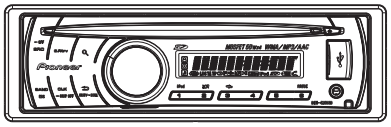
Pioneer

Service Manual



DEH-4250SD/XNES

ORDER NO.
CRT4505

CD RECEIVER

DEH-4280SD

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

Model No.	Order No.	Mech. Module	Remarks
CX-3269	CRT4488	S11STD-DOUT	CD Mech. Module : Circuit Descriptions, Mech. Descriptions, Disassembly

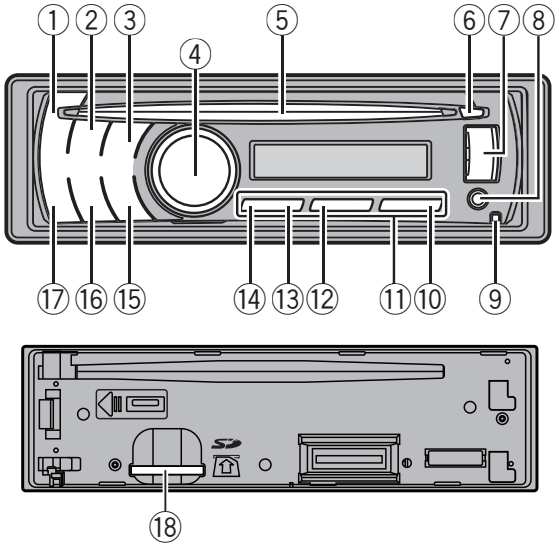
For details, refer to "Important Check Points for Good Servicing".

PIONEER CORPORATION 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS (USA) INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER EUROPE NV Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936

K-ZZZ NOV. 2009 Printed in Japan

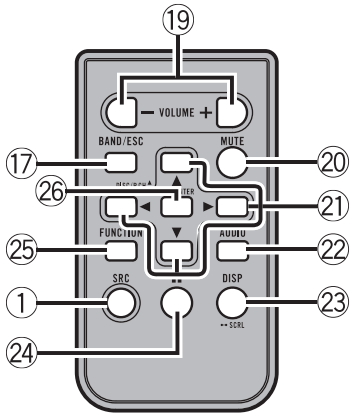
2.3 PANEL FACILITIES

Head unit



	Part		Part
①	**SRC**/**OFF**	⑩	**6**/**PAUSE**
②	**S.Rtrv**	⑪	**1** to **6**
③	(list)	⑫	**3** /
④	**MULTI-CONTROL (M.C.)**	⑬	**2** /
⑤	Disc loading slot	⑭	**1**/**iPod**
⑥	⏏ (eject)	⑮	/**DISP**/**SCRL**.
⑦	USB port	⑯	**CLK** / **DISP OFF**
⑧	AUX input jack (3.5 mm stereo jack)	⑰	**BAND**/**ESC**
⑨	Detach button	⑱	SD memory card slot Only for **ES, ES1, ID .** You can see the SD memory card slot if you remove the front panel.

Remote control



	Part	Operation
⑲	**VOLUME**	Press to increase or decrease volume.
⑳	**MUTE**	Press to mute. Press again to unmute.
㉑	▲/▼/◄/►	Press to perform manual seek tuning, fast forward, reverse and track search controls. Also used for controlling functions.
㉒	**AUDIO**	Press to select an audio function.
㉓	**DISP**/**SCRL**	Press to select different displays. Press and hold to scroll through the text information.
㉔	❚❚	Press to pause or resume.
㉕	**FUNCTION**	Press to select functions. Press and hold to recall the initial setting menu when the sources are off.
㉖	**LIST**/ **ENTER**	Press to display the list depending on the source. While in the operating menu, press to control functions.

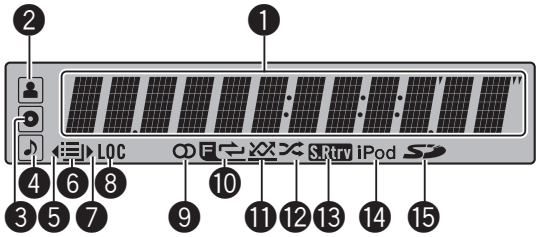
▣

⚠ CAUTION

Use an optional Pioneer USB cable (CD-U51E) to connect the USB audio player/USB memory to the USB port. Since the USB audio player/USB memory is projected forward from the unit, it is dangerous to connect directly.

Do not use the unauthorized product.▣

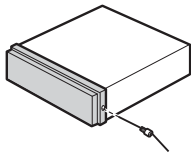
Display indication



	Indicator	State
❶	Main display section	Tuner: band and frequency Built-in CD, external storage device (USB, SD) and iPod: elapsed playback time and text information
❷	(artist)	The disc (track) artist name is displayed. Artist search refinement on the iPod browsing function is in use.
❸	(disc)	The disc (album) name is displayed. Album search refinement on the iPod browsing function is in use.
❹	(song)	The track (song) name is displayed. A playable audio file has been selected while operating the list. Song search refinement on the iPod browsing function is in use.
❺	◄	An upper tier of folder or menu exists.
❻	(list)	The list function is operated.
❼	►	A lower tier of folder or menu exists. It flashes when a song/album related to the song currently playing is selected from iPod.
❽	LOC	The local seek tuning is on.
❾	(stereo)	The selected frequency is being broadcasted in stereo.
❿	F (folder repeat)	Folder repeat is on. When repeat function is on, only is displayed.
⓫	F (folder random)	Folder random is on. When random function is on, only is displayed.
⓬	(shuffle)	Shuffle or shuffle all function is on while the iPod source is being selected.
⓭	S.Rtrv (sound retriever)	The sound retriever function is on.
⓮	iPod	CTRL (control mode) is set to iPod.
⓯	SD (SD memory card)	Only for **ES, ES1, ID** SD/SDHC memory card is inserted.

Fastening the front panel

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

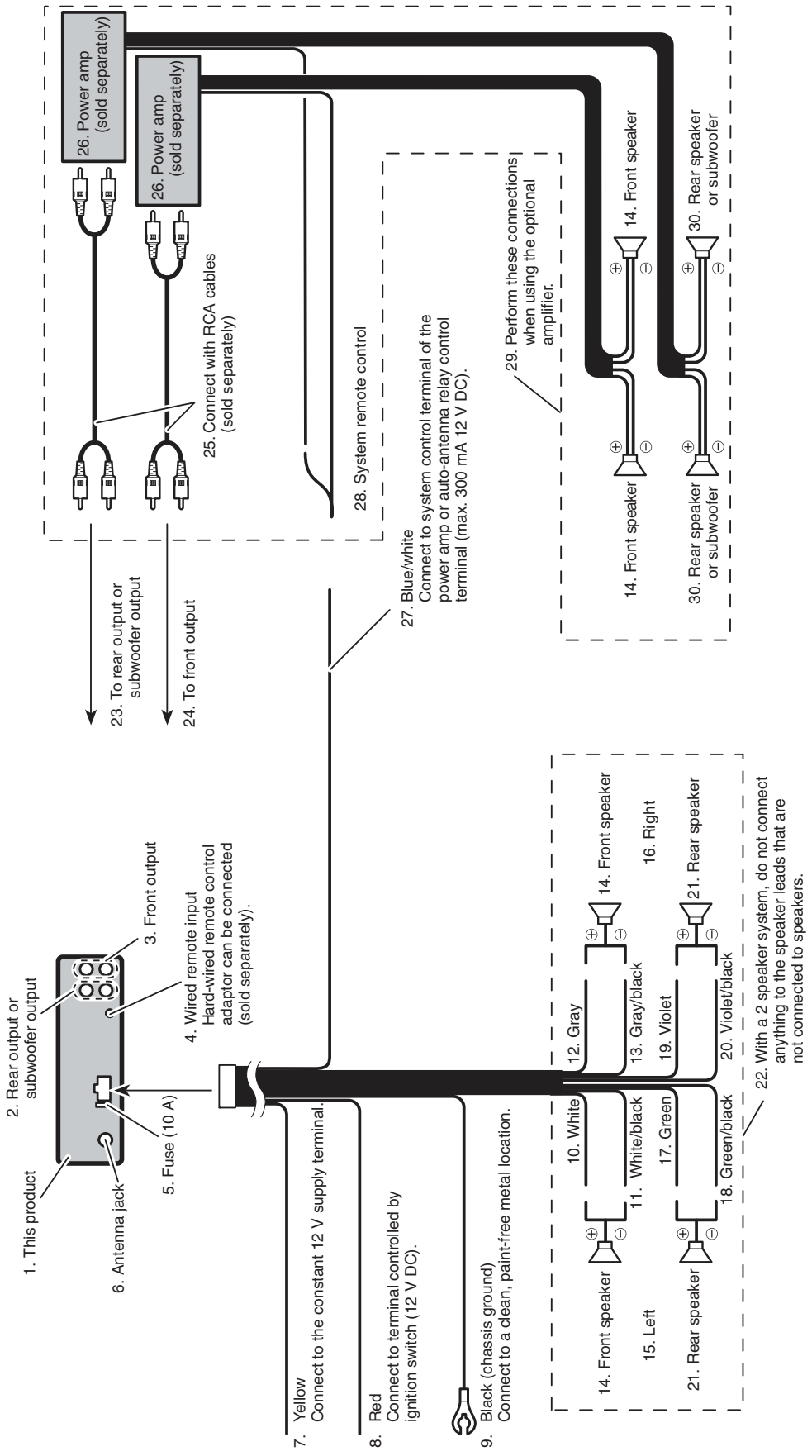


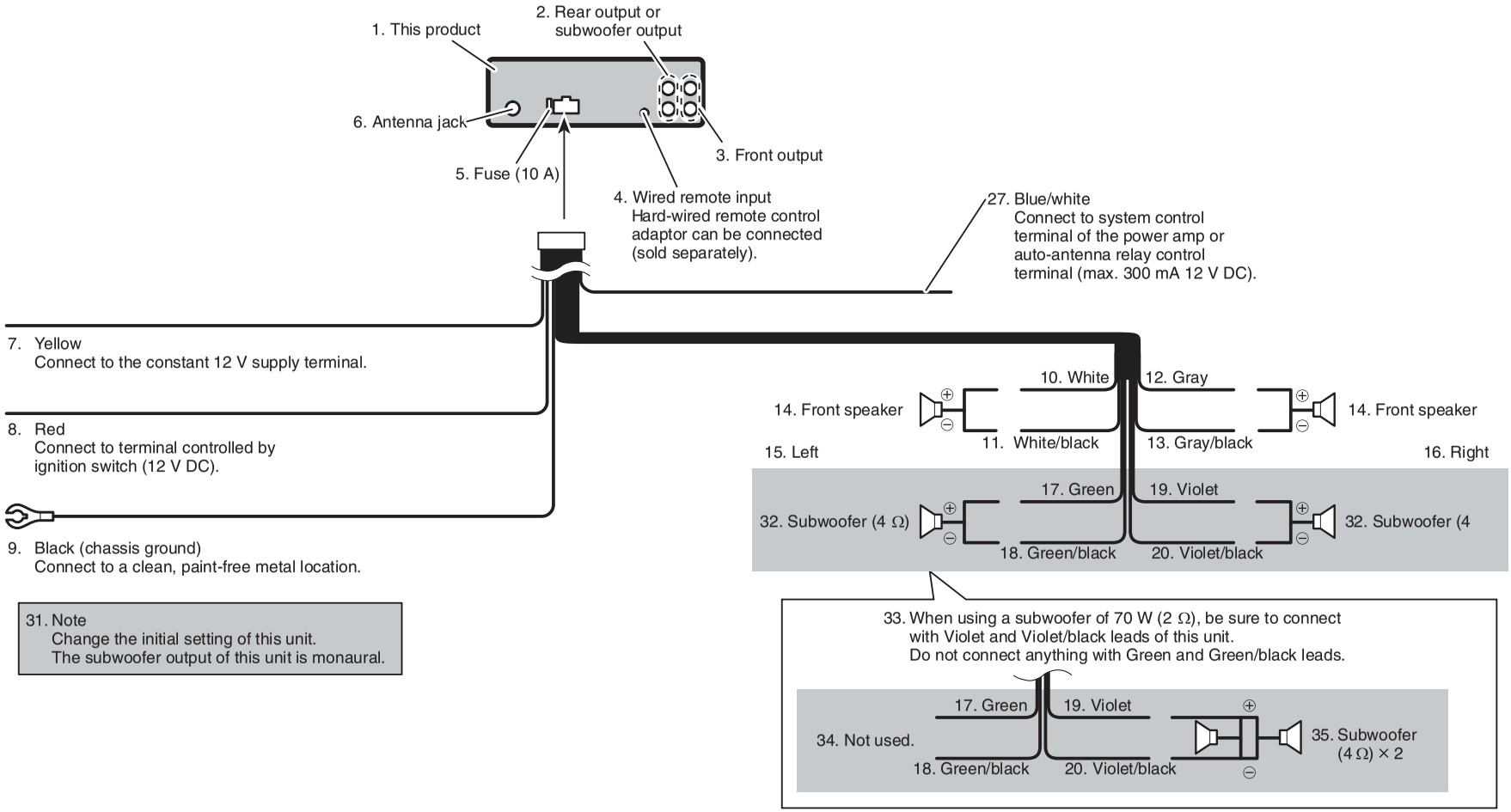
ES, ES1, ID
Service Screw
CXX2204

UC
Screw
BPZ20P060FTC

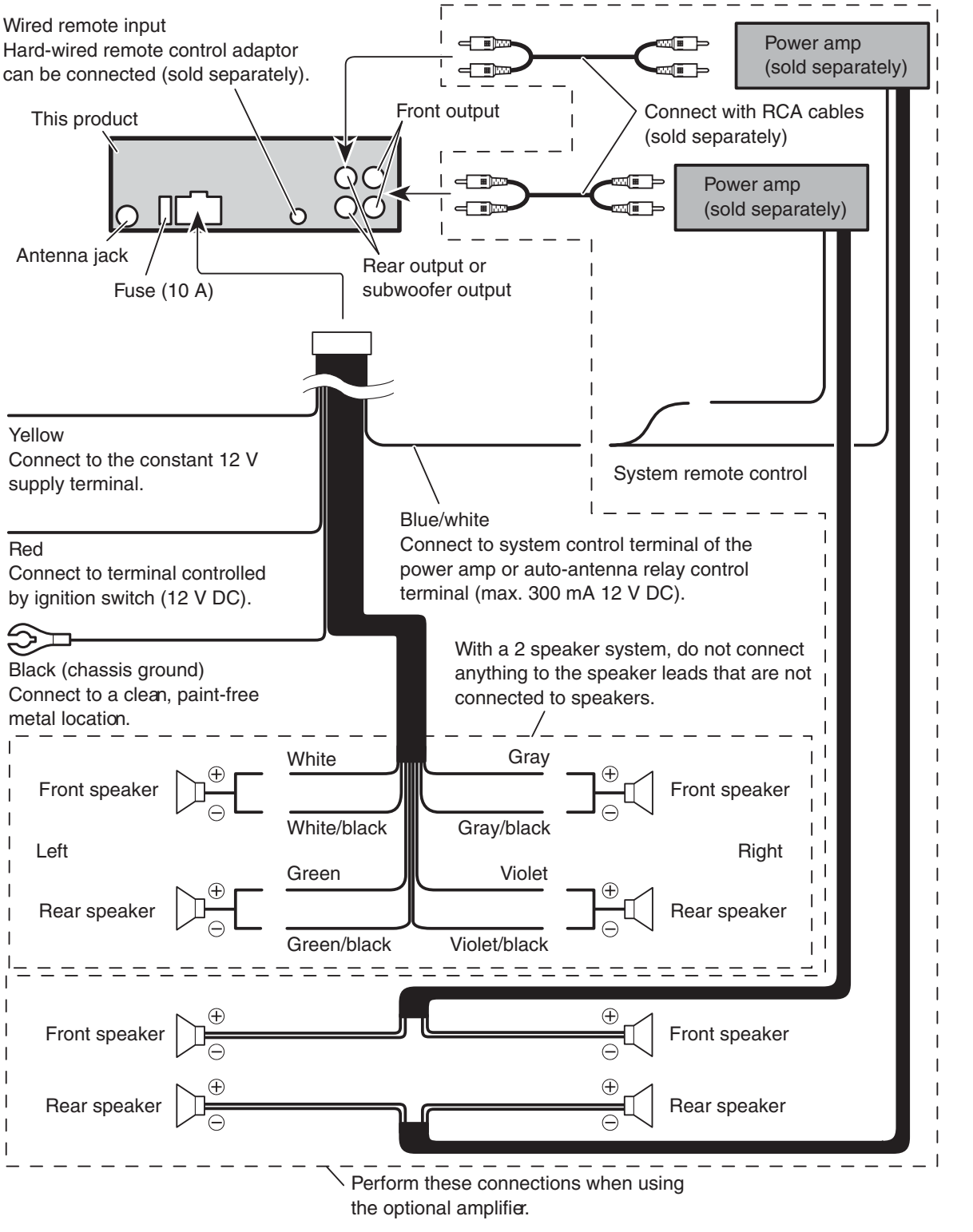
2.4 CONNECTION DIAGRAM

DEH-4250SD/XNES, DEH-4250SD/XNES1



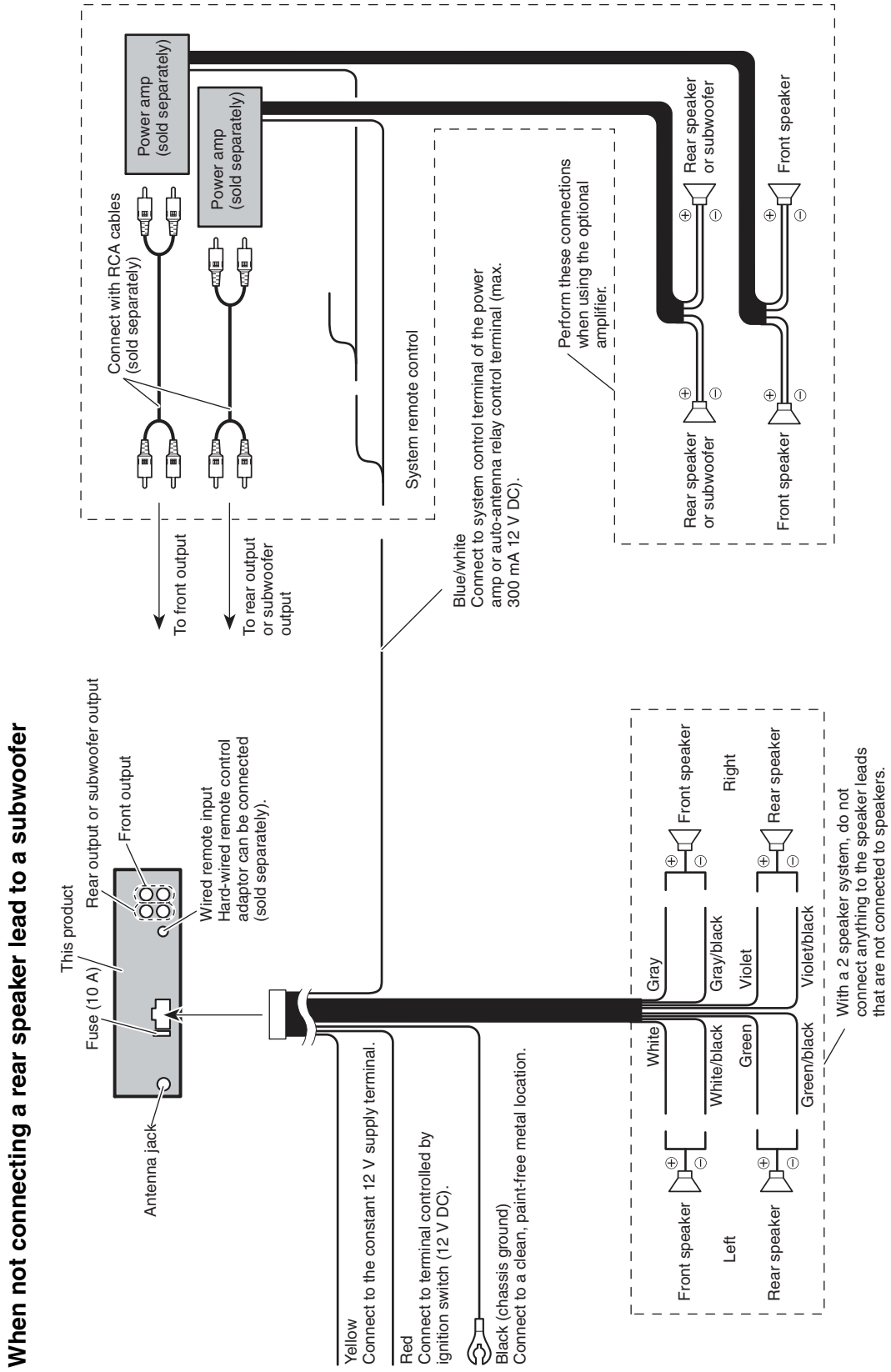

1. This product
2. Rear output or subwoofer output
6. Antenna jack
5. Fuse (10 A)
3. Front output
4. Wired remote input
Hard-wired remote control adaptor can be connected (sold separately).
27. Blue/white
Connect to system control terminal of the power amp or auto-antenna relay control terminal (max. 300 mA 12 V DC).
7. Yellow
Connect to the constant 12 V supply terminal.
8. Red
Connect to terminal controlled by ignition switch (12 V DC).
9. Black (chassis ground)
Connect to a clean, paint-free metal location.
10. White
12. Gray
14. Front speaker
11. White/black
13. Gray/black
14. Front speaker
15. Left
16. Right
17. Green
19. Violet
32. Subwoofer (4 Ω)
18. Green/black
20. Violet/black
32. Subwoofer (4
31. Note
Change the initial setting of this unit.
The subwoofer output of this unit is monaural.
33. When using a subwoofer of 70 W (2 Ω), be sure to connect with Violet and Violet/black leads of this unit.
Do not connect anything with Green and Green/black leads.
17. Green
19. Violet
34. Not used.
35. Subwoofer (4 Ω) × 2
18. Green/black
20. Violet/black

DEH-4290SD/XNID

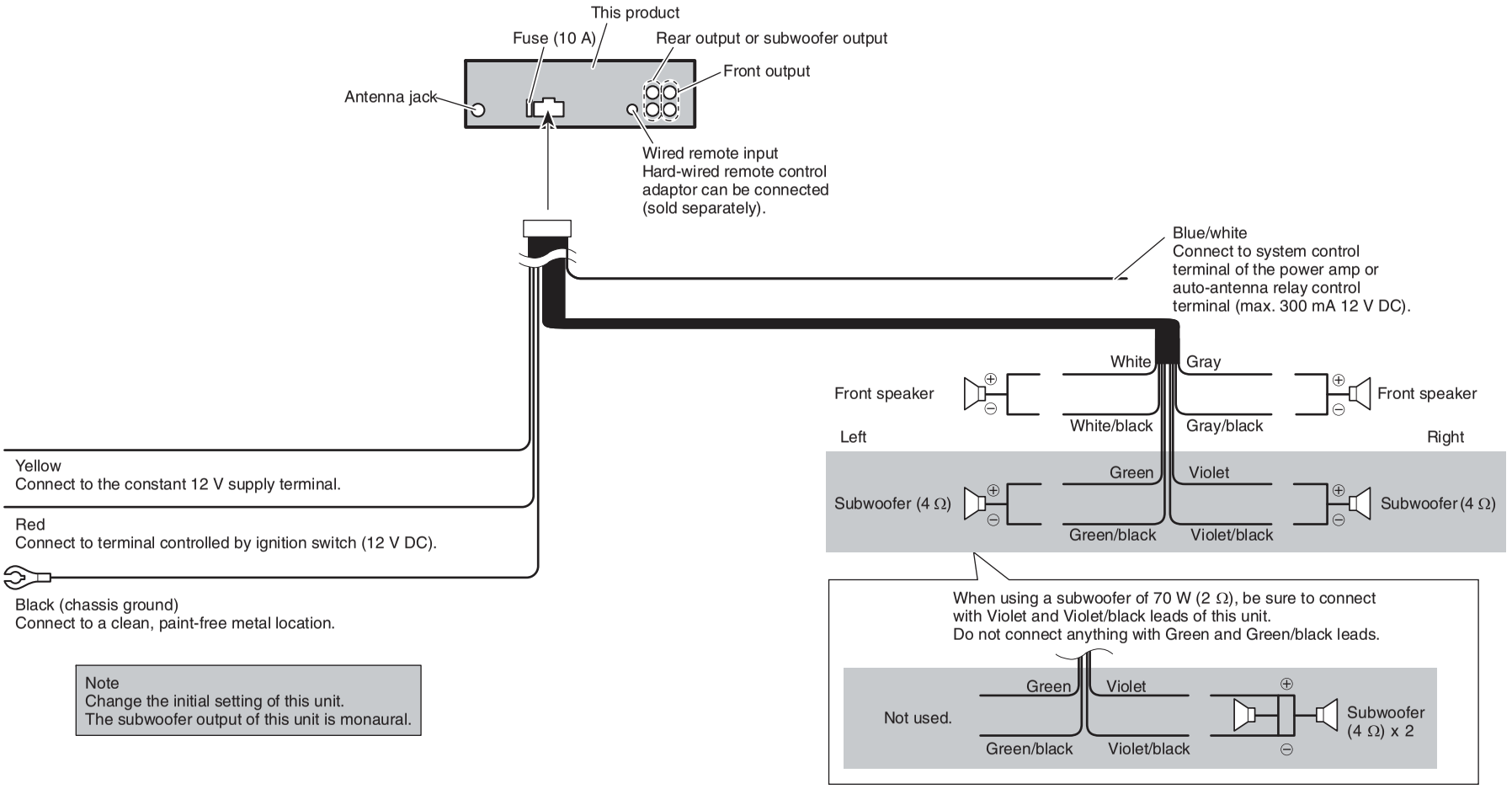


DEH-3200UB/XNUC

When not connecting a rear speaker lead to a subwoofer



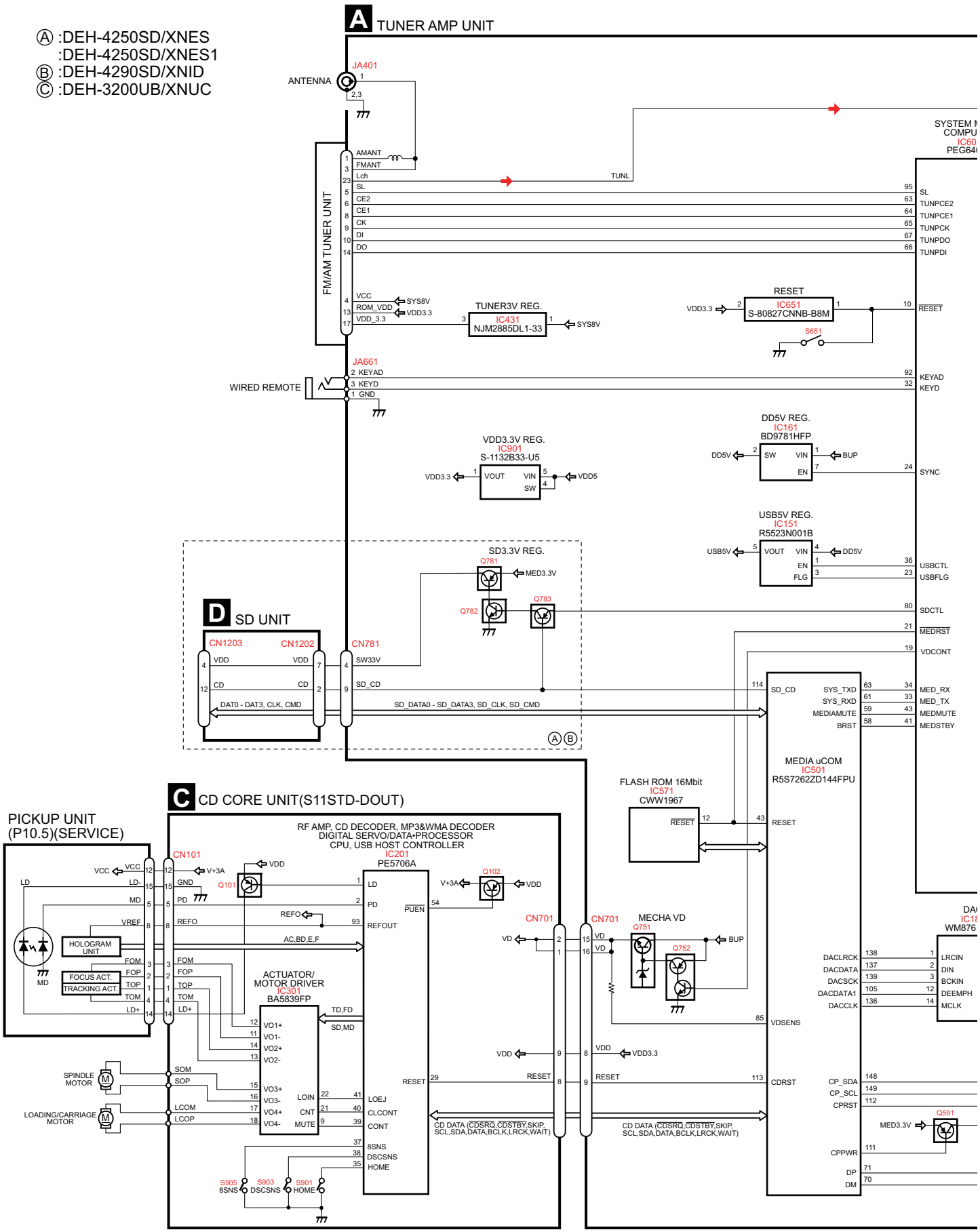
When using a subwoofer without using the optional amplifier

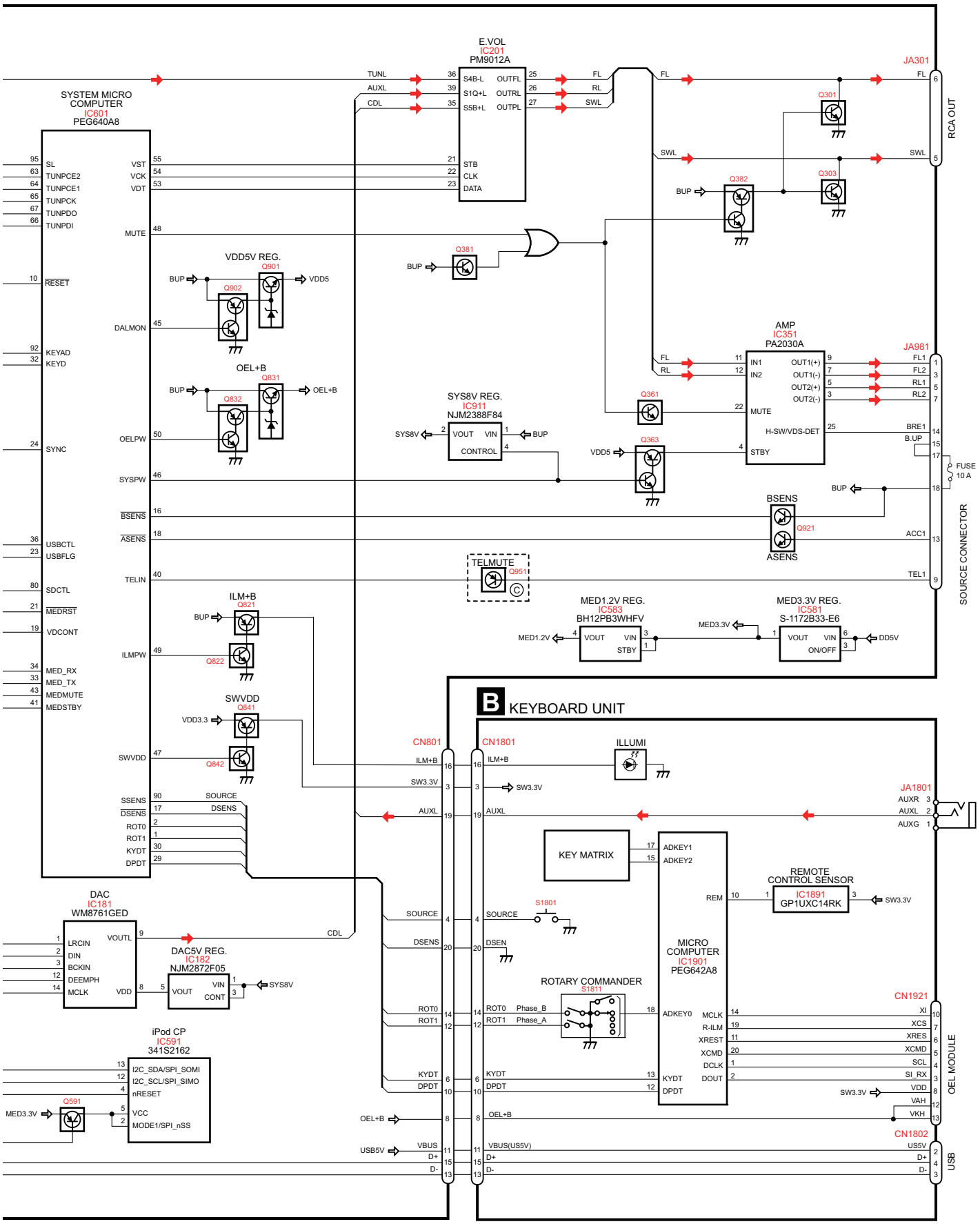


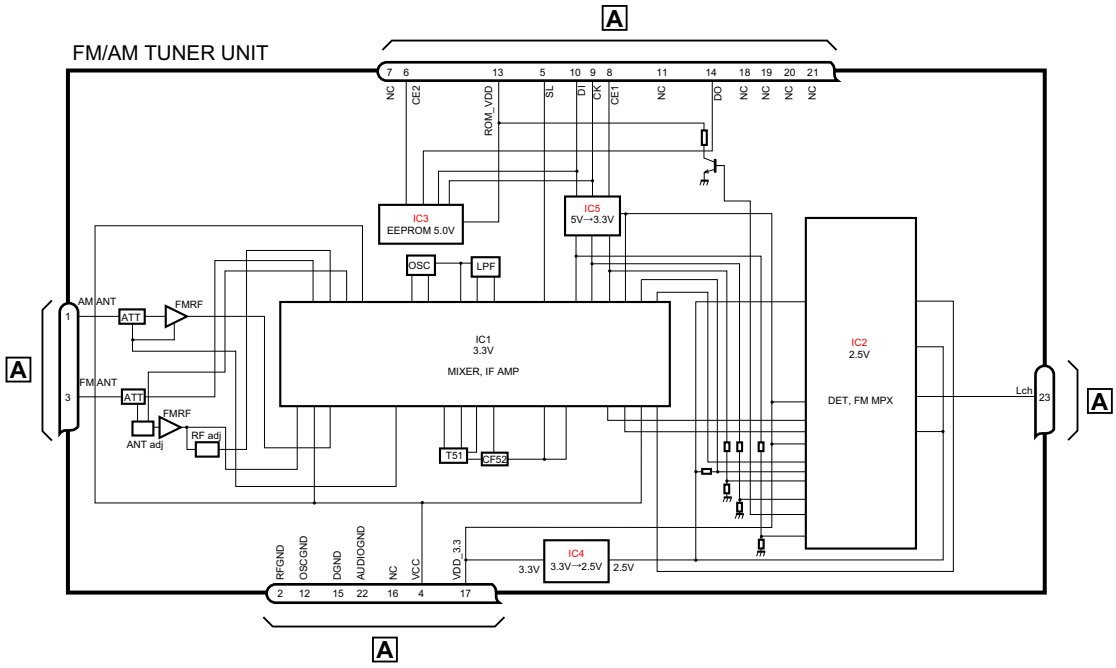
Note
Change the initial setting of this unit.
The subwoofer output of this unit is monaural.

4. BLOCK DIAGRAM

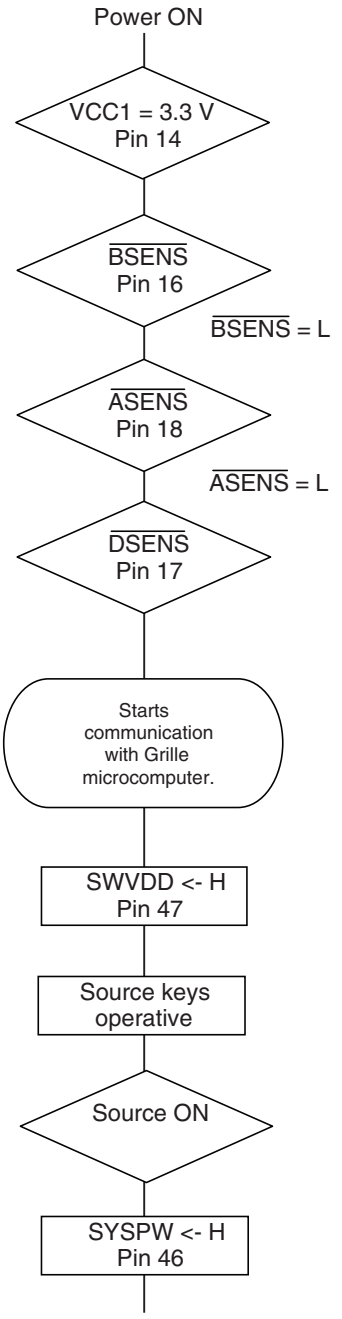
Ⓐ :DEH-4250SD/XNES
:DEH-4250SD/XNES1
Ⓑ :DEH-4290SD/XNID
Ⓒ :DEH-3200UB/XNUC



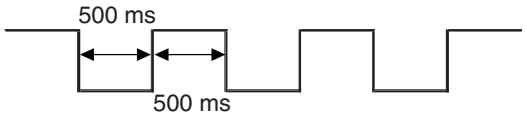

SYSTEM MICRO COMPUTER
IC601
PEG640A8
E.VOL
IC201
PM9012A
JA301
RCA OUT
VDD5V REG.
OEL+B
SYS8V REG.
IC911
NJM2388F84
AMP
IC351
PA2030A
JA981
SOURCE CONNECTOR
FUSE
10 A
BSENS
ASENS
TELMUTE
Q951
MED1.2V REG.
IC583
BH12PB3WHFV
MED3.3V REG.
IC581
S-1172B33-E6
ILM+B
SWVDD
B KEYBOARD UNIT
CN801
CN1801
ILLUMI
JA1801
FRONT AUX
KEY MATRIX
REMOTE
CONTROL SENSOR
IC1891
GP1UXC14RK
DAC
IC181
WM8761GED
DAC5V REG.
IC182
NJM2872F05
MICRO
COMPUTER
IC1901
PEG642A8
ROTARY COMMANDER
S1811
S1801
iPod CP
IC591
341S2162
CN1921
OEL MODULE
CN1802
USB


FM/AM TUNER UNIT
A
7 6 13 5 10 9 8 11 14 18 19 20 21
NC CE2 ROM_VDD SL DI CK CE1 NC DO NC NC NC NC
IC3
EEPROM 5.0V
IC5
5V→3.3V
OSC
LPF
AM ANT
FMRF
ATT
FM ANT
ATT
FMRF
RF adj
ANT adj
IC1
3.3V
MIXER, IF AMP
IC2
2.5V
DET, FM MPX
Lch
23
T51
CF52
RFGND OSCGND DGND AUDIOGND NC VCC VDD_3.3
2 12 15 22 16 4 17
IC4
3.3V→2.5V
3.3V
2.5V

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 500 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

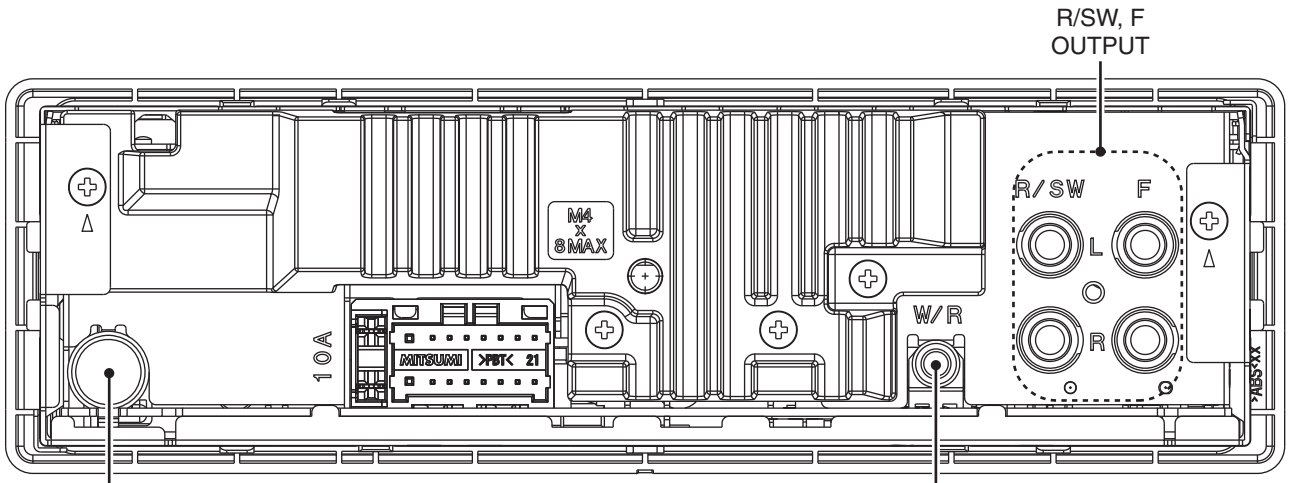
(2) LIST OF CD ERROR CODES (Error Mode: 0xFD)

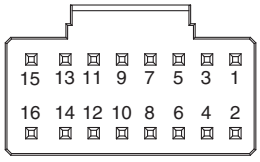
Code	Classification	Error code to be displayed	Details and possible causes
7	Servo	TOC reading NG	TOC information cannot be read. --> The partial disk or TOC content is illegal.
10	Servo	Carriage Home NG	The CRG cannot move toward the inner track. The CRG cannot move from the inner track. --> Defective 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

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 version is checked and the lighting of every segment on the display is checked.

[Operation key]

Corresponding key	Processing	Remarks
CLK/DISP OFF + LIST	Switching to next test display	Also used as an entry key

[Test item]

Test mode is started

System Version information is displayed

S $ $ $ $ # # #

$ PEG number — For PEG123A, "123A" is displayed
# System microcomputer version — For Ver.7.01, "701" is displayed

Unit number information is displayed

U % % % % % % %

% System unit number — For CWW1234, "CWW1234" is displayed

Display Version information is displayed

(Both of Sys. and Disp.) Ver. 2.01 or later

D $ $ $ $ # # #

$ PEG number — For PEG123A, "123A" is displayed
# Display microcomputer version — For Ver.7.01, "701" is displayed

(Both of Sys. and Disp.) less than Ver. 2.01

D I S P $ $ $ $ # # #

$ PEG number — For PEG123A, "123A" is displayed
# Display microcomputer version — For Ver.7.01, "701" is displayed

Media microcomputer Version information is displayed

M V $ $ # #

$ Major version
# Minor version

Only /UC model (excluding DEH-3200UB/XNUC)

Manufacture_ID information is displayed

M I D $ $ $ $ $ $ $ $

$ Manufacture ID

Display is normally updated

Usual product operation is implemented to outward appearances.

Display update is stopped

The screen gets still when entering this item.

Every segment lights up

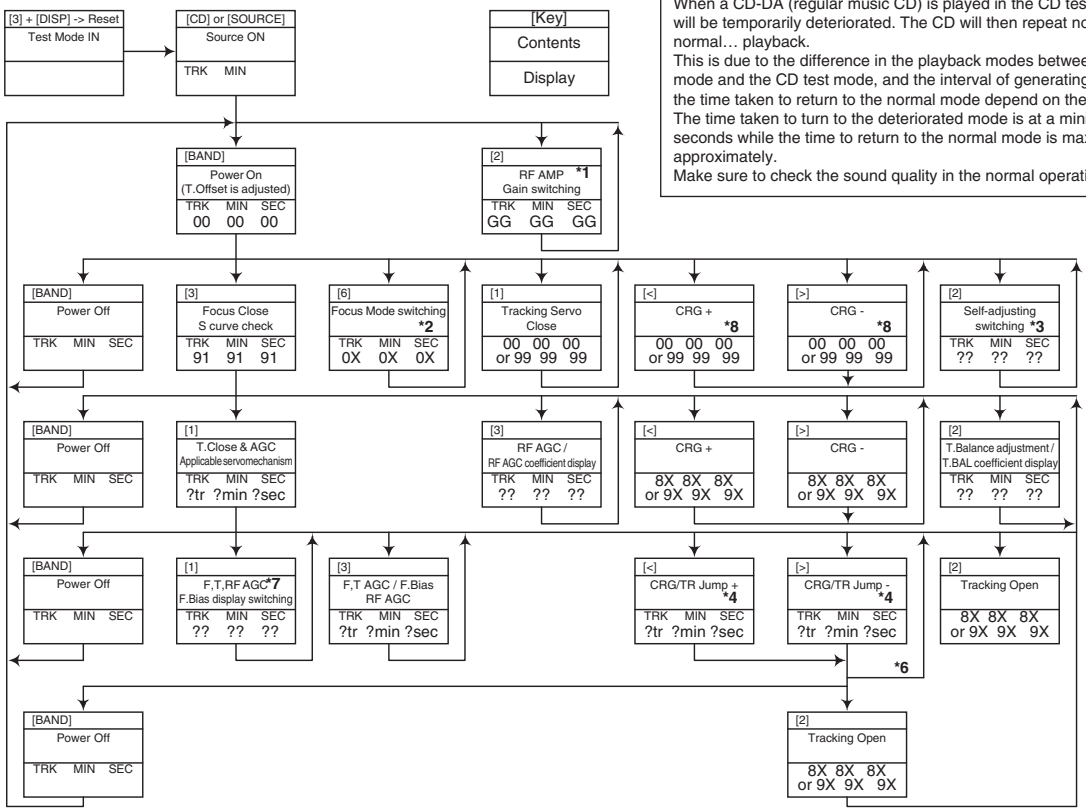
Every segment including icons lights up.

Every segment goes out

Every segment including icons goes out.

6.2 CD TEST MODE

● Flow Chart



NOTE

When a CD-DA (regular music CD) is played in the CD test mode, its sound quality will be temporarily deteriorated. The CD will then repeat normal, deteriorated, normal… playback.
This is due to the difference in the playback modes between the normal operation mode and the CD test mode, and the interval of generating deteriorated mode and the time taken to return to the normal mode depend on the error of each clock.
The time taken to turn to the deteriorated mode is at a minimum around 20 seconds while the time to return to the normal mode is maximum 40 seconds approximately.
Make sure to check the sound quality in the normal operation mode.

*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 Case (not shown)

1. Remove the Case.

●Removing the CD Mechanism Module (Fig.1)

1 Release the two latches and then remove the Panel Assy.

2 Remove the four screws.

Disconnect the connector and then remove the CD Mechanism Module.

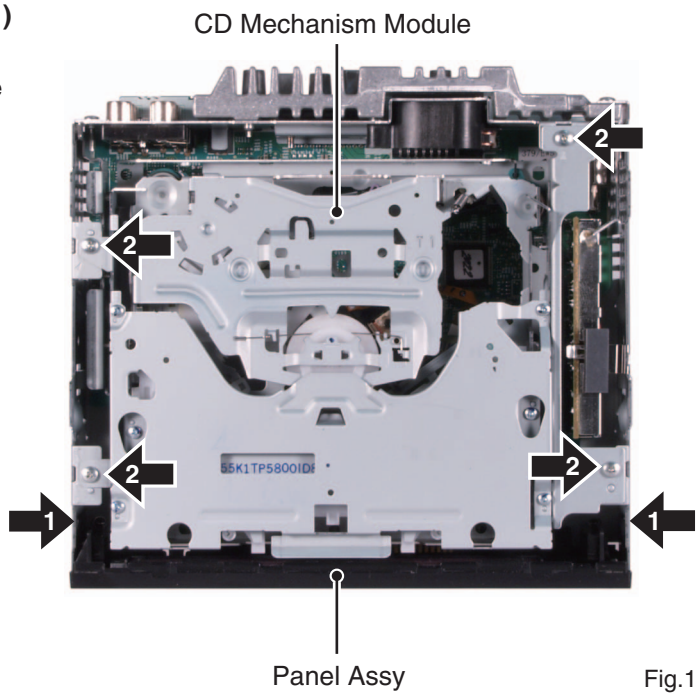


Fig.1

●Removing the Tuner Amp Unit and SD Unit (Fig.2)

1 Remove the two screws.

2 Disconnect the connector.

3 Remove the screw.

4 Straighten the tabs at five locations indicated and then remove the Tuner Amp Unit.

5 Straighten the tabs at three locations indicated and then remove the SD Unit (DEH-4250SD/XNES, DEH-4250SD/XNES1 DEH-4290SD/XNID).

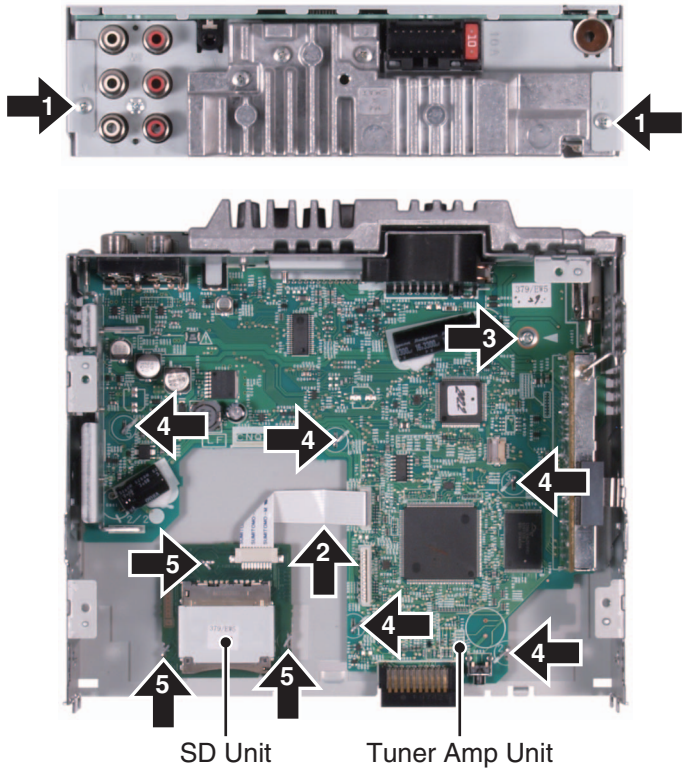
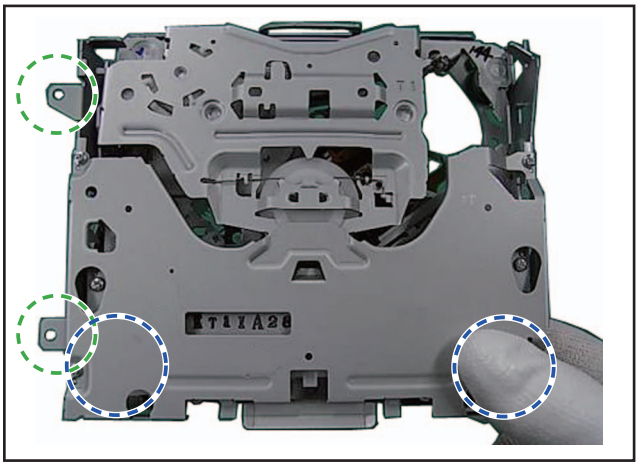


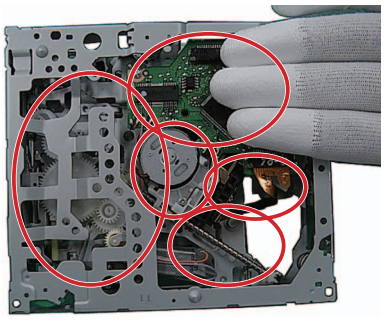
Fig.2

● How to Hold the Mechanism Unit

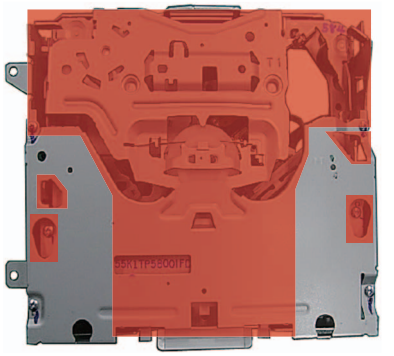
1. Hold the Upper and Lower Frames at the specified parts (circled with broken blue lines in the photo below).
2. You can hold the tabs of the Lower Frame (circled with broken green lines in the photo below) if you do so only while lifting the Mechanism Unit from the table. Keeping the Mechanism Unit lifted by holding these tabs with your fingers may result in deformation.
3. Be careful NOT to hold the front part of the Upper Frame or the CRG Mechanism and NOT to insert foreign objects into these mechanisms. Doing so may result in deformation.

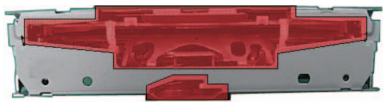
Proper handling

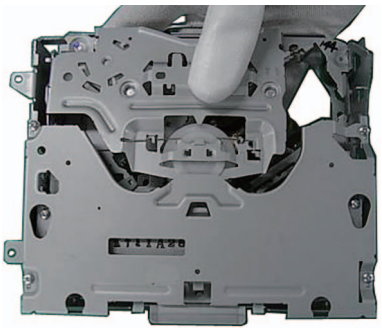


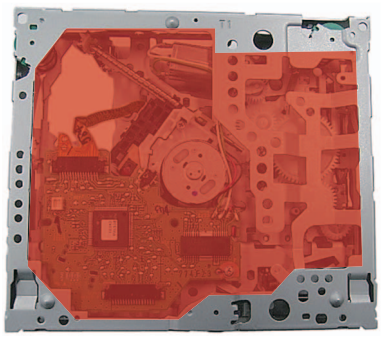


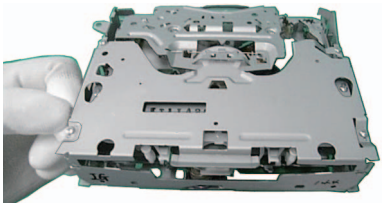
Improper handling











● Mechanism Module: How to Set to the Quasi-Clamp State (Driven by the Motor)

1. Remove the solder from the CRG-motor lead wire (Fig. 1).
2. Push in the Disc Detection Arm while applying 4-V power to the CRG Motor (Fig. 2). (Apply 4-V power to the green lead wire. The white lead wire is for grounding.)
   The Mechanism Module is set to the clamped state, and the PU will move toward the outer track.
   Note: NEVER apply power to the CRG-motor lead wire without removing the solder from the wire. Doing so may result in damage to the ICs and the PU.
3. Stop the motor when the PU reaches around the middle track.
   Note: Jumpiness will occur when the PU reaches the outermost track. Although jumpiness does not constitute a problem, it is recommended that it occur as least frequently as possible.

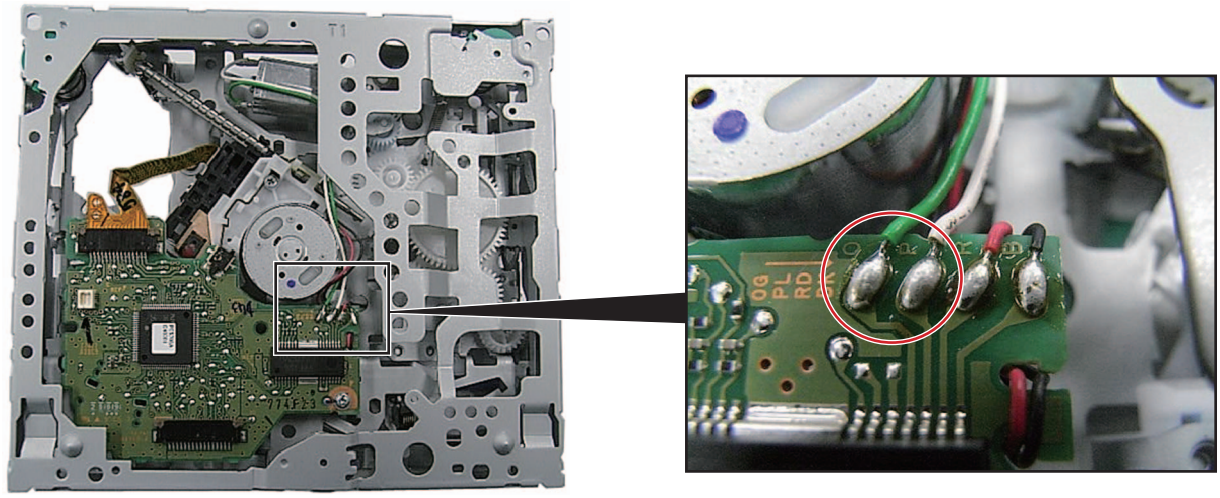


Fig. 1

Note: Be aware that the colors of the lead wires do not match the indications on the Core Board Pattern (green wire to O and white wire to P).

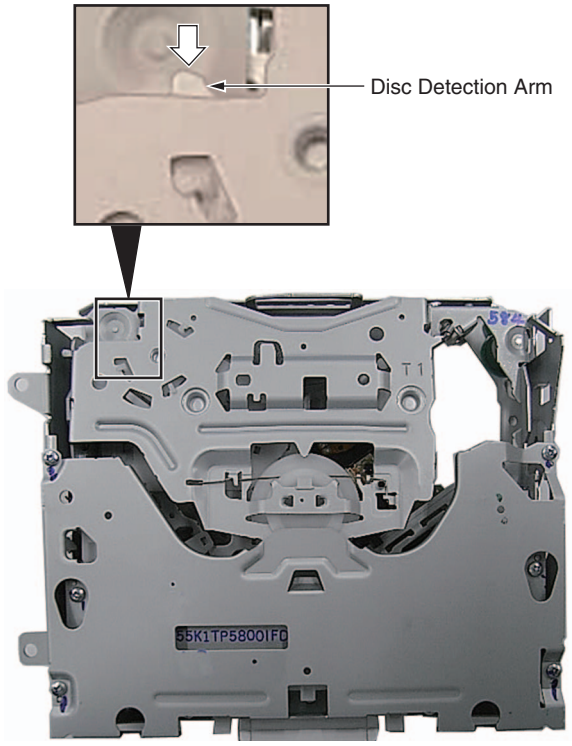


Fig. 2

● How to Remove the PU Unit

1. Set the unit to the quasi-clamp state, following the procedures described in “Mechanism Module: How to Set to the Quasi-Clamp State (Driven by the Motor).”
2. Temporarily change the engagement position of the bias spring of the feed screw (Fig. 2b).
   Be careful not to cut yourself on the tip of the spring.
3. Hold the PU unit by parts A in Fig. 1 then slide it toward the inner track.
4. Remove the backend of the feed screw from the outer holder, by first sliding it, as shown in Fig. 3, then lifting it.
5. Remove the PU unit, by lifting it. Lifting the PU unit will disengage the PU unit from the part B of the chassis.

Note: When reassembling the PU unit, be sure to securely engage the PU unit with the part B of the chassis, as shown in Fig. 4. Also, be sure to change the engagement position of the bias spring of the feed screw to its original position (Fig. 2a). After reassembling, perform the PU adjustment, following the description in the service manual.

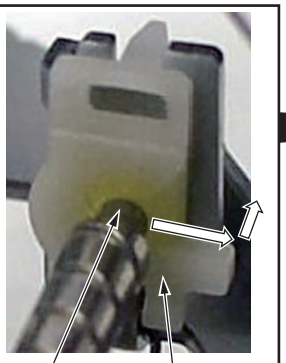


Fig. 3

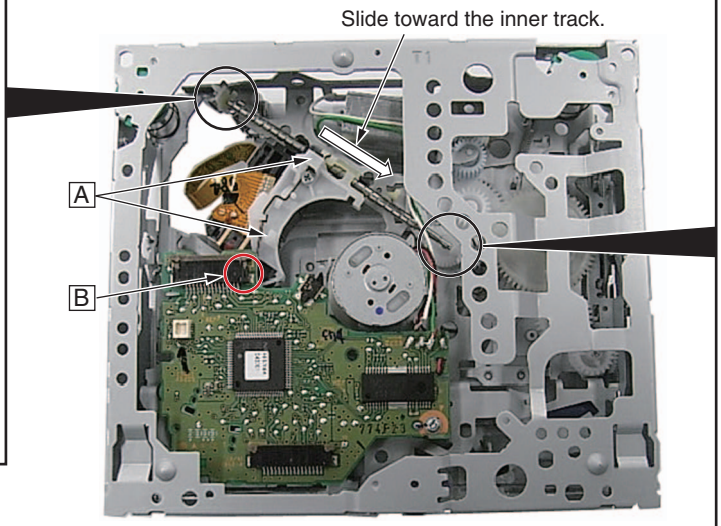
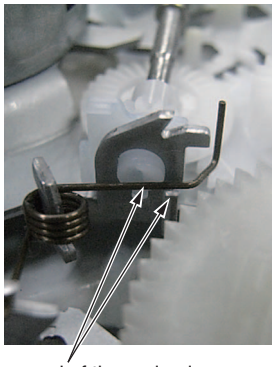


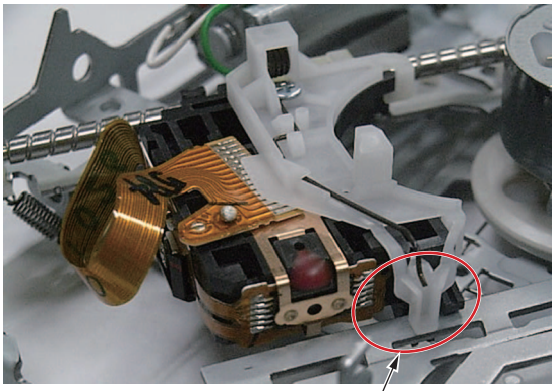
Fig. 1



One end of the spring is engaged beneath the resin flange and plate bend.

Fig. 2a
Original engagement position

Fig. 2b
Temporary engagement position



Properly assembled state

Fig. 4

[Improper assembly]
The chassis is not properly pinched by the PU case and PU rack.

● How to Move the PU toward the Outer Track

1. Set the unit to the quasi-clamp state, following the procedures described in “Mechanism Module: How to Set to the Quasi-Clamp State (Driven by the Motor).”
2. Move the PU unit toward the outer track, by applying 1.5-V power to the CRG motor.

Note: After moving the PU toward the outer track and taking the necessary measures, be sure to solder the lead wires.

● How to Remove the PU Rack

1. Remove the PU Unit, following the procedures described in “How to Remove the PU Unit.”
2. Remove the PU Rack fixing screw (Fig. 1).
3. Remove the PU Rack, by applying force in the direction of the arrow in Fig. 2.

Notes:

While handling the PU Unit, be careful NOT to touch the actuator block shown in Fig. 6 or bang the actuator block against your workbench.

Handle the PU and PU Unit with care, according to the description in “How to Hold the PU.”

When reattaching the PU Rack to the PU, first reassemble parts a and b shown in Fig. 3 into the PU case then attach the boss shown in Fig. 4 to the PU case.

After reassembling the PU Rack, insert the feed screw from side c in Fig. 5 (insertion depth: Approx. 18 mm for the part indicated in the photo).

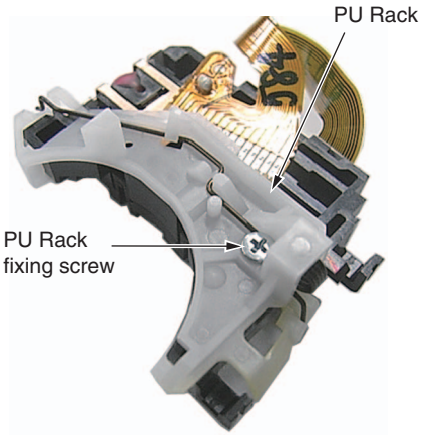


Fig. 1

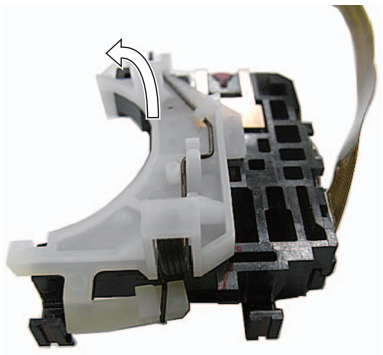


Fig. 2

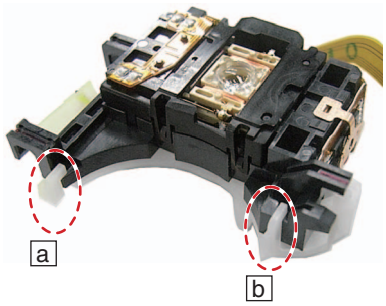


Fig. 3

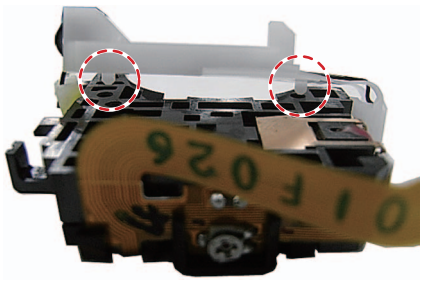


Fig. 4

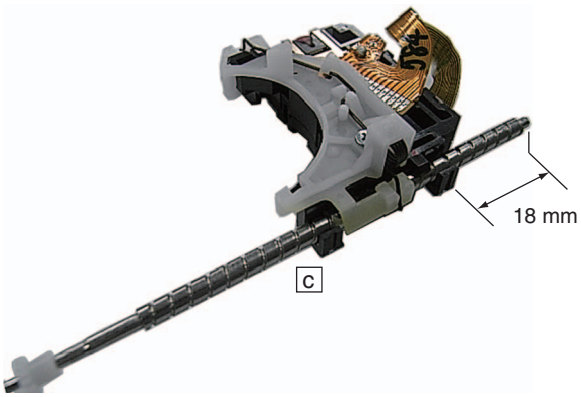


Fig. 5

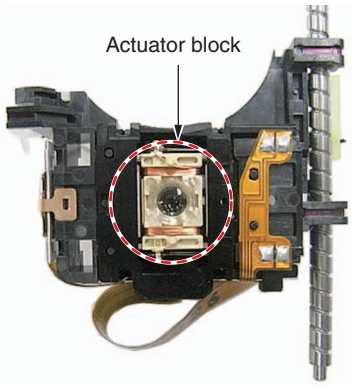
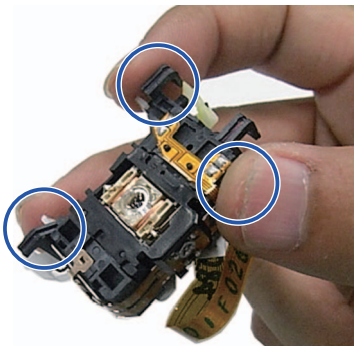


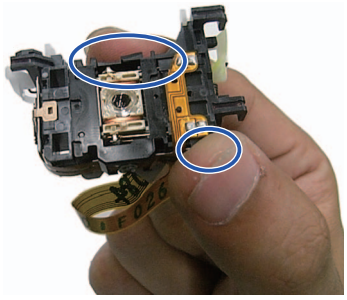
Fig. 6

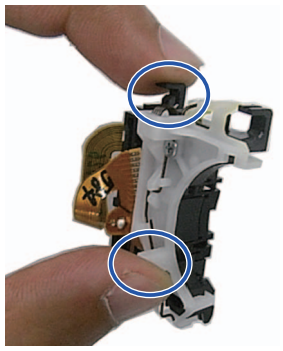
● How to Hold the PU

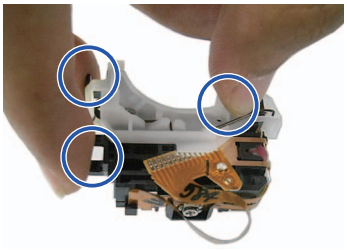
1. Be sure to hold the PU at the positions shown in “Proper handling.” NEVER hold it as shown in “Improper handling.”

Proper handling

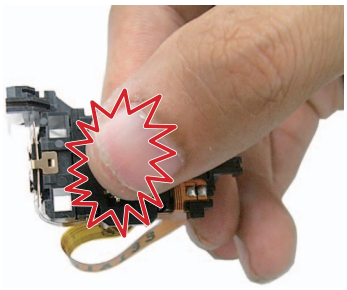




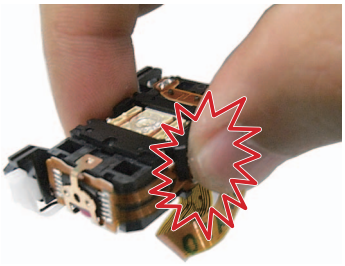




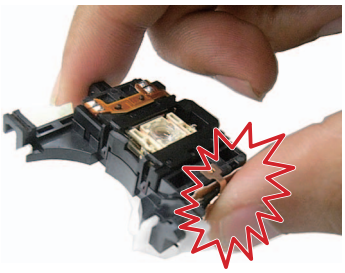
Improper handling



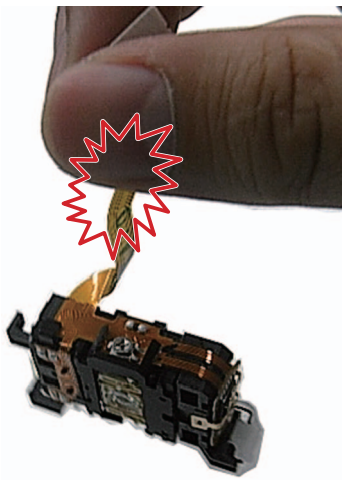
Do not touch the object lens and ACT.



Do not touch the VR.



Do not touch the Hologram.



Do not pull the FPC.

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.
[3] + [DISP] -> Reset

• 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.

When a CD-DA (regular music CD) is played in the CD test mode, its sound quality will be temporarily deteriorated. The CD will then repeat normal, deteriorated, normal… playback.
This is due to the difference in the playback modes between the normal operation mode and the CD test mode, and the interval of generating deteriorated mode and the time taken to return to the normal mode depend on the error of each clock.
The time taken to turn to the deteriorated mode is at a minimum around 20 seconds while the time to return to the normal mode is maximum 40 seconds approximately. Make sure to check the sound quality in the normal operation mode.

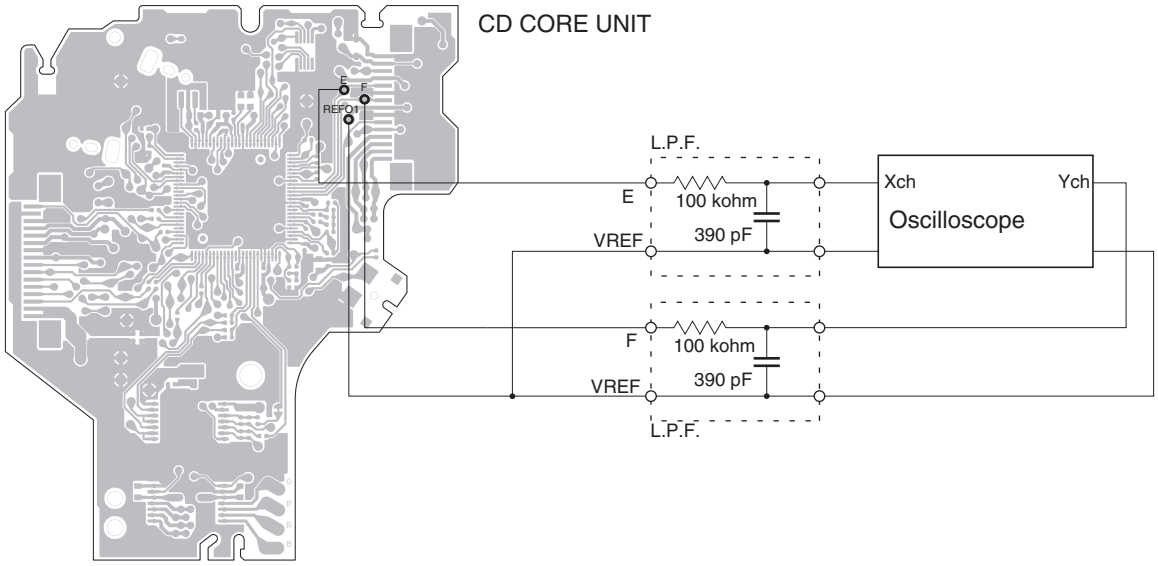
8.2 CHECKING THE GRATING AFTER CHANGING THE PICKUP UNIT

- **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

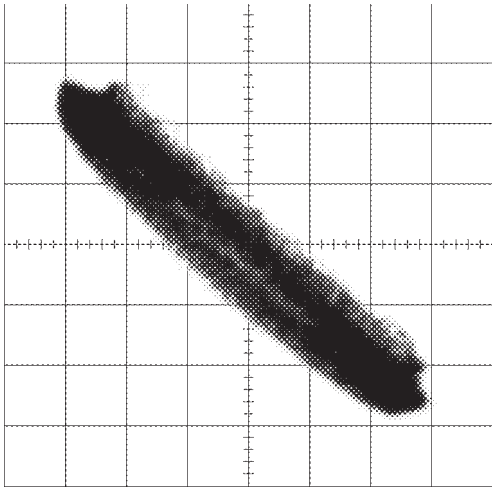


- **Checking Procedure**
  1. In test mode, load the disc and switch the 3 V regulator on.
  2. Using the right and left buttons, move the PU unit to the innermost track.
  3. Press key 3 to close focus, the display should read "91". Press key 2 to implement the tracking balance adjustment the display 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".

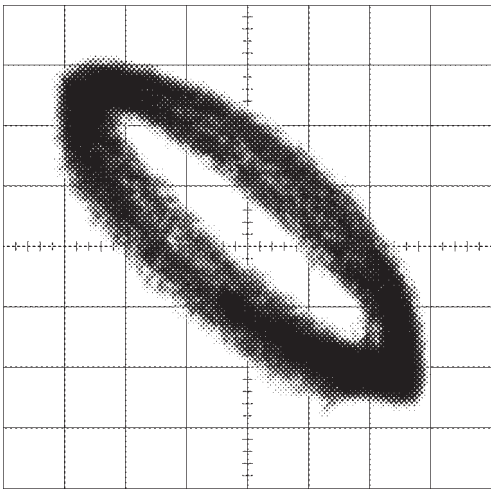
Grating waveform

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

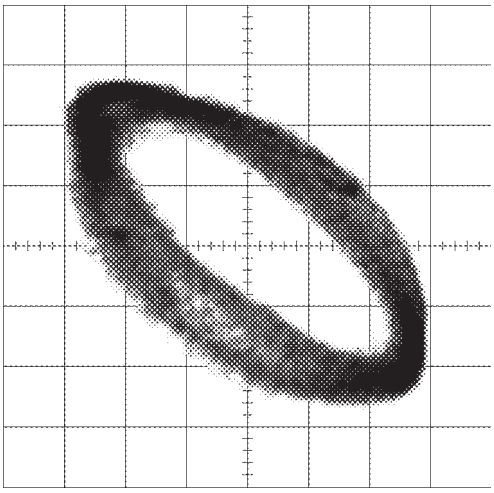
0 degrees



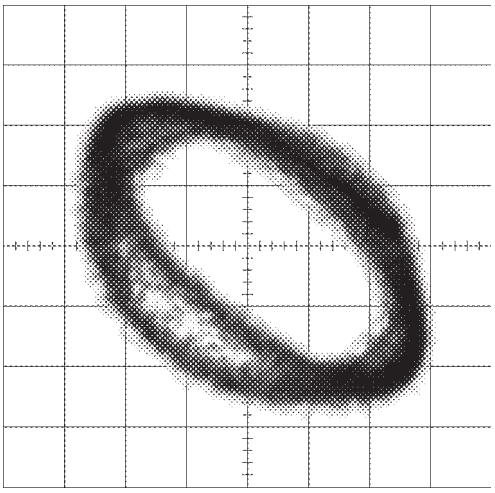
30 degrees



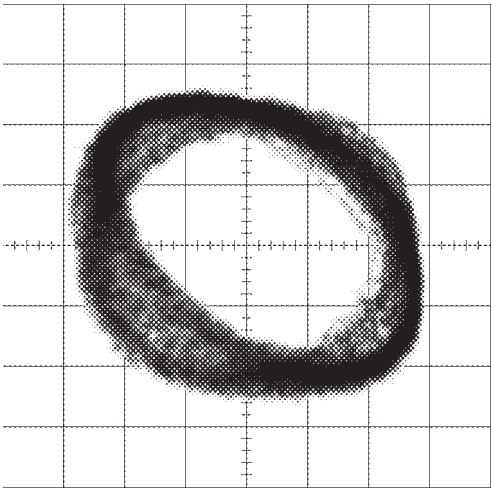
45 degrees



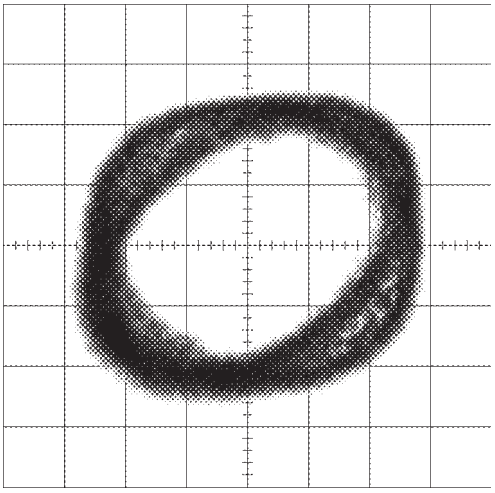
60 degrees



75 degrees



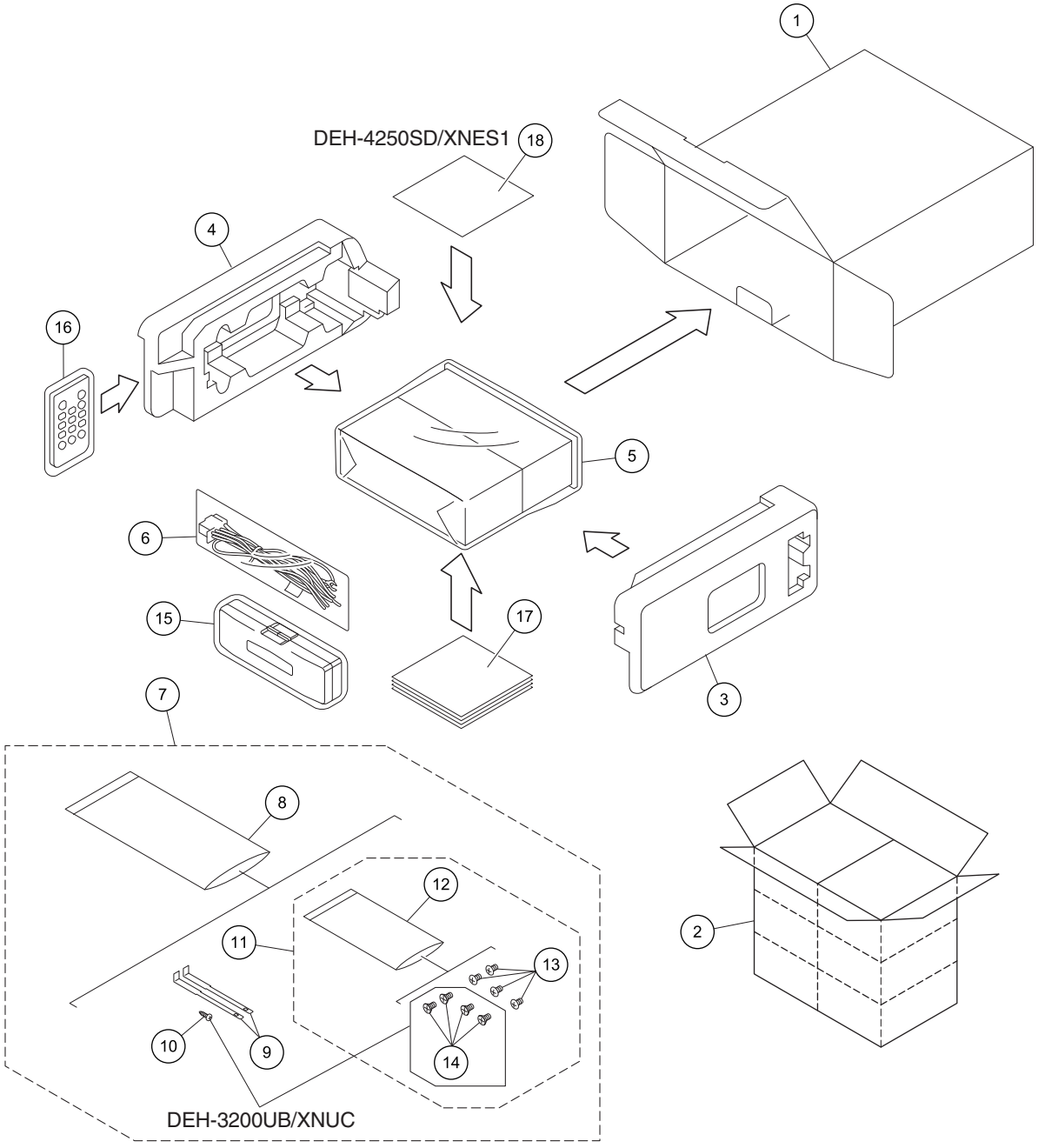
90 degrees



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



PACKING SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Unit Box	See Contrast table (2)
	2	Contain Box	See Contrast table (2)
	3	Protector	See Contrast table (2)
	4	Protector	See Contrast table (2)
	5	Polyethylene Bag	See Contrast table (2)
	6	Cord Assy	YDP5039
	7	Accessory Assy	See Contrast table (2)
	8	Polyethylene Bag	CEG1160
	9	Handle	CND3707
	10	Screw	See Contrast table (2)
	11	Screw Assy	See Contrast table (2)
*	12	Polyethylene Bag	CEG-127
	13	Screw	TRZ50P080FTC
	14	Screw	See Contrast table (2)
	15	Case Assy	See Contrast table (2)
	16	Remote Control Unit	CXE2758
	17-1	Owner's Manual	See Contrast table (2)
	17-2	Installation Manual	See Contrast table (2)
*	17-3	Warranty Card	See Contrast table (2)
*	17-4	Service Network	See Contrast table (2)
*	18	Service Network	See Contrast table (2)

(2) CONTRAST TABLE

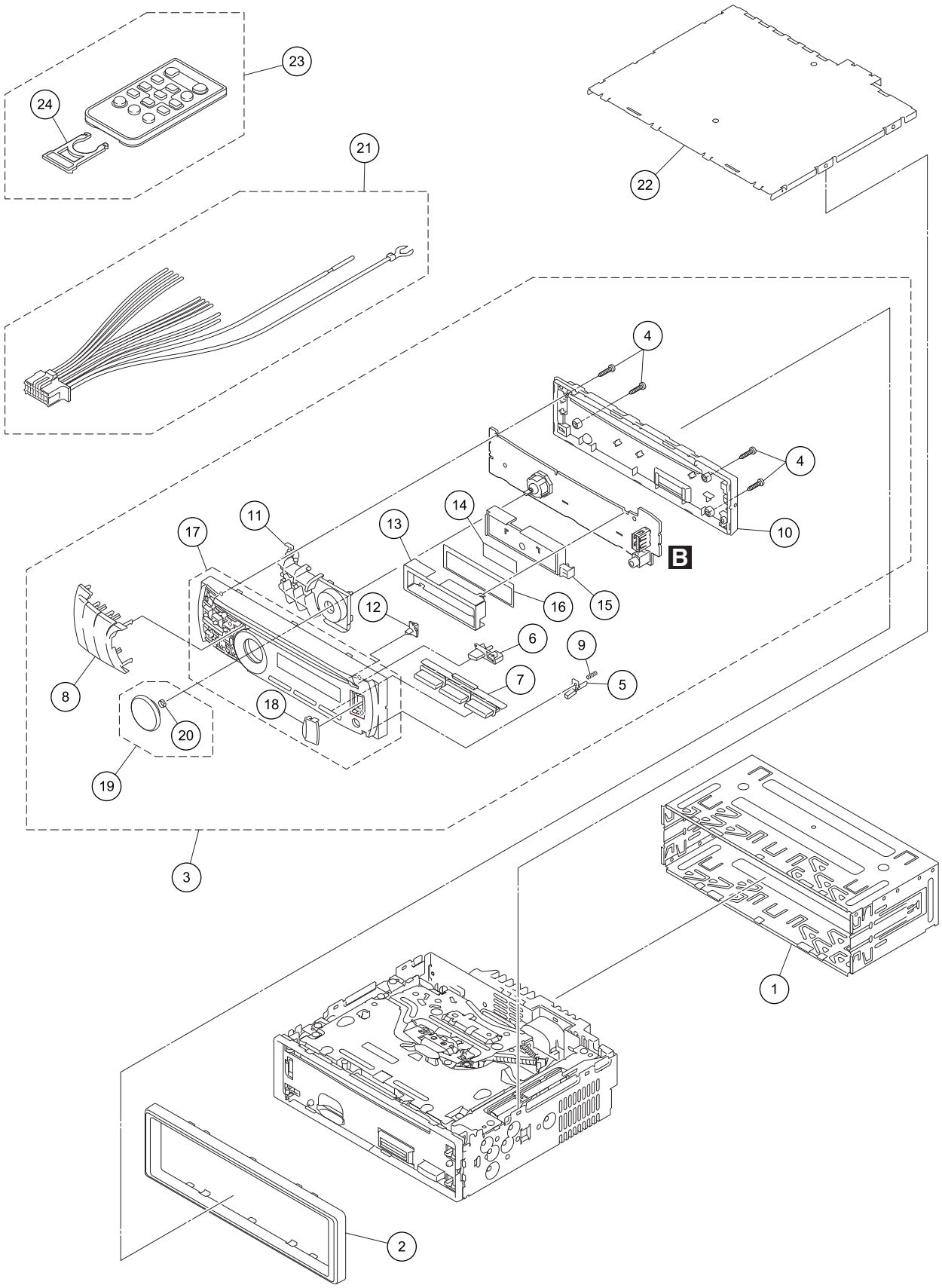
DEH-4250SD/XNES, DEH-4250SD/XNES1, DEH-4290SD/XNID and DEH-3200UB/XNUC are constructed the same except for the following:

Mark	No.	Description	DEH-4250SD/XNES	DEH-4250SD/XNES1	DEH-4290SD/XNID	DEH-3200UB/XNUC
	1	Unit Box	CHG7062	CHG7063	CHG7064	CHG7118
	2	Contain Box	CHL7062	CHL7063	CHL7064	CHL7118
	3	Protector	CHP3931	CHP3931	CHP3931	CHP3941
	4	Protector	CHP3932	CHP3932	CHP3932	CHP3942
	5	Polyethylene Bag	QEG3001	QEG3001	QEG3001	CEG1173
	7	Accessory Assy	YEA5084	YEA5084	YEA5084	*YEA5071
	10	Screw	Not Used	Not Used	Not Used	BPZ20P060FTC
	11	Screw Assy	YEA5082	YEA5082	YEA5082	YEA5072
	14	Screw	Not Used	Not Used	Not Used	CRZ50P090FTC
	15	Case Assy	YXB5009	YXB5009	YXB5009	Not Used
	17-1	Owner's Manual	CRD4434	CRD4434	CRB3094	CRD4457
	17-2	Installation Manual	CRD4437	CRD4437	Not Used	CRD4458
*	17-3	Warranty Card	Not Used	CRY1250	CRY1304	CRY1276
*	17-4	Service Network	Not Used	Not Used	CRY1305	Not Used
*	18	Service Network	Not Used	CRY1251	Not Used	Not Used

Owner's Manual,Installation Manual

Part No.	Language
CRD4434	English, Spanish(Espanol), Portuguese(B), Traditional Chinese, Arabic
CRD4437	English, Spanish(Espanol), Portuguese(B), Traditional Chinese, Arabic
CRB3094	English
CRD4457	English, French, Spanish(Espanol)
CRD4458	English, French, Spanish(Espanol)

9.2 EXTERIOR(1)



EXTERIOR(1) SECTION PARTS LIST

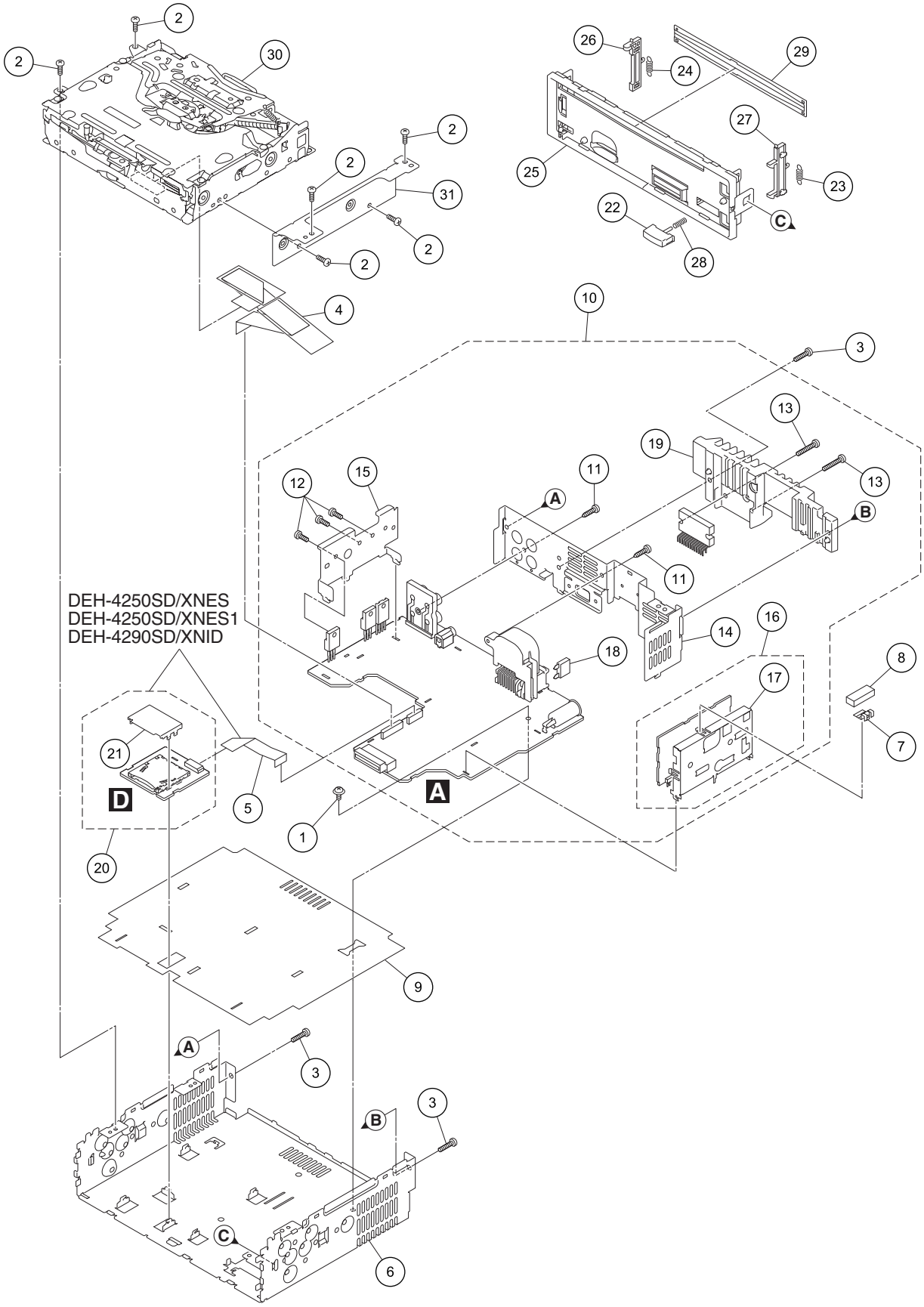
Mark	No.	Description	Part No.
	1	Holder	CND3598
	2	Panel	CNU1016
	3	Detach Grille Assy	See Contrast table (2)
	4	Screw	BPZ20P100FTC
	5	Button(DETACH)	CAI2688
	6	Button(EJECT)	CAI2689
	7	Button(1-6)	CAI2690
	8	Button (SRC, BAND, S.Rtrv, CLK, LIST, BACK)	See Contrast table (2)
	9	Spring	CBH2210
	10	Cover	CNU1012
	11	Lighting Conductor	CNW1752
	12	Lighting Conductor	CNW1753
	13	Holder	CND5407
	14	Double Side Tape	CNN1878
	15	Holder	CNW1754
	16	OEL Module	See Contrast table (2)
	17	Grille Unit	See Contrast table (2)
	18	Door(USB)	CAT2911
	19	Knob Unit	CXE2417
	20	Spring	XBL7005
	21	Cord Assy	YDP5039
	22	Case	YNB5063
	23	Remote Control Unit	CXE2758
	24	Cover	CNS7068

(2) CONTRAST TABLE

DEH-4250SD/XNES, DEH-4250SD/XNES1, DEH-4290SD/XNID and DEH-3200UB/XNUC are constructed the same except for the following:

Mark	No.	Description	DEH-4250SD/XNES	DEH-4250SD/XNES1	DEH-4290SD/XNID	DEH-3200UB/XNUC
	3	Detach Grille Assy	CXE2428	CXE2428	CXE2429	CXE3006
	8	Button(SRC, BAND, S.Rtrv, CLK, LIST, DISP)	CAI2692	CAI2692	CAI2692	CAI2713
	16	OEL Module	MXS4012	MXS4012	MXS4012	MXS4013
	17	Grille Unit	CXE2410	CXE2410	CXE2412	CXE2413

9.3 EXTERIOR(2)



EXTERIOR(2) SECTION PARTS LIST

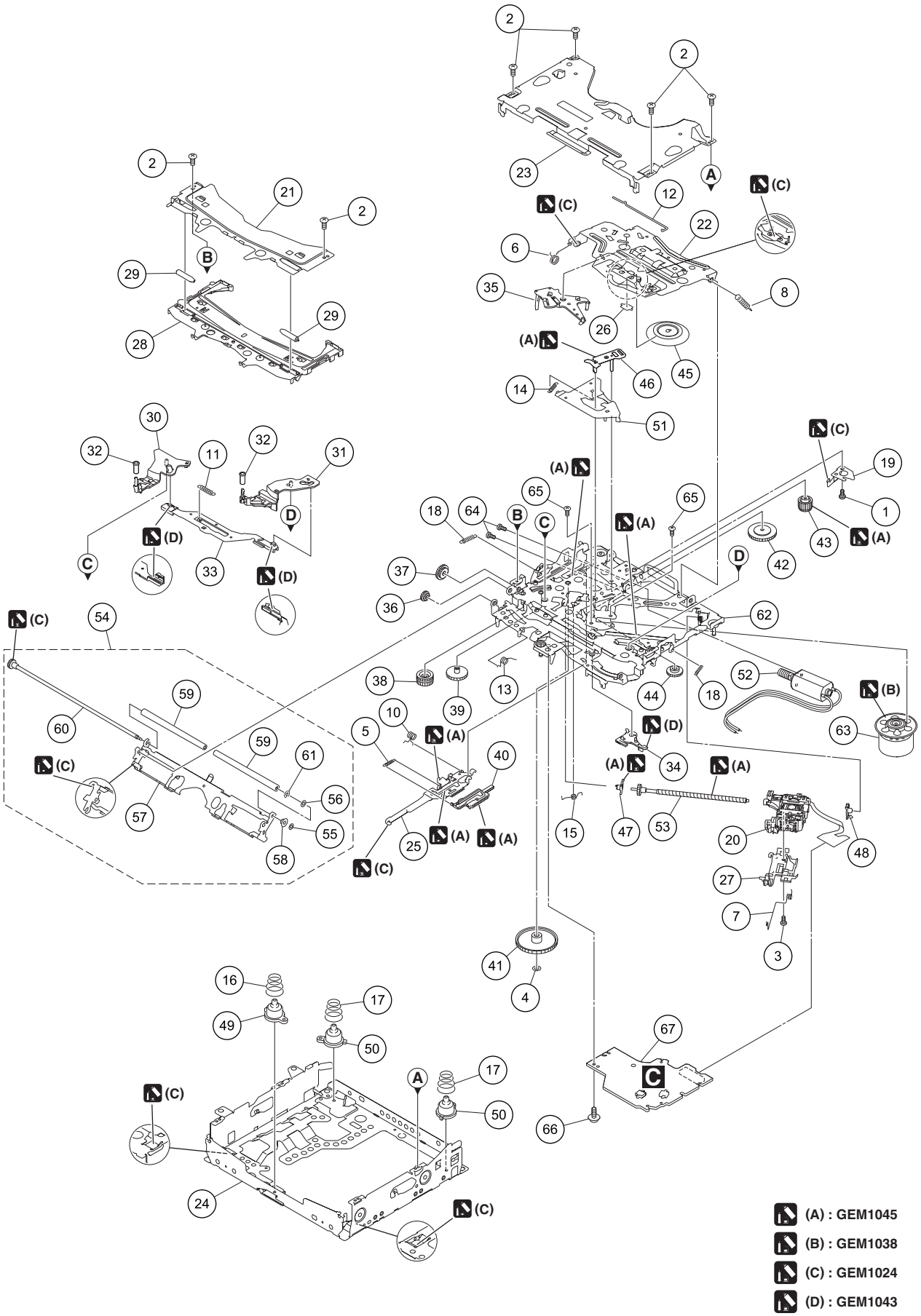
Mark	No.	Description	Part No.
	1	Screw	ASZ26P050FTC
	2	Screw	BSZ26P060FTC
	3	Screw	BSZ26P100FTC
	4	Cable	CDE9106
	5	Cable	See Contrast table (2)
	6	Chassis	CNA3151
	7	Earth Plate	CNC8915
	8	Cushion	CNM8890
	9	Insulator	CNN3145
	10	Tuner Amp Unit	See Contrast table (2)
	11	Screw	BPZ26P080FTC
	12	Screw	BSZ26P060FTC
	13	Screw	BSZ26P160FTC
	14	Holder	CND5411
	15	Holder	CND5423
	16	FM/AM Tuner Unit	CWE2098
	17	Holder	CND4324
⚠	18	Fuse(10 A)	YEK5001
	19	Heat Sink	YNR5139
	20	SD Unit	See Contrast table (2)
	21	Holder	See Contrast table (2)
	22	Button	CAC4836
	23	Spring(Thin)	CBH2961
	24	Spring(Thick)	CBH2962
	25	Panel	See Contrast table (2)
	26	Arm	CNV9312
	27	Arm	CNW1439
	28	Spring	YBH5012
	29	Cover	YNN5030
	30	CD Mechanism Module(S11)	CXK5800
	31	Holder	YND5048

(2) CONTRAST TABLE

DEH-4250SD/XNES, DEH-4250SD/XNES1, DEH-4290SD/XNID and DEH-3200UB/XNUC are constructed the same except for the following:

Mark	No.	Description	DEH-4250SD/XNES	DEH-4250SD/XNES1	DEH-4290SD/XNID	DEH-3200UB/XNUC
	5	Cable	CDE9107	CDE9107	CDE9107	Not Used
	10	Tuner Amp Unit	CWN4805	CWN4805	CWN4805	CWN5219
	20	SD Unit	CWN4816	CWN4816	CWN4816	Not Used
	21	Holder	CND5417	CND5417	CND5417	Not Used
	25	Panel	CNU1015	CNU1015	CNU1015	CNU1017

9.4 CD MECHANISM MODULE



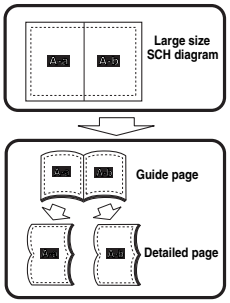
CD MECHANISM MODULE SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Screw	BMZ20P020FTC
	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	•••••	
	10	Spring	CBH3011
	11	Spring	CBH3012
	12	Spring	CBH3014
	13	Spring	CBH3015
	14	Spring	CBH3016
	15	Spring	CBH3017
	16	Spring	CBH3018
	17	Spring	CBH3019
	18	Spring	CBH3020
	19	Spring	CBL1797
	20	Pickup Unit(S10.5)(Service)	CXX1942
	21	Bracket	CND4553
	22	Arm	CND4555
	23	Frame	CND4557
	24	Frame	CND5217
	25	Lever	CND5398
	26	Sheet	CNN2280
	27	Rack	CNV8342
	28	Guide	CNW1171
	29	Roller	CNW1172
	30	Arm	CNW1173
	31	Arm	CNW1174
	32	Roller	CNW1175
	33	Lever	CNW1176
	34	Arm	CNW1177
	35	Arm	CNW1178
	36	Gear	CNW1180
	37	Gear	CNW1181
	38	Gear	CNW1182
	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(M2)(LOAD/CRG)	CXC4026
	53	Screw Unit	CXC8894
	54	Arm Assy	CXC8896
	55	Washer	CBF1037
	56	Washer	CBF1038
	57	Arm	CND4554
	58	Collar	CNV6906
	59	Roller	CNW1196
	60	Gear Unit	CXC8893
	61	Washer	YE15FTC
	62	Chassis Unit	CXE1946
	63	Motor Unit(M1)(SPDL)	CXE2273
	64	Screw	JFZ20P025FTC
	65	Screw	JGZ17P022FTC
	66	Screw	IMS20P030FTC
	67	CD Core Unit (S11STD-DOUT)	CWX3774

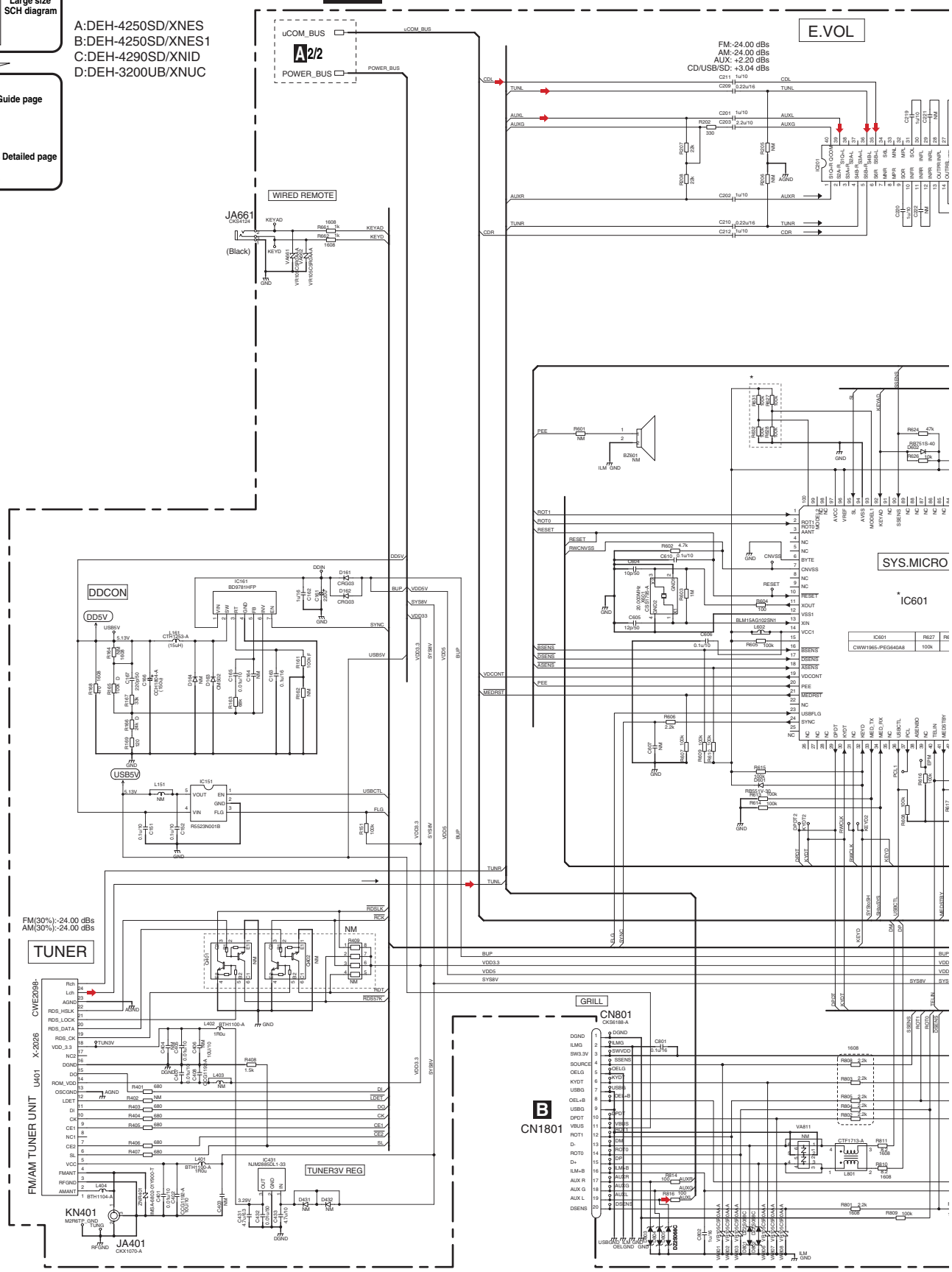
10. SCHEMATIC DIAGRAM

10.1 TUNER AMP UNIT 1/2 [MAIN] (GUIDE PAGE)

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



A:DEH-4250SD/XNES
B:DEH-4250SD/XNES1
C:DEH-4290SD/XNID
D:DEH-3200UB/XNUC



A-b 1/2

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.

A1/2 TUNER AMP UNIT (MAIN)

RCA OUT

JA301 YKB5011-

FM: -6.00 dBs
AM: -6.00 dBs
AUX:+10.20 dBs
CD/USB/SD:+10.04 dBs

REFERENCE AREA MAP		sheet1	
101~120	IP-BUS	651~670	WIRED REMOTE
151~160	USB H.SW	801~820	GRILL
161~170	DC-DC CONVERTOR	821~830	ILM+B
201~240	E.VOL	831~840	OEL+B
301~350	RCA	841~850	SWVDD
351~380	AMP	901~910	VDD5 & VDD3.3
381~400	MUTE	911~920	SYS+B
401~430	TUNER	921~930	ASENS&BSENS
431~440	TUNER 3V REG	931~940	ISENS
601~640	SYSTEM MICRO	941~950	B.REM
641~650	ROM COLECTION	951~960	TEL IN
651~660	RESET	961~970	AUTO ANTENNA
		981~990	SOURCE CONNECTOR

REFERENCE AREA MAP		sheet2	
181~200	DAC & LPF	501~600	ipod CP
501~570	MEDIA uCOM	701~750	MECHA
571~580	FLASH ROM	751~780	MECHA VD
581~590	MED3.3V & MED1.2V	781~800	SD CONNECT

SYS.MICRO

IC601

IC601	R627	R628	R631	R632
CWW1965-/PEG640A8	100k	-	100k	-

No MOUNT

ROM CORRECTION

CN601 NM

RESET

AMP

IC351 PA2030A

MUTE

B.REM

SOURCE CONNECTOR

JA981 CKM1586-A

OEL+B

ILM+B

SWVDD

SYS+B

VDD3.3

VDD5V

VDD5.0

VDD33

BUP

ASENS

ISENS

TELMUTE

FM:+20.00 dBs
AM:+20.00 dBs
AUX:+36.20 dBs
CD/USB/SD:+36.04 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

A1/2

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 1/2 TUNER AMP UNIT (MAIN)

RCA OUT

FM: -6.00 dBs
AM: -6.00 dBs
AUX:+10.20 dBs
CD/USB/SD:+10.04 dBs

REFERENCE AREA MAP		sheet1	
101～120	IP-BUS	661～670	WIRED REMOTE
151～160	USB H.SW	801～820	GRILL
161～170	DC-DC CONVERTOR	821～830	ILM+B
201～240	E.VOL	831～840	OEL+B
301～350	RCA	841～850	SWVDD
351～380	AMP	901～910	VDD5 & VDD3.3
381～400	MUTE	911～920	SYS+B
401～430	TUNER	921～930	ASENS&BSENS
431～440	TUNER 3V REG	931～940	ISENS
601～640	SYSTEM MICRO	941～950	B.REM
641～650	ROM COLECTION	951～960	TEL IN
651～660	RESET	961～970	AUTO ANTENNA
		981～990	SOURCE CONNECTOR

REFERENCE AREA MAP		sheet2	
181～200	DAC & LPF	591～600	ipod CP
501～570	MEDIA uCOM	701～750	MECHA
571～580	FLASH ROM	751～780	MECHA VD
581～590	MED3.3V & MED1.2V	781～800	SD CONNECT

SYS.MICRO

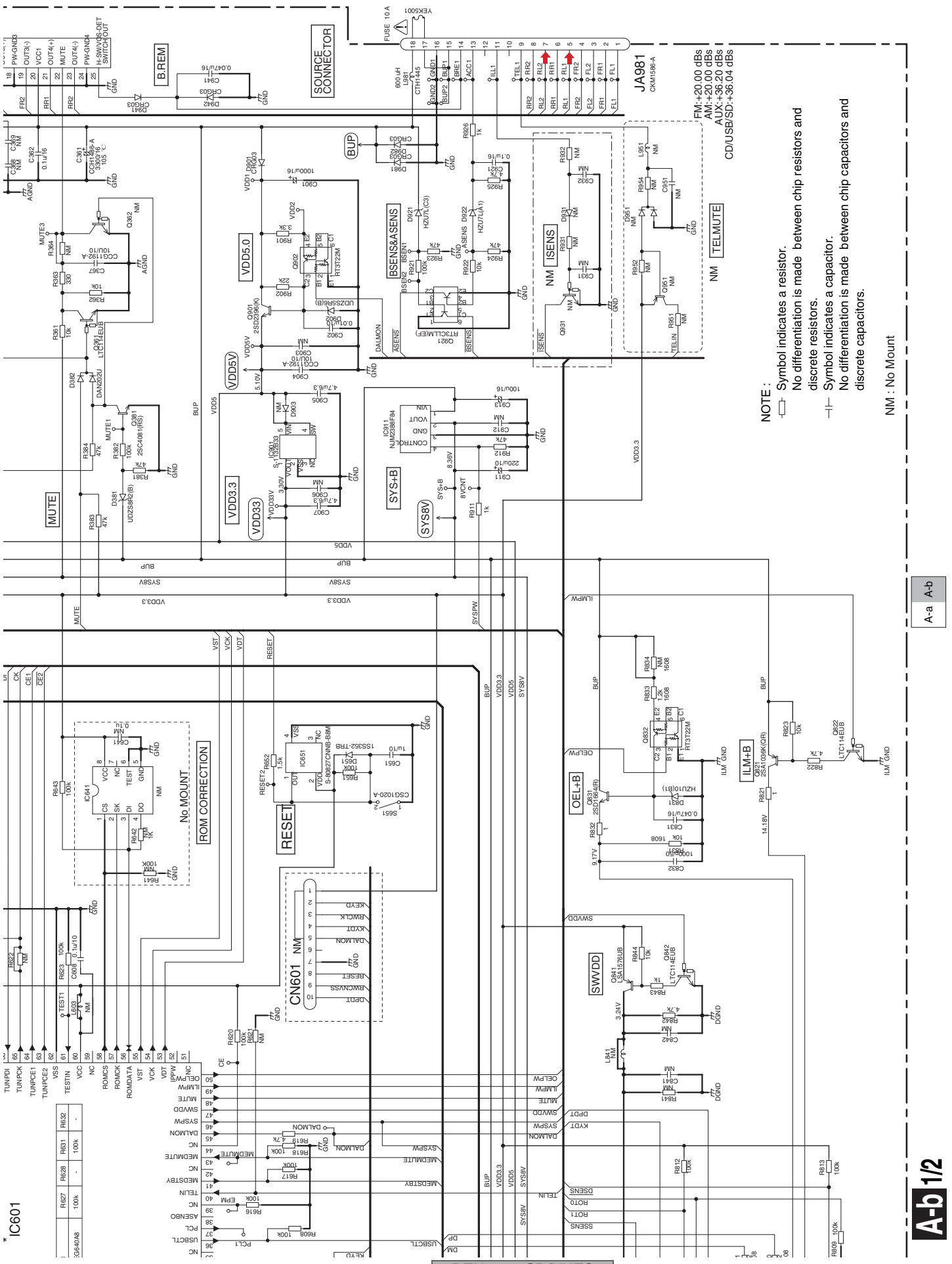
* IC601

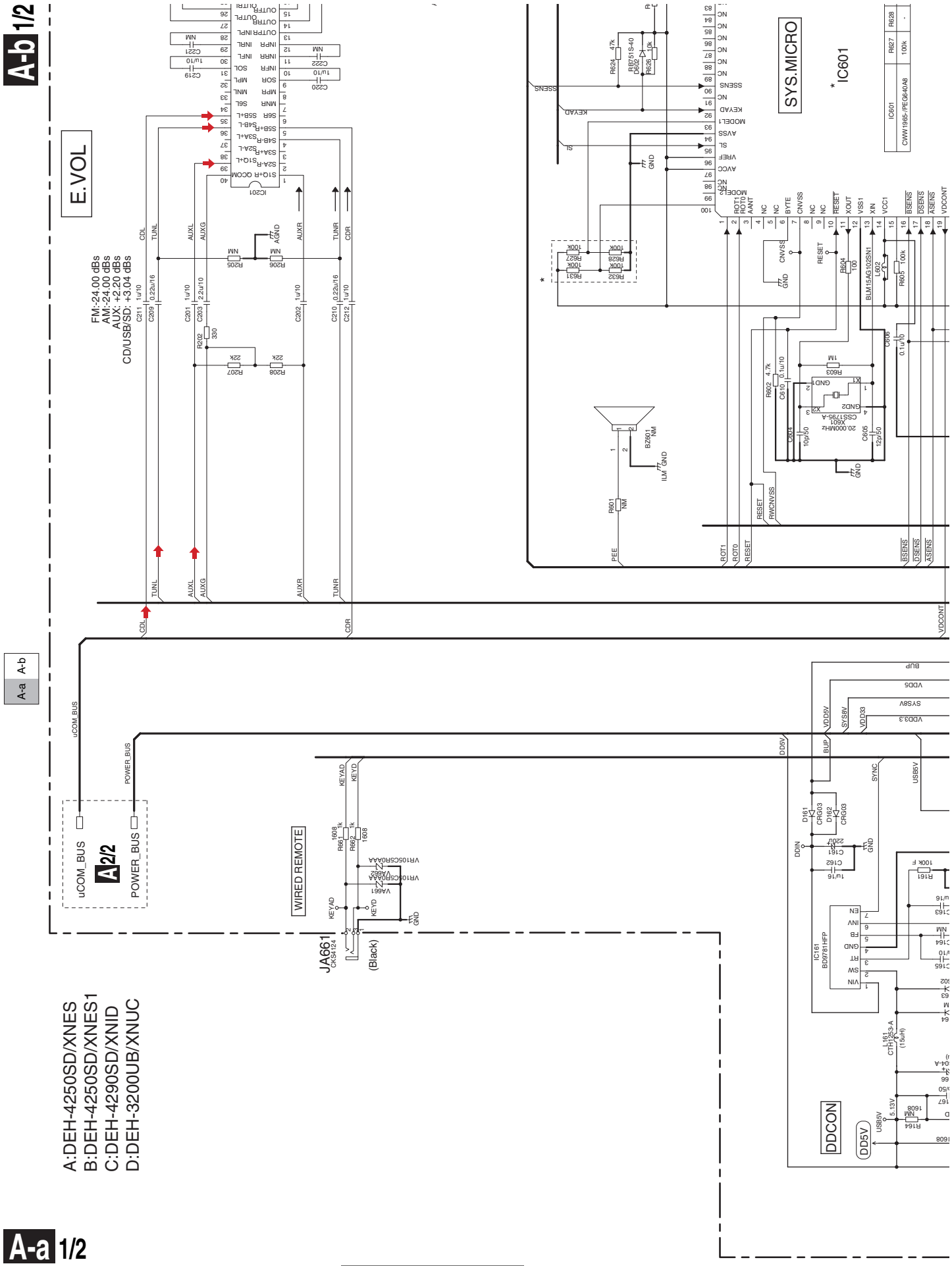
	R627	R628	R631	R632
:G640A8	100k	-	100k	-

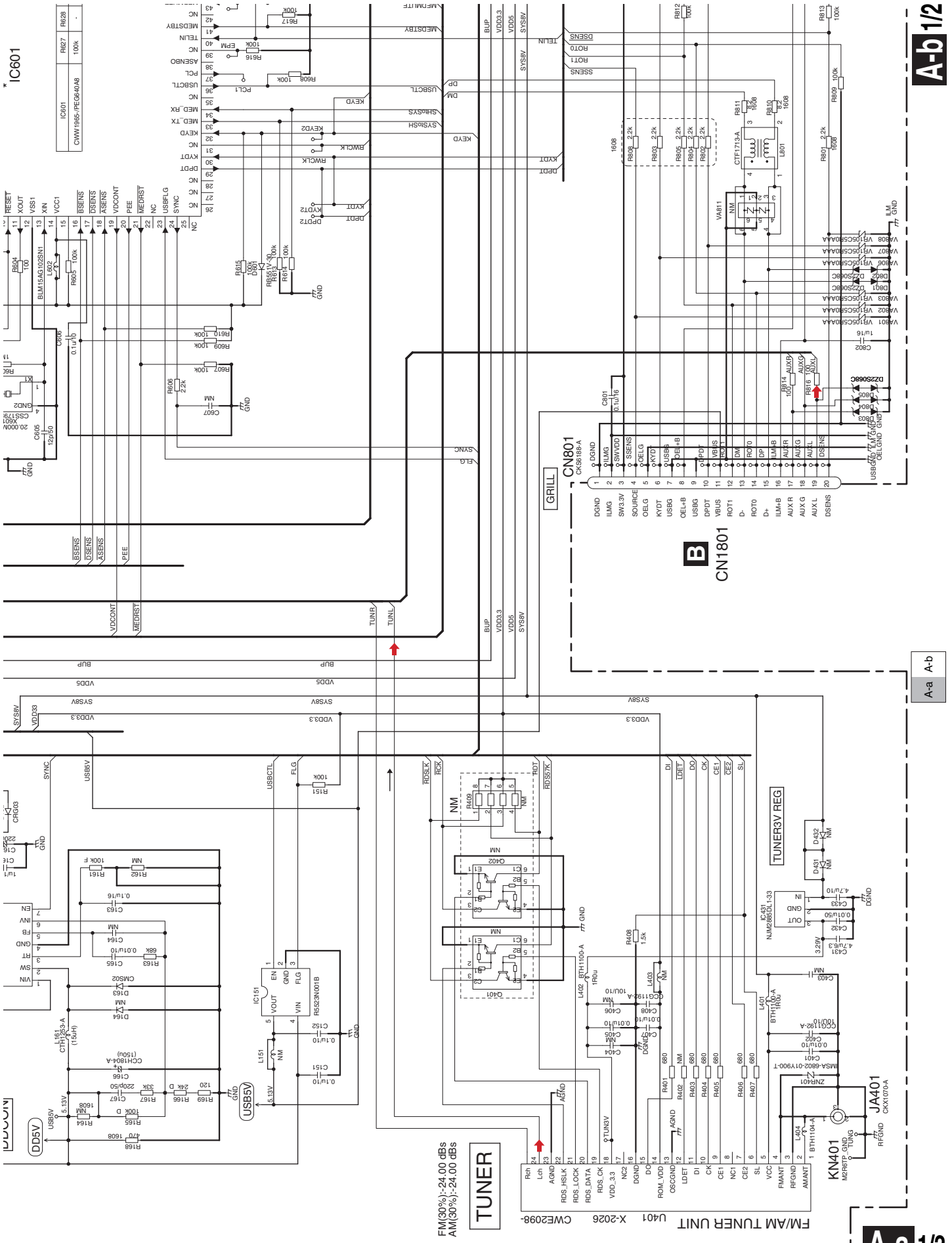
JA301 YKB5011-

AMP IC351 PA2030A

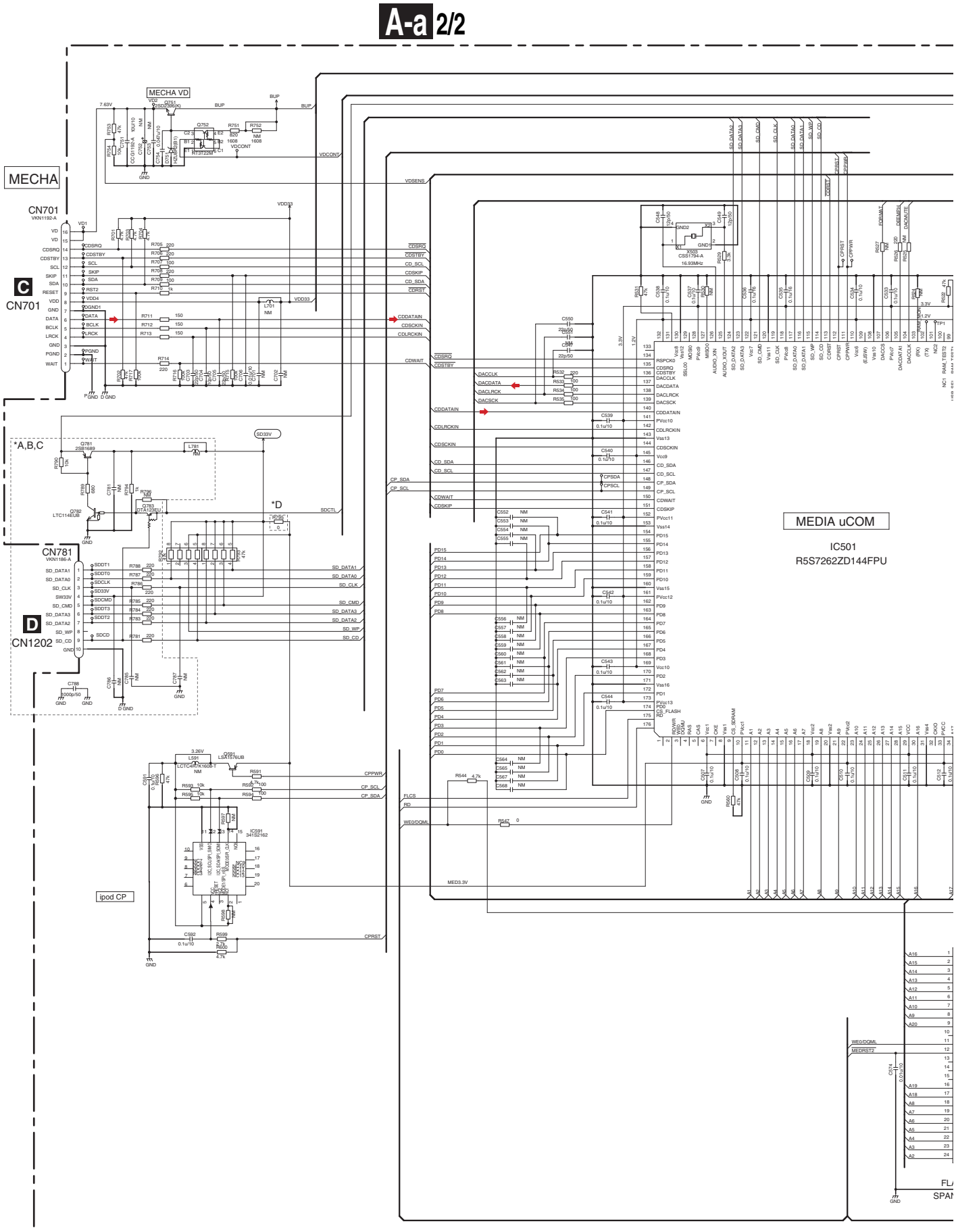
MUTE


SOURCE CONNECTOR
JA981
CKM1586-A
FM:+20.00 dBs
AM:+20.00 dBs
AUX:+36.20 dBs
CD/USB/SD:+36.04 dBs
B.REM
MUTE
VDD5.0
VDD5V
VDD3.3
VDD33
SYS+B
SYS8V
BSENS&ASENS
ISENS
TELMUTE
RESET
ROM CORRECTION
No MOUNT
CN601 NM
IC601
OEL+B
ILM+B
SWVDD
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-a
A-b
A-b 1/2


A-b 1/2
E.VOL
SYS.MICRO
IC601
A-a A-b
A2/2
uCOM_BUS
POWER_BUS
WIRED REMOTE
JA661
(Black)
DDCON
DD5V
A:DEH-4250SD/XNES
B:DEH-4250SD/XNES1
C:DEH-4290SD/XNID
D:DEH-3200UB/XNUC
A-a 1/2

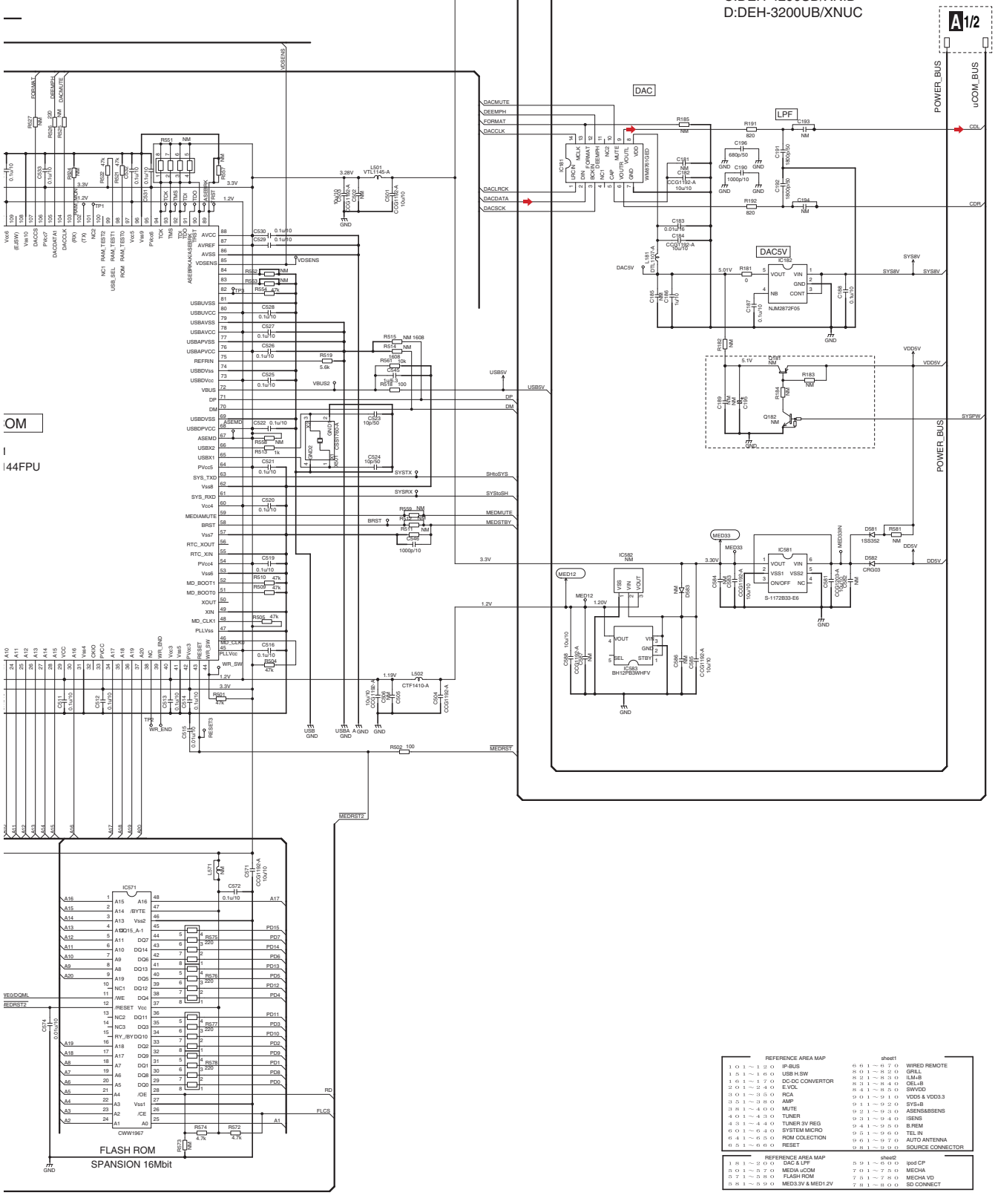

A-b 1/2
A-a 1/2
IC601
CN801
CN1801
GRILL
TUNER
FM/AM TUNER UNIT
TUNER3V REG
USB5V
DD5V
KN401
JA401
FM(30%):-24.00 dBs
AM(30%):-24.00 dBs

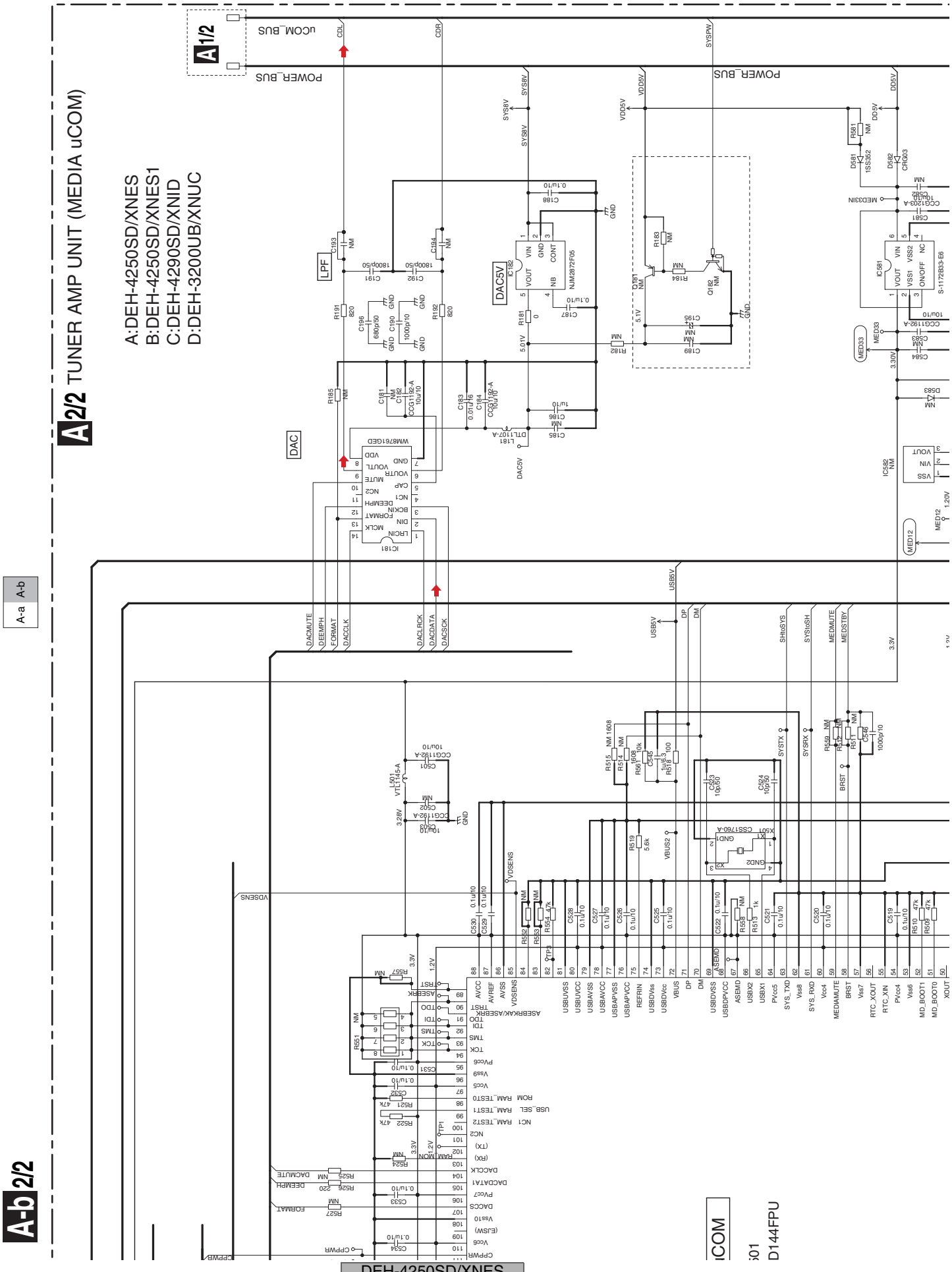
10.2 TUNER AMP UNIT 2/2 [MEDIA Ucom] (GUIDE PAGE)

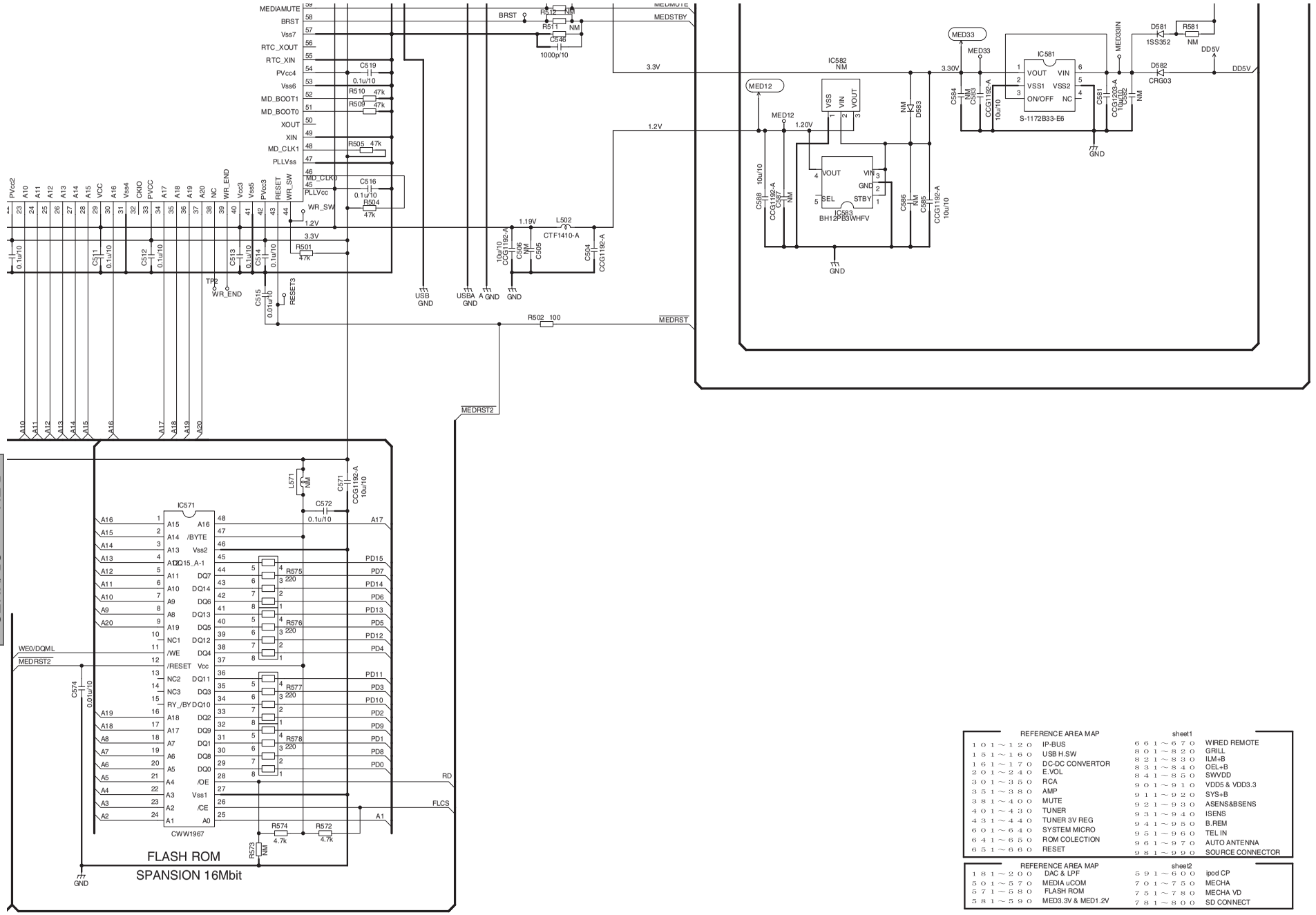


A 2/2 TUNER AMP UNIT (MEDIA uCOM)

A:DEH-4250SD/XNES
B:DEH-4250SD/XNES1
C:DEH-4290SD/XNID
D:DEH-3200UB/XNUC




A2/2 TUNER AMP UNIT (MEDIA uCOM)
A:DEH-4250SD/XNES
B:DEH-4250SD/XNES1
C:DEH-4290SD/XNID
D:DEH-3200UB/XNUC
A1/2
uCOM_BUS
POWER_BUS
A-b 2/2
A-a A-b
DAC
LPF
DAC5V
IC181
WM8761GED
IC182
NJM2872F05
IC581
S-1172B33-E6
IC582
DTL-1107-A
L181
L501
VTL1145-A
X501
CSS1760-A
DACMUTE
DEEMPH
FORMAT
DACCLK
DACLRCK
DACDATA
DACSCK
SYSTX
SYSRX
BRST
MEDMUTE
MEDSTBY
SHtoSYS
SYStoSH
VDSENS
USB5V
3.3V
1.2V
3.28V
5.1V
5.01V
1.20V
MED12
MED33
MEDSIN
D144FPU
DEH-4250SD/XNES
54



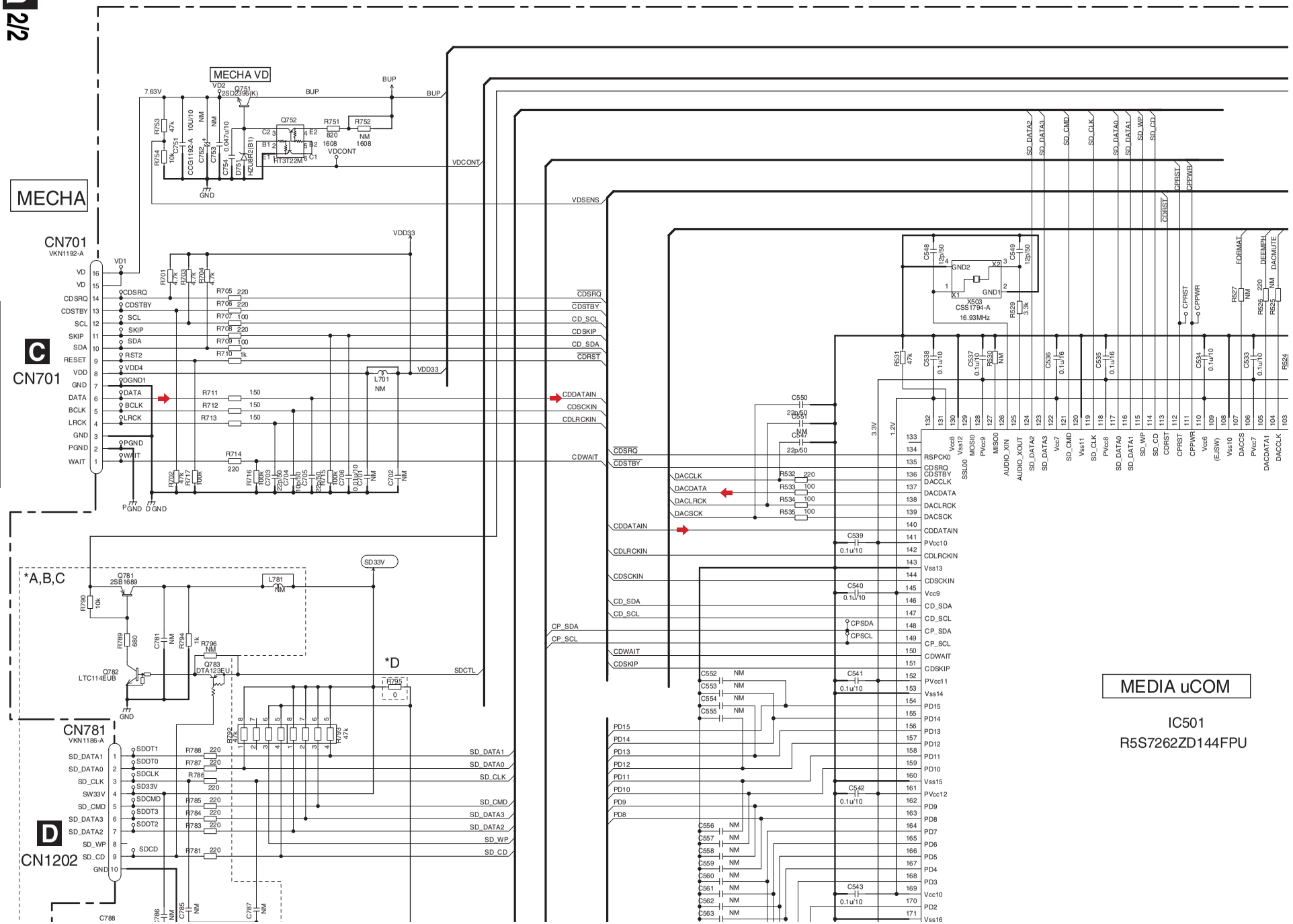
DEH-4250SD/XNES

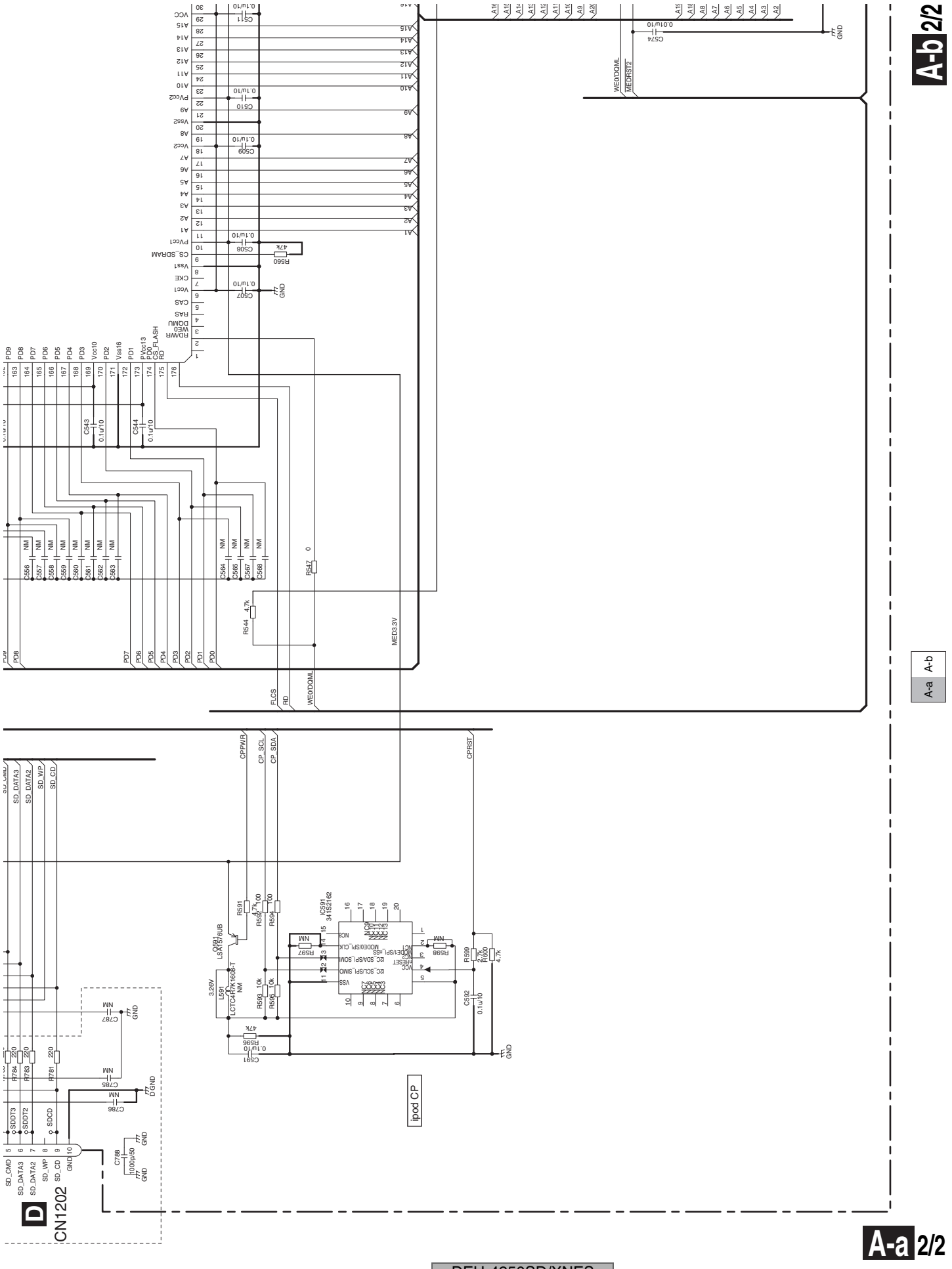
REFERENCE AREA MAP		sheet1	
101～120	IP-BUS	661～670	WIRED REMOTE
151～160	USB H.SW	801～820	GRILL
161～170	DC-DC CONVERTOR	821～830	ILM+B
201～240	E.VOL	831～840	OEL+B
301～350	RCA	841～850	SWVDD
351～380	AMP	901～910	VDD5 & VDD3.3
381～400	MUTE	911～920	SYS+B
401～430	TUNER	921～930	ASENS&BSENS
431～440	TUNER 3V REG	931～940	ISENS
601～640	SYSTEM MICRO	941～950	B.REM
641～650	ROM COLECTION	951～960	TEL IN
651～660	RESET	961～970	AUTO ANTENNA
		981～990	SOURCE CONNECTOR

REFERENCE AREA MAP		sheet2	
181～200	DAC & LPF	591～600	ipod CP
501～570	MEDIA uCOM	701～750	MECHA
571～580	FLASH ROM	751～780	MECHA VD
581～590	MED3.3V & MED1.2V	781～800	SD CONNECT

A-b 2/2

A-a A-b

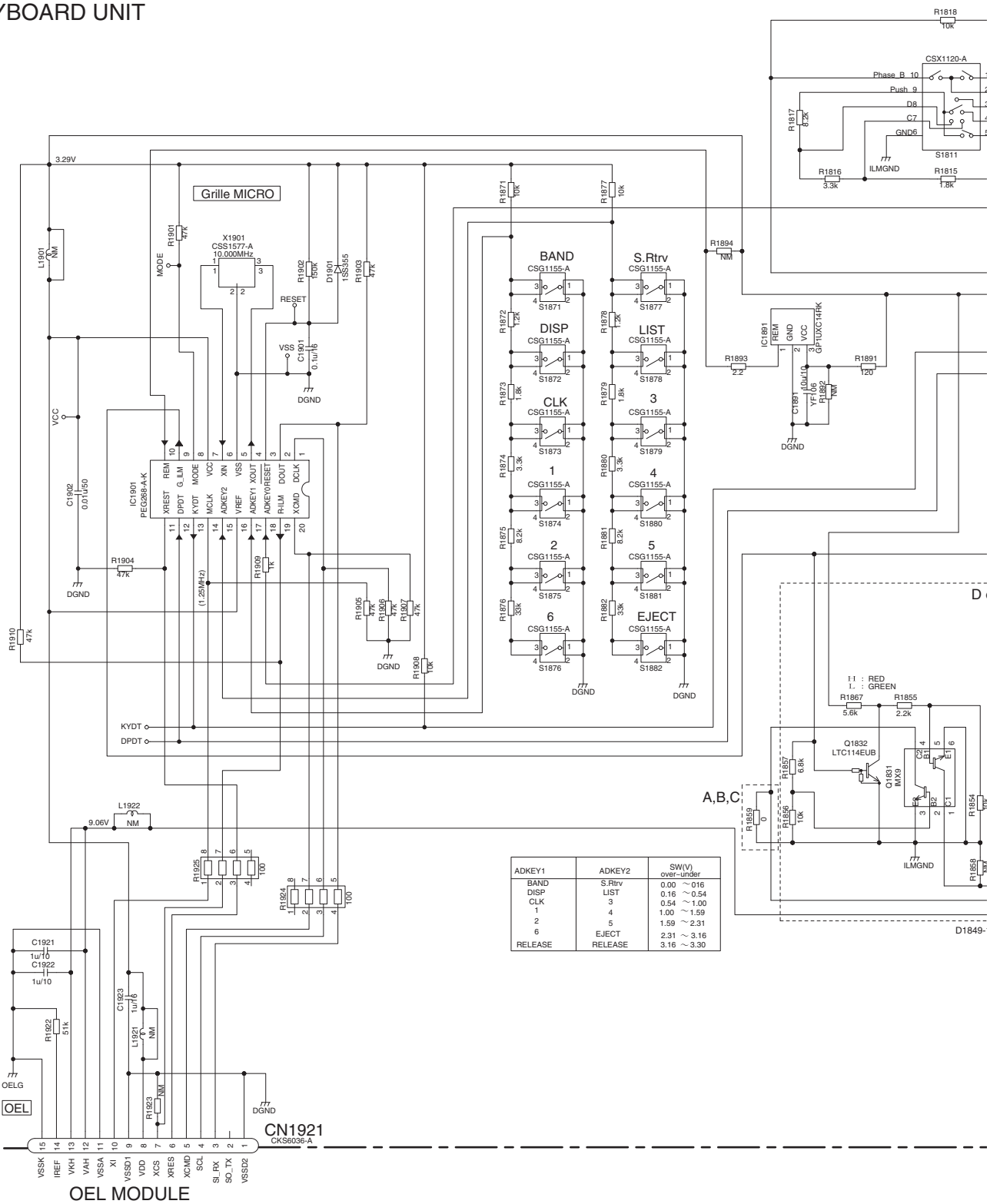

MECHA
MECHA VD
CN701
VKN1192-A
CN781
VKN1186-A
CN1202
MEDIA uCOM
IC501
R5S7262ZD144FPU
X501
CSS1794-A
16.93MHz
*A,B,C
*D
VDCONT
VDSENS
VDD33
SD33V
CDSRQ
CDSTBY
CD_SCL
CDSKIP
CD_SDA
CDRST
CDDATAIN
CDSCKIN
CDLRCKIN
CDWAIT
DACCLK
DACDATA
DACLRCK
DACSCK
CP_SDA
CP_SCL
SDCTL
SD_DATA1
SD_DATA0
SD_CLK
SD_CMD
SD_DATA3
SD_DATA2
SD_WP
SD_CD


CN1202
SD_CMD
SD_DATA3
SD_DATA2
SD_WP
SD_CD
GND
SDDT3
SDDT2
SDCD
D GND
CPPWR
CP_SCL
CP_SDA
CPRST
FLCS
RD
WE0/DQML
MED3.3V
ipod CP

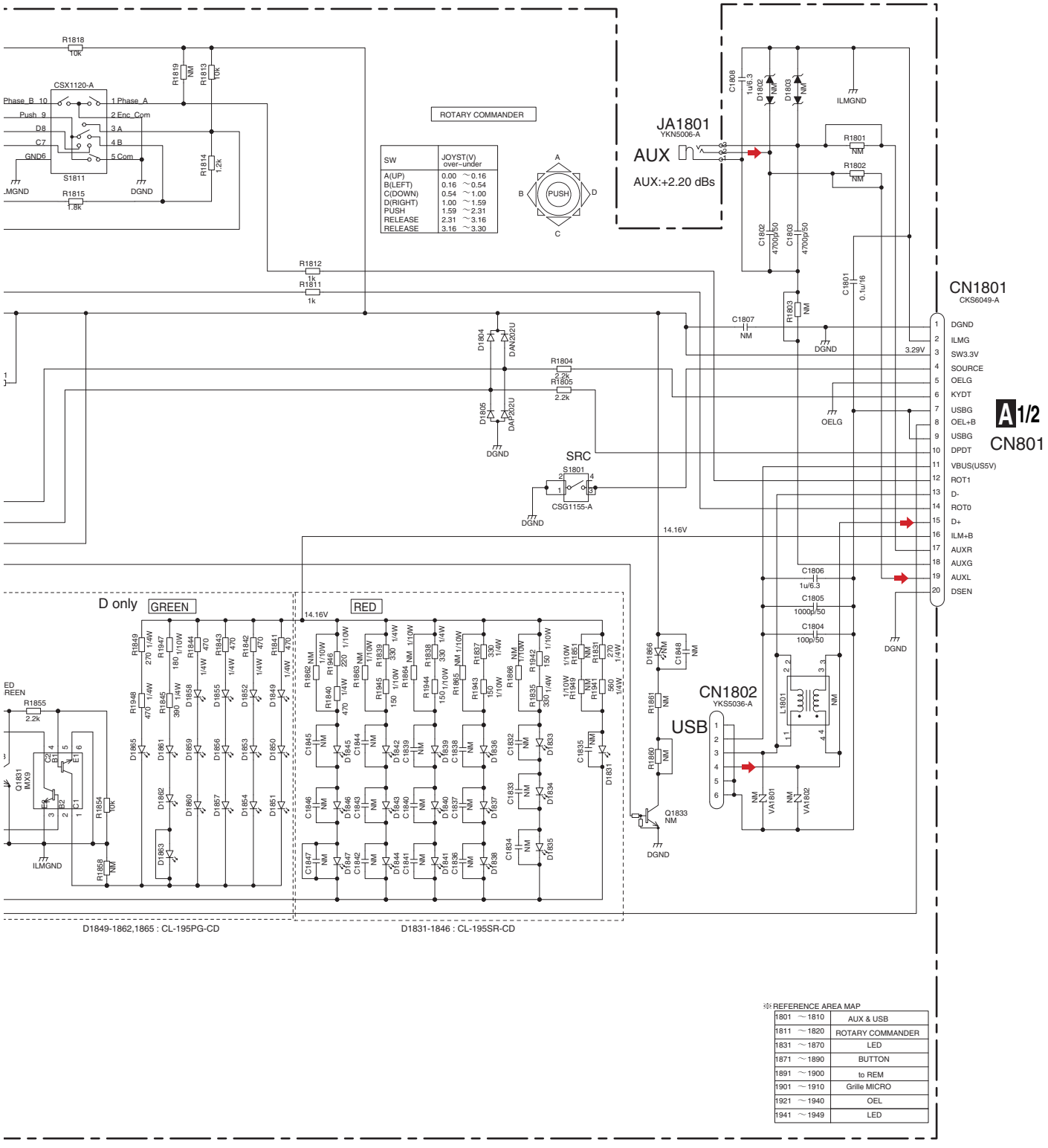
10.3 KEYBOARD UNIT

A:DEH-4250SD/XNES
B:DEH-4250SD/XNES1
C:DEH-4290SD/XNID
D:DEH-3200UB/XNUC

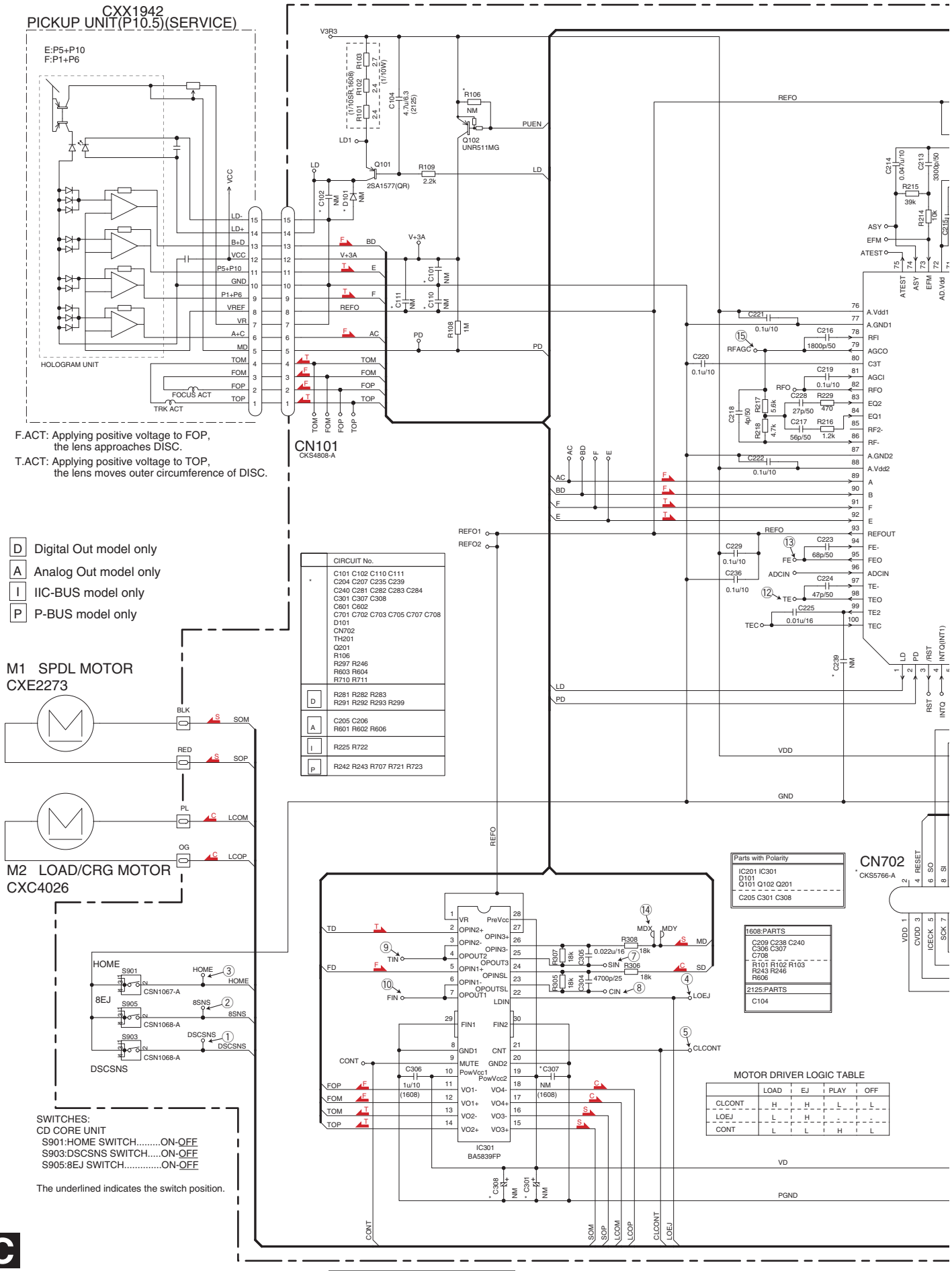
B KEYBOARD UNIT



ADKEY1	ADKEY2	SW(V) over–under
BAND	S.Rtrv	0.00 ～016
DISP	LIST	0.16 ～0.54
CLK	3	0.54 ～1.00
1	4	1.00 ～1.59
2	5	1.59 ～2.31
6	EJECT	2.31 ～3.16
RELEASE	RELEASE	3.16 ～3.30


ROTARY COMMANDER
SW | JOYST(V) over-under
A(UP) 0.00 ~0.16
B(LEFT) 0.16 ~0.54
C(DOWN) 0.54 ~1.00
D(RIGHT) 1.00 ~1.59
PUSH 1.59 ~2.31
RELEASE 2.31 ~3.16
RELEASE 3.16 ~3.30
JA1801
YKN5006-A
AUX
AUX:+2.20 dBs
CN1801
CKS6049-A
A1/2
CN801
SRC
CN1802
YKS5036-A
USB
D only
GREEN
RED
D1849-1862,1865 : CL-195PG-CD
D1831-1846 : CL-195SR-CD
※REFERENCE AREA MAP
1801 ~1810 AUX & USB
1811 ~1820 ROTARY COMMANDER
1831 ~1870 LED
1871 ~1890 BUTTON
1891 ~1900 to REM
1901 ~1910 Grille MICRO
1921 ~1940 OEL
1941 ~1949 LED

10.4 CD CORE UNIT(S11STD-DOUT)



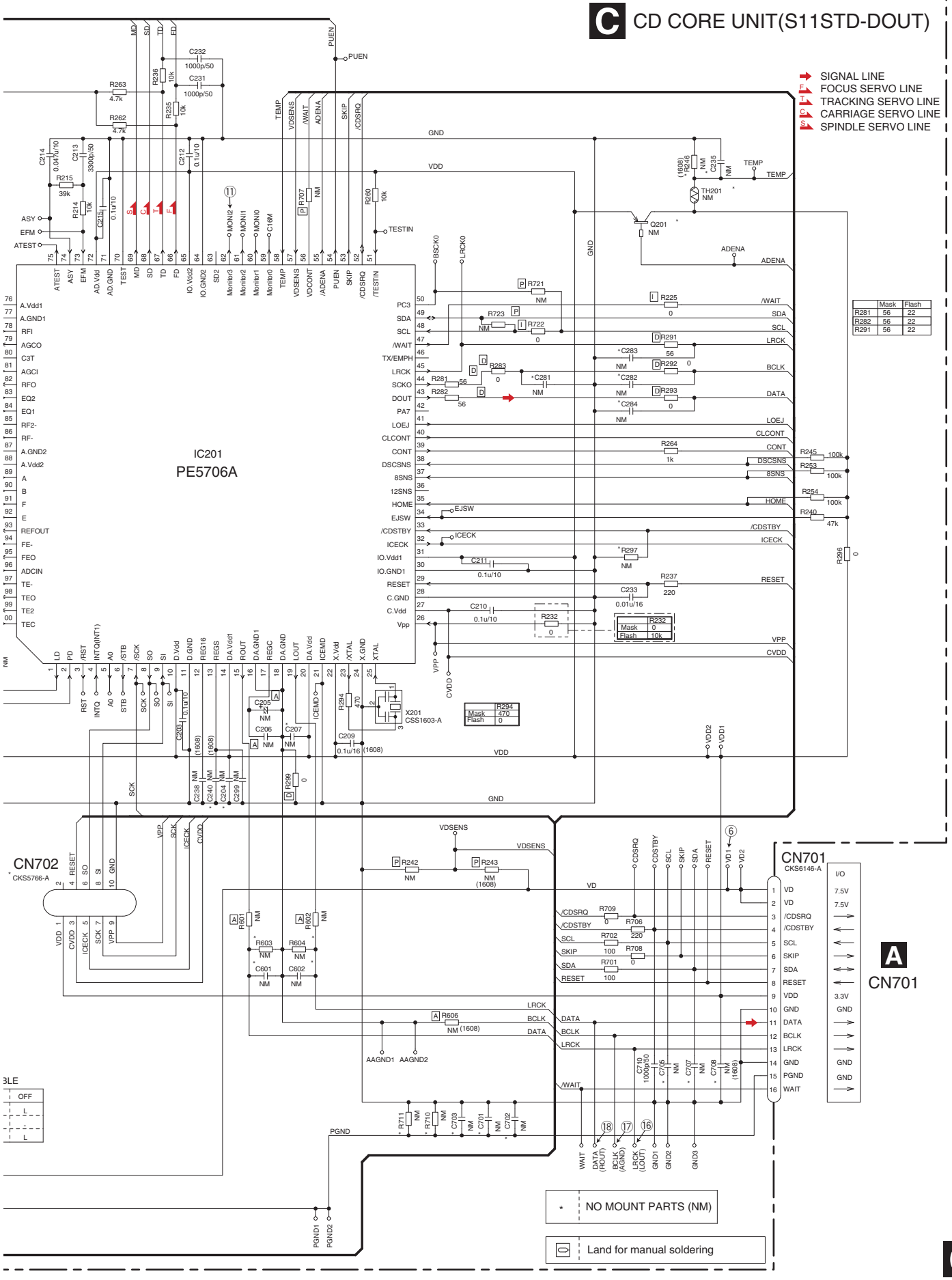
CIRCUIT No.
* C101 C102 C110 C111 C204 C207 C235 C239 C240 C281 C282 C283 C284 C301 C307 C308 C601 C602 C701 C702 C703 C705 C707 C708 D101 CN702 TH201 Q201 R106 R297 R246 R603 R604 R710 R711
D R281 R282 R283 R291 R292 R293 R299
A C205 C206 R601 R602 R606
I R225 R722
P R242 R243 R707 R721 R723

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

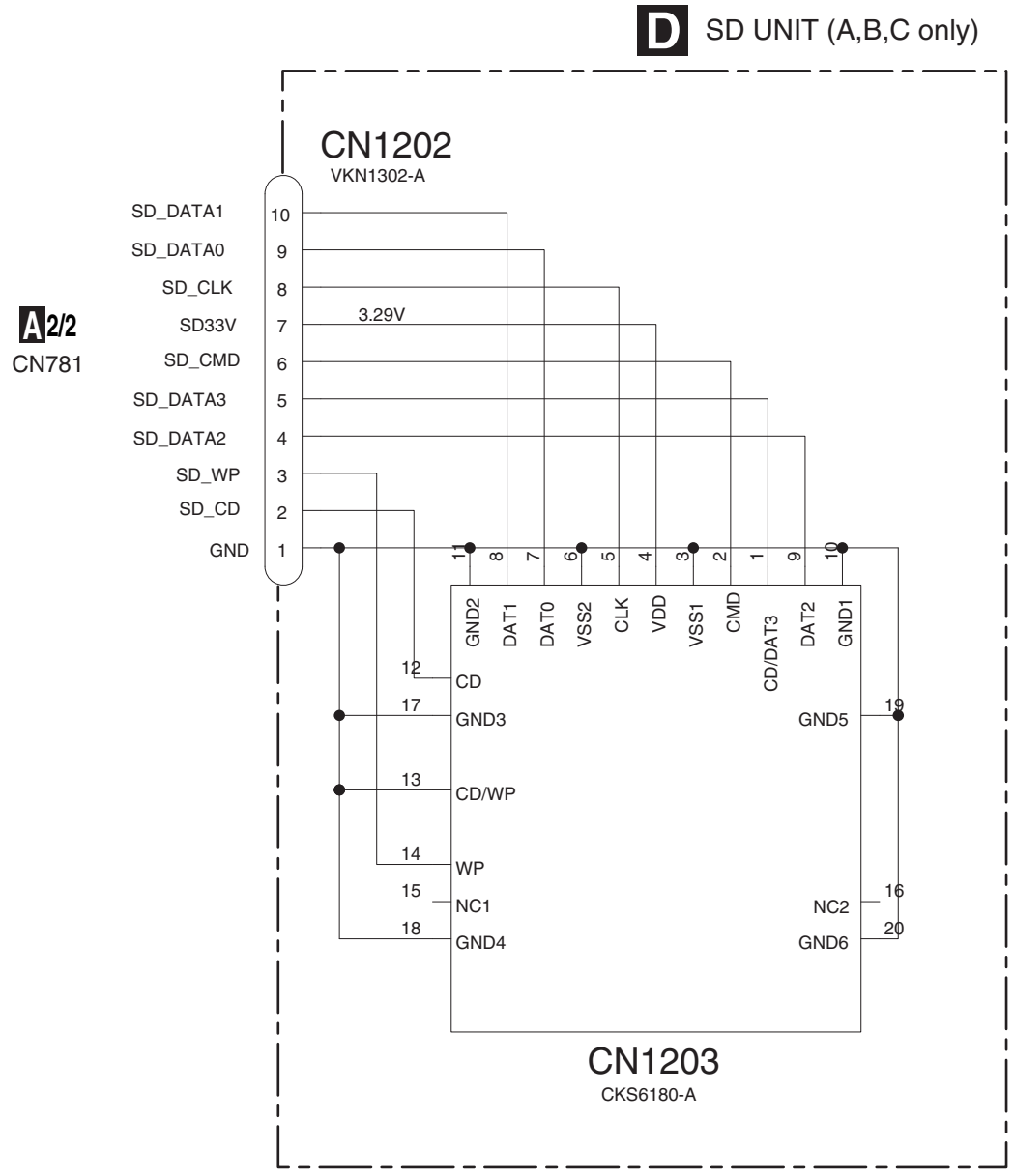
	LOAD	EJ	PLAY	OFF
CLCONT	H	H	L	L
LOEJ	L	H	-	-
CONT	L	L	H	L

C CD CORE UNIT(S11STD-DOUT)



10.5 SD UNIT

A:DEH-4250SD/XNES
B:DEH-4250SD/XNES1
C:DEH-4290SD/XNID
D:DEH-3200UB/XNUC



D

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-4250SD/XNES

B:DEH-4250SD/XNES1

C:DEH-4290SD/XNID

D:DEH-3200UB/XNUC

Unit Number : CWN4805(A,B,C)

Unit Number : CWN5219(D)

Unit Name : Tuner Amp Unit

Unit Number : CWN4813(A,B,C)

Unit Name : Keyboard Unit

Unit Number : CWN5220(D)

Unit Name : Keyboard Unit

Unit Number : CWX3774

Unit Name : CD Core Unit(S11STD-DOUT)

Unit Number : CWN4816(A,B,C)

Unit Name : SD Unit

A

Unit Number : CWN4805(A,B,C)

Unit Number : CWN5219(D)

Unit Name : Tuner Amp Unit

MISCELLANEOUS

Circuit Symbol and No.		Part No.
IC 151	(A,62,91) IC	R5523N001B
IC 161	(A,50,102) Regulator IC	BD9781HFP
IC 181	(A,108,75) IC	WM8761GED
IC 182	(A,80,99) IC	NJM2872F05
IC 201	(A,75,118) IC	PM9012A
IC 351	(A,83,142) IC	PA2030A
IC 431	(B,152,131) IC	NJM2885DL1-33
IC 501	(A,121,50) IC	R5S7262ZD144FPU
IC 571	(A,148,51) Software Unit	CWW1967
IC 581	(A,24,80) IC	S-1172B33-E6
IC 583	(A,24,89) IC	BH12PB3WHFV
IC 591	(A,102,23) IC	341S2162
IC 601	(A,128,96) IC	PEG640A8
IC 651	(A,119,108) IC	S-80827CNNB-B8M
IC 901	(B,24,70) Regulator IC	S-1132B33-U5
IC 911	(A,7,122) IC	NJM2388F84
Q 301	(A,14,126) Transistor	UMH3N
Q 303	(A,29,126) Transistor	UMH3N
Q 361	(A,57,131) Transistor	LTC114EUB
Q 363	(A,70,128) Transistor	RT3T22M
Q 381	(B,55,131) Transistor	2SC4081
Q 382	(A,45,129) Transistor	RT3T22M
Q 591	(A,108,25) Transistor	LSA1576UB
Q 751	(A,7,94) Transistor	2SD2396
Q 752	(A,16,104) Transistor	RT3T22M
Q 781	(A,72,92) Chip Transistor(A,B,C)	2SB1689
Q 782	(A,70,92) Transistor(A,B,C)	LTC114EUB
Q 783	(A,106,95) Transistor(A,B,C)	DTA123EU
Q 821	(A,95,126) Transistor	2SA1036K
Q 822	(A,96,121) Transistor	LTC114EUB
Q 831	(B,93,118) Transistor	2SD1664
Q 832	(A,91,122) Transistor	RT3T22M
Q 841	(A,94,16) Transistor	LSA1576UB
Q 842	(A,93,11) Transistor	LTC114EUB
Q 901	(A,7,71) Transistor	2SD2396
Q 902	(A,14,77) Transistor	RT3T22M
Q 921	(A,136,108) Transistor	RT3CLLM
D 161	(A,28,96) Diode	CRG03
D 162	(A,28,94) Diode	CRG03
D 163	(A,36,94) Diode	CMS02
D 381	(B,61,131) Diode	UDZS8R2(B)
D 382	(B,47,126) Diode	DAN202U
D 383	(A,54,128) Diode	1SS352
D 581	(A,19,79) Diode	1SS352
D 582	(B,23,80) Diode	CRG03
D 601	(A,122,85) Diode	RB551V-30
D 602	(A,128,107) Diode	RB751S-40
D 651	(A,118,105) Diode	1SS352
D 751	(A,12,104) Diode	HZU8R2(B1)

Circuit Symbol and No.		Part No.
D 801	(A,116,14) Diode	DZ2S068C
D 802	(A,119,14) Diode	DZ2S068C
D 803	(A,122,13) Diode	DZ2S068C
D 804	(A,123,13) Diode	DZ2S068C
D 805	(A,124,13) Diode	DZ2S068C
D 831	(A,91,119) Diode	HZU10(B1)
D 901	(B,14,97) Diode	CRG03
D 902	(A,12,77) Diode	UDZS5R6(B)
D 921	(A,141,122) Diode	HZU7L(C3)
D 922	(A,139,122) Diode	HZU7L(A1)
D 941	(A,100,129) Diode	CRG03
D 942	(A,105,125) Diode	CRG03
D 981	(A,139,130) Diode	CRG03
D 982	(A,139,128) Diode	CRG03
ZNR401	(B,164,117) Surge Protector	IMSA-6802-01Y900
L 161	(A,44,92) Inductor	CTH1253
L 181	(A,102,80) Chip Ferrite Bead	DTL1107
L 401	(A,153,103) Chip Coil	BTH1100
L 402	(A,155,73) Chip Coil	BTH1100
L 404	(B,167,103) Chip Coil	BTH1104
L 501	(A,98,74) Inductor	VTL1145
L 502	(A,98,79) Inductor	CTF1410
L 601	(A,109,89) Chip Coil	BTH1103
L 801	(A,117,17) Inductor	CTF1713
L 981	(A,116,141) Choke Coil 600 uH	CTH1445
X 501	(A,124,69) Oscillator 48.000 MHz	CSS1760
X 503	(A,103,43) Oscillator 16.93 MHz	CSS1794
X 601	(A,114,97) Oscillator 20.000 MHz	CSS1795
S 651	(A,134,10) Switch	CSG1020
P 301	(A,40,118) Poly Switch	MINISMDC075F/24
VA661	(A,53,135) Varistor	VR105C5R0AAA
VA662	(A,53,133) Varistor	VR105C5R0AAA
VA801	(A,106,15) Varistor	VR105C5R0AAA
VA802	(A,115,16) Varistor	VR105C5R0AAA
VA803	(A,120,14) Varistor	VR105C5R0AAA
VA806	(A,110,15) Varistor	VR105C5R0AAA
VA807	(A,111,15) Varistor	VR105C5R0AAA
VA808	(A,127,14) Varistor	VR105C5R0AAA
CN701	(A,96,39) Connector	VKN1192
CN781	(A,96,61) Connector(A,B,C)	VKN1186
CN801	(A,114,4) Connector	CKS6188
JA301	(A,25,138) Pin Jack	YKB5011
JA401	(A,169,129) Antenna Jack	CKX1070
JA661	(A,47,139) Connector	CKS4124
JA981	(A,118,141) Plug	CKM1586
	FM/AM Tuner Unit	CWE2098
⚠	Fuse(10 A)	YEK5001

RESISTORS

R 151	(A,96,90)	RS1/16SS104J
R 161	(A,42,103)	RS1/16SS1003F
R 163	(A,42,98)	RS1/16SS683J
R 165	(B,48,97)	RS1/10SR1003D
R 166	(B,47,99)	RS1/10SR2402D
R 167	(B,45,96)	RS1/10SR333J
R 168	(B,52,99)	RS1/10SR471J
R 169	(B,47,101)	RS1/10SR121J
R 181	(A,102,95)	RS1/10SR0R0J
R 191	(A,92,103)	RS1/16SS821J
R 192	(A,92,104)	RS1/16SS821J
R 201	(A,69,124)	RAB4CQ102J
R 202	(A,80,105)	RS1/16SS331J
R 207	(A,81,105)	RS1/16SS223J
R 208	(A,81,106)	RS1/16SS223J
R 301	(A,12,128)	RS1/16SS821J
R 302	(A,18,126)	RS1/16SS821J
R 305	(A,27,128)	RS1/16SS821J
R 306	(A,32,128)	RS1/16SS821J
R 307	(A,12,129)	RS1/16SS223J
R 308	(A,17,129)	RS1/16SS223J
R 311	(A,28,129)	RS1/16SS223J
R 312	(A,32,129)	RS1/16SS223J
R 315	(A,23,130)	RS1/16SS0R0J
R 316	(A,26,130)	RS1/16SS0R0J
R 361	(A,59,132)	RS1/16SS103J
R 362	(A,57,129)	RS1/16SS103J
R 363	(A,60,132)	RS1/16SS331J
R 365	(A,69,131)	RS1/16SS103J
R 366	(A,70,131)	RS1/16SS103J
R 381	(B,59,132)	RS1/10SR473J
R 382	(B,63,133)	RS1/10SR104J
R 383	(A,134,84)	RS1/16SS473J
R 384	(B,50,129)	RS1/10SR473J
R 385	(A,45,131)	RS1/16SS102J
R 401	(A,156,92)	RS1/16SS681J
R 403	(A,156,94)	RS1/16SS681J
R 404	(A,156,95)	RS1/16SS681J
R 405	(A,156,96)	RS1/16SS681J
R 406	(A,156,97)	RS1/16SS681J
R 407	(A,156,98)	RS1/16SS681J
R 408	(A,156,99)	RS1/16SS152J
R 501	(A,134,65)	RS1/16SS473J
R 502	(A,140,66)	RS1/16SS101J
R 504	(A,132,65)	RS1/16SS473J
R 505	(A,131,65)	RS1/16SS473J
R 509	(A,130,65)	RS1/16SS473J
R 510	(A,129,65)	RS1/16SS473J
R 513	(A,122,65)	RS1/16SS102J
R 518	(A,96,71)	RS1/16SS101J
R 519	(A,118,65)	RS1/16SS5601F
R 521	(A,106,55)	RS1/16SS473J
R 522	(A,106,54)	RS1/16SS473J
R 526	(B,114,63)	RS1/10SR221J
R 529	(A,106,43)	RS1/16SS332J
R 530	(A,106,41)	RS1/16SS473J
R 531	(B,109,38)	RS1/10SR473J
R 532	(B,120,51)	RS1/10SR221J
R 533	(B,120,49)	RS1/10SR101J
R 534	(B,120,46)	RS1/10SR101J
R 535	(B,120,42)	RS1/10SR101J
R 544	(A,137,40)	RS1/16SS472J
R 547	(A,136,40)	RS1/16SS0R0J
R 554	(A,112,67)	RS1/16SS473J
R 560	(B,135,43)	RS1/10SR473J
R 561	(A,101,71)	RS1/16SS103J
R 572	(A,141,38)	RS1/16SS472J
R 574	(A,143,38)	RS1/16SS472J
R 575	(A,142,29)	RAB4CQ221J
R 576	(A,139,31)	RAB4CQ221J

Circuit Symbol and No.		Part No.
R 577	(A,142,33)	RAB4CQ221J
R 578	(A,138,35)	RAB4CQ221J
R 591	(A,111,24)	RS1/16SS472J
R 592	(A,108,28)	RS1/16SS101J
R 593	(A,102,28)	RS1/16SS103J
R 594	(A,108,27)	RS1/16SS101J
R 595	(A,101,28)	RS1/16SS103J
R 596	(A,108,23)	RS1/16SS473J
R 599	(A,103,18)	RS1/16SS272J
R 600	(A,101,17)	RS1/16SS472J
R 602	(B,121,98)	RS1/10SR472J
R 603	(A,116,97)	RS1/16SS105J
R 604	(A,117,98)	RS1/16SS101J
R 605	(A,116,92)	RS1/16SS104J
R 606	(A,117,91)	RS1/16SS222J
R 607	(A,129,83)	RS1/16SS104J
R 608	(A,118,86)	RS1/16SS104J
R 609	(A,134,109)	RS1/16SS104J
R 610	(A,134,107)	RS1/16SS104J
R 613	(A,125,84)	RS1/16SS104J
R 614	(A,126,84)	RS1/16SS104J
R 615	(A,124,84)	RS1/16SS104J
R 616	(A,127,84)	RS1/16SS104J
R 617	(A,129,84)	RS1/16SS104J
R 618	(A,130,84)	RS1/16SS104J
R 619	(A,132,83)	RS1/16SS472J
R 620	(A,131,83)	RS1/16SS104J
R 623	(A,138,96)	RS1/16SS104J
R 624	(A,130,107)	RS1/16SS473J
R 626	(A,128,108)	RS1/16SS103J
R 627	(A,125,109)	RS1/16SS104J
R 630	(A,142,105)	RS1/16SS104J
R 631	(A,122,107) (A,B,C)	RS1/16SS104J
R 632	(A,121,107) (D)	RS1/16SS104J
R 643	(A,147,93)	RS1/16SS104J
R 651	(A,117,104)	RS1/16SS104J
R 652	(A,117,103)	RS1/16SS152J
R 661	(A,56,135)	RS1/10SR102J
R 662	(A,56,133)	RS1/10SR102J
R 701	(A,100,49)	RS1/16SS472J
R 702	(A,100,46)	RS1/16SS473J
R 703	(A,106,29)	RS1/16SS472J
R 704	(A,106,30)	RS1/16SS472J
R 705	(A,101,47)	RS1/16SS221J
R 706	(A,103,39)	RS1/16SS221J
R 707	(A,110,35)	RS1/16SS101J
R 708	(A,102,37)	RS1/16SS221J
R 709	(A,110,34)	RS1/16SS101J
R 710	(A,103,36)	RS1/16SS102J
R 711	(A,100,36)	RS1/16SS151J
R 712	(A,100,35)	RS1/16SS151J
R 713	(A,100,34)	RS1/16SS151J
R 714	(A,100,32)	RS1/16SS221J
R 715	(A,119,31)	RS1/16SS104J
R 716	(A,101,32)	RS1/16SS104J
R 717	(A,100,37)	RS1/16SS104J
R 751	(A,15,101)	RS1/10SR821J
R 753	(A,13,99)	RS1/16SS473J
R 754	(A,14,99)	RS1/16SS103J
R 781	(A,100,62) (A,B,C)	RS1/16SS221J
R 783	(A,100,61) (A,B,C)	RS1/16SS221J

Circuit Symbol and No.		Part No.
R 784	(A,100,60) (A,B,C)	RS1/16SS221J
R 785	(A,100,59) (A,B,C)	RS1/16SS221J
R 786	(A,100,58) (A,B,C)	RS1/16SS221J
R 787	(A,100,53) (A,B,C)	RS1/16SS221J
R 788	(A,100,54) (A,B,C)	RS1/16SS221J
R 789	(A,70,90) (A,B,C)	RS1/10SR681J
R 790	(A,72,90) (A,B,C)	RS1/10SR103J
R 792	(A,104,54)	RAB4CQ473J
R 793	(A,103,58)	RAB4CQ473J
R 794	(A,76,91) (A,B,C)	RS1/10SR102J
R 795	(A,104,56) (D)	RS1/10SS0R0J
R 801	(A,127,16)	RS1/10SR222J
R 802	(A,112,15)	RS1/10SR222J
R 803	(A,109,15)	RS1/10SR222J
R 804	(A,120,17)	RS1/10SR222J
R 805	(A,114,15)	RS1/10SR222J
R 808	(A,108,15)	RS1/10SR222J
R 809	(B,134,21)	RS1/10SR104J
R 810	(A,118,20)	RS1/10SR8R2J
R 811	(A,117,20)	RS1/10SR8R2J
R 812	(A,126,24)	RS1/16SS104J
R 813	(A,127,24)	RS1/16SS104J
R 814	(A,122,17)	RS1/10SR101J
R 816	(A,124,17)	RS1/10SR101J
R 821	(A,94,123)	RS1/10SR1R0J
R 822	(A,97,124)	RS1/16SS472J
R 823	(A,95,129)	RS1/16SS103J
R 831	(A,90,115)	RS1/10SR103J
R 832	(A,87,117)	RS1/16SS1R0J
R 833	(A,91,126)	RS1/10SR122J
R 842	(A,96,12)	RS1/16SS472J
R 843	(A,94,14)	RS1/16SS102J
R 844	(A,92,16)	RS1/16SS103J
R 901	(A,14,73)	RS1/16SS332J
R 902	(A,12,73)	RS1/16SS223J
R 911	(A,12,108)	RS1/16SS102J
R 912	(A,12,111)	RS1/16SS473J
R 921	(A,139,106)	RS1/16SS104J
R 922	(A,139,109)	RS1/16SS103J
R 923	(A,140,106)	RS1/16SS473J
R 924	(A,140,108)	RS1/16SS473J
R 925	(A,128,126)	RS1/16SS472J
R 926	(A,124,127)	RS1/4SA102J

CAPACITORS

C 151	(A,60,92)	CKSSYB104K10
C 152	(A,59,90)	CKSSYB104K10
C 161	(A,35,104) Capacitor	CEVW221M16
C 162	(A,42,107)	CKSRYB105K16
C 163	(A,43,103)	CKSSYB104K16
C 165	(A,42,100)	CKSSYB103K10
C 166	(A,54,93) 150 uF/6.3 V	CCH1804(P25)
C 167	(B,48,95)	CCSRCH221J50
C 182	(A,113,77) 10 uF	CCG1192
C 183	(A,105,80)	CKSSYB103K16
C 184	(A,104,81) 10 uF	CCG1192
C 186	(A,99,81)	CKSRYB105K10
C 187	(A,82,98)	CKSSYB104K10
C 188	(A,77,99)	CKSSYB104K10

Circuit Symbol and No.		Part No.	Circuit Symbol and No.		Part No.
C 190	(A,119,74)	CKSSYB102K10	C 519	(A,127,65)	CKSSYB104K10
C 191	(A,89,103)	CCSRCH182J50	C 520	(A,124,65)	CKSSYB104K10
C 192	(A,90,103)	CCSRCH182J50	C 521	(A,124,66)	CKSSYB104K10
C 196	(A,99,83)	CKSSYB681K50	C 522	(A,119,67)	CKSSYB104K10
C 201	(A,79,104)	CKSRYB105K10	C 523	(A,122,71)	CCSSCH100D50
C 202	(A,79,107)	CKSRYB105K10	C 524	(A,125,71)	CCSSCH100D50
C 203	(A,77,105)	CKSQYB225K10	C 525	(A,119,66)	CKSSYB104K10
C 209	(A,88,109)	CKSRYB224K16	C 526	(A,116,67)	CKSSYB104K10
C 210	(A,88,108)	CKSRYB224K16	C 527	(A,116,66)	CKSSYB104K10
C 211	(B,70,113)	CKSRYB105K10	C 528	(A,115,65)	CKSSYB104K10
C 212	(B,72,113)	CKSRYB105K10	C 529	(A,111,65)	CKSSYB104K10
C 213	(B,83,119) 10 uF	CCG1203	C 530	(A,110,65)	CKSSYB104K10
C 214	(A,84,121) 10 uF	CCG1192	C 531	(A,106,57)	CKSSYB104K10
C 215	(A,84,119)	CKSSYB104K10	C 532	(A,106,56)	CKSSYB104K10
C 216	(B,80,122) 10 uF	CCG1203	C 533	(A,106,52)	CKSSYB104K10
C 217	(A,85,126)	CKSSYB104K10	C 534	(A,106,50)	CKSSYB104K10
C 218	(A,84,124) 10 uF	CCG1192	C 535	(B,109,45)	CKSRYB104K16
C 219	(B,72,118)	CKSRYB105K10	C 536	(B,109,43)	CKSRYB104K16
C 220	(B,79,117)	CKSRYB105K10	C 537	(A,106,40)	CKSSYB104K10
C 301	(A,28,119) 10 uF	CCG1192	C 538	(A,106,38)	CKSSYB104K10
C 302	(A,29,121) 10 uF	CCG1192	C 539	(A,115,34)	CKSSYB104K10
C 305	(A,35,125) 10 uF	CCG1192	C 540	(A,116,33)	CKSSYB104K10
C 306	(A,39,127) 10 uF	CCG1192	C 541	(A,120,34)	CKSSYB104K10
C 351	(A,82,129)	CKSRYB474K10	C 542	(A,124,35)	CKSSYB104K10
C 352	(A,80,129)	CKSRYB474K10	C 543	(A,129,34)	CKSSYB104K10
C 353	(A,84,129)	CKSRYB474K10	C 544	(A,130,35)	CKSSYB104K10
C 354	(A,86,129)	CKSRYB474K10	C 545	(A,100,71)	CKSSYB105K6R3
C 355	(A,82,132)	CKSRYB474K16	C 546	(A,137,70)	CKSSYB102K10
C 356	(A,80,132)	CKSRYB474K16	C 547	(B,120,53)	CCSRCH220J50
C 357	(A,84,132)	CKSRYB474K16	C 548	(A,101,42)	CCSSCH120J50
C 358	(A,86,132)	CKSRYB474K16	C 549	(A,101,44)	CCSSCH120J50
C 361	(A,136,122) 3 300 uF/16 V	CCH1486	C 550	(B,120,44)	CCSRCH220J50
C 362	(B,98,143)	CKSRYB104K16	C 571	(A,139,40) 10 uF	CCG1192
C 363	(A,88,126)	CKSQYB225K10	C 572	(A,140,39)	CKSSYB104K10
C 364	(A,88,130)	CKSQYB225K10	C 574	(A,148,62)	CKSSYB103K10
C 365	(A,76,130) 10 uF	CCG1236	C 581	(B,22,77) 10 uF	CCG1203
C 367	(A,62,132) 10 uF	CCG1192	C 583	(A,30,81) 10 uF	CCG1192
C 381	(A,50,128) Capacitor	CEVW220M16	C 585	(A,23,86) 10 uF	CCG1192
C 401	(A,154,105)	CKSSYB103K10	C 588	(A,34,85) 10 uF	CCG1192
C 402	(A,156,104) 10 uF	CCG1192	C 591	(A,108,22)	CKSSYB104K10
C 405	(A,156,69)	CKSSYB103K10	C 592	(A,101,18)	CKSSYB104K10
C 406	(A,155,70) 10 uF	CCG1192	C 601	(A,106,90) 10 uF	CCG1192
C 407	(A,155,78)	CKSSYB103K10	C 603	(A,113,90) 4.7 uF	CCG1201
C 431	(B,159,125)	CKSQYB475K6R3	C 604	(A,111,98)	CCSSCH100D50
C 432	(B,159,122)	CKSRYB103K50	C 605	(A,111,96)	CCSSCH120J50
C 433	(B,159,136)	CKSQYB475K10	C 606	(A,117,95)	CKSSYB104K10
C 501	(A,98,75) 10 uF	CCG1192	C 608	(A,138,95)	CKSSYB104K10
C 503	(A,102,73) 10 uF	CCG1192	C 610	(A,118,101)	CKSSYB104K10
C 504	(A,98,77) 10 uF	CCG1192	C 651	(A,117,108)	CKSRYB105K10
C 506	(A,102,77) 10 uF	CCG1192	C 703	(A,103,33)	CCSSCH220J50
C 507	(A,136,42)	CKSSYB104K10	C 704	(A,103,32)	CCSSCH100D50
C 508	(A,137,43)	CKSSYB104K10	C 705	(A,103,31)	CCSSCH220J50
C 509	(A,136,48)	CKSSYB104K10	C 706	(A,118,31)	CKSSYB103K10
C 510	(A,137,49)	CKSSYB104K10	C 751	(A,14,96) 10 uF	CCG1192
C 511	(A,136,54)	CKSSYB104K10	C 754	(A,13,104)	CKSSYB473K10
C 512	(A,137,55)	CKSSYB104K10	C 788	(B,98,68)	CKSRYB102K50
C 513	(A,136,59)	CKSSYB104K10	C 801	(B,104,17)	CKSRYB104K16
C 514	(A,137,59)	CKSSYB104K10	C 802	(B,128,22)	CKSRYB105K16
C 515	(A,136,61)	CKSSYB103K10	C 831	(A,91,118)	CKSSYB473K16
C 516	(A,133,65)	CKSSYB104K10	C 832	(A,89,115)	CKSSYB102K50

Circuit Symbol and No.		Part No.
C 901	(A,15,63)	CEAT102M16
C 902	(A,14,79)	CKSSYB103K10
C 904	(A,16,72) 10 uF	CCG1192
C 905	(B,24,66)	CKSQYB475K6R3
C 907	(B,29,69)	CKSQYB475K6R3
C 911	(A,25,108) Capacitor	CEVW221M10
C 913	(A,16,114)	CEVW101M16
C 921	(A,128,127)	CKSSYB104K16
C 941	(A,103,128)	CKSSYB473K16

B

Unit Number : CWN4813(A,B,C)
Unit Name : Keyboard Unit

MISCELLANEOUS

IC 1891	(A,144,18) Remote IC	GP1UXC14RK
IC 1901	(B,87,23) IC	PEG642A8
D 1804	(B,87,14) Diode	DAN202U
D 1805	(B,91,15) Diode	DAP202U
D 1831	(A,152,39) LED	CL-195SR-CD
D 1833	(A,7,29) LED	CL-195SR-CD
D 1834	(A,18,28) LED	CL-195SR-CD
D 1835	(A,30,27) LED	CL-195SR-CD
D 1836	(A,8,12) LED	CL-195SR-CD
D 1837	(A,19,12) LED	CL-195SR-CD
D 1838	(A,30,13) LED	CL-195SR-CD
D 1839	(A,77,8) LED	CL-195SR-CD
D 1840	(A,87,8) LED	CL-195SR-CD
D 1841	(A,101,8) LED	CL-195SR-CD
D 1842	(A,111,8) LED	CL-195SR-CD
D 1843	(A,125,8) LED	CL-195SR-CD
D 1844	(A,135,8) LED	CL-195SR-CD
D 1845	(A,43,24) LED	CL-195SR-CD
D 1846	(A,64,28) LED	CL-195SR-CD
D 1901	(B,97,31) Diode	1SS355
X 1901	(B,87,29) Radiator 10.0 MHz	CSS1577
S 1801	(A,5,36) Push Switch	CSG1155
S 1811	(A,55,20) Switch	CSX1120
S 1871	(A,11,6) Push Switch	CSG1155
S 1872	(A,22,6) Push Switch	CSG1155
S 1873	(A,34,7) Push Switch	CSG1155
S 1874	(A,72,7) Push Switch	CSG1155
S 1875	(A,91,7) Push Switch	CSG1155
S 1876	(A,139,7) Push Switch	CSG1155
S 1877	(A,21,34) Push Switch	CSG1155
S 1878	(A,33,33) Push Switch	CSG1155
S 1879	(A,95,7) Push Switch	CSG1155
S 1880	(A,115,7) Push Switch	CSG1155
S 1881	(A,120,7) Push Switch	CSG1155
S 1882	(A,149,42) Push Switch	CSG1155
CN1801	(B,108,10) Connector	CKS6049
CN1802	(A,154,25) Connector	YKS5036
CN1921	(A,97,21) Connector	CKS6036
JA1801	(A,153,10) Jack	YKN5006
	OEL Module	MXS4012

RESISTORS

R 1804	(B,88,12)	RS1/10SR222J
R 1805	(B,90,17)	RS1/10SR222J
R 1811	(B,68,16)	RS1/10SR102J
R 1812	(B,47,12)	RS1/10SR102J
R 1813	(B,49,13)	RS1/10SR103J
R 1814	(B,61,12)	RS1/10SR122J
R 1815	(B,59,25)	RS1/10SR182J
R 1816	(B,48,28)	RS1/10SR332J
R 1817	(B,48,26)	RS1/10SR822J
R 1818	(B,42,27)	RS1/10SR103J
R 1831	(B,150,37)	RS1/4SA271J
R 1835	(B,13,24)	RS1/4SA331J
R 1837	(B,15,10)	RS1/4SA331J
R 1838	(B,67,8)	RS1/4SA331J
R 1839	(B,120,23)	RS1/4SA331J
R 1840	(B,31,26)	RS1/4SA471J
R 1859	(B,43,8)	RS1/10SR0R0J
R 1871	(A,6,7)	RS1/10SR103J
R 1872	(A,15,7)	RS1/10SR122J
R 1873	(A,30,7)	RS1/10SR182J
R 1874	(A,39,8)	RS1/10SR332J
R 1875	(A,81,9)	RS1/10SR822J
R 1876	(A,119,22)	RS1/10SR333J
R 1877	(A,17,33)	RS1/10SR103J
R 1878	(A,26,32)	RS1/10SR122J
R 1879	(A,38,32)	RS1/10SR182J
R 1880	(A,118,27)	RS1/10SR332J
R 1881	(A,122,19)	RS1/10SR822J
R 1882	(A,125,18)	RS1/10SR333J
R 1891	(B,131,24)	RS1/10SR121J
R 1893	(B,140,17)	RS1/10SR2R2J
R 1901	(B,75,28)	RS1/10SR473J
R 1902	(B,94,32)	RS1/10SR154J
R 1903	(B,81,31)	RS1/10SR473J
R 1904	(B,98,19)	RS1/10SR473J
R 1905	(B,99,21)	RS1/10SR473J
R 1906	(A,109,28)	RS1/10SR473J
R 1907	(A,110,30)	RS1/10SR473J
R 1908	(B,86,16)	RS1/10SR103J
R 1909	(B,71,21)	RS1/10SR102J
R 1910	(B,75,24)	RS1/10SR473J
R 1922	(A,89,21)	RS1/10SR5102D
R 1924	(A,107,25)	RAB4C101J
R 1925	(B,95,22)	RAB4C101J
R 1941	(B,155,37)	RS1/4SA561J
R 1942	(B,15,23)	RS1/10SR151J
R 1943	(B,13,20)	RS1/10SR151J
R 1944	(B,70,8)	RS1/10SR151J
R 1945	(B,122,21)	RS1/10SR151J
R 1946	(B,31,30)	RS1/10SR221J

CAPACITORS

C 1801	(B,146,32)	CKSRYB104K16
C 1802	(B,157,17)	CKSRYB472K50
C 1803	(B,145,13)	CKSRYB472K50
C 1804	(B,145,27)	CCSRCH101J50
C 1805	(B,143,27)	CKSRYB102K50
C 1806	(B,108,19)	CKSRYB105K6R3
C 1808	(B,135,7)	CKSRYB105K6R3
C 1891	(B,138,20)	CKSYF106Z10
C 1901	(B,99,29)	CKSRYB104K16
C 1902	(B,82,24)	CKSRYB103K50

Circuit Symbol and No.		Part No.
C 1921	(A,89,25)	CKSRYB105K10
C 1922	(A,89,23)	CKSRYB105K10
C 1923	(B,99,22)	CKSRYB105K10

B

Unit Number : CWN5220(D)
Unit Name : Keyboard Unit

MISCELLANEOUS

IC 1891	(A,144,18) Remote IC	GP1UXC14RK
IC 1901	(B,87,23) IC	PEG642A8
Q 1831	(B,40,8) Transistor	IMX9
Q 1832	(B,40,15) Transistor	LTC114EUB
D 1804	(B,87,14) Diode	DAN202U
D 1805	(B,91,15) Diode	DAP202U
D 1831	(A,152,39) LED	CL-195SR-CD
D 1833	(A,7,29) LED	CL-195SR-CD
D 1834	(A,18,28) LED	CL-195SR-CD
D 1835	(A,30,27) LED	CL-195SR-CD
D 1836	(A,8,12) LED	CL-195SR-CD
D 1837	(A,19,12) LED	CL-195SR-CD
D 1838	(A,30,13) LED	CL-195SR-CD
D 1839	(A,77,8) LED	CL-195SR-CD
D 1840	(A,87,8) LED	CL-195SR-CD
D 1841	(A,101,8) LED	CL-195SR-CD
D 1842	(A,111,8) LED	CL-195SR-CD
D 1843	(A,125,8) LED	CL-195SR-CD
D 1844	(A,135,8) LED	CL-195SR-CD
D 1845	(A,43,24) LED	CL-195SR-CD
D 1846	(A,64,28) LED	CL-195SR-CD
D 1849	(A,7,31) LED	CL-195PG-CD
D 1850	(A,18,30) LED	CL-195PG-CD
D 1851	(A,30,29) LED	CL-195PG-CD
D 1852	(A,8,11) LED	CL-195PG-CD
D 1853	(A,19,11) LED	CL-195PG-CD
D 1854	(A,30,11) LED	CL-195PG-CD
D 1855	(A,76,8) LED	CL-195PG-CD
D 1856	(A,88,8) LED	CL-195PG-CD
D 1857	(A,100,8) LED	CL-195PG-CD
D 1858	(A,112,8) LED	CL-195PG-CD
D 1859	(A,124,8) LED	CL-195PG-CD
D 1860	(A,136,8) LED	CL-195PG-CD
D 1861	(A,45,24) LED	CL-195PG-CD
D 1862	(A,62,28) LED	CL-195PG-CD
D 1865	(A,150,39) LED	CL-195PG-CD
D 1901	(B,97,31) Diode	1SS355
X 1901	(B,87,29) Radiator 10.0 MHz	CSS1577
S 1801	(A,5,36) Push Switch	CSG1155
S 1811	(A,55,20) Switch	CSX1120
S 1871	(A,11,6) Push Switch	CSG1155
S 1872	(A,22,6) Push Switch	CSG1155
S 1873	(A,34,7) Push Switch	CSG1155
S 1874	(A,72,7) Push Switch	CSG1155
S 1875	(A,91,7) Push Switch	CSG1155
S 1876	(A,139,7) Push Switch	CSG1155
S 1877	(A,21,34) Push Switch	CSG1155
S 1878	(A,33,33) Push Switch	CSG1155
S 1879	(A,95,7) Push Switch	CSG1155
S 1880	(A,115,7) Push Switch	CSG1155
S 1881	(A,120,7) Push Switch	CSG1155
S 1882	(A,149,42) Push Switch	CSG1155
CN1801	(B,108,10) Connector	CKS6049
CN1802	(A,154,25) Connector	YKS5036
CN1921	(A,97,21) Connector	CKS6036
JA1801	(A,153,10) Jack	YKN5006
	OEL Module	MXS4013

RESISTORS

R 1804	(B,88,12)	RS1/10SR222J
R 1805	(B,90,17)	RS1/10SR222J
R 1811	(B,68,16)	RS1/10SR102J
R 1812	(B,47,12)	RS1/10SR102J
R 1813	(B,49,13)	RS1/10SR103J
R 1814	(B,61,12)	RS1/10SR122J
R 1815	(B,59,25)	RS1/10SR182J
R 1816	(B,48,28)	RS1/10SR332J
R 1817	(B,48,26)	RS1/10SR822J
R 1818	(B,42,27)	RS1/10SR103J
R 1831	(B,150,37)	RS1/4SA271J
R 1835	(B,13,24)	RS1/4SA331J
R 1837	(B,15,10)	RS1/4SA331J
R 1838	(B,67,8)	RS1/4SA331J
R 1839	(B,120,23)	RS1/4SA331J
R 1840	(B,31,26)	RS1/4SA471J
R 1841	(B,10,24)	RS1/4SA471J
R 1842	(B,12,10)	RS1/4SA471J
R 1843	(B,67,6)	RS1/4SA471J
R 1844	(B,117,23)	RS1/4SA471J
R 1845	(B,33,26)	RS1/4SA391J
R 1849	(B,149,35)	RS1/4SA271J
R 1854	(B,41,12)	RS1/10SR103J
R 1855	(B,43,12)	RS1/10SR222J
R 1856	(B,35,14)	RS1/10SR103J
R 1857	(B,35,16)	RS1/10SR682J
R 1867	(B,43,15)	RS1/10SR562J
R 1871	(A,6,7)	RS1/10SR103J
R 1872	(A,15,7)	RS1/10SR122J
R 1873	(A,30,7)	RS1/10SR182J
R 1874	(A,39,8)	RS1/10SR332J
R 1875	(A,81,9)	RS1/10SR822J
R 1876	(A,119,22)	RS1/10SR333J
R 1877	(A,17,33)	RS1/10SR103J
R 1878	(A,26,32)	RS1/10SR122J
R 1879	(A,38,32)	RS1/10SR182J
R 1880	(A,118,27)	RS1/10SR332J
R 1881	(A,122,19)	RS1/10SR822J
R 1882	(A,125,18)	RS1/10SR333J
R 1891	(B,131,24)	RS1/10SR121J
R 1893	(B,140,17)	RS1/10SR2R2J
R 1901	(B,75,28)	RS1/10SR473J
R 1902	(B,94,32)	RS1/10SR154J
R 1903	(B,81,31)	RS1/10SR473J
R 1904	(B,98,19)	RS1/10SR473J
R 1905	(B,99,21)	RS1/10SR473J
R 1906	(A,109,28)	RS1/10SR473J
R 1907	(A,110,30)	RS1/10SR473J
R 1908	(B,86,16)	RS1/10SR103J
R 1909	(B,71,21)	RS1/10SR102J

Circuit Symbol and No.		Part No.
R 1910	(B,75,24)	RS1/10SR473J
R 1922	(A,89,21)	RS1/10SR5102D
R 1924	(A,107,25)	RAB4C101J
R 1925	(B,95,22)	RAB4C101J
R 1941	(B,155,37)	RS1/4SA561J
R 1942	(B,15,23)	RS1/10SR151J
R 1943	(B,13,20)	RS1/10SR151J
R 1944	(B,70,8)	RS1/10SR151J
R 1945	(B,122,21)	RS1/10SR151J
R 1946	(B,31,30)	RS1/10SR221J
R 1947	(B,34,30)	RS1/10SR181J
R 1948	(B,155,35)	RS1/4SA471J

CAPACITORS

C 1801	(B,146,32)	CKSRYB104K16
C 1802	(B,157,17)	CKSRYB472K50
C 1803	(B,145,13)	CKSRYB472K50
C 1804	(B,145,27)	CCSRCH101J50
C 1805	(B,143,27)	CKSRYB102K50
C 1806	(B,108,19)	CKSRYB105K6R3
C 1808	(B,135,7)	CKSRYB105K6R3
C 1891	(B,138,20)	CKSYF106Z10
C 1901	(B,99,29)	CKSRYB104K16
C 1902	(B,82,24)	CKSRYB103K50
C 1921	(A,89,25)	CKSRYB105K10
C 1922	(A,89,23)	CKSRYB105K10
C 1923	(B,99,22)	CKSRYB105K10

C

Unit Number : CWX3774
Unit Name : CD Core Unit(S11STD-DOUT)

MISCELLANEOUS

IC 201	(A,28,33)	IC	PE5706A
IC 301	(A,64,27)	IC	BA5839FP
Q 101	(B,8,56)	Transistor	2SA1577
Q 102	(B,21,51)	Digital TR(PNP)	UNR511MG
X 201	(A,15,27)	Ceramic Resonator	16.934 MHz CSS1603
S 901	(A,42,53)	Switch	CSN1067
S 903	(B,21,12)	Switch	CSN1068
S 905	(B,11,25)	Switch	CSN1068
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 253	(B,27,30)	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

Circuit Symbol and No.		Part No.
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

D

Unit Number : CWN4816(A,B,C)
Unit Name : SD Unit

MISCELLANEOUS

CN1202	(A,33,43)		VKN1302
CN1203	(A,23,19)	Connector	CKS6180

Miscellaneous Parts List

	Pickup Unit(S10.5)(Service)	CXX1942
M 1	Motor Unit(SPINDLE)	CXE2273
M 2	Motor Unit(LOADING/CARRIAGE)	CXC4026