be fastened with the supplied screw.



Screw
ES, ES1 : XXX7020

3. BASIC ITEMS FOR SERVICE

3.1 CHECK POINTS AFTER SERVICING

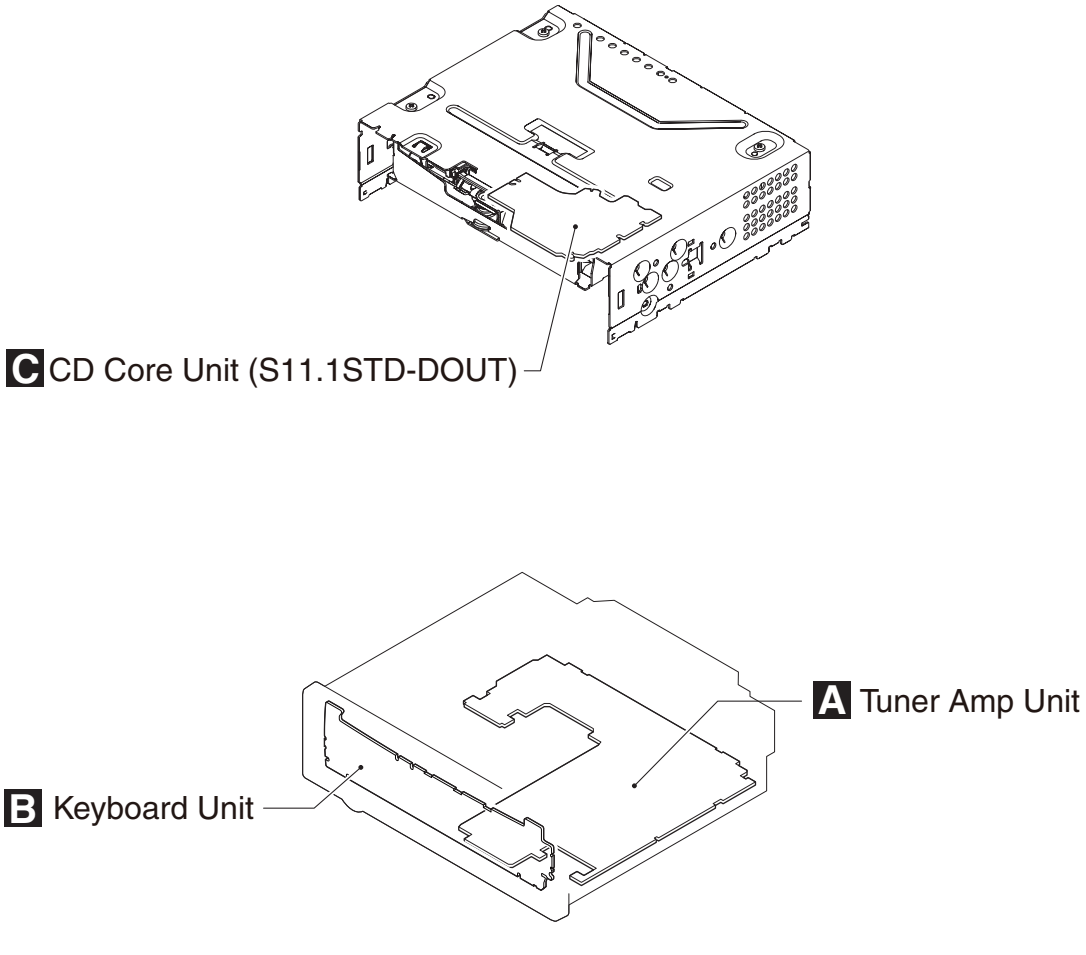
To keep the product quality after servicing, please confirm following check points.

No.		Procedures	Item to be confirmed
1		Confirm whether the customer complain has been solved. If the customer complain occurs with the specific media, use it for the operation check.	The customer complain must not be reappeared. Display, audio and operations must be normal.
2	CD	Play back a CD. (Track search)	No malfunction on display, audio and operation.
3	FM/AM tuner	Check FM/AM tuner action. (Seek, Preset) Switch band to check both FM and AM.	Display, audio and operations must be normal.
4		Check whether no disc is inside the product.	The media used for the operating check must be ejected.
5		Appearance check	No scratches or dirt on its appearance after receiving it for service.

See the table below for the items to be checked regarding audio:

Item to be checked regarding audio
Distortion
Noise
Volume too low
Volume too high
Volume fluctuating
Sound interrupted

3.2 PCB LOCATIONS



A:DEH-2350UB/XNES
B:DEH-2350UBG/XNES
C:DEH-2350UBSW/XNES
D:DEH-2350UB/XSES
E:DEH-2350UB/XNES1

Unit Number : CWN5489 (A, B, D, E)
: CWN5479 (C)
Unit Name : Tuner Amp Unit
Unit Number :
Unit Name : Keyboard Unit
Unit Number : CWX3985
Unit Name : CD Core Unit (S11.1STD-DOUT)

3.3 JIGS LIST

● **Jigs List**

Name	Jig No.	Remarks
16P FFC	GGD1310	Tuner Amp Unit - CD Core Unit
Test Disc	TCD-782	Checking the grating
L.P.F.		Checking the grating (Two pieces)

● **Grease List**

Name	Grease No.	Remarks
Grease	GEM1024	CD Mechanism Module
Grease	GEM1038	CD Mechanism Module
Grease	GEM1043	CD Mechanism Module
Grease	GEM1045	CD Mechanism Module
Silicon Glue	GEM1017	Capacitor Bond Lock

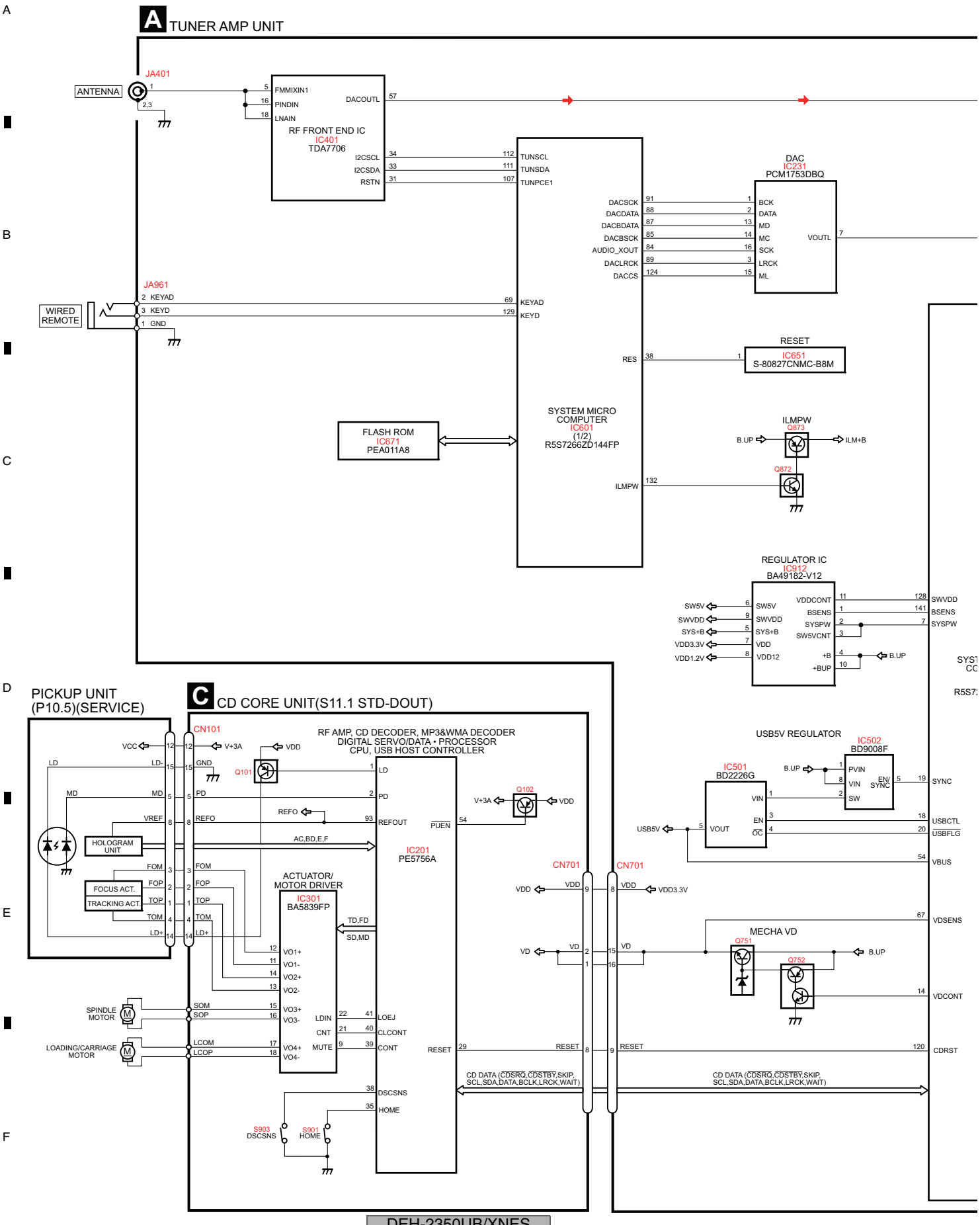
3.4 CLEANING

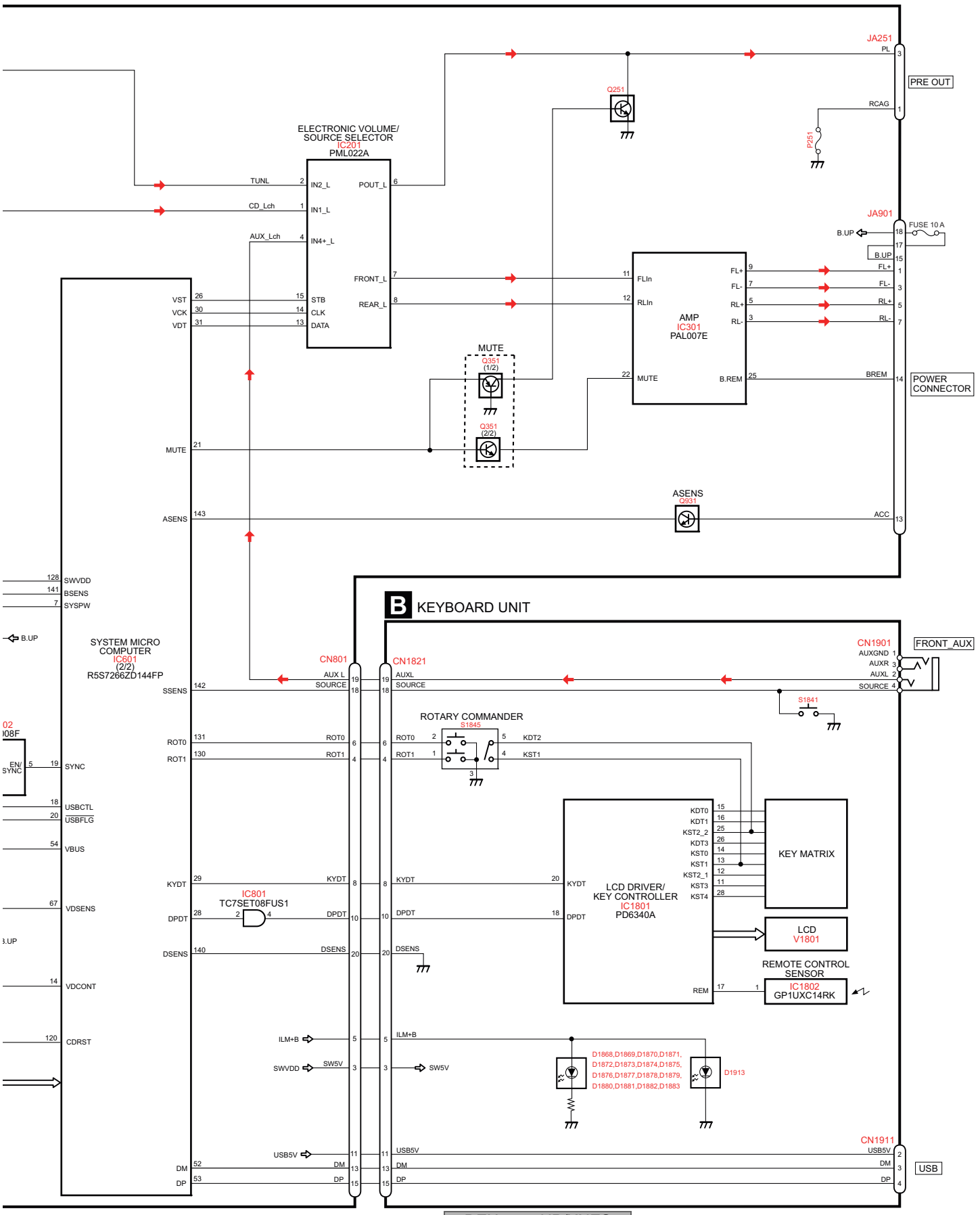
Before shipping out the product, be sure to clean the following portions by using the prescribed cleaning tools:

Portions to be cleaned	Cleaning tools
CD pickup lenses	Cleaning liquid : GEM1004 Cleaning paper : GED-008

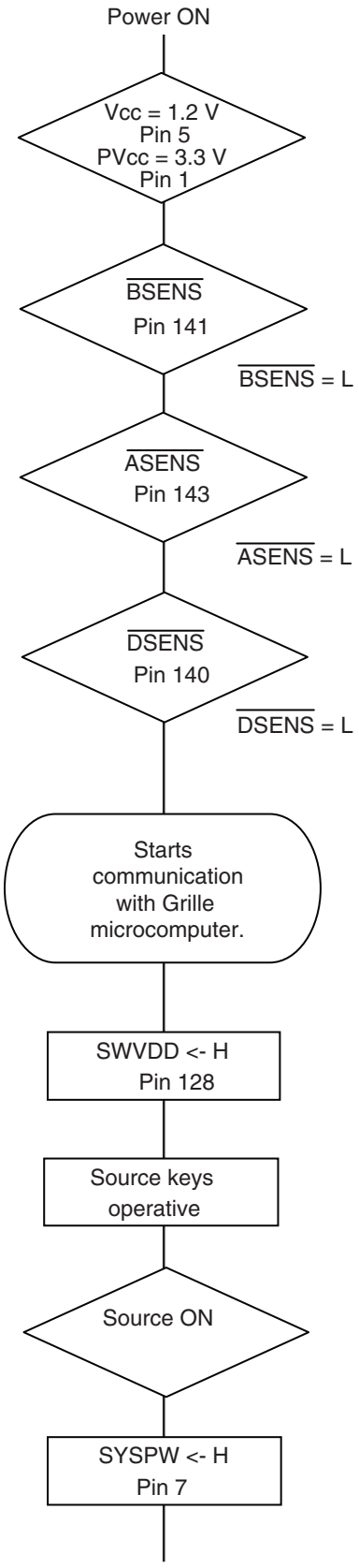
4. BLOCK DIAGRAM

4.1 BLOCK DIAGRAM

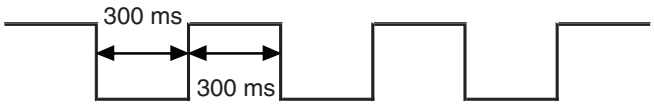



JA251
PL
PRE OUT
RCAG
Q251
P251
ELECTRONIC VOLUME/
SOURCE SELECTOR
IC201
PML022A
TUNL
CD_Lch
AUX_Lch
IN2_L
IN1_L
IN4+_L
POUT_L
FRONT_L
REAR_L
JA901
FUSE 10 A
B.UP
AMP
IC301
PAL007E
FLIn
RLIn
FL+
FL-
RL+
RL-
MUTE
Q351
(1/2)
Q351
(2/2)
B.REM
BREM
POWER
CONNECTOR
ASENS
Q931
ACC
VST
VCK
VDT
STB
CLK
DATA
SYSTEM MICRO
COMPUTER
IC601
(2/2)
R5S7266ZD144FP
SWVDD
BSENS
SYSPW
SYNC
USBCTL
USBFLG
VBUS
VDSENS
VDCONT
CDRST
B KEYBOARD UNIT
CN801
CN1821
CN1901
FRONT_AUX
AUXGND
AUXR
AUXL
SOURCE
AUX L
S1841
ROTARY COMMANDER
S1845
ROT0
ROT1
KDT2
KST1
KYDT
DPDT
DSENS
IC801
TC7SET08FUS1
LCD DRIVER/
KEY CONTROLLER
IC1801
PD6340A
KDT0
KDT1
KST2_2
KDT3
KST0
KST1
KST2_1
KST3
KST4
KEY MATRIX
LCD
V1801
REMOTE CONTROL
SENSOR
IC1802
GP1UXC14RK
REM
ILM+B
SWVDD
SW5V
D1868,D1869,D1870,D1871,
D1872,D1873,D1874,D1875,
D1876,D1877,D1878,D1879,
D1880,D1881,D1882,D1883
D1913
USB5V
DM
DP
CN1911
USB

5. DIAGNOSIS
5.1 OPERATIONAL FLOWCHART



Completes power-on operation.
(After that, proceed to each source operation)



In case of the above signal, the communication with Grille microcomputer may fail.
If the time interval is not 300 msec, the oscillator may be defective.

5.2 ERROR CODE LIST

● ERROR CODES

If a CD memory device is inoperable, or operation of such media is stopped by an error, the error mode is established and a cause of the error is displayed by an error code. Indication of error codes is intended to reduce the number of calls from customers and facilitate failure analysis and repair work in servicing.

(1) DISPLAY METHOD

If "0xFD" error mode is displayed in CD MODE (CD MODE area for display), an error code will be displayed in the MIN (minute display) and SEC (second display) areas.

The same code is displayed in the MIN and SEC areas.
The TNO area is blank (#0FFH), as it conventionally was.

- Display example of the main unit
  Depending on the display capability of LCDs, the display format varies, as shown below. XX denotes an error number.
  Note: In a case of an OEM product, the error display format is subject to the specifications used by the equipment manufacturer.

8-digit display	6-digit display	4-digit display
ERROR-xx	ERR-xx	E-xx

(2) LIST OF CD ERROR CODES (Error Mode: 0xFD)

Code	Classification	Error code to be displayed	Details and possible causes
7	Servo	TOC reading NG	TOC information cannot be read. --> The partial disk or TOC content is illegal.
10	Servo	Carriage Home NG	The CRG cannot move toward the inner track. The CRG cannot move from the inner track. --> Defective HOME SW; Failure in CRG movement.
11	Servo	Focus Search NG	Focusing not available --> Disc placed upside-down; Stains on the disc; excessive vibration.
12	Servo	Spindle Lock NG Subcode NG RF-amp NG	Spindle not locked. Subcode not readable. Proper RF AMP gain not obtained. --> Defective spindle; Scratches or stains on the disc; excessive vibration. --> A CD-R disc that does not contain data loaded, or in a rare case, disc placed upside-down. --> CD signal error.
15	Servo	Failure in RF data	RF not read --> A CD-R disc that does not contain data loaded --> A CD-RW disc that does not contain data loaded
17	Servo	Setup NG	AGC protection does not work. Focus can be easily lost. --> Scratches or stains on the disc; excessive vibration.
30	Servo	Search Time Out	Failed to reach a target address --> CRG tracking error; Scratches on the disc; Stains on the disc
50	Mechanism	Failure in ejection Load NG	Disc ejection not completed Disc loading not completed --> A foreign object inserted in the mechanism; Disc jammed.
51	Mechanism	Failure in retried turning for ejection	Disc could not be ejected even after disc turning had been retried. --> A foreign object inserted in the mechanism; Disc jammed.

NOTES

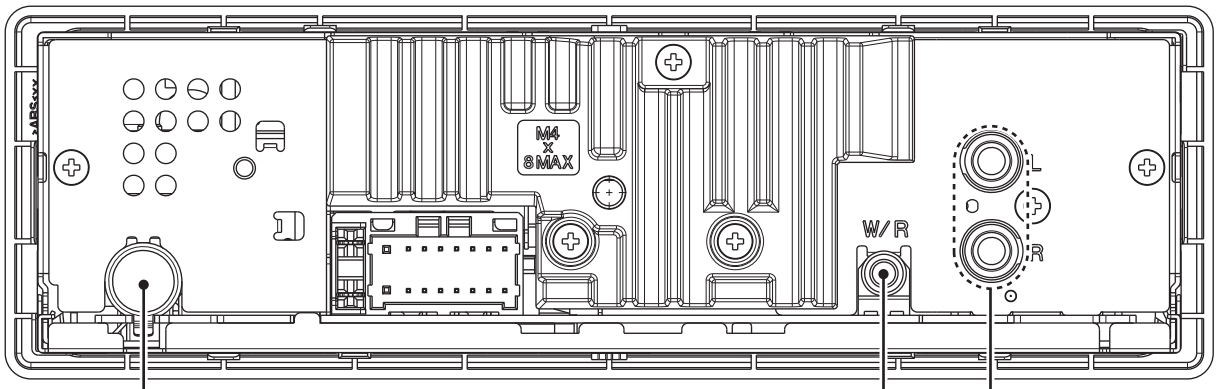
- Indications of error codes are available only during disc operations, because CD operations are unavailable if a mechanical error is generated.
- If the TOC cannot be read, this is not processed as an error, and operation continues accordingly.
- If you design a new head unit, be sure to use one of the display formats indicated in "Display example of the main unit."
- The 2 high-order digits of an error code denote the main classification, shown below.
  0x: Servo-related errors
  1x: Servo-related errors
  3x: Servo-related errors
  5x: Mechanism-related errors
- How to restore from each error is shown below.
  0x, 1x and 3x: ACC-OFF then ON, CD-OFF then ON, Disc ejection
  5X: ACC-OFF then ON, Disc ejection, Disc reloading

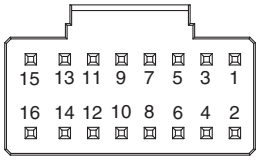
USB storage device

Message	Cause	Action
NO DEVICE	When plug and play is off, no USB storage device is connected.	• Turn the plug and play on. • Connect a compatible USB storage device.
FRMT READ	Sometimes there is a delay between the start of playback and when you start to hear any sound.	Wait until the message disappears and you hear sound.
NO AUDIO	There are no songs.	Transfer the audio files to the USB storage device and connect.
	The connected USB storage device has security enabled	Follow the USB storage device instructions to disable the security.
SKIPPED	The connected USB storage device contains WMA files embedded with Windows Media™ DRM 9/10	Play an audio file not embedded with Windows Media DRM 9/10.
PROTECT	All the files in the USB storage device are embedded with Windows Media DRM 9/10	Transfer audio files not embedded with Windows Media DRM 9/10 to the USB storage device and connect.
N/A USB	The USB device connected to is not supported by this unit.	• Connect a USB portable audio player or USB memory that is USB Mass Storage Class compliant. • Disconnect your device and replace it with a compatible USB storage device.
CHECK USB	The USB connector or USB cable has short-circuited.	Check that the USB connector or USB cable is not caught in something or damaged.
	The connected USB portable audio player/ USB memory consumes more than maximum allowable current.	Disconnect the USB portable audio player/USB memory and do not use it. Turn the ignition switch to OFF, then to ACC or ON and then connect a compliant USB portable audio player/USB memory.

Message	Cause	Action
ERROR-19	Communication failed.	Perform one of the following operations. –Turn the ignition switch OFF and back ON. –Disconnect the USB portable audio player/USB memory. –Change to a different source. Then, return to the USB portable audio player/USB memory.
ERROR-23	USB storage device is not formatted with FAT12, FAT16 or FAT32	USB storage device should be formatted with FAT12, FAT16 or FAT32.

5.3 CONNECTOR FUNCTION DESCRIPTION





1	FL+	9	NC
2	FR+	10	NC
3	FL-	11	NC
4	FR-	12	NC
5	RL+	13	ACC
6	RR+	14	B.REM
7	RL-	15	B.UP
8	RR-	16	GND

6. SERVICE MODE
6.1 DISPLAY TEST MODE

The information such as the system microcomputer version is checked.

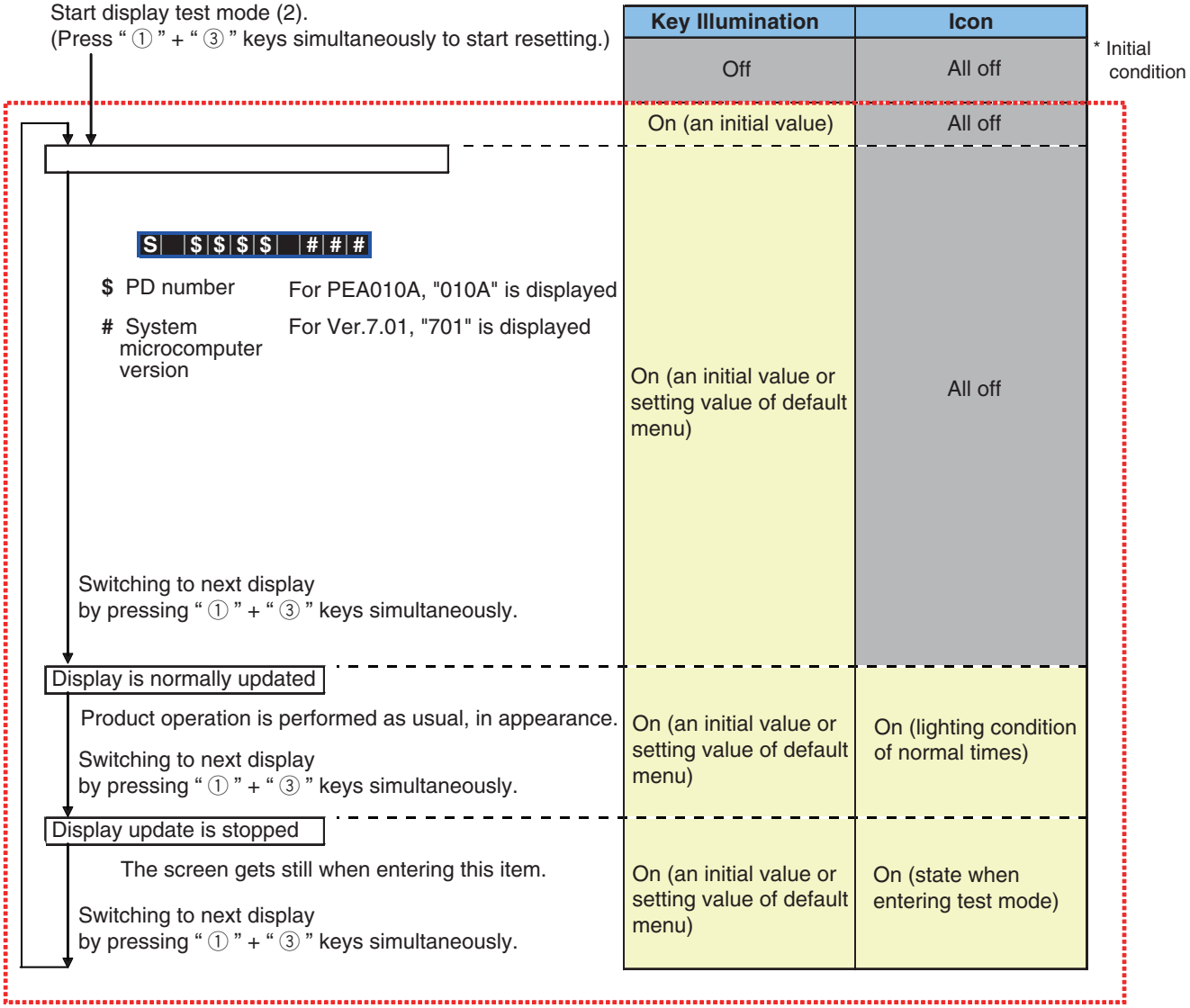
[How to enter Test mode]

Press " ① " and " ③ " keys simultaneously to start resetting.

[Operation key]

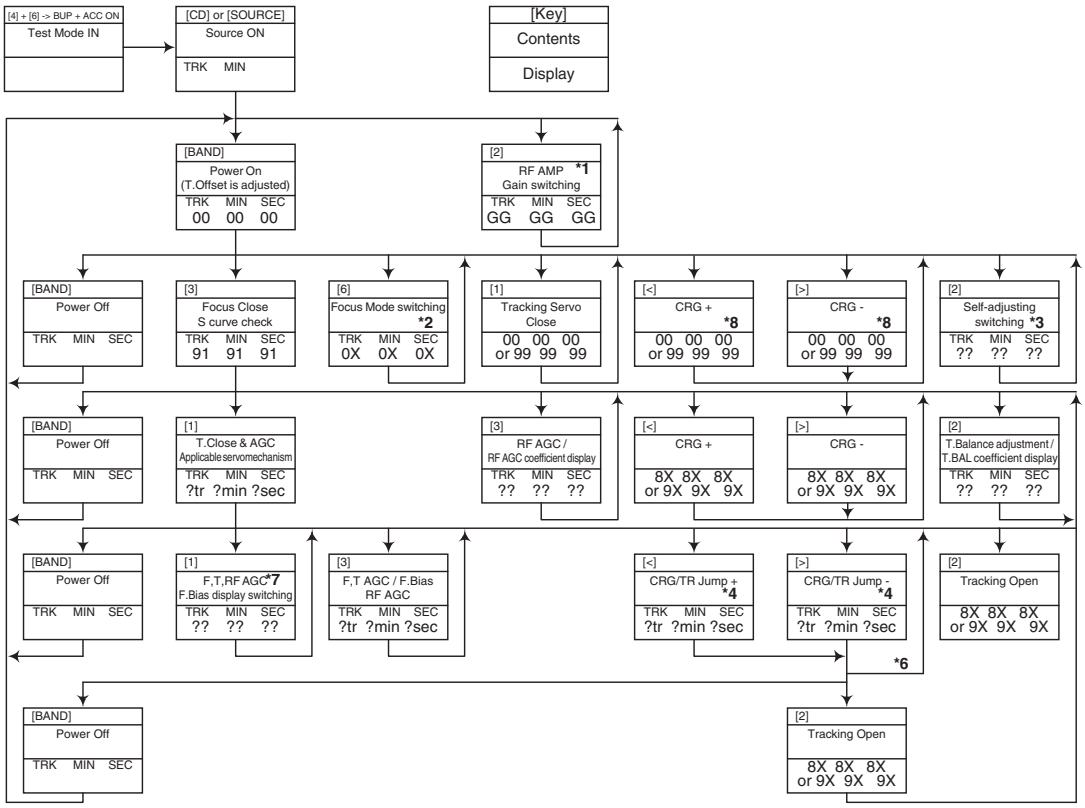
Operation key	Processing	Remarks
① + ③	Enter display test mode (2) Switch to next test mode	

[Test items]



6.2 CD TEST MODE

● Flow Chart



*1) TYP (TRK MIN SEC) → + 6 dB ($^{TRK}06^{MIN}06^{SEC}06$) → + 12 dB ($^{TRK}12^{MIN}12^{SEC}12$)

*2) Focus Close ($^{TRK}00^{MIN}00^{SEC}00$ / $^{TRK}99^{MIN}99^{SEC}99$) → S. Curve ($^{TRK}01^{MIN}01^{SEC}01$) → F EQ measurement setting ($^{TRK}02^{MIN}02^{SEC}02$)

*3) F.Offset Display → T.Offset Display → Switch to the order of the original display

*4) 100TR Jump

*7) TRK/MIN/SEC → F.AGC → T.AGC Gain → F.Bias → RF AGC

*8) CRG motor voltage = 2 [V]

*9) TYP (1X) (TRK MIN SEC) → 2X ($^{TRK}22^{MIN}22^{SEC}22$) → 1X ($^{TRK}11^{MIN}11^{SEC}11$)

*10) OFF(TYP) (TRK MIN SEC) → FORCUS ($^{TRK}70^{MIN}70^{SEC}70$) → TRACKING ($^{TRK}71^{MIN}71^{SEC}71$)

[Key]	Operation Test Mode
[BAND]	Power On/Off
[<]	CRG + / TR Jump + (Direction of the external surface)
[>]	CRG - / TR Jump - (Direction of the internal surface)
[1]	T. CLS & AGC & Applicable servomechanism / AGC,AGC display setting
[2]	RF Gain switching / Offset adjustment display / T.Balance adjustment / T. Open
[3]	F. Close,S. Curve / Rough Servo and RF AGC / F,T,RF AGC
[6]	F. Mode switching / Tracking Close

- After the [EJECT] key is pressed keys other than the [EJECT] key should not be pressed, until disc ejection is complete.
- When the key [2] or [3] is pressed during the Focus Search, the power supply should be immediately turned off (otherwise the lens sticks to Wall, causing the actuator to be damaged).
- 100TR Jump, the mechanism shall be set to the Tracking Close mode when the key is released.
- When the power is turned on/off the gain of the RFAMP is reset to 0 dB. At the same time all the self-adjusting values shall return to the default setting.
- Do not do Tracking Servo Close before doing Focus Servo Close. (Because the overcurrent flows)

7. DISASSEMBLY

While the photograph shown is slightly different from this model in shape, the disassembly procedure is the same.

● Removing the Panel Assy (Fig.1)

1 Remove the two hooks.

2 Remove the two hooks and then remove the Panel Assy.

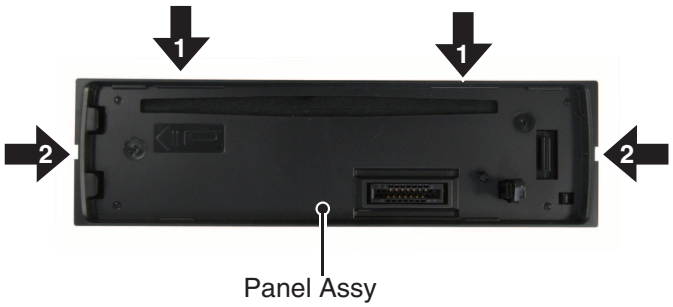


Fig.1

● Removing the CD Mechanism Module (Fig.2, 3, 4)

1 Remove the screw.

2 Remove the two screws.

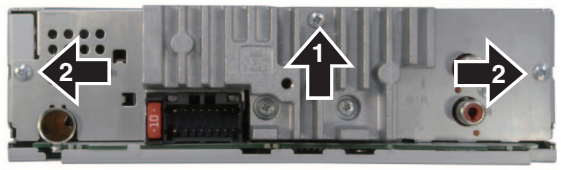


Fig.2

The CD Mechanism Module side is made a bottom.

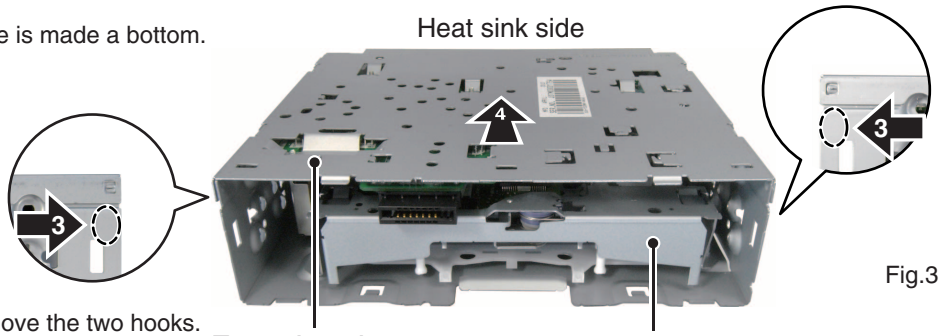


Fig.3

3 Push the area and remove the two hooks.

4 Slide the Tuner Amp Assy in the direction of the arrow and then remove the hooks of upper and lower.

Lift off the Tuner Amp Assy from the Heat sink side.

5 The Tuner Amp Unit is fixed into the ditch.

6 Disconnect the FFC and then remove the CD Mechanism Module.

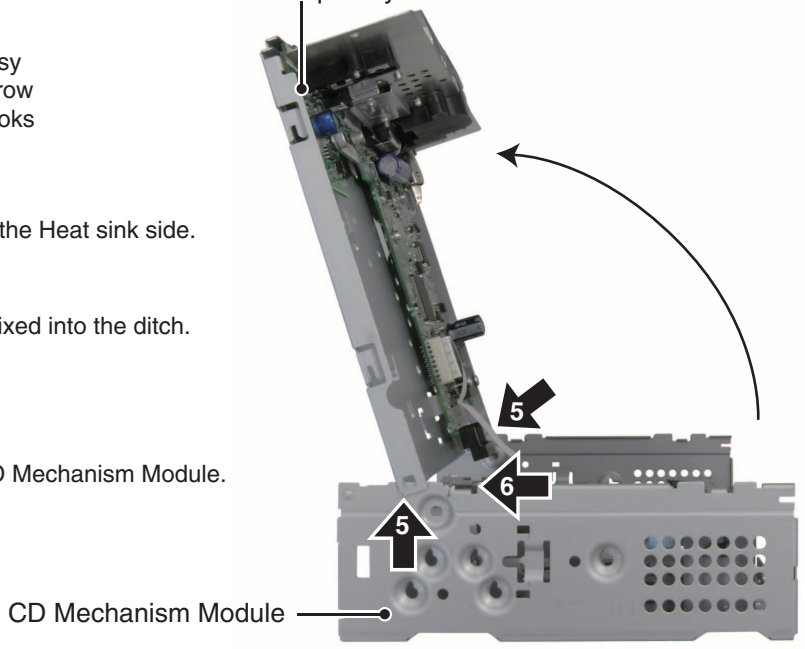


Fig.4

● Removing the Tuner Amp Unit (Fig.5)

1 Remove the two screws.

2 Remove the two screws.

3 Straighten the tabs
at two locations indicated
and then remove the Tuner Amp Unit.

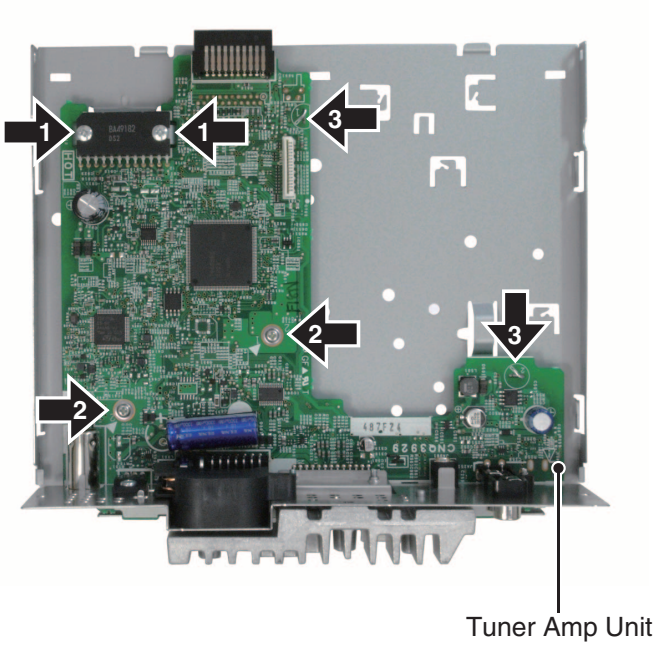


Fig.5

● Attention of removing (Fig.6)

Don't remove this screws
excluding the dismantlement
of the CD Mechanism Module.

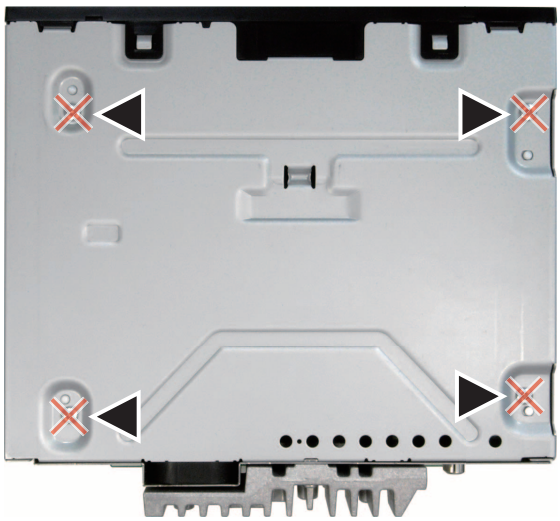


Fig.6

● Disassembling the Panel Part (Fig.7, 8)

1. Remove the arm while bending the rib of the panel upward.

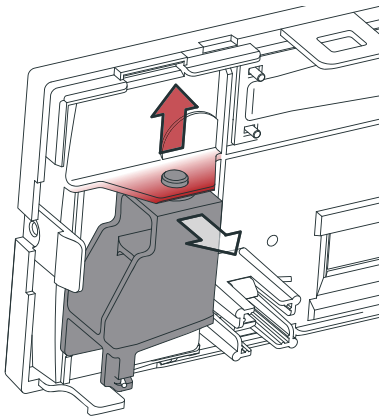


Fig.7

2. Press the upside hook and the bottom side hook of the button at the same time, and pull out the button.

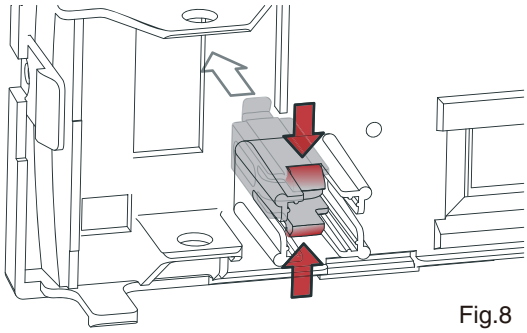


Fig.8

● Assembling the Panel Part (Fig.9, 10, 11)

1. Attach the button from the front side of the panel.

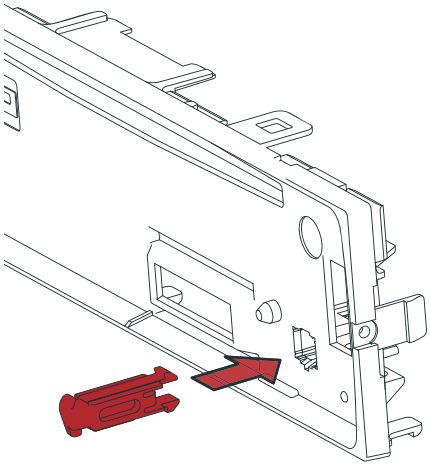


Fig.9

2. Attach the spring to the arm as shown in the figure.

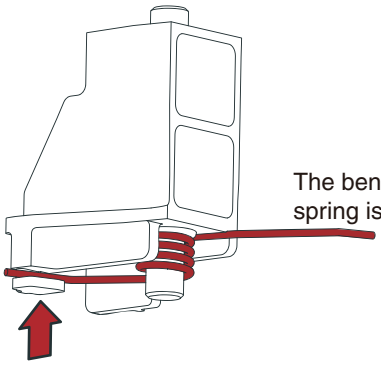


Fig.10

3. Fit the spring in the groove at the position shown in the figure.
4. Fit the boss on the lower side of the arm in the lower hole of the panel, and then warp the rib on the panel in the direction shown in the figure and fit the boss of the arm in the panel.

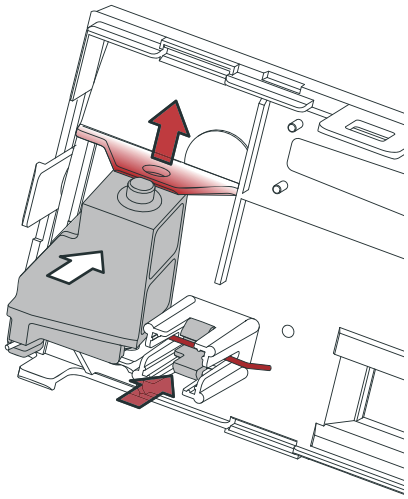
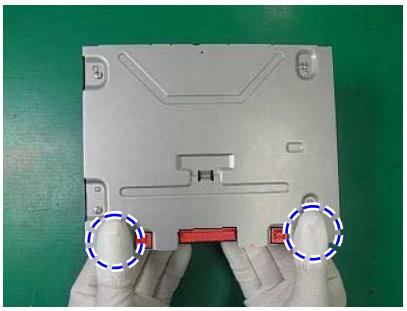


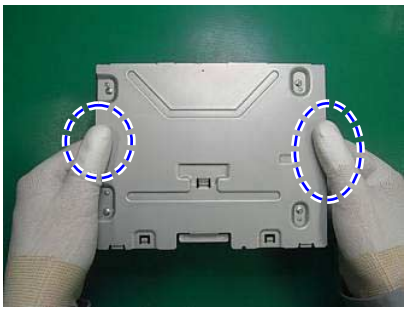
Fig.11

● How to carry the mecha unit

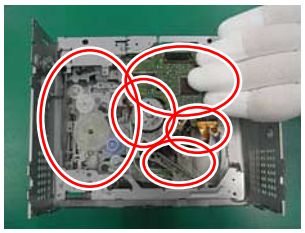
1. Hold the designated points (shown with dashed lines) of the upper chassis and the front/rear bracket.
2. Be careful not to hold the solid line portions or the CRG mecha part or insert foreign substances, to prevent distortion.
3. When holding the sides of the upper chassis, do not apply excessive force to prevent distortion. (Approx. 8N or less)

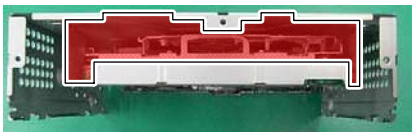
Correct way of holding the unit

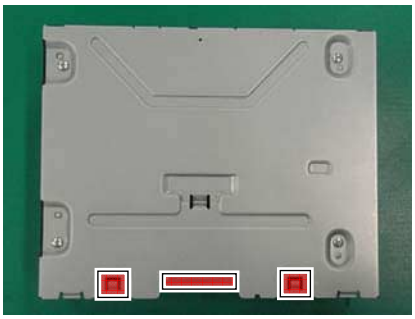


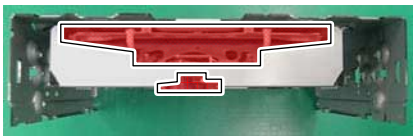


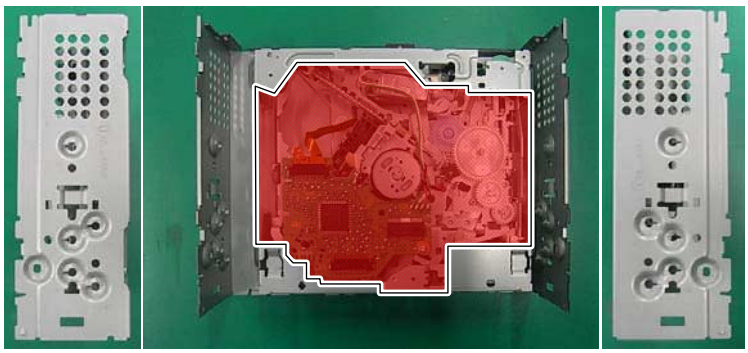
Incorrect way of holding the unit







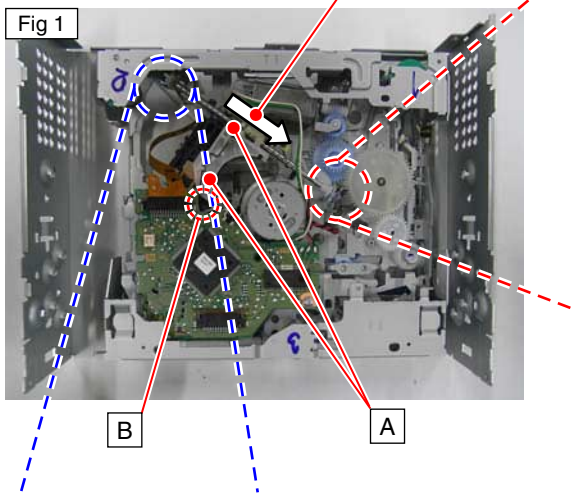


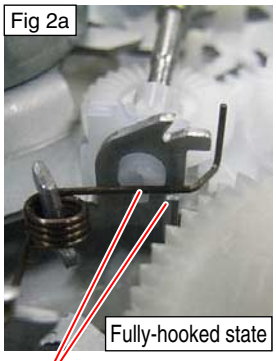


● How to remove the PU unit

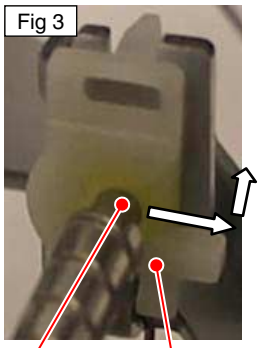
1. Create an empty-clamp state according to “How to create empty clamp state (motor drive)”.
2. Hook the feeding screw biasing spring to a tentative hooking portion (Fig 2b). Be careful not to get injured by the spring edge.
3. Hold the PU at the position A as shown in Fig 1. Slide the PU as far as possible toward the holder in the feeding screw so that a joint on the outer end of the feeding screw is loosened.
4. As shown in Fig 3, move the rear end of the feeding screw laterally and then upward, to remove it from the outer holder.
5. Lift the PU unit to disengage it from Part B of the chassis (Fig 4), and remove the PU unit.

(Cautions) When re-installing the PU, be sure to first nip the chassis and the PU unit (Fig 4) at the position B.
Also, make sure to fully hook the feeding screw biasing spring (Fig 2a).
Please follow the service manual for adjustment of the PU unit after the re-installation.

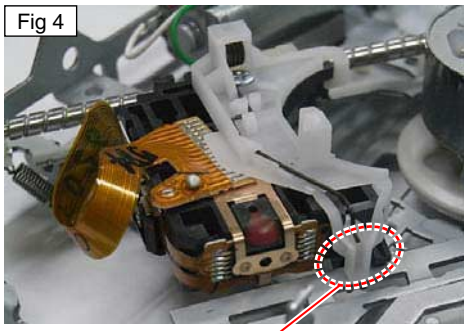




The spring is below a resin flange and is built inside the sheet metal bending.



Outer holder
Rear end of feeding screw



Normal built-in state

[Incorrect built-in state]
The chassis is not nipped between the PU case and the PU rack.

● How to move the PU to the outer circumference

1. Create an empty clamp state according to “How to create empty clamp state of mecha module”.
2. Apply 1.5 V to the CRG motor and move the PU to the outer circumference.

(Caution) After moving the PU to the outer circumference and performing necessary treatment, make sure to solder the lead wires.

8. EACH SETTING AND ADJUSTMENT

8.1 CD ADJUSTMENT

1) Cautions on adjustments

• In this product the single voltage (3.3 V) is used for the regulator. The reference voltage is the REFO1 (1.65 V) instead of the GND.
If you should mistakenly short the REFO1 with the GND during adjustment, accurate voltage will not be obtained, and the servo's misoperation will apply excessive shock to the pickup. To avoid such problems:
a. Do not mix up the REFO1 with the GND when connecting the (-) probe of measuring instruments. Especially on an oscilloscope, avoid connecting the (-) probe for CH1 to the GND.
b. In many cases, measuring instruments have the same potential as that for the (-) probe. Be sure to set the measuring instruments to the floating state.
c. If you have mistakenly connected the REFO1 to the GND, turn off the regulator or the power immediately.

• Before mounting and removing filters or leads for adjustment, be sure to turn off the regulator.

• For stable circuit operation, keep the mechanism operating for about one minute or more after the regulator is turned on.

• In the test mode, any software protections will not work. Avoid applying any mechanical or electrical shock to the mechanism during adjustment.

• The RFAGC and RFO signals with a wide frequency range are easy to oscillate. When observing the signals, insert a resistor of 1k ohms in series.

• The load and eject operation is not guarantied with the mechanism upside down. If the mechanism is blocked due to mistaken eject operation, reset the product or turn off and on the ACC to restore it.

2) Test mode

This mode is used to adjust the CD mechanism module.
• To enter the test mode.
[4] + [6] -> BUP + ACC ON

• To exit from the test mode.
Turn off the ACC and back up.

Notes:
a. During ejection, do not press any other keys than the EJECT key until the loaded disc is ejected.
b. If you have pressed the (→) key or (←) key during focus search, turn off the power immediately to protect the actuator from damage caused by the lens stuck.
c. For the TR jump modes except 100TR, the track jump operation will continue even if the key is released.
d. For the CRG move and 100TR jump modes, the tracking loop will be closed at the same time when the key is released.
e. When the power is turned off and on, the jump mode is reset to the single TR (91), the RF amp gain is set to 0 dB, and the auto-adjustment values are reset to the default settings.

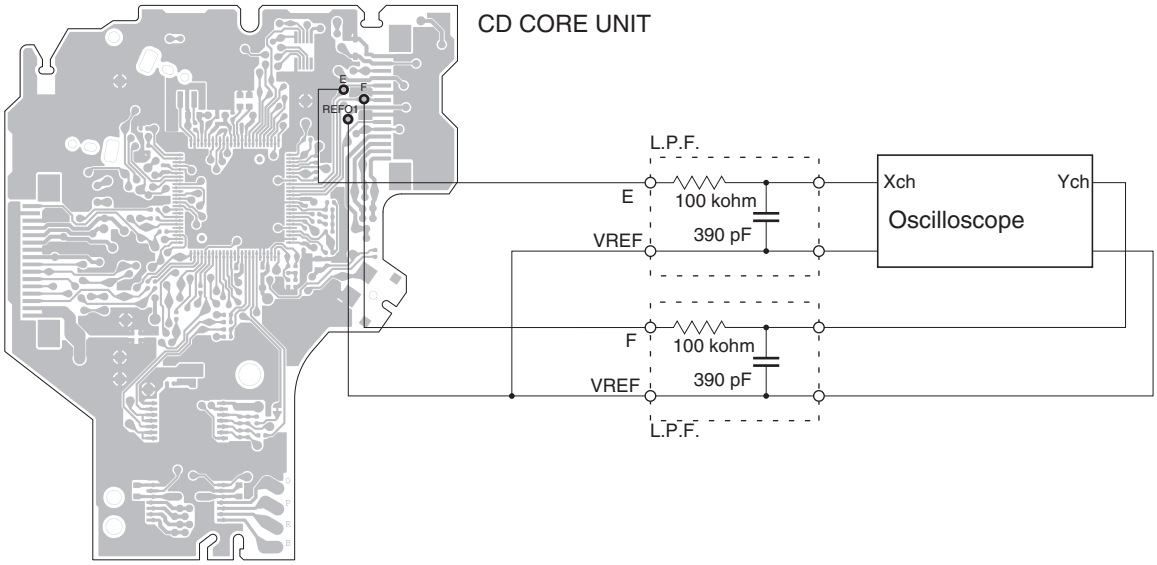
8.2 CHECKING THE GRATING AFTER CHANGING THE PICKUP UNIT

- **Note :**
  The grating angle of the PU unit cannot be adjusted after the PU unit is changed. The PU unit in the CD mechanism module is adjusted on the production line to match the CD mechanism module and is thus the best adjusted PU unit for the CD mechanism module. Changing the PU unit is thus best considered as a last resort. However, if the PU unit must be changed, the grating should be checked using the procedure below.

- **Purpose :**
  To check that the grating is within an acceptable range when the PU unit is changed.

- **Symptoms of Mal-adjustment :**
  If the grating is off by a large amount symptoms such as being unable to close tracking, being unable to perform track search operations, or taking a long time for track searching.

- **Method :**
  - Measuring Equipment • Oscilloscope, Two L.P.F.
  - Measuring Points • E, F, REFO1
  - Disc • TCD-782
  - Mode • TEST MODE

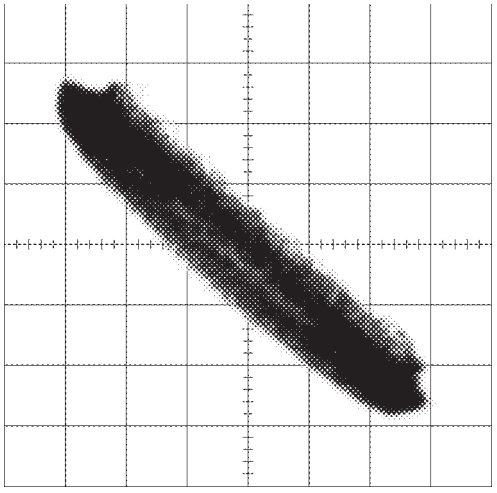


- **Checking Procedure**
  1. In test mode, load the disc and switch the 3 V regulator on.
  2. Using the right and left buttons, move the PU unit to the innermost track.
  3. Press key 3 to close focus, the display should read "91". Press key 2 to implement the tracking balance adjustment the display should now read "81". Press key 3. The display will change, returning to "81" on the fourth press.
  4. As shown in the diagram above, monitor the LPF outputs using the oscilloscope and check that the phase difference is within 75°. Refer to the photographs supplied to determine the phase angle.
  5. If the phase difference is determined to be greater than 75° try changing the PU unit to see if there is any improvement. If, after trying this a number of times, the grating angle does not become less than 75° then the mechanism should be judged to be at fault.
- **Note**
  Because of eccentricity in the disc and a slight misalignment of the clamping center the grating waveform may be seen to "wobble" (the phase difference changes as the disc rotates). The angle specified above indicates the average angle.
- **Hint**
  Reloading the disc changes the clamp position and may decrease the "wobble".

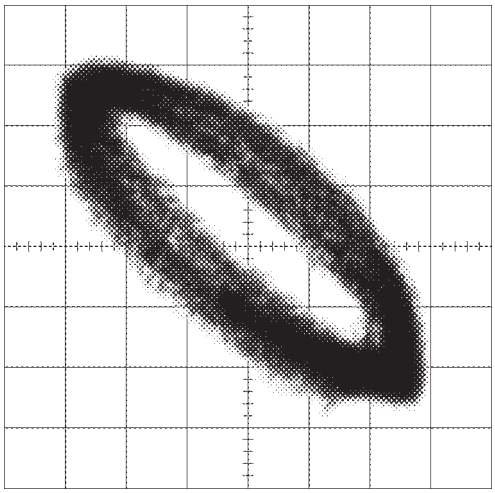
Grating waveform

Ech -> Xch 20 mV/div, AC
Fch -> Ych 20 mV/div, AC

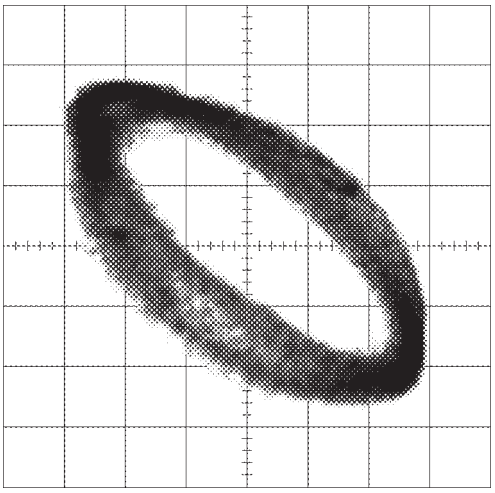
0 degrees



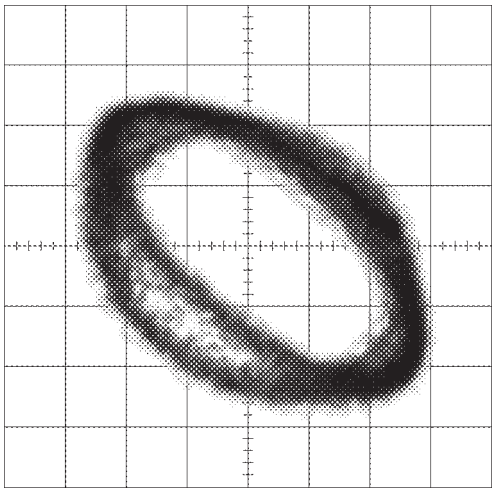
30 degrees



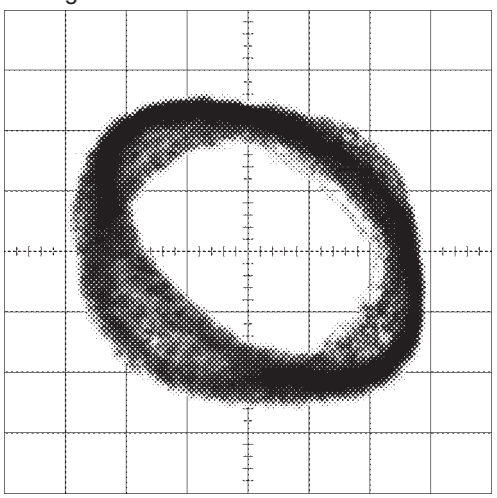
45 degrees



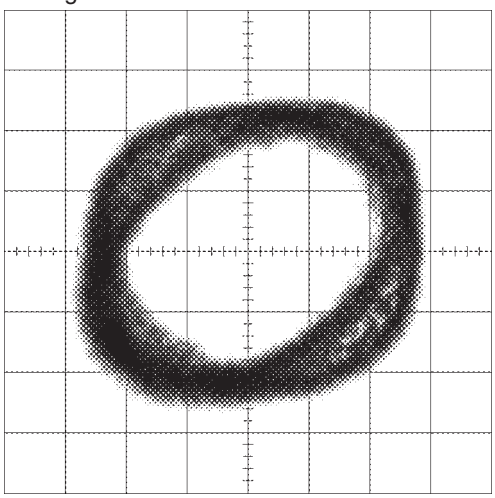
60 degrees



75 degrees



90 degrees



8.3 PCL OUTPUT CONFIRMATION

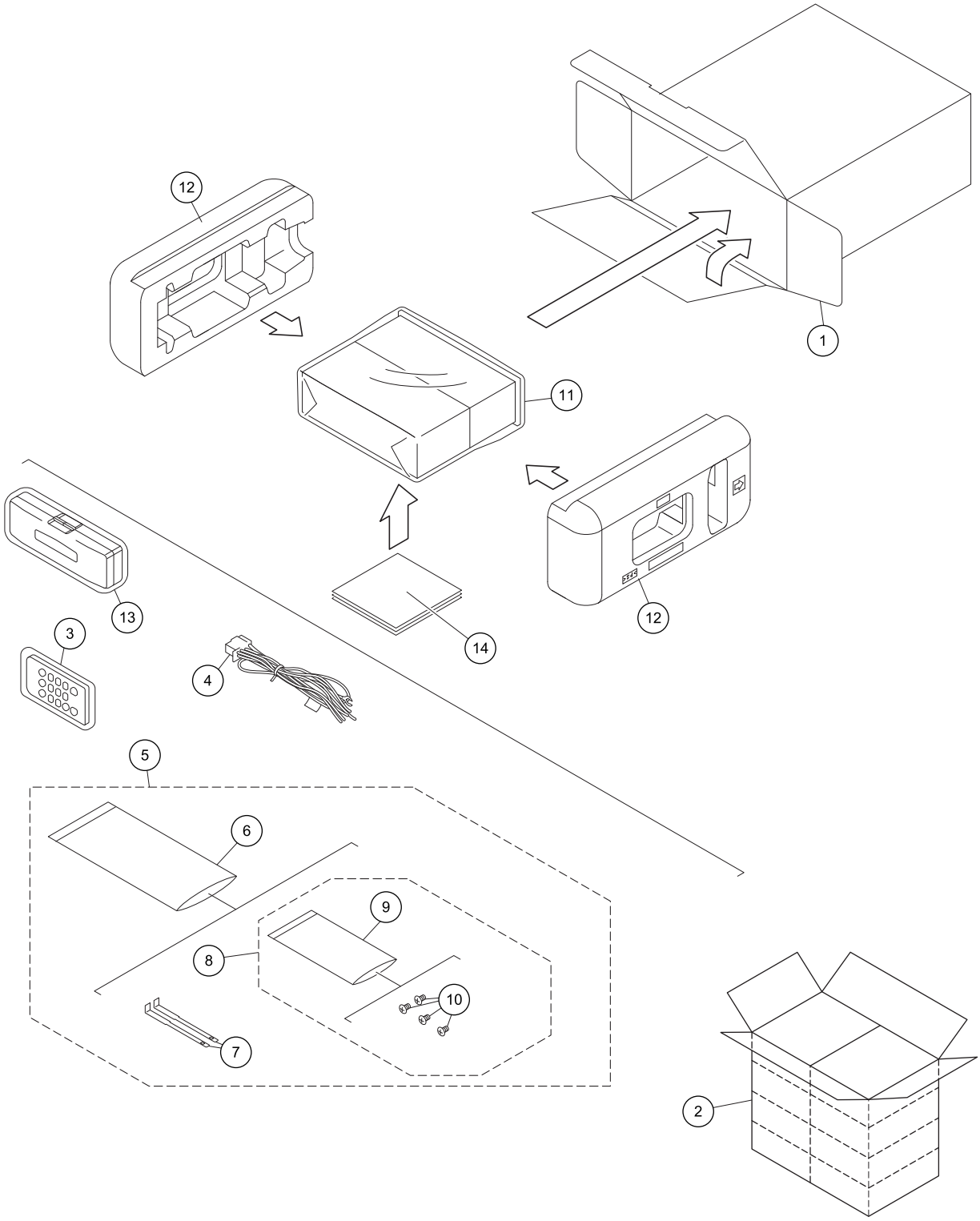
● **PCL output**

With the TESTIN (22 pin) status of IC601 to be “H”, it is shifted to PCL Output Test mode after reset started.
Check that square wave of 600.0 kHz is output from PCL (8 Pin) of IC601.
If clock signal is out of this range, this resonator (X602) must be changed for a new one.

9. EXPLODED VIEWS AND PARTS LIST

NOTES : • *Parts marked by " * " are generally unavailable because they are not in our Master Spare Parts List.*
• *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
• *Screw adjacent to▽ mark on the product are used for disassembly.*
• *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions,apply as you think it appropriate.)*

9.1 PACKING



(1) PACKING SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Unit Box	See Contrast table (2)
	2	Contain Box	See Contrast table (2)
	3	Remote Control Unit	CXE3669
	4	Cord Assy	QDP3013
*	5	Accessory Assy	QEA3009
	6	Polyethylene Bag	CEG1160
	7	Handle	QNC3021
	8	Screw Assy	YEA5082
*	9	Polyethylene Bag	CEG-127
	10	Screw	TRZ50P080FTC
	11	Polyethylene Bag	QEG3001
	12	Protector	QHP3016
	13	Case Assy	QXA3129
	14-1	Owner's Manual	CRD4530
*	14-2	Warranty Card	See Contrast table (2)
*	14-3	Service Network	See Contrast table (2)

(2) CONTRAST TABLE

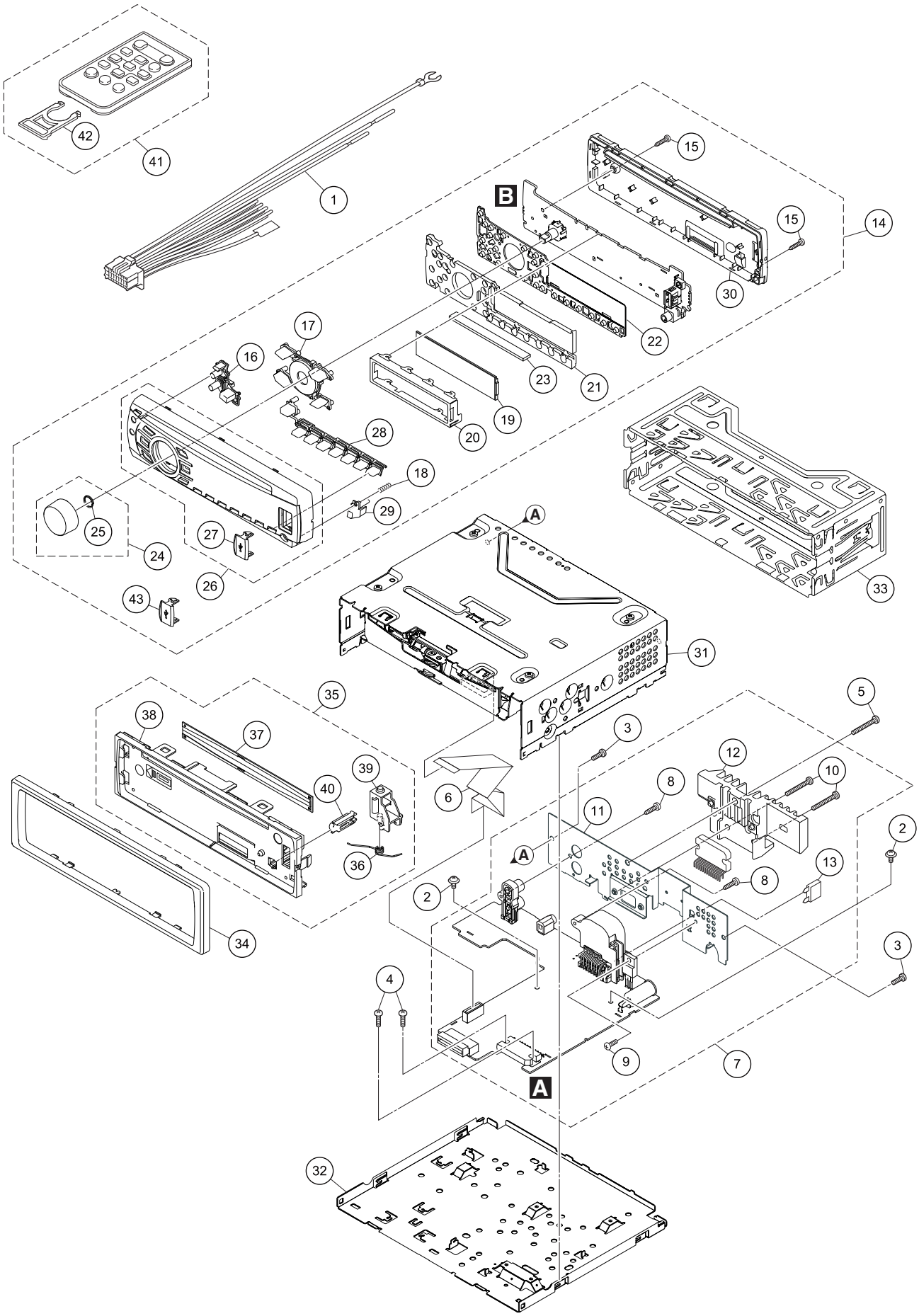
DEH-2350UB/XNES, DEH-2350UBG/XNES, DEH-2350UBSW/XNES, DEH-2350UB/XSES and DEH-2350UB/XNES1are constructed the same except for the following:

Mark	No.	Description	DEH-2350UB/XNES	DEH-2350UBG/XNES	DEH-2350UBSW/XNES	DEH-2350UB/XSES	DEH-2350UB/XNES1
	1	Unit Box	CHG7463	CHG7465	CHG7467	CHG7464	CHG7468
	2	Contain Box	CHL7463	CHL7465	CHL7467	CHL7464	CHL7468
*	14-2	Warranty Card	Not used	Not used	Not used	Not used	CRY1250
*	14-3	Service Network	Not used	Not used	Not used	Not used	CRY1251

Owner's Manual,Installation Manual

Part No.	Language
CRD4530	English, Spanish(Espanol) ,Portuguese(B), Traditional Chinese, Arabic, Persian

9.2 EXTERIOR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43
A
B

(1) EXTERIOR SECTION PARTS LIST

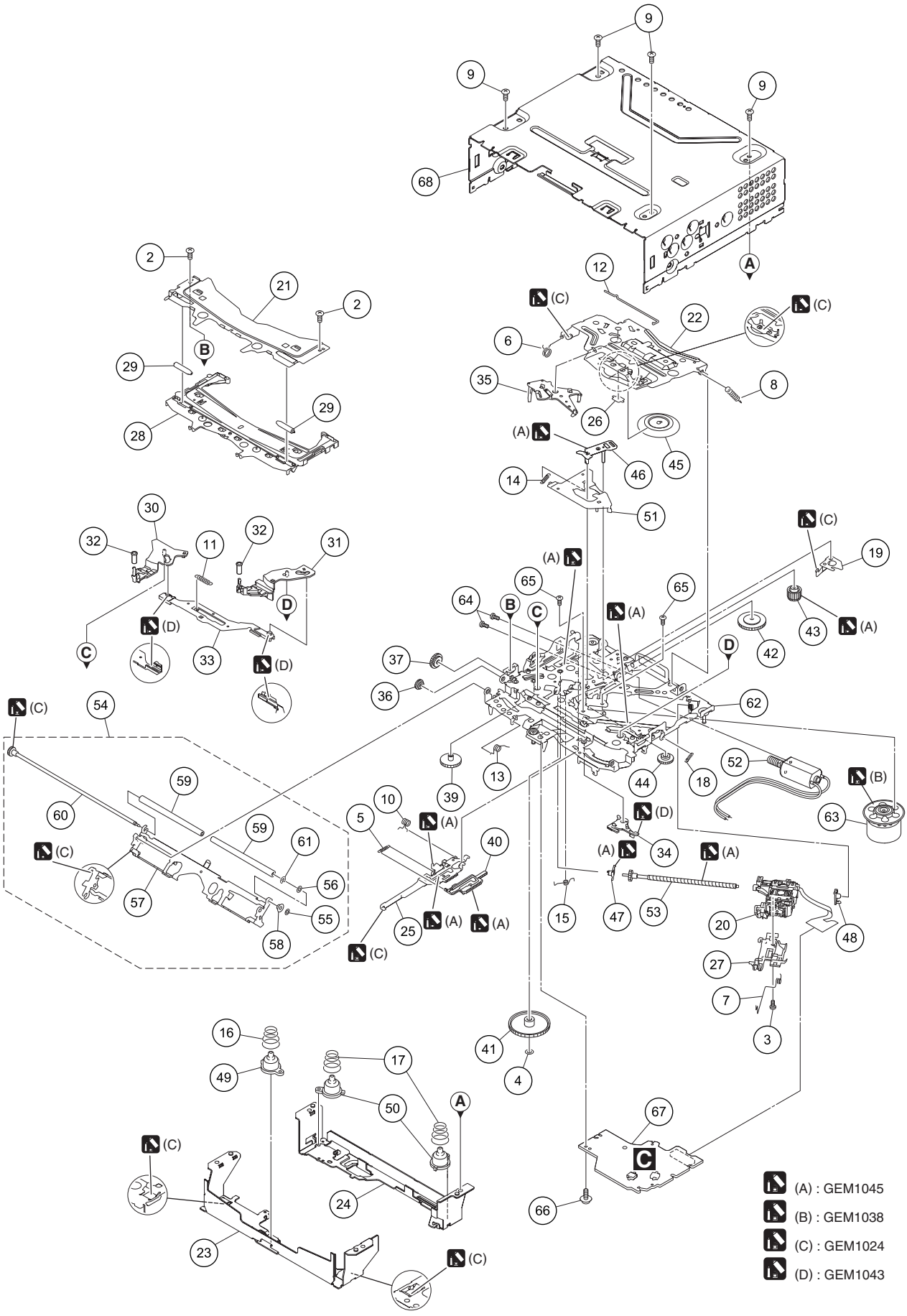
Mark	No.	Description	Part No.
	1	Cord Assy	QDP3013
	2	Screw	ASZ26P050FTC
	3	Screw	BSZ26P060FTC
	4	Screw	BSZ26P080FTC
	5	Screw	BSZ26P120FTC
	6	Cable	CDE9337
	7	Tuner Amp Unit	See Contrast table (2)
	8	Screw	BPZ26P080FTC
	9	Screw	BSZ26P060FTC
	10	Screw	BSZ26P120FTC
	11	Holder	CND5847
	12	Heat Sink	QNR3002
⚠	13	Fuse (10 A)	YEK5001
	14	Detach Grille Assy	See Contrast table (2)
	15	Screw	BPZ20P100FTC
	16	Button(EJECT, SRC, BAND, LEFT)	CAI3203
	17	Button(LIST, RPT, UP, DOWN)	CAI3204
	18	Spring	CBH2210
	19	LCD(V1801)	CAW1998
	20	Holder	See Contrast table (2)
	21	Lighting Conductor	QNV3022
	22	Rubber Contact	QNV3023
	23	Connector	YNV5192
	24	Knob Unit	CXE3692
	25	Spring	YBL5010
	26	Grille Unit	See Contrast table (2)
	27	Door	See Contrast table (2)
	28	Button(RIGHT, -, 1-6)	QAC3052
	29	Button(DETACH)	QAC3053
	30	Cover	QNS3125
	31	CD Mechanism Module(S11.1)	CXK5802
	32	Case	QNB3001
	33	Holder	QNC3020
	34	Panel	QNS3127
	35	Panel Assy	See Contrast table (2)
	36	Spring	QBH3001
	37	Cover	See Contrast table (2)
	38	Panel	See Contrast table (2)
	39	Arm	See Contrast table (2)
	40	Button	See Contrast table (2)
	41	Remote Control Unit	CXE3669
	42	Cover	CNS7068
	43	Door	See Contrast table (2)

(2) CONTRAST TABLE

DEH-2350UB/XNES, DEH-2350UBG/XNES, DEH-2350UBSW/XNES, DEH-2350UB/XSES and DEH-2350UB/XNES1are constructed the same except for the following:

Mark	No.	Description	DEH-2350UB/XNES	DEH-2350UBG/XNES	DEH-2350UBSW/XNES	DEH-2350UB/XSES	DEH-2350UB/XNES1
	7	Tuner Amp Unit	CWN5489	CWN5489	CWN5479	CWN5489	CWN5489
	14	Detach Grille Assy	CXE3787	CXE3786	CXE3788	CXE3787	CXE3787
	20	Holder	QNC3027	QNC3027	QNC3027	QNC3018	QNC3027
	26	Grille Unit	CXE3735	CXE3732	CXE3738	CXE3734	CXE3735
	27	Door	CAT2921	CAT2921	CAT2921	Not used	CAT2921
	35	Panel Assy	*QXA3261	*QXA3261	*QXA3261	CXE3805(Panel Unit)	*QXA3261
	37	Cover	QNM3029	QNM3029	QNM3029	CNN1665	QNM3029
	38	Panel	QNS3126	QNS3126	QNS3126	QNS3126	QNS3126
	39	Arm	QNV3025	QNV3025	QNV3025	QNV3025	QNV3025
	40	Button	QNV3026	QNV3026	QNV3026	QNV3026	QNV3026
	43	Door	Not used	Not used	Not used	CAT2921	Not used

9.3 CD MECHANISM MODULE



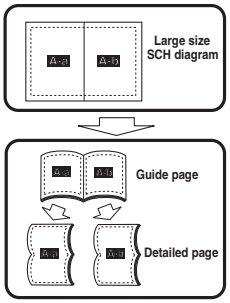
CD MECHANISM MODULE SECTION PARTS LIST

Mark No.	Description	Part No.
1	.....	
2	Screw	BSZ20P040FTC
3	Screw(M2 x 4)	CBA1835
4	Washer	CBF1038
5	Spring	CBH3010
6	Spring	CBH2855
7	Spring	CBH2856
8	Spring	CBH2860
9	Screw	BSZ26P060FTC
10	Spring	CBH3011
11	Spring	CBH3012
12	Spring	CBH3014
13	Spring	CBH3015
14	Spring	CBH3016
15	Spring	CBH3017
16	Spring	CBH3086
17	Spring	CBH3019
18	.....	
19	Spring	CBL1822
20	Pickup Unit(S10.5)(Service)	CXX1942
21	Bracket	CND4553
22	Arm	CND4555
23	Bracket	CND5709
24	Bracket	CND5710
25	Lever	CND5398
26	Sheet	CNN2280
27	Rack	CNV8342
28	Guide	CNW1171
29	Roller	CNW1172
30	Arm	CNW2157
31	Arm	CNW1174
32	Roller	CNW1175
33	Lever	CNW1176
34	Arm	CNW1177
35	Arm	CNW1178
36	Gear	CNW1180
37	Gear	CNW1181
38	.....	
39	Gear	CNW1183
40	Rack	CNW1184
41	Gear	CNW1185
42	Gear	CNW1186
43	Gear	CNW1187
44	Gear	CNW1188
45	Clamper	CNW1190
46	Arm	CNW1192
47	Holder	CNW1193
48	Holder	CNW1194
49	Damper	CNW1197
50	Damper	CNW1198
51	Arm	CNW1726
52	Motor Unit	CXC4026
53	Screw Unit	CXC8894
54	Arm Assy	CXE3849
55	Washer	CBF1037
56	Washer	CBF1038
57	Arm	CND5886
58	Collar	CNV6906
59	Roller	CNW1196
60	Gear Unit	CXC8893
61	Washer	YE15FTC
62	Chassis Unit	CXE3818
63	Motor Unit	CXE2273
64	Screw	JFZ20P025FTC
65	Screw	JGZ17P022FTC
66	Screw	EBA1028
67	CD Core Unit (S11.1STD-DOUT)	CWX3985
68	Chassis	CNA3181

10. SCHEMATIC DIAGRAM

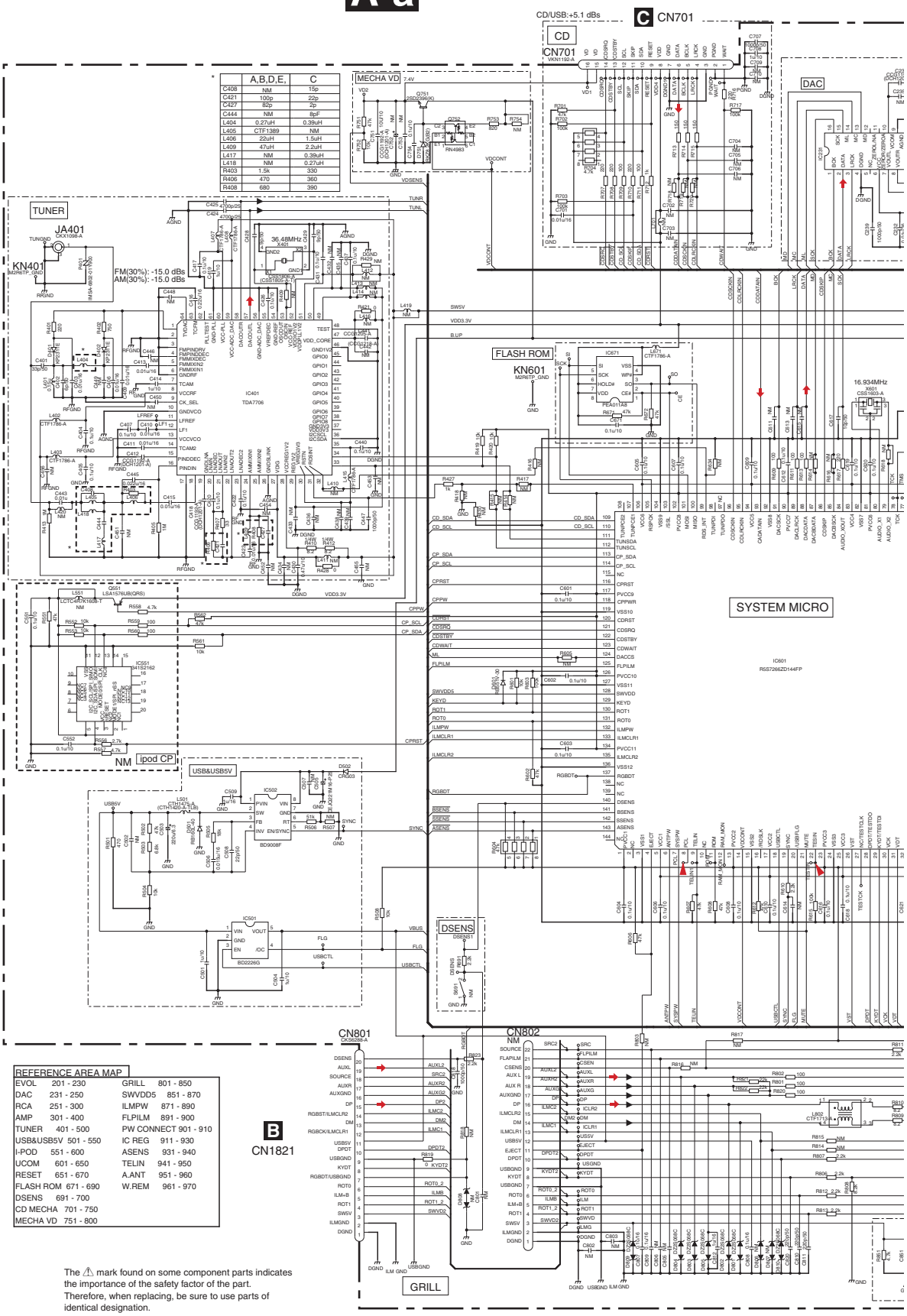
10.1 TUNER AMP UNIT (GUIDE PAGE)

Note: When ordering service parts, be sure to refer to " EXPLODED VIEWS AND PARTS LIST" or "ELECTRICAL PARTS LIST".



A-a

*	A,B,D,E,	C
C408	NM	15p
C421	100p	22p
C427	82p	2p
C444	NM	8pF
L404	0.27uH	0.39uH
L405	CTF1389	NM
L406	22uH	1.5uH
L409	47uH	2.2uH
L417	NM	0.39uH
L418	NM	0.27uH
R403	1.5k	330
R406	470	360
R408	680	390

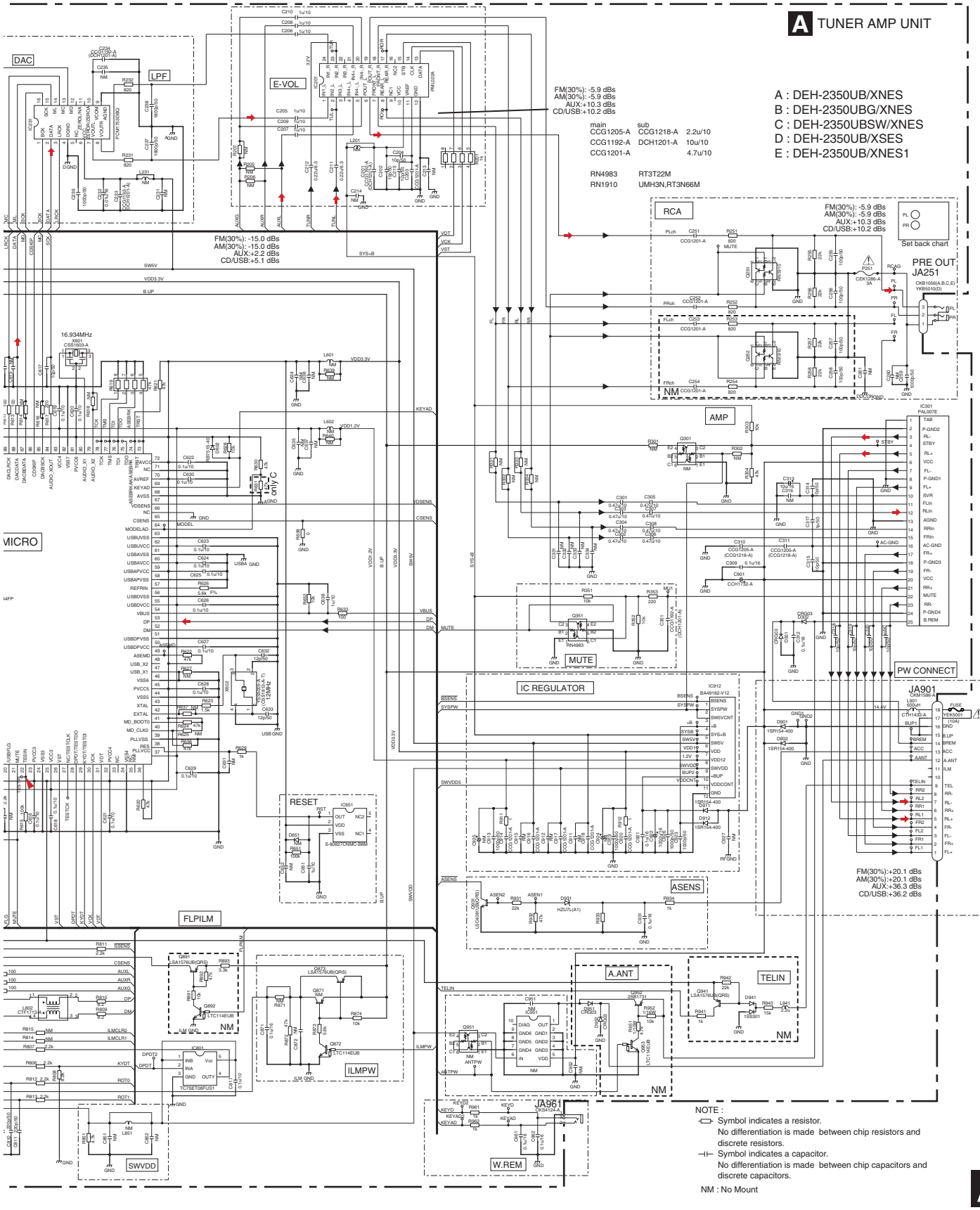


REFERENCE AREA MAP			
EVOL	201 - 230	GRILL	801 - 850
DAC	231 - 250	SWVDD5	851 - 870
RCA	251 - 300	ILMPW	871 - 890
AMP	301 - 400	FLPILM	891 - 900
TUNER	401 - 500	PW CONNECT	901 - 910
USB&USB5V	501 - 550	IC REG	911 - 930
I-POD	551 - 600	ASENS	931 - 940
UCOM	601 - 650	TELIN	941 - 950
RESET	651 - 670	A.ANT	951 - 960
FLASH ROM	671 - 690	W.REM	961 - 970
DSENS	691 - 700		
CD MECHA	701 - 750		
MECHA VD	751 - 800		

The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

A

A-b


A TUNER AMP UNIT
A : DEH-2350UB/XNES
B : DEH-2350UBG/XNES
C : DEH-2350UBSW/XNES
D : DEH-2350UB/XSES
E : DEH-2350UB/XNES1
FM(30%): -5.9 dBs
AM(30%): -5.9 dBs
AUX:+10.3 dBs
CD/USB:+10.2 dBs
main sub
CCG1205-A CCG1218-A 2.2u/10
CCG1192-A DCH1201-A 10u/10
CCG1201-A 4.7u/10
RN4983 RT3T22M
RN1910 UMH3N,RT3N66M
FM(30%): -15.0 dBs
AM(30%): -15.0 dBs
AUX:+2.2 dBs
CD/USB:+5.1 dBs
RCA
PRE OUT
JA251
Set back chart
AMP
MUTE
IC REGULATOR
PW CONNECT
JA901
FM(30%):+20.1 dBs
AM(30%):+20.1 dBs
AUX:+36.3 dBs
CD/USB:+36.2 dBs
A.ANT
TELIN
ASENS
FLPILM
ILMPW
SWVDD
RESET
W.REM
JA951
DAC
LPF
E-VOL
MICRO
16.934MHz
NOTE :
Symbol indicates a resistor.
No differentiation is made between chip resistors and discrete resistors.
Symbol indicates a capacitor.
No differentiation is made between chip capacitors and discrete capacitors.
NM : No Mount

A-b

A TUNER AMP UNIT

A : DEH-2350UB/XNES
B : DEH-2350UBG/XNES
C : DEH-2350UBSW/XNES
D : DEH-2350UB/XSES
E : DEH-2350UB/XNES1

DEH-2350UB/XNES

FM(30%): -5.9 dBs
AM(30%): -5.9 dBs
AUX:+10.3 dBs
CD/USB:+10.2 dBs

main	sub	
CCG1205-A	CCG1218-A	2.2u/10
CCG1192-A	DCH1201-A	10u/10
CCG1201-A		4.7u/10

RN4983	RT3T22M
RN1910	UMH3N,RT3N66M

FM(30%): -15.0 dBs
AM(30%): -15.0 dBs
AUX:+2.2 dBs
CD/USB:+5.1 dBs

FM(30%): -5.9 dBs
AM(30%): -5.9 dBs
AUX:+10.3 dBs
CD/USB:+10.2 dBs

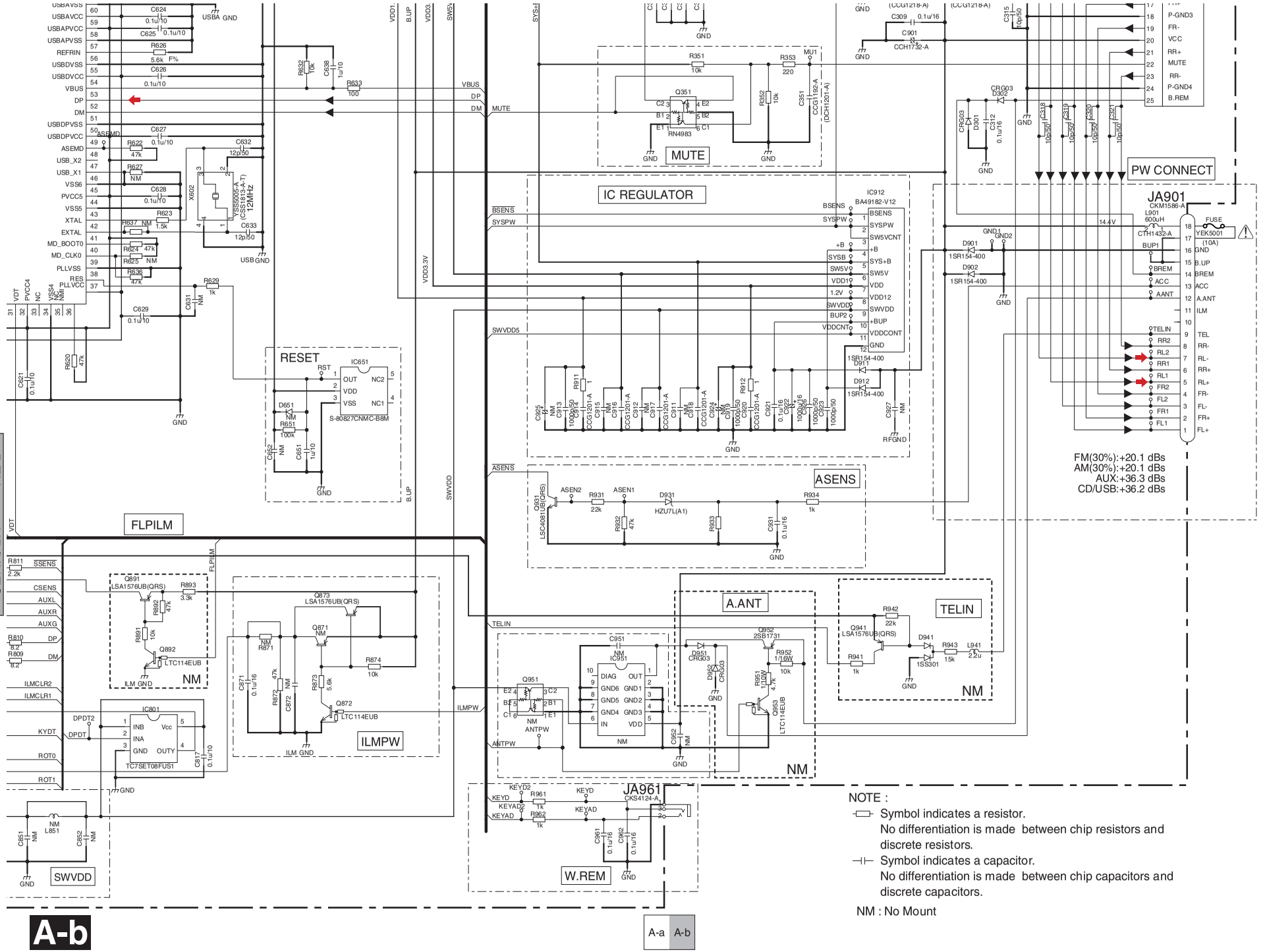
Set back chart

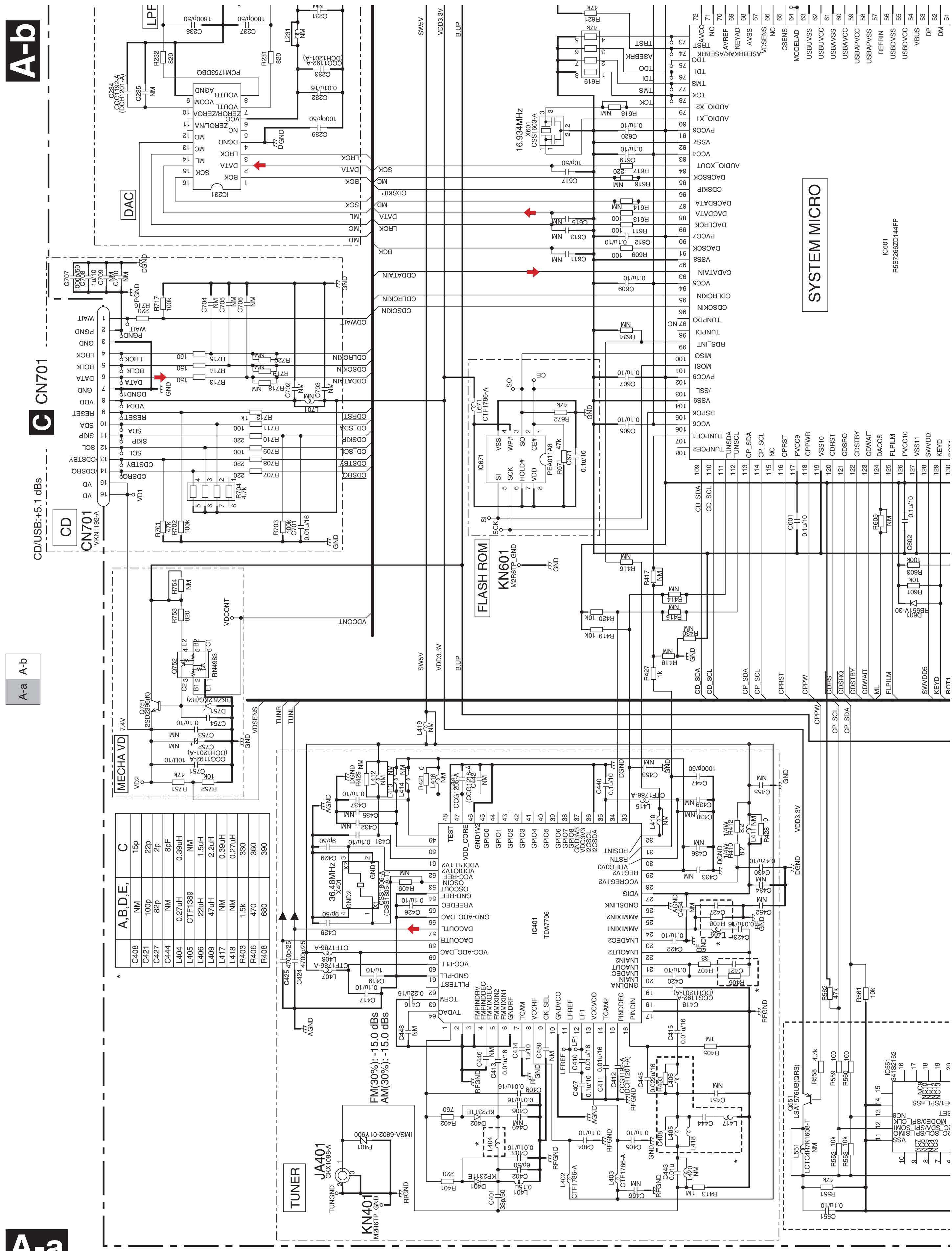
PRE OUT
JA251
CKB1056(A,B,C,E)
YKB5010(D)

IC301
PAL007E

1	TAB
2	P-GND2
3	RL-
4	STBY
5	RL+
6	VCC
7	FL-
8	P-GND1
9	FL+
10	SVR
11	FLIn
12	RLIn
13	AGND
14	RRIn
15	FRIn
16	AC-GND
17	FR+
18	P-GND3
19	FR-
20	VCC
21	RR+
22	MUTE
23	RR-
24	P-GND4
25	B.REM

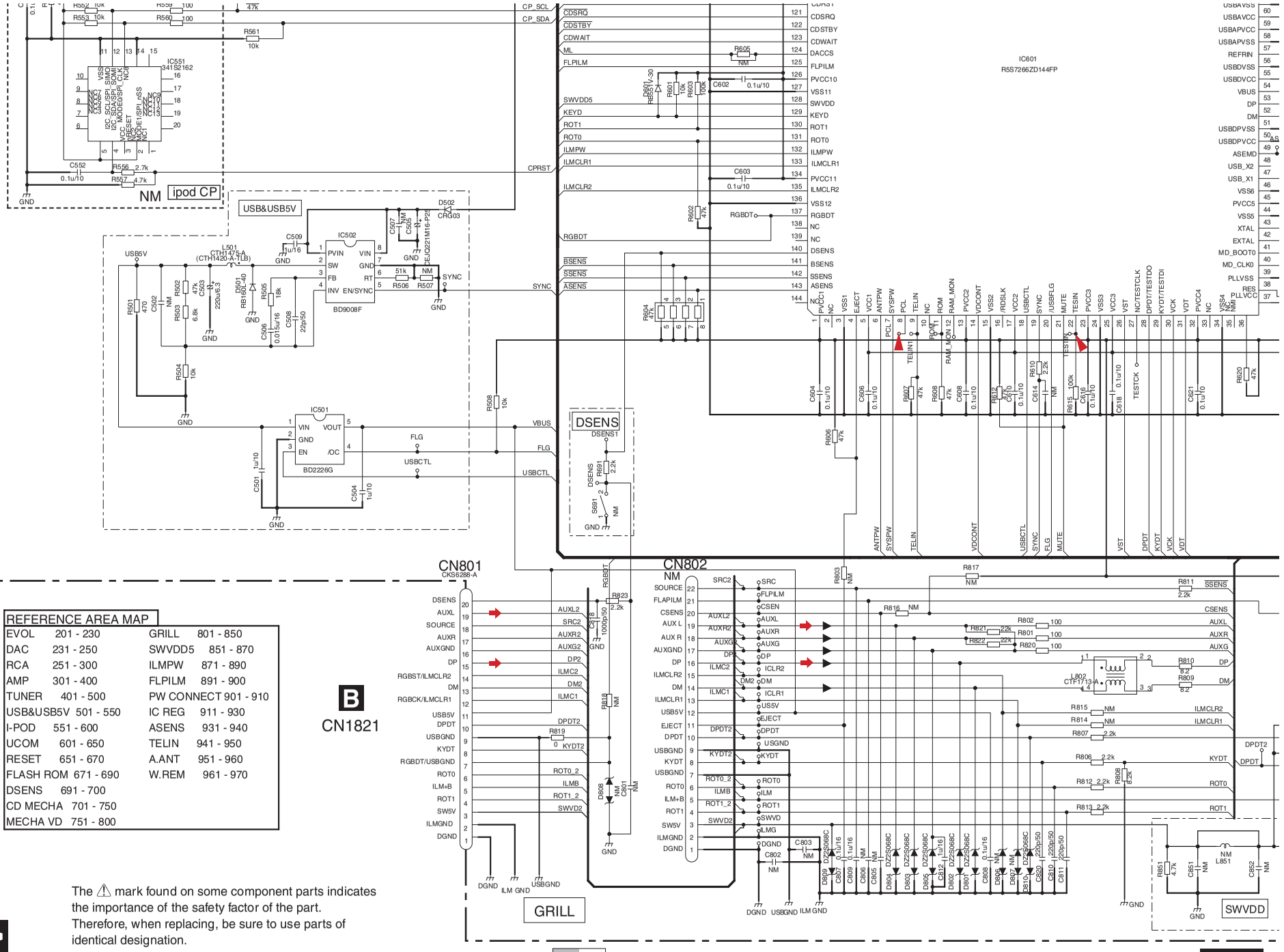
only C


DEH-2350UB/XNES
A-b
A-a
A-b
MUTE
IC REGULATOR
PW CONNECT
JA901
CKM1586-A
RESET
ASENS
FLPILM
ILMPW
SWVDD
A.ANT
TELIN
W.REM
JA961
CKS4124-A
NM
FM(30%):+20.1 dBs
AM(30%):+20.1 dBs
AUX:+36.3 dBs
CD/USB:+36.2 dBs
NOTE :
Symbol indicates a resistor.
No differentiation is made between chip resistors and discrete resistors.
Symbol indicates a capacitor.
No differentiation is made between chip capacitors and discrete capacitors.
NM : No Mount



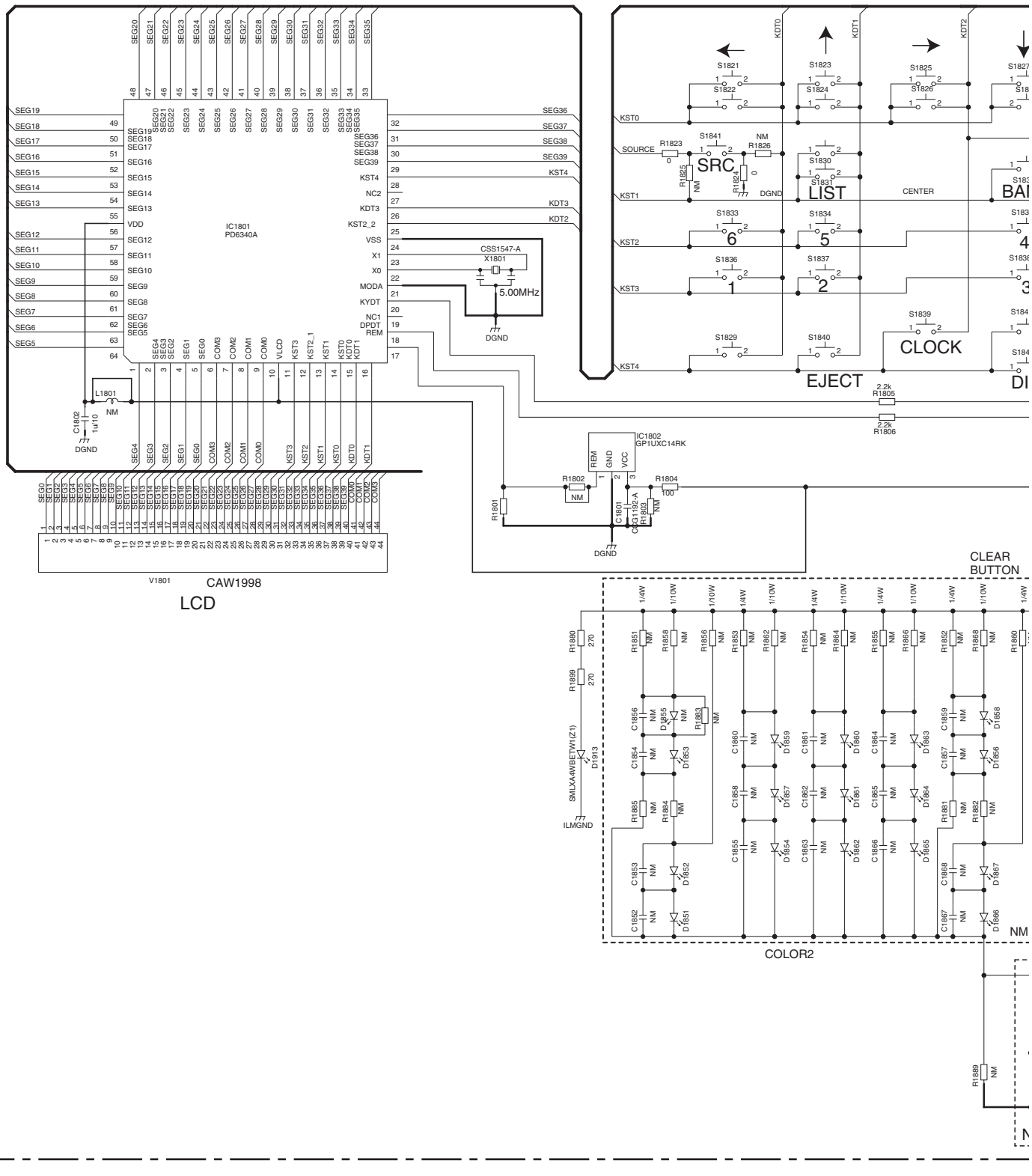
	A,B,D,E,	C
C408	NM	15p
C421	100p	22p
C427	82p	2p
C444	NM	8pF
L404	0.27uH	0.39uH
L405	CTF1389	NM
L406	22uH	1.5uH
L409	47uH	2.2uH
L417	NM	0.39uH
L418	NM	0.27uH
R403	1.5k	330
R406	470	360
R408	680	390

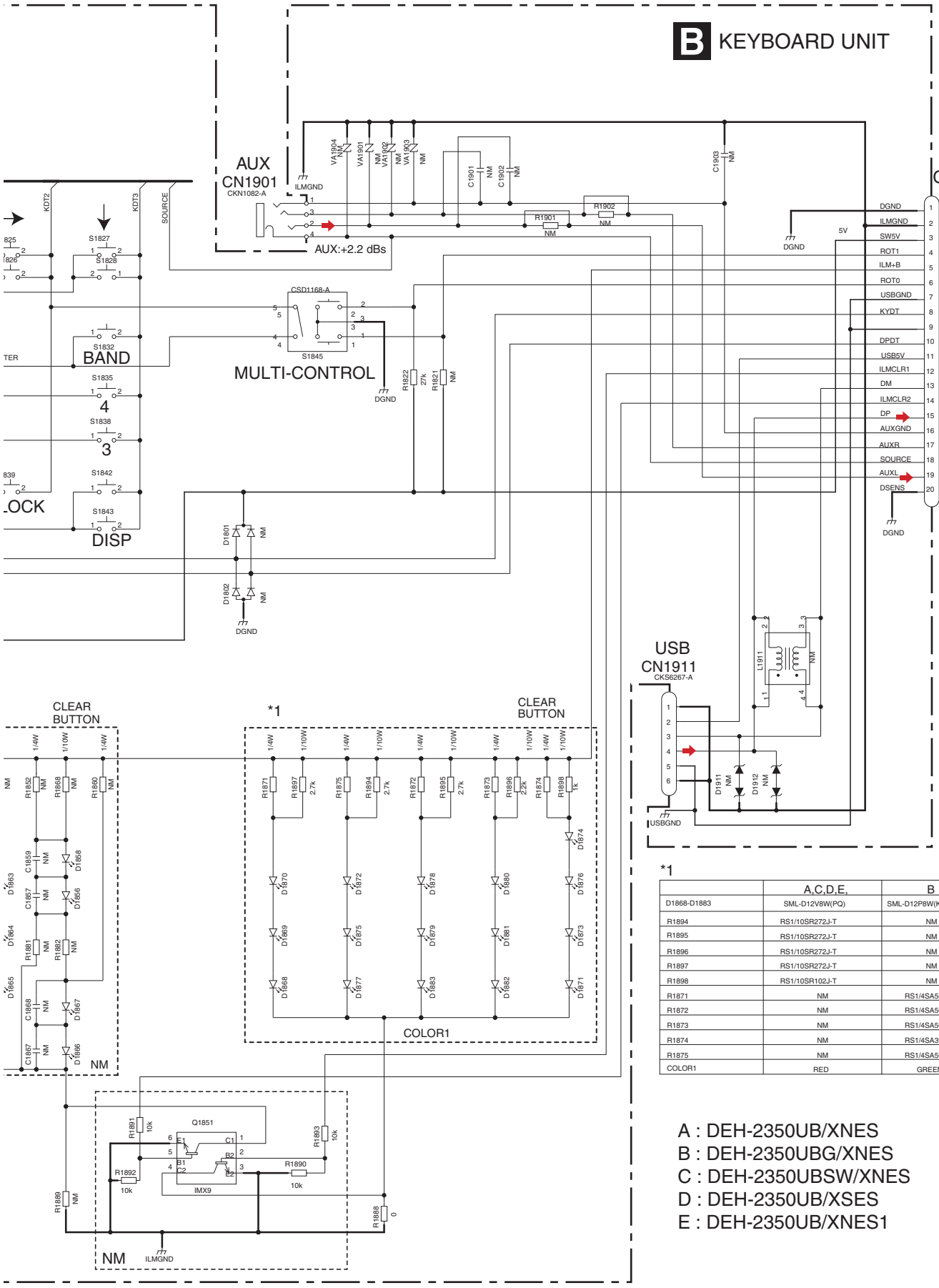
*


IC601
R5S7266ZD144FP
IC551
3412S162
NM
ipod CP
USB&USB5V
IC502
BD9008F
IC501
BD2226G
L501
CTH1475-A
(CTH1420-A-TLB)
D502
CRG03
DSENS
CN801
CKS6288-A
CN802
NM
CN1821
B
REFERENCE AREA MAP
EVOL 201 - 230
DAC 231 - 250
RCA 251 - 300
AMP 301 - 400
TUNER 401 - 500
USB&USB5V 501 - 550
I-POD 551 - 600
UCOM 601 - 650
RESET 651 - 670
FLASH ROM 671 - 690
DSENS 691 - 700
CD MECHA 701 - 750
MECHA VD 751 - 800
GRILL 801 - 850
SWVDD5 851 - 870
ILMPW 871 - 890
FLPILM 891 - 900
PW CONNECT 901 - 910
IC REG 911 - 930
ASENS 931 - 940
TELIN 941 - 950
A.ANT 951 - 960
W.REM 961 - 970
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
GRILL
SWVDD
A-a
A-b
DEH-2350UB/XNES
43

10.2 KEYBOARD UNIT

UCON&LCD	1801-1820
SWITCH&CONNENCTOR	1821-1850
LED	1851-1900
FRONT AUX	1901-1910
USB IN	1911-1920

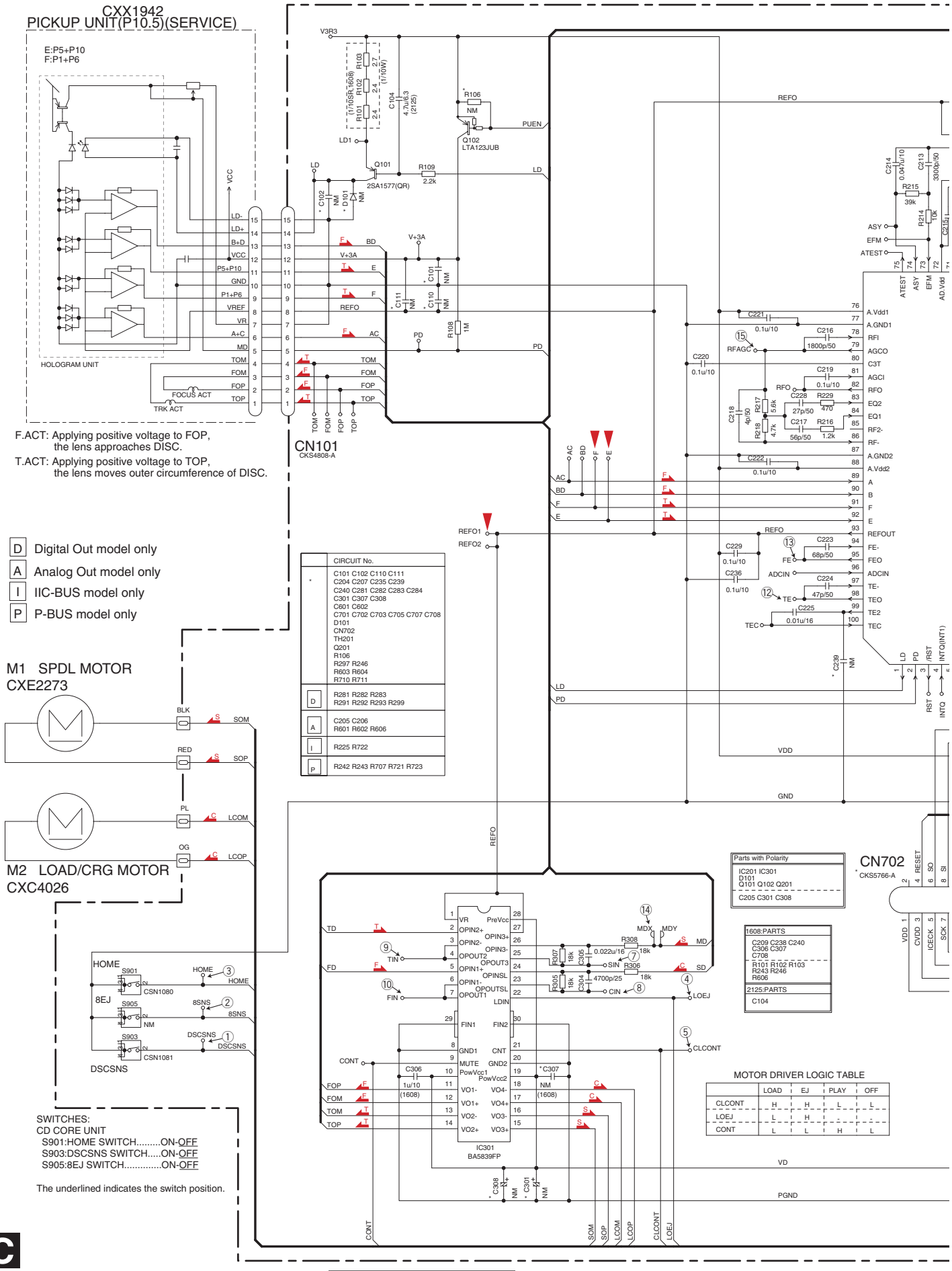




*1

	A,C,D,E,	B
D1868-D1883	SML-D12V8W(PQ)	SML-D12P8W(KL)
R1894	RS1/10SR272J-T	NM
R1895	RS1/10SR272J-T	NM
R1896	RS1/10SR272J-T	NM
R1897	RS1/10SR272J-T	NM
R1898	RS1/10SR102J-T	NM
R1871	NM	RS1/4SA561J-T
R1872	NM	RS1/4SA561J-T
R1873	NM	RS1/4SA561J-T
R1874	NM	RS1/4SA391J-T
R1875	NM	RS1/4SA561J-T
COLOR1	RED	GREEN

10.3 CD CORE UNIT (S11.1STD-DOUT)



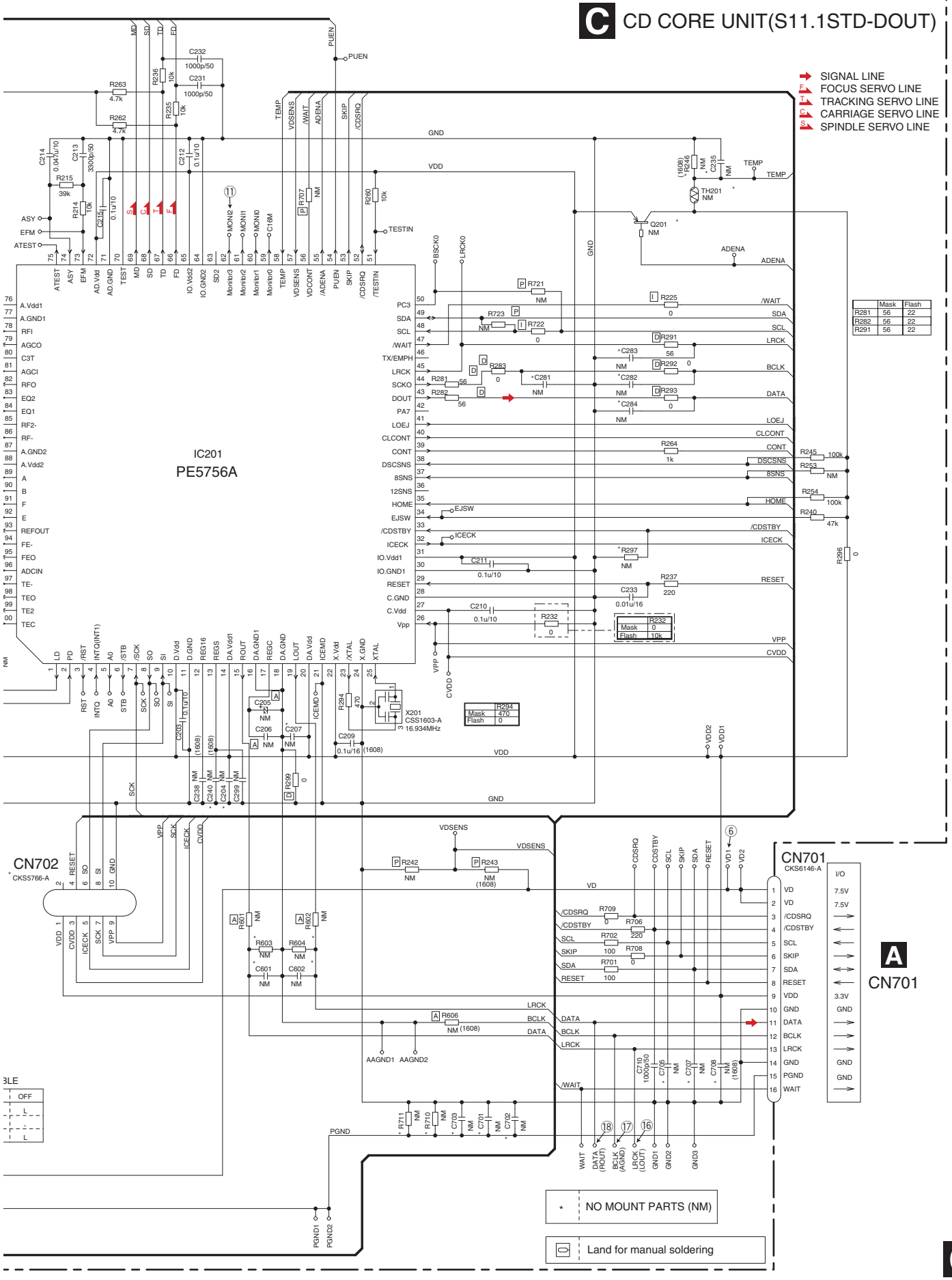
CIRCUIT No.
* C101 C102 C110 C111 C204 C207 C235 C239 C240 C281 C282 C283 C284 C301 C307 C308 C601 C602 C701 C702 C703 C705 C707 C708 D101 CN702 TH201 Q201 R106 R297 R246 R603 R604 R710 R711
D R281 R282 R283 R291 R292 R293 R299
A C205 C206 R601 R602 R606
I R225 R722
P R242 R243 R707 R721 R723

Parts with Polarity
IC201 IC301 D101 Q101 Q102 Q201
C205 C301 C308

1608:PARTS
C209 C238 C240 C306 C307 C708 R101 R102 R103 R243 R246 R606
2125:PARTS
C104

	LOAD	EJ	PLAY	OFF
CLCONT	H	H	L	L
LOEJ	L	H	-	-
CONT	L	L	H	L

C CD CORE UNIT(S11.1STD-DOUT)



	Mask	Flash
R281	56	22
R282	56	22
R291	56	22

	R234
Mask	470
Flash	0

	R232
Mask	0
Flash	10k

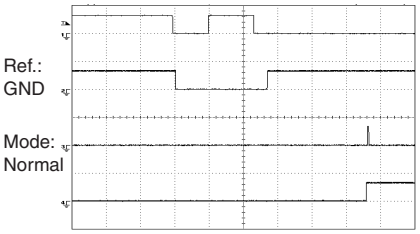
10.4 WAVEFORMS

● CD CORE UNIT

Note : 1. The encircled numbers denote measuring points in the circuit diagram.
2. Reference voltage REFO1(1.65 V)

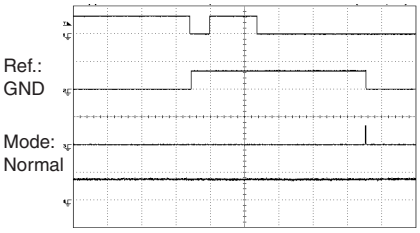
①DSCSNS	5 V/div	500 ms/div
②8SNS	5 V/div	
④LOEJ	5 V/div	
③HOME	5 V/div	

12 cm CD Loading operation



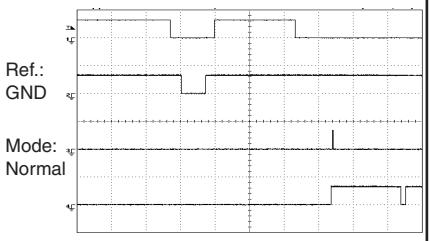
①DSCSNS	5 V/div	500 ms/div
⑤CLCONT	5 V/div	
④LOEJ	5 V/div	
⑥VD	10 V/div	

12 cm CD Loading operation



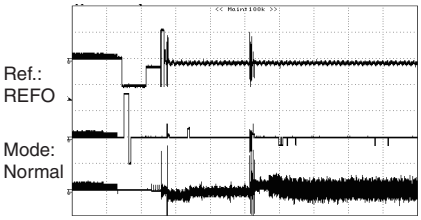
①DSCSNS	5 V/div	500 ms/div
②8SNS	5 V/div	
④LOEJ	5 V/div	
③HOME	5 V/div	

8 cm CD Loading operation



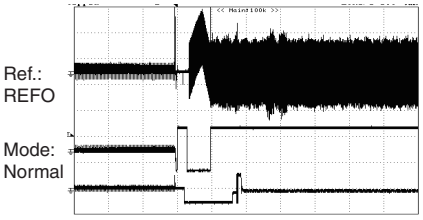
⑦SIN	1 V/div	2 s/div
⑧CIN	500 mV/div	
⑨TIN	500 mV/div	

12 cm CD-DA setup operation after loading



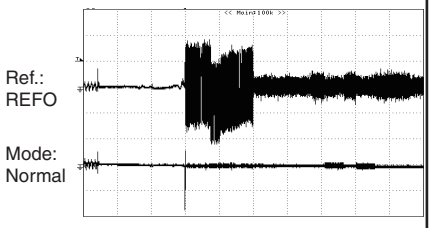
⑩FIN	200 mV/div	500 ms/div
⑪RFOK(MONI_3)	2 V/div	
⑦SIN	2 V/div	

12 cm CD-DA Source On setup operation



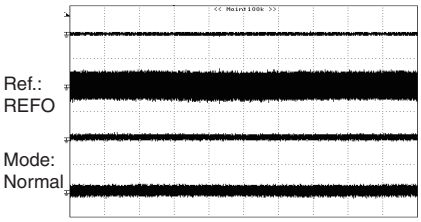
⑫TE	500 mV/div	200 ms/div
⑬FE	500 mV/div	

Source On setup operation



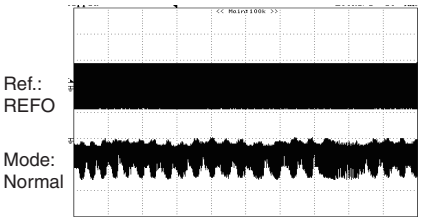
⑬FE	500 mV/div	20 ms/div
⑩FIN	500 mV/div	
⑫TE	500 mV/div	
⑨TIN	500 mV/div	

CD-DA Play operation



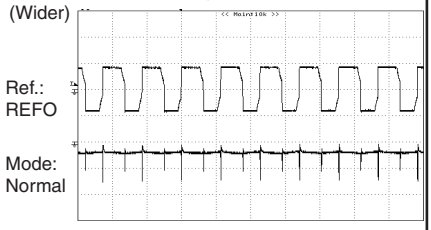
⑭MDX	2 V/div	50 ms/div
⑦SIN	500 mV/div	

Spindle waveform during play operation



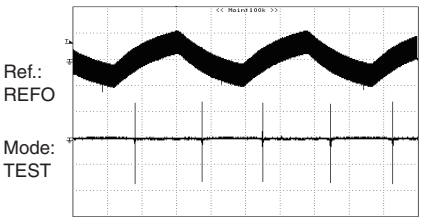
⑭MDX	2 V/div	5 µs/div
⑦SIN	500 mV/div	

Spindle waveform during play operation (Wider)



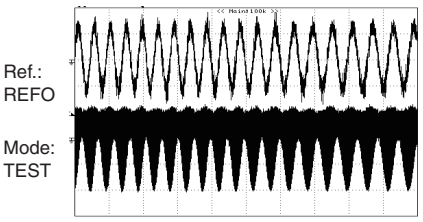
⑩FIN	500 mV/div	200 ms/div
⑬FE	500 mV/div	

Focus Search waveform



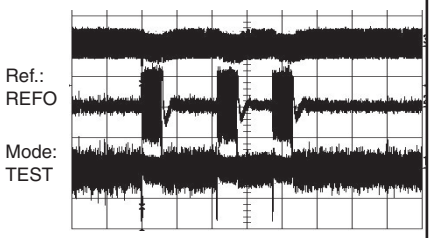
⑫TE	500 mV/div	2 ms/div
⑮RFAGC	500 mV/div	

Track Open waveform



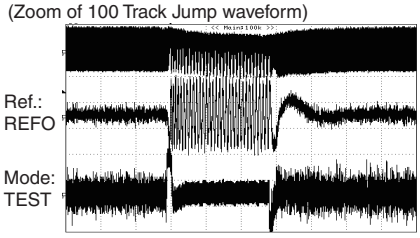
⑮RFAGC	1 V/div	500 µs/div
⑫TE	500 mV/div	
⑨TIN	500 mV/div	

100 Track Jump waveform (32 Track Jump x 3)



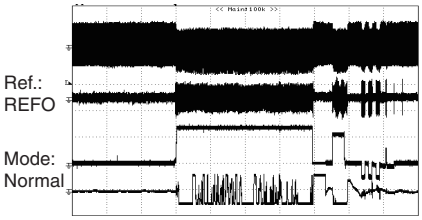
⑮RFAGC	1 V/div	2 ms/div
⑫TE	500 mV/div	
⑨TIN	500 mV/div	

32 Tracks Jump waveform
(Zoom of 100 Track Jump waveform)



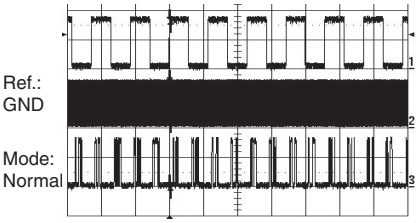
⑮RFAGC	1 V/div	200 ms/div
⑫TE	1 V/div	
⑧CIN	500 mV/div	
⑦SIN	2 V/div	

Search operation(Outter to Inner)



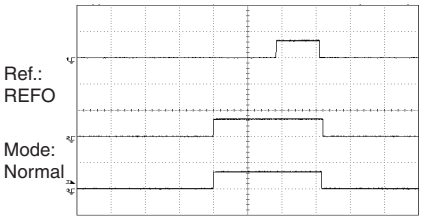
⑯LRCK	2 V/div	10 μs/div
⑰BCLK	2 V/div	
⑱DATA	2 V/div	

Digital Out waveform



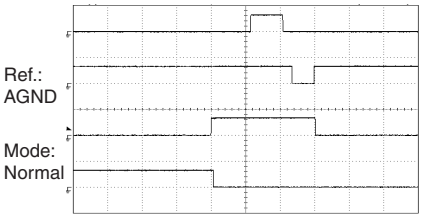
①DSCSNS	5 V/div	500 ms/div
⑤CLCONT	5 V/div	
④LOEJ	5 V/div	

12 cm CD Eject operation



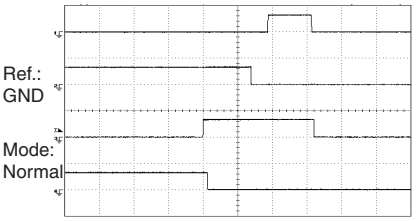
①DSCSNS	5 V/div	500 ms/div
②8SNS	5 V/div	
④LOEJ	5 V/div	
③HOME	5 V/div	

8 cm CD Eject operation



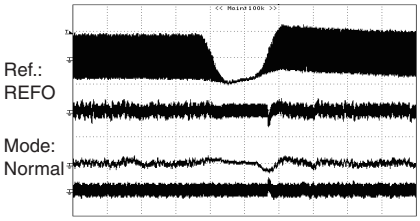
①DSCSNS	5 V/div	500 ms/div
②8SNS	5 V/div	
④LOEJ	5 V/div	
③HOME	5 V/div	

12 cm CD Eject operation



⑮RFAGC	1 V/div	500 μs/div
⑨TIN	1 V/div	
⑫TE	1 V/div	
⑩FIN	1 V/div	

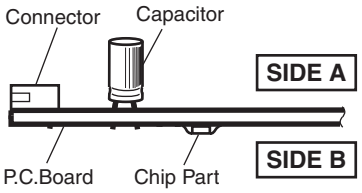
Black Dot (800 μm) during play

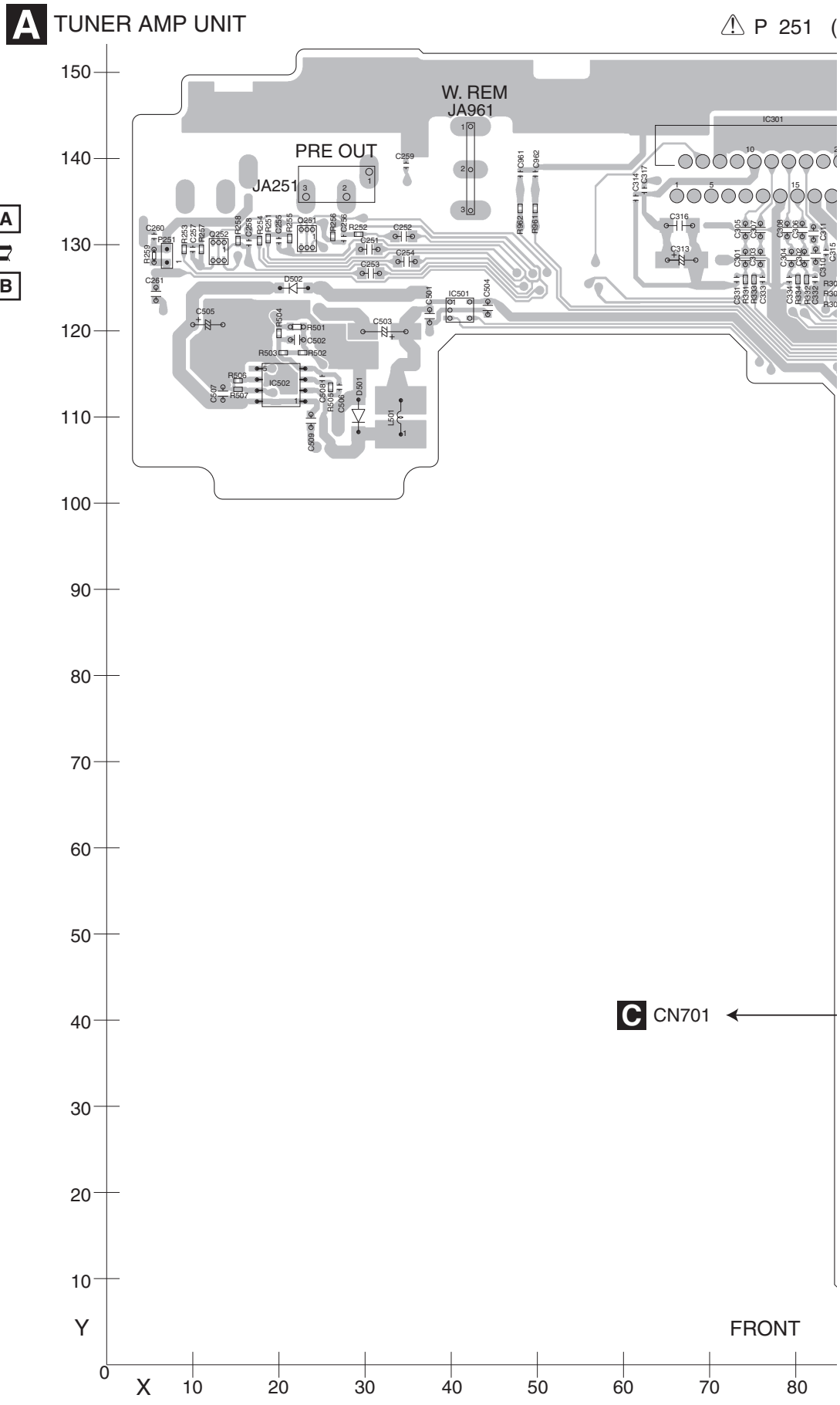


11. PCB CONNECTION DIAGRAM
11.1 TUNER AMP UNIT

NOTE FOR PCB DIAGRAMS

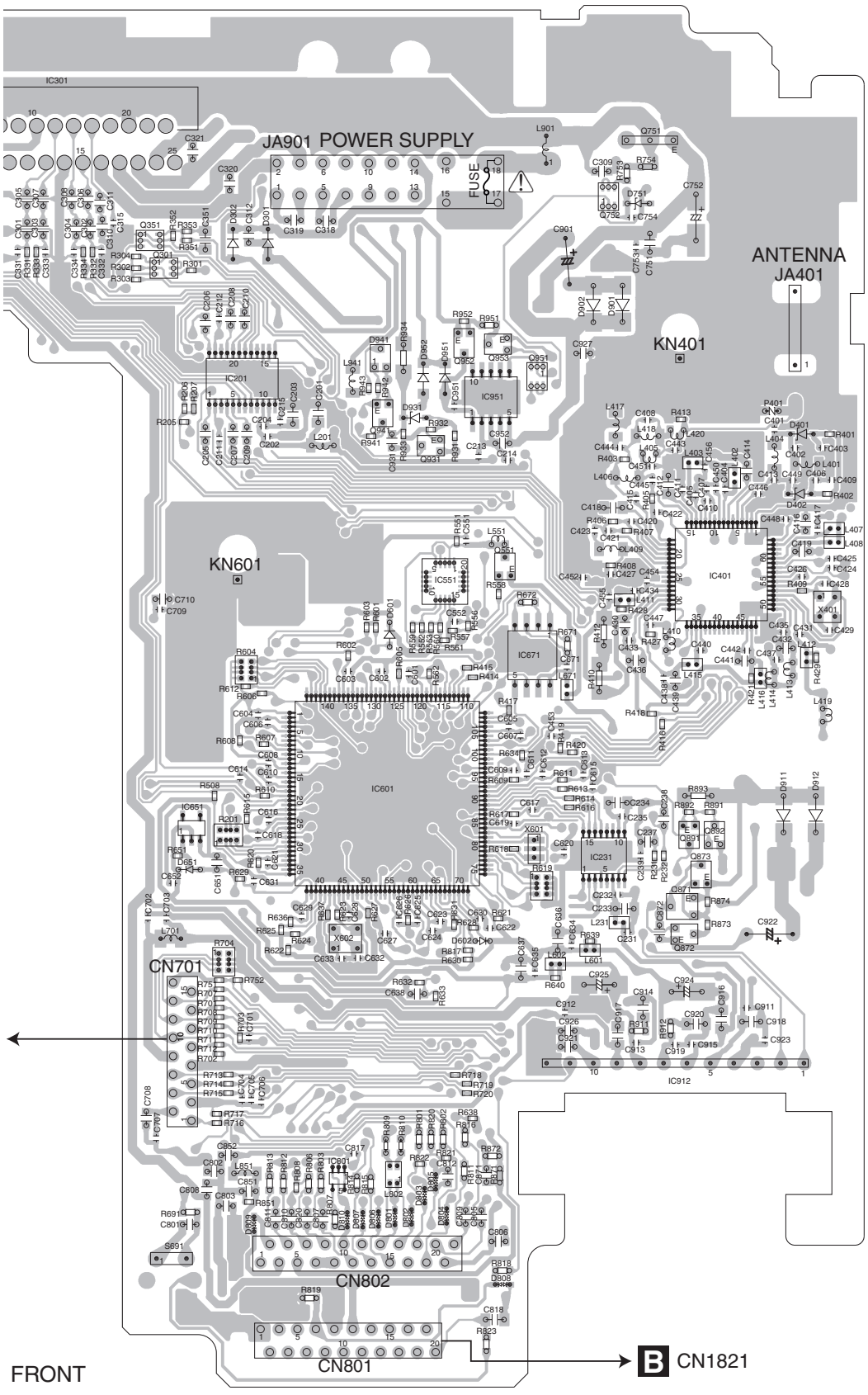
1. The parts mounted on this PCB include all necessary parts for several destination. For further information for respective destinations, be sure to check with the schematic diagram.
2. Viewpoint of PCB diagrams



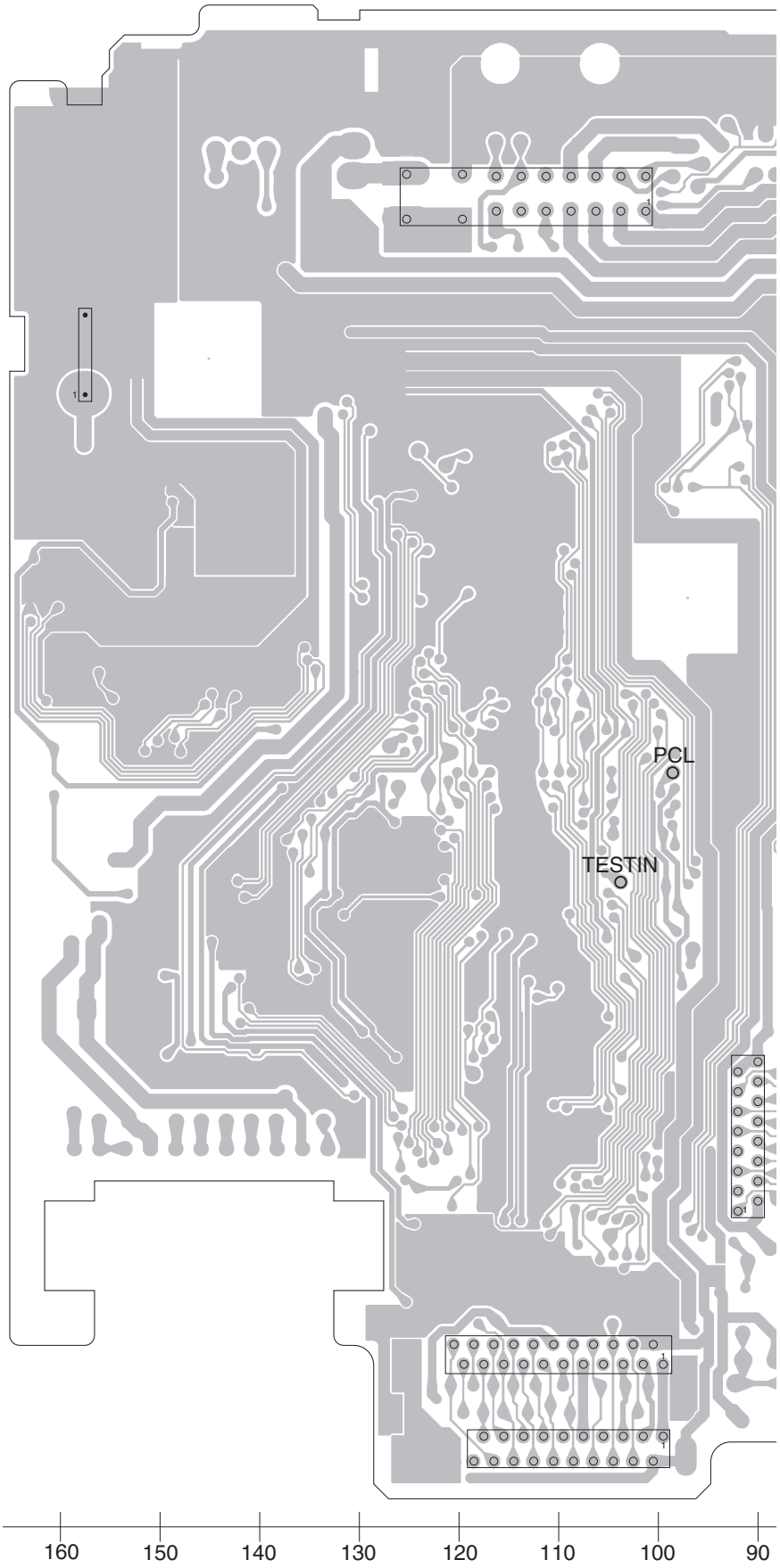


⚠ P 251 (A,7,129) Fuse 3 A CEK1286

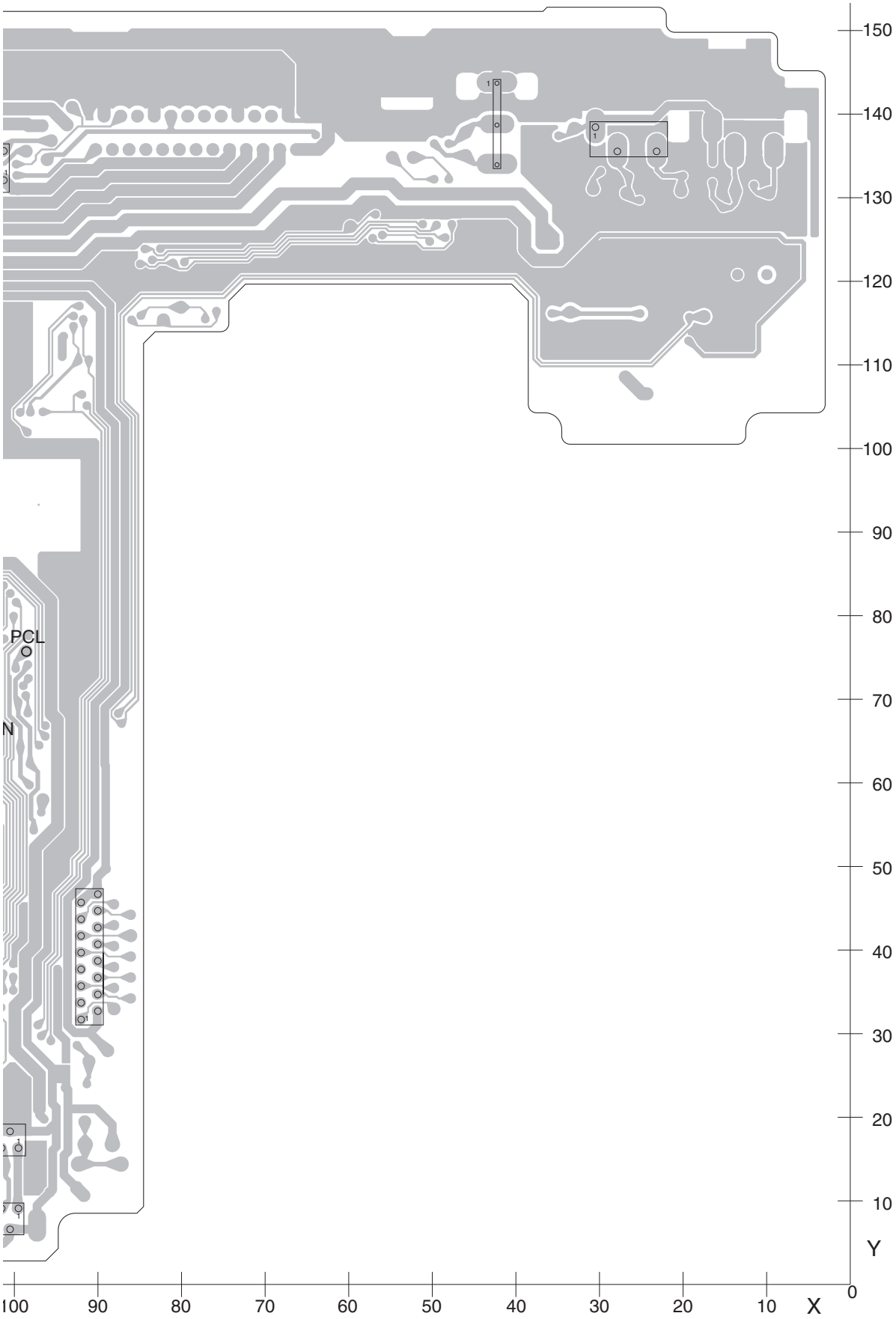
SIDE A



A TUNER AMP UNIT



SIDE B



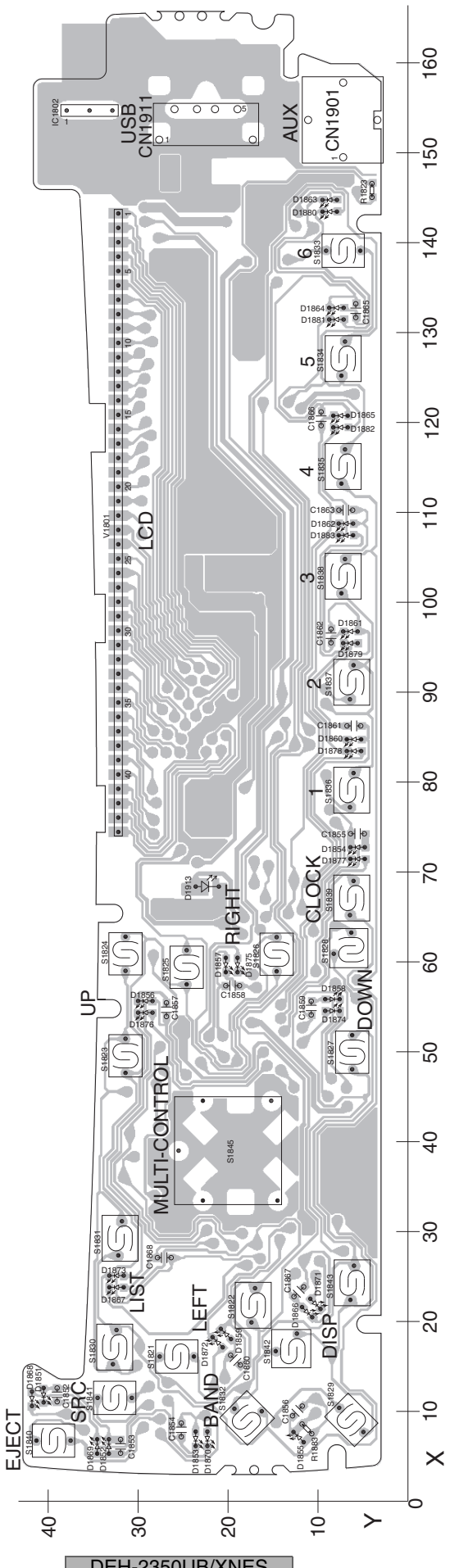
A B C D E F

A

11.2 KEYBOARD UNIT

B KEYBOARD UNIT

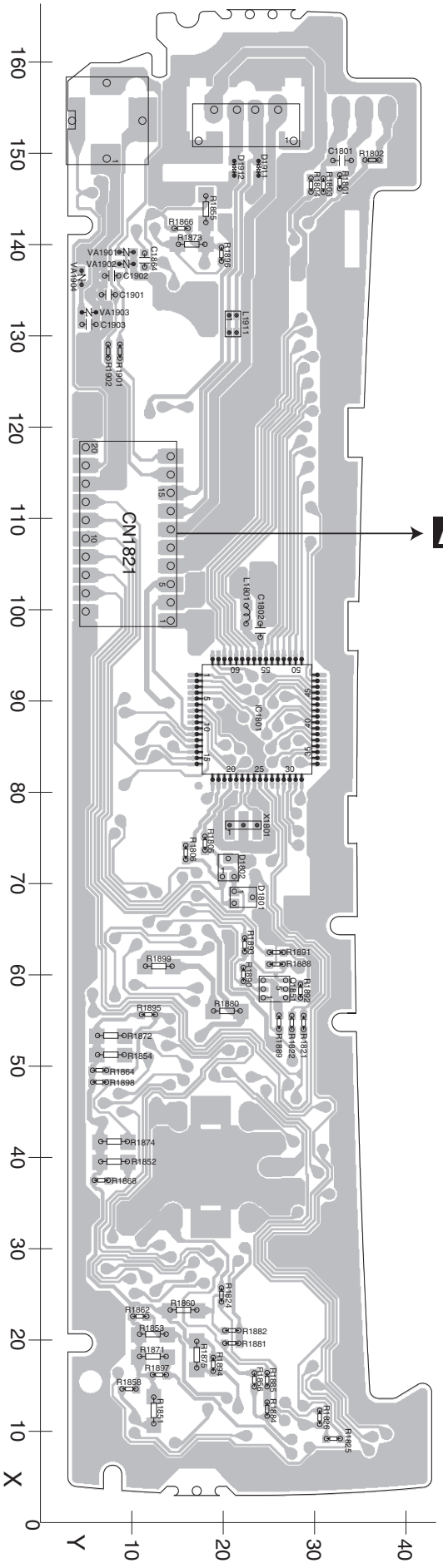
SIDE A



B

B KEYBOARD UNIT

SIDE B

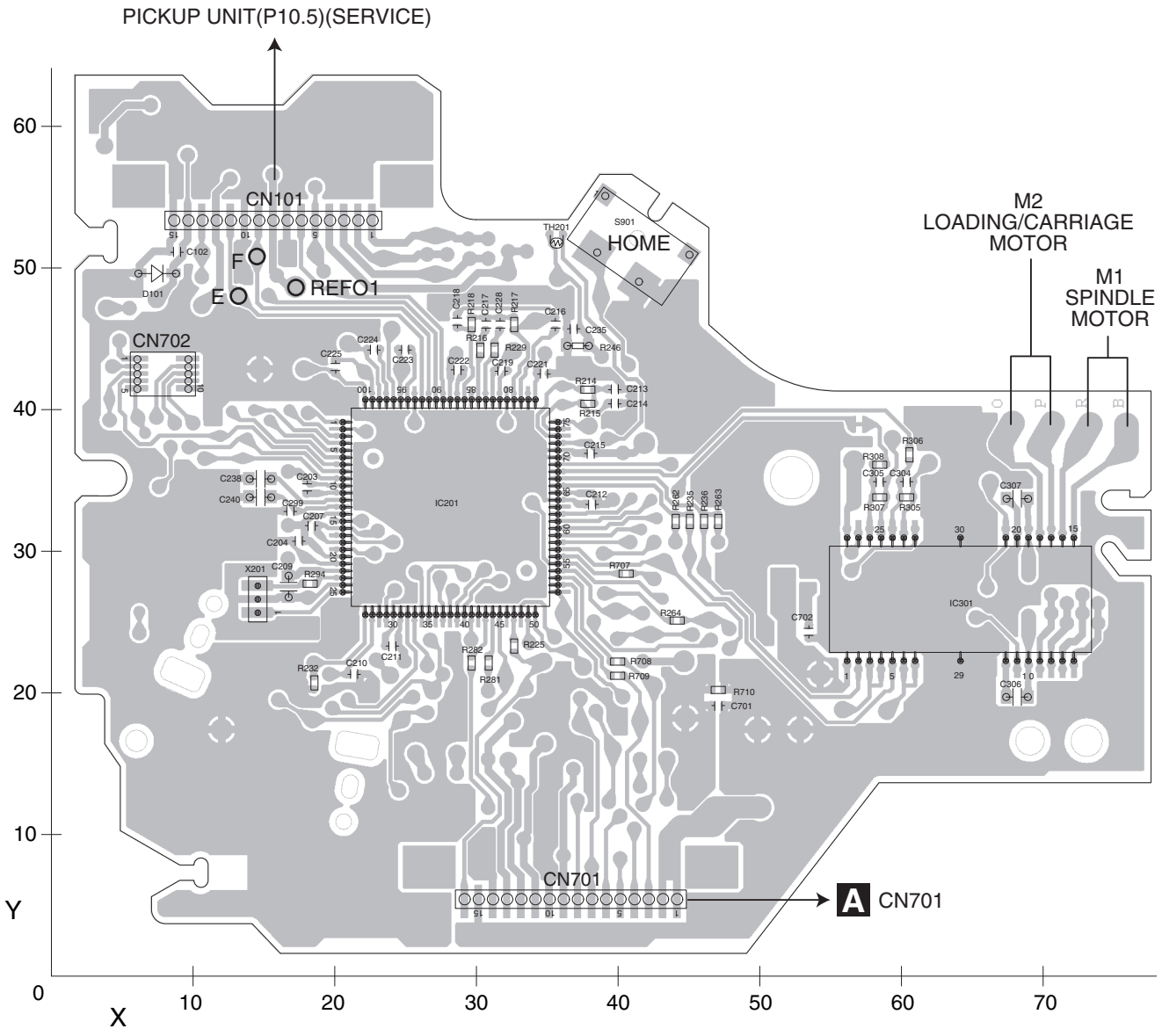


B

11.3 CD CORE UNIT (S11.1STD-DOUT)

C CD CORE UNIT (S11.1STD-DOUT)

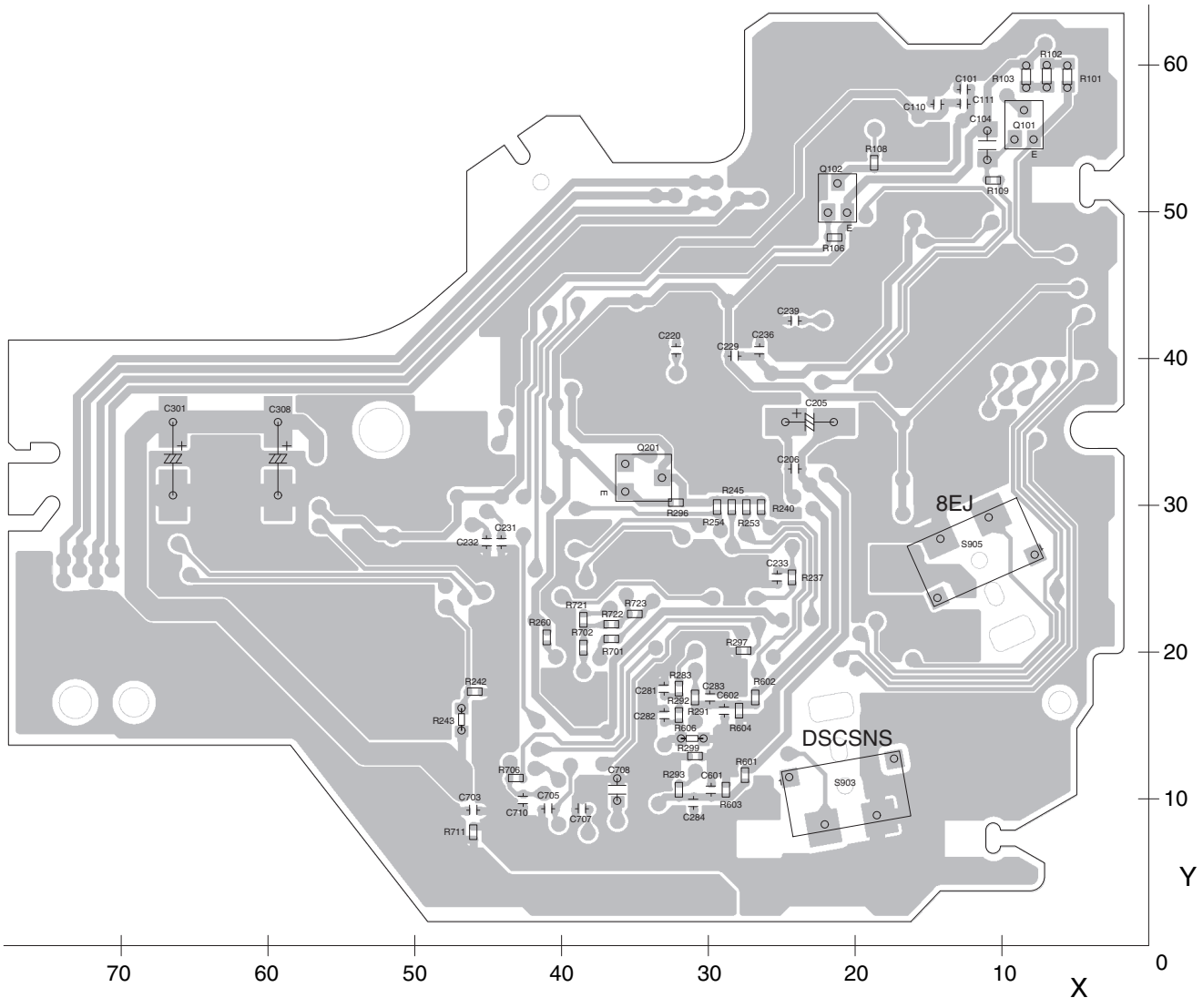
SIDE A



C

C CD CORE UNIT (S11.1STD-DOUT)

SIDE B



12. ELECTRICAL PARTS LIST

NOTE:

- *Parts whose parts numbers are omitted are subject to being not supplied.*
- *The part numbers shown below indicate chip components.*

  Chip Resistor

  RS1/◯S◯◯◯J,RS1/◯◯S◯◯◯J

  Chip Capacitor (except for CQS.....)

  CKS....., CCS....., CSZS.....
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Meaning of the figures and others in the parentheses in the parts list.*

Example) IC 301 is on the point (face A, 91 of x-axis, and 111 of y-axis) of the corresponding PC board.

IC 301 (A, 91, 111) IC NJM2068V

A:DEH-2350UB/XNES

B:DEH-2350UBG/XNES

C:DEH-2350UBSW/XNES

D:DEH-2350UB/XSES

E:DEH-2350UB/XNES1

Unit Number : CWN5489(A,B,D,E)

: CWN5479(C)

Unit Name : Tuner Amp Unit

Unit Number :

Unit Name : Keyboard Unit

Unit Number : CWX3985

Unit Name : CD Core Unit(S11.1STD-DOUT)

A

Unit Number : CWN5489(A,B,D,E)
CWN5479(C)

Unit Name : Tuner Amp Unit

MISCELLANEOUS

Circuit Symbol and No.			Part No.
IC 201	(A,98,112)	IC	PML022A
IC 231	(A,137,60)	D/A Converter	PCM1753DBQ
IC 301	(A,78,142)	IC	PAL007E
IC 401	(A,150,91)	IC	TDA7706
IC 501	(A,41,122)	IC	BD2226G
IC 502	(A,20,114)	IC	BD9008F
IC 601	(A,113,67)	IC	R5S7266ZD144FP
IC 651	(A,92,63)	IC	S-80827CNMC-B8M
IC 671	(A,129,82)	Flash ROM Unit	PEA011A8
IC 801	(A,108,25)	L-MOS And Gate	TC7SET08FUS1
IC 912	(A,145,28)	IC	BA49182-V12
Q 251	(A,23,131)	Chip Transistor	RN1910
Q 351	(A,88,127)	Chip Transistor	RN4983
Q 751	(A,142,139)	Transistor	2SD2396
Q 752	(A,137,132)	Chip Transistor	RN4983
Q 872	(A,146,52)	Transistor	LTC114EUB
Q 873	(A,147,58)	Transistor	LSA1576UB
Q 931	(A,118,105)	Transistor	LSC4081UB
D 301	(A,100,127)	Diode	CRG03
D 302	(A,97,127)	Diode	CRG03
D 401	(A,158,106)	Diode	KP2311E
D 402	(A,158,100)	Diode	KP2311E
D 501	(A,29,110)	Diode	RB160L-40
D 502	(A,22,125)	Diode	CRG03
D 601	(A,114,84)	Diode	RB551V-30
D 602	(A,124,51)	Diode	RB751S-40
D 751	(A,141,131)	Diode	RKZ8.2KG(B2)
D 801	(A,114,21)	Diode	DZ2S068C
D 802	(A,116,21)	Diode	DZ2S068C
D 803	(A,117,24)	Diode	DZ2S068C
D 804	(A,120,21)	Diode	DZ2S068C
D 805	(A,119,25)	Diode	DZ2S068C
D 809	(A,99,20)	Diode	DZ2S068C
D 810	(A,109,21)	Diode	DZ2S068C
D 901	(A,139,120)	Diode	1SR154-400
D 902	(A,136,120)	Diode	1SR154-400
D 911	(A,156,65)	Diode	1SR154-400
D 912	(A,160,65)	Diode	1SR154-400
D 931	(A,116,108)	Diode	HZU7L(A1)
L 401	(A,159,103)	Chip Coil	LCTAWR15J2520
L 402	(A,151,101)	Inductor	CTF1786
L 403	(A,146,103)	Inductor	CTF1786
L 404	(A,155,104)	Chip Coil(A,B,D,E)	LCTAWR27J2520
	(A,155,104)	Chip Coil(C)	LCTAWR39J2520
L 405	(A,142,104)	Inductor(A,B,D,E)	CTF1389
L 406	(A,139,101)	Inductor(A,B,D,E)	LCTAW220J2520
	(A,139,101)	Chip Coil(C)	LCTAW1R5J2520
L 407	(A,162,96)	Inductor	CTF1786
L 408	(A,162,94)	Inductor	CTF1786
L 409	(A,138,94)	Chip Coil(A,B,D,E)	LCTAW470J2520
	(A,138,94)	Inductor(C)	LCTAW2R2J2520
L 415	(A,146,81)	Inductor	CTF1786
L 417	(A,138,107)	Chip Coil(C)	LCTAWR39J2520
L 418	(A,141,106)	Chip Coil(C)	LCTAWR27J2520
L 501	(A,34,110)	Coil	CTH1475

Circuit Symbol and No.		Part No.
L 671	(A,133,78) Inductor	CTF1786
L 802	(A,114,26) Inductor	CTF1713
L 901	(A,112,141) Choke Coil 600 uH	CTH1432
X 401	(A,161,87) Oscillator 36.48 MHz	CSS1805
X 601	(A,129,61) Ceramic Resonator 16.934 MHz	CSS1603
X 602	(A,109,51) Oscillator 12.000 MHz	YSS5005
⚠ P251	(A,7,129) Fuse 3 A	CEK1286
P 401	(A,155,109) Surge Protector	IMSA-6802-01Y900
CN701	(A,91,39) Connector	VKN1192
CN801	(A,109,4) Connector	CKS6288
JA251	(A,19,138) Pin Jack(A,B,C,E)	CKB1056
	(A,19,138) Pin Jack(D)	YKB5010
JA401	(A,158,129) Antenna Jack	YKS5041
JA901	(A,113,141) Plug	CKM1586
JA961	(A,42,139) Connector	CKS4124
⚠	Fuse 10 A	YEK5001

RESISTORS

R 201	(A,96,63)	RAB4CQ102J
R 231	(A,142,60)	RS1/16SS821J
R 232	(A,143,60)	RS1/16SS821J
R 251	(A,19,131)	RS1/16SS821J
R 252	(A,29,131)	RS1/16SS821J
R 255	(A,21,131)	RS1/16SS223J
R 256	(A,26,131)	RS1/16SS223J
R 303	(A,86,123)	RS1/16SS103J
R 304	(A,86,125)	RS1/16SS473J
R 351	(A,92,127)	RS1/16SS103J
R 352	(A,90,128)	RS1/16SS103J
R 353	(A,92,128)	RS1/16SS221J
R 401	(A,161,106)	RS1/16SS221J
R 402	(A,161,100)	RS1/16SS751J
R 403	(A,139,103) (A,B,D,E)	RS1/16SS152J
	(A,139,103) (C)	RS1/16SS331J
R 405	(A,142,99)	RS1/16SS105J
R 406	(A,138,97) (A,B,D,E)	RS1/16SS471J
	(A,138,97) (C)	RS1/16SS361J
R 407	(A,139,96)	RS1/16SS330J
R 408	(A,138,92) (A,B,D,E)	RS1/16SS681J
	(A,138,92) (C)	RS1/16SS391J
R 410	(A,136,80)	RS1/4SA8R2J
R 412	(A,137,85)	RS1/4SA8R2J
R 413	(A,145,108)	RS1/16SS105J
R 419	(A,132,72)	RS1/16SS103J
R 420	(A,133,72)	RS1/16SS103J
R 421	(A,153,80)	RS1/16SS0R0J
R 427	(A,142,84)	RS1/16SS102J
R 428	(A,139,87)	RS1/16SS0R0J
R 501	(A,22,120)	RS1/10SR471J
R 502	(A,23,117)	RS1/16SS4702F
R 503	(A,21,117)	RS1/16SS682J
R 504	(A,20,120)	RS1/16SS1002F
R 505	(A,26,113)	RS1/16SS183J
R 506	(A,15,114)	RS1/16SS513J
R 508	(A,95,67)	RS1/16SS103J
R 561	(A,119,84)	RS1/16SS103J
R 562	(A,118,80)	RS1/16SS473J
R 601	(A,112,85)	RS1/16SS103J
R 602	(A,109,82)	RS1/16SS473J
R 603	(A,111,85)	RS1/16SS104J

Circuit Symbol and No.		Part No.
R 604	(A,98,81)	RAB4CQ473J
R 606	(A,100,78)	RS1/16SS473J
R 607	(A,100,73)	RS1/16SS473J
R 608	(A,97,73)	RS1/16SS473J
R 609	(A,127,69)	RS1/16SS101J
R 610	(A,100,67)	RS1/16SS222J
R 611	(A,132,69)	RS1/16SS101J
R 612	(A,98,79)	RS1/16SS473J
R 613	(A,132,68)	RS1/16SS101J
R 615	(A,98,64)	RS1/16SS104J
R 617	(A,127,65)	RS1/16SS221J
R 619	(A,130,57)	RAB4CQ473J
R 620	(A,99,60)	RS1/16SS473J
R 621	(A,125,54)	RS1/16SS473J
R 622	(A,103,50)	RS1/16SS473J
R 623	(A,108,54)	RS1/16SS152J
R 624	(A,103,52)	RS1/16SS473J
R 626	(A,116,53)	RS1/16SS5601F
R 628	(A,123,53)	RS1/16SS103J
R 629	(A,97,58)	RS1/16SS102J
R 630	(A,122,49)	RS1/16SS473J
R 631	(A,121,53) (C)	RS1/16SS473J
R 632	(A,117,47)	RS1/16SS103J
R 633	(A,119,45)	RS1/16SS101J
R 636	(A,103,53)	RS1/16SS473J
R 638	(A,123,32)	RS1/16SS0R0J
R 651	(A,91,60)	RS1/16SS104J
R 671	(A,133,83)	RS1/10SR473J
R 672	(A,129,88)	RS1/10SR473J
R 691	(A,92,22)	RS1/10SR222J
R 701	(A,95,45)	RS1/16SS473J
R 702	(A,95,39)	RS1/16SS104J
R 703	(A,97,41)	RS1/16SS104J
R 704	(A,96,49)	RAB4CQ472J
R 707	(A,95,46)	RS1/16SS221J
R 708	(A,95,44)	RS1/16SS221J
R 709	(A,95,43)	RS1/16SS101J
R 710	(A,95,42)	RS1/16SS221J
R 711	(A,95,41)	RS1/16SS101J
R 712	(A,95,40)	RS1/16SS102J
R 713	(A,96,37)	RS1/16SS151J
R 714	(A,96,36)	RS1/16SS151J
R 715	(A,96,35)	RS1/16SS151J
R 716	(A,95,31)	RS1/16SS221J
R 717	(A,95,32)	RS1/16SS104J
R 751	(A,95,47)	RS1/16SS473J
R 752	(A,97,47)	RS1/16SS103J
R 753	(A,139,134)	RS1/10SR821J
R 801	(A,117,30)	RS1/10SR101J
R 802	(A,119,30)	RS1/10SR101J
R 806	(A,105,25)	RS1/10SR222J
R 807	(A,108,21)	RS1/10SR222J
R 808	(A,103,24)	RS1/16SS822J
R 809	(A,113,29)	RS1/10SR8R2J
R 810	(A,115,29)	RS1/10SR8R2J
R 811	(A,122,26)	RS1/10SR222J
R 812	(A,102,25)	RS1/10SR222J
R 813	(A,100,25)	RS1/10SR222J
R 819	(A,105,12)	RS1/10SR0R0J
R 820	(A,118,30)	RS1/10SR101J

Circuit Symbol and No.		Part No.
R 821	(A,120,28)	RS1/16SS223J
R 822	(A,117,27)	RS1/16SS223J
R 823	(A,124,7)	RS1/10SR222J
R 851	(A,98,23)	RS1/16SS472J
R 872	(A,125,28)	RS1/10SR473J
R 873	(A,148,53)	RS1/16SS562J
R 874	(A,148,55)	RS1/16SS103J
R 911	(A,141,41)	RS1/10SR1R0J
R 912	(A,144,42)	RS1/10SR1R0J
R 931	(A,121,106)	RS1/16SS223J
R 932	(A,118,107)	RS1/16SS473J
R 933	(A,115,106)	RS1/16SS472J
R 934	(A,115,114)	RS1/4SA102J
R 961	(A,50,134)	RS1/16SS102J
R 962	(A,48,134)	RS1/16SS102J

CAPACITORS

C 201	(A,106,108) 10 uF	CCG1192
C 202	(A,100,106)	CCSSCH100D50
C 203	(A,103,108) 4.7 uF	CCG1201
C 204	(A,100,107)	CCSSCH100D50
C 205	(A,94,106)	CKSRYB105K10
C 206	(A,94,118)	CKSRYB105K10
C 207	(A,97,106)	CKSRYB105K10
C 208	(A,96,119)	CKSRYB105K10
C 209	(A,98,106)	CKSRYB105K10
C 210	(A,98,119)	CKSRYB105K10
C 211	(A,95,106)	CKSSYB224K6R3
C 212	(A,95,119)	CKSSYB224K6R3
C 215	(A,102,108)	CCSSCH100D50
C 232	(A,138,56)	CKSSYB103K16
C 233	(A,139,55) 10 uF	CCG1192
C 234	(A,138,66) 10 uF	CCG1192
C 237	(A,142,62)	CCSRCH182J50
C 238	(A,143,64)	CCSRCH182J50
C 239	(A,141,60)	CKSSYB102K50
C 251	(A,31,129) 4.7 uF	CCG1201
C 252	(A,35,131) 4.7 uF	CCG1201
C 255	(A,20,130)	CCSSCH101J50
C 256	(A,28,131)	CCSSCH101J50
C 259	(A,35,139)	CKSSYB102K50
C 301	(A,74,128)	CKSRYB474K10
C 302	(A,81,128)	CKSRYB474K10
C 303	(A,76,128)	CKSRYB474K10
C 304	(A,80,128)	CKSRYB474K10
C 305	(A,74,132)	CKSRYB474K10
C 306	(A,81,132)	CKSRYB474K10
C 307	(A,76,132)	CKSRYB474K10
C 308	(A,79,132)	CKSRYB474K10
C 309	(A,137,135)	CKSRYB104K16
C 310	(A,82,129) 2.2 uF	CCG1205
C 311	(A,82,131) 2.2 uF	CCG1205
C 312	(A,98,128)	CKSRYB104K16
C 313	(A,67,128)	CEVW100M16
C 314	(A,61,135)	CCSSCH100D50
C 315	(A,84,129)	CCSSCH100D50
C 317	(A,62,136)	CCSSCK1R0C50
C 318	(A,107,129)	CCSRCH100D50
C 319	(A,103,129)	CCSRCH100D50
C 320	(A,96,133)	CCSRCH100D50
C 321	(A,92,137)	CCSRCH100D50
C 351	(A,94,127) 10 uF	CCG1192
C 401	(A,155,107)	CCSSCH330J50
C 402	(A,158,105)	CCSSCH6R0D50
C 403	(A,161,105)	CKSSYB103K16
C 404	(A,150,100)	CKSSYB104K10
C 405	(A,147,100)	CKSSYB104K10
C 406	(A,160,101)	CKSSYB103K16
C 407	(A,148,100)	CKSSYB104K10
C 408	(A,142,108) (C)	CCSSCH150J50
C 409	(A,162,101)	CKSSYB103K16
C 410	(A,148,99)	CKSSYB103K16
C 411	(A,145,100)	CKSSYB103K16
C 412	(A,144,101) 10 uF	CCG1192
C 413	(A,155,101)	CKSSYB103K16
C 414	(A,152,102)	CKSRYB105K10
C 415	(A,140,99)	CKSSYB103K16
C 416	(A,159,96)	CKSRYB224K16
C 417	(A,160,96)	CKSSYB104K10
C 418	(A,138,98) 10 uF	CCG1192
C 419	(A,158,93)	CKSRYB105K10
C 420	(A,140,97)	CKSSYB104K10
C 421	(A,137,96) (A,B,D,E)	CCSSCH101J50
	(A,137,96) (C)	CCSSCH220J50
C 422	(A,143,98)	CKSSYB104K10
C 423	(A,136,96)	CKSSYB103K16
C 424	(A,162,92)	CKSSYB472K25
C 425	(A,162,93)	CKSSYB472K25
C 426	(A,158,91)	CKSSYB104K10
C 427	(A,138,91) (A,B,D,E)	CCSSCH820J50
	(A,138,91) (C)	CCSSCK2R0C50
C 428	(A,161,90)	CCSSCH9R0D50
C 429	(A,161,85)	CCSSCH9R0D50
C 430	(A,139,85)	CKSRYB474K10
C 431	(A,158,84)	CKSSYB104K10
C 437	(A,156,82)	CKSSYB104K10
C 440	(A,147,83)	CKSSYB104K10
C 441	(A,152,82) 2.2 uF	CCG1205
C 443	(A,145,104)	CKSSYB103K16
C 444	(A,139,105) (C)	CCSSCH8R0D50
C 445	(A,142,101)	CKSSYB223K16
C 447	(A,142,86)	CKSSYB102K50
C 501	(A,38,122)	CKSRYB105K10
C 503	(A,32,120)	CEVQW221M6R3
C 504	(A,44,123)	CKSRYB105K10
C 505	(A,12,121)	CEJQ221M16
C 506	(A,27,113)	CKSSYB153K16
C 508	(A,25,114)	CCSSCH220J50
C 509	(A,24,110)	CKSRYB105K16
C 601	(A,116,80)	CKSSYB104K10
C 602	(A,113,80)	CKSSYB104K10
C 603	(A,109,80)	CKSSYB104K10
C 604	(A,99,76)	CKSSYB104K10
C 605	(A,126,74)	CKSSYB104K10
C 606	(A,100,75)	CKSSYB104K10
C 607	(A,128,73)	CKSSYB104K10
C 608	(A,100,71)	CKSSYB104K10
C 609	(A,127,70)	CKSSYB104K10
C 610	(A,100,69)	CKSSYB104K10
C 612	(A,130,69)	CKSSYB104K10

Circuit Symbol and No.		Part No.
C 616	(A,100,64)	CKSSYB104K10
C 617	(A,129,65) (A,B,D,E)	CCSSCH100D50
C 618	(A,99,63)	CKSSYB104K10
C 619	(A,127,64)	CKSSYB104K10
C 620	(A,132,61)	CKSSYB104K10
C 621	(A,100,60)	CKSSYB104K10
C 622	(A,124,53)	CKSSYB104K10
C 623	(A,119,53)	CKSSYB104K10
C 624	(A,118,52)	CKSSYB104K10
C 625	(A,117,53)	CKSSYB104K10
C 626	(A,115,53)	CKSSYB104K10
C 627	(A,113,52)	CKSSYB104K10
C 628	(A,109,54)	CKSSYB104K10
C 629	(A,104,54)	CKSSYB104K10
C 630	(A,123,54)	CKSSYB104K10
C 632	(A,110,49)	CCSSCH120J50
C 633	(A,108,49)	CCSSCH120J50
C 638	(A,117,45)	CKSRYB105K10
C 651	(A,95,60)	CKSRYB105K10
C 671	(A,133,81)	CKSSYB104K10
C 701	(A,98,41)	CKSSYB103K16
C 707	(A,88,30)	CKSSYB102K50
C 708	(A,87,32)	CKSRYB105K10
C 751	(A,142,127) 10 uF	CCG1192
C 754	(A,140,130)	CKSSYB104K10
C 807	(A,106,21)	CKSRYB104K16
C 808	(A,94,24)	CKSRYB104K16
C 809	(A,122,21)	CKSRYB104K16
C 810	(A,103,21)	CCSRCH221J50
C 811	(A,101,21)	CCSRCH221J50
C 812	(A,120,26)	CKSRYB105K16
C 817	(A,110,28)	CKSSYB104K10
C 818	(A,125,10)	CKSQYB102K50
C 820	(A,105,21)	CCSRCH221J50
C 871	(A,124,26)	CKSRYB104K16
C 901	(A,133,125) 3 300 uF/16 V	CCH1732
C 913	(A,140,40)	CKSSYB102K50
C 914	(A,141,44) 4.7 uF	CCG1201
C 916	(A,150,43) 4.7 uF	CCG1201
C 917	(A,138,41) 4.7 uF	CCG1201
C 918	(A,153,42) 4.7 uF	CCG1201
C 919	(A,145,40)	CKSSYB102K50
C 920	(A,147,42) 4.7 uF	CCG1201
C 921	(A,133,40)	CKSRYB104K16
C 922	(A,155,52)	CEAT102M16(P30)
C 923	(A,154,40)	CKSSYB102K50
C 926	(A,133,41)	CKSRYB102K50
C 931	(A,114,105)	CKSRYB104K16
C 961	(A,48,138)	CKSSYB104K16
C 962	(A,50,138)	CKSSYB104K16

B

Unit Number :
Unit Name : Keyboard Unit

MISCELLANEOUS

IC 1801	(B,88,24) IC	PD6340A
IC 1802	(A,160,35) Remote IC	GP1UXC14RK
D 1868	(A,11,42) LED(RED) (A,C,D,E)	SML-D12V8W(PQ)
	(A,11,42) LED(B)	SML-D12P8W(KL)
D 1869	(A,6,35) LED(RED) (A,C,D,E)	SML-D12V8W(PQ)
	(A,6,35) LED(B)	SML-D12P8W(KL)
D 1870	(A,7,22) LED(RED) (A,C,D,E)	SML-D12V8W(PQ)
	(A,7,22) LED(B)	SML-D12P8W(KL)
D 1871	(A,22,10) LED(RED) (A,C,D,E)	SML-D12V8W(PQ)
	(A,22,10) LED(B)	SML-D12P8W(KL)
D 1872	(A,18,21) LED(RED) (A,C,D,E)	SML-D12V8W(PQ)
	(A,18,21) LED(B)	SML-D12P8W(KL)
D 1873	(A,25,32) LED(RED) (A,C,D,E)	SML-D12V8W(PQ)
	(A,25,32) LED(B)	SML-D12P8W(KL)
D 1874	(A,55,8) LED(RED) (A,C,D,E)	SML-D12V8W(PQ)
	(A,55,8) LED(B)	SML-D12P8W(KL)
D 1875	(A,60,19) LED(RED) (A,C,D,E)	SML-D12V8W(PQ)
	(A,60,19) LED(B)	SML-D12P8W(KL)
D 1876	(A,54,29) LED(RED) (A,C,D,E)	SML-D12V8W(PQ)
	(A,54,29) LED(B)	SML-D12P8W(KL)
D 1877	(A,71,6) LED(RED) (A,C,D,E)	SML-D12V8W(PQ)
	(A,71,6) LED(B)	SML-D12P8W(KL)
D 1878	(A,83,6) LED(RED) (A,C,D,E)	SML-D12V8W(PQ)
	(A,83,6) LED(B)	SML-D12P8W(KL)
D 1879	(A,95,6) LED(RED) (A,C,D,E)	SML-D12V8W(PQ)
	(A,95,6) LED(B)	SML-D12P8W(KL)
D 1880	(A,143,9) LED(RED) (A,C,D,E)	SML-D12V8W(PQ)
	(A,143,9) LED(B)	SML-D12P8W(KL)
D 1881	(A,131,8) LED(RED) (A,C,D,E)	SML-D12V8W(PQ)
	(A,131,8) LED(B)	SML-D12P8W(KL)
D 1882	(A,119,8) LED(RED) (A,C,D,E)	SML-D12V8W(PQ)
	(A,119,8) LED(B)	SML-D12P8W(KL)
D 1883	(A,107,7) LED(RED) (A,C,D,E)	SML-D12V8W(PQ)
	(A,107,7) LED(B)	SML-D12P8W(KL)
D 1913	(A,69,23) White LED	SMLXA4WBETW1(Z1)
X 1801	(B,76,22) Ceramic Resonator 5.00 MHz	CSS1547
S 1845	(A,39,19) Encoder(MULTI-CONTROL)	CSD1168
CN1821	(B,108,10) Connector	CKS6287
CN1901	(A,154,7) Jack(A,B,C,E)	CKN1082
	(A,154,7) Jack(D)	YKN5001
CN1911	(A,155,22) Connector(A,B,C,E)	CKS6267
	(A,155,22) Connector(D)	CKS6266
V 1801	(A,143,32) LCD	CAW1998

RESISTORS

R 1804	(B,147,30)	RS1/10SR101J
R 1805	(B,74,18)	RS1/10SR222J
R 1806	(B,73,16)	RS1/10SR222J
R 1822	(B,55,28)	RS1/10SR273J
R 1823	(A,146,4)	RS1/10SR0R0J
R 1824	(B,25,20)	RS1/10SR0R0J
R 1871	(B,18,12) (B)	RS1/4SA561J
R 1872	(B,53,8) (B)	RS1/4SA561J
R 1873	(B,140,17) (B)	RS1/4SA561J
R 1874	(B,42,8) (B)	RS1/4SA391J
R 1875	(B,18,17) (B)	RS1/4SA561J
R 1880	(B,56,20)	RS1/4SA271J
R 1888	(B,61,26)	RS1/10SR0R0J
R 1894	(B,17,19) (A,C,D,E)	RS1/10SR272J
R 1895	(B,56,12) (A,C,D,E)	RS1/10SR272J
R 1896	(B,139,20) (A,C,D,E)	RS1/10SR272J
R 1897	(B,16,13) (A,C,D,E)	RS1/10SR272J
R 1898	(B,48,6) (A,C,D,E)	RS1/10SR102J

Circuit Symbol and No.		Part No.
R 1899	(B,61,13)	RS1/4SA271J

CAPACITORS

C 1801	(B,149,33)	10 uF	CCG1192
C 1802	(B,98,24)		CKSRYB105K10

C

Unit Number : CWX3985
Unit Name : CD Core Unit(S11.1STD-DOUT)

MISCELLANEOUS

IC 201	(A,28,33)	IC	PE5756A
IC 301	(A,64,27)	IC	BA5839FP
Q 101	(B,8,56)	Transistor	2SA1577
Q 102	(B,21,51)	Chip Digital Transistor	LTA123JUB
X 201	(A,15,27)	Ceramic Resonator 16.934 MHz	CSS1603
S 901	(A,42,53)	Switch(HOME)	CSN1080
S 903	(B,21,12)	Switch(DSCSNS)	CSN1081
CN101	(A,16,58)	Connector	CKS4808
CN701	(A,37,10)	Connector	CKS6146

RESISTORS

R 101	(B,6,59)	RS1/10SR2R4J
R 102	(B,7,59)	RS1/10SR2R4J
R 103	(B,8,59)	RS1/10SR2R7J
R 108	(B,19,53)	RS1/16SS105J
R 109	(B,11,52)	RS1/16SS222J
R 214	(A,38,41)	RS1/16SS103J
R 215	(A,38,40)	RS1/16SS393J
R 216	(A,30,44)	RS1/16SS122J
R 217	(A,33,46)	RS1/16SS562J
R 218	(A,30,46)	RS1/16SS472J
R 225	(A,33,23)	RS1/16SS0R0J
R 229	(A,31,44)	RS1/16SS471J
R 232	(A,19,21)	RS1/16SS0R0J
R 235	(A,45,32)	RS1/16SS103J
R 236	(A,46,32)	RS1/16SS103J
R 237	(B,24,25)	RS1/16SS221J
R 240	(B,26,30)	RS1/16SS473J
R 245	(B,28,30)	RS1/16SS104J
R 254	(B,29,30)	RS1/16SS104J
R 260	(B,41,21)	RS1/16SS103J
R 262	(A,44,32)	RS1/16SS472J
R 263	(A,47,32)	RS1/16SS472J
R 264	(A,44,25)	RS1/16SS102J
R 281	(A,31,22)	RS1/16SS560J
R 282	(A,30,22)	RS1/16SS560J
R 283	(B,32,18)	RS1/16SS0R0J
R 291	(B,31,17)	RS1/16SS560J
R 292	(B,32,16)	RS1/16SS0R0J
R 293	(B,32,11)	RS1/16SS0R0J
R 294	(A,18,28)	RS1/16SS471J
R 296	(B,32,30)	RS1/16SS0R0J
R 299	(B,31,13)	RS1/16SS0R0J
R 305	(A,60,34)	RS1/16SS183J
R 306	(A,61,37)	RS1/16SS183J
R 307	(A,58,34)	RS1/16SS183J
R 308	(A,58,36)	RS1/16SS183J
R 701	(B,37,21)	RS1/16SS101J
R 702	(B,38,20)	RS1/16SS101J
R 706	(B,43,11)	RS1/16SS221J
R 708	(A,40,22)	RS1/16SS0R0J
R 709	(A,40,21)	RS1/16SS0R0J
R 722	(B,37,22)	RS1/16SS0R0J

CAPACITORS

C 104	(B,11,55)	CKSQYB475K6R3
C 203	(A,18,35)	CKSSYB104K10
C 209	(A,17,28)	CKSRYB104K16
C 210	(A,21,21)	CKSSYB104K10
C 211	(A,24,23)	CKSSYB104K10
C 212	(A,38,33)	CKSSYB104K10
C 213	(A,40,41)	CKSSYB332K50
C 214	(A,40,40)	CKSSYB473K10
C 215	(A,38,37)	CKSSYB104K10
C 216	(A,36,46)	CKSSYB182K50
C 217	(A,31,46)	CCSSCH560J50
C 218	(A,29,46)	CCSSCH4R0C50
C 219	(A,32,43)	CKSSYB104K10
C 220	(B,32,41)	CKSSYB104K10
C 221	(A,35,43)	CKSSYB104K10
C 222	(A,29,43)	CKSSYB104K10
C 223	(A,25,44)	CCSSCH680J50
C 224	(A,23,44)	CCSSCH470J50
C 225	(A,20,43)	CKSSYB103K16
C 228	(A,32,46)	CCSSCH270J50
C 229	(B,28,40)	CKSSYB104K10
C 231	(B,44,28)	CKSSYB102K50
C 232	(B,45,28)	CKSSYB102K50
C 233	(B,25,25)	CKSSYB103K16
C 236	(B,26,41)	CKSSYB104K10
C 238	(A,15,35)	CKSRYB104K16
C 299	(A,17,33)	CKSSYB104K10
C 304	(A,60,35)	CKSSYB472K25
C 305	(A,58,35)	CKSSYB223K16
C 306	(A,68,20)	CKSRYB105K10
C 710	(B,43,10)	CKSSYB102K50

Miscellaneous Parts List

M 1	Motor Unit(SPDL)	CXE2273
M 2	Motor Unit(LOAD/CRG)	CXC4026
	Pickup Unit(S10.5)(Service)	CXX1942