

# CFD-S01

## SERVICE MANUAL

Ver. 1.3 2007.07

*Canadian Model  
AEP Model  
UK Model  
E Model  
Australian Model*



CD Section	Model Name Using Similar Mechanism	CFD-S350L
	CD Mechanism Type	KSM-213CDP
	Optical Pick-up Name	KSS-213C
TC Section	Model Name Using Similar Mechanism	NEW
	Tape Transport Mechanism Type	MF-S01

### SPECIFICATIONS

#### CD player section

##### System

Compact disc digital audio system

##### Laser diode properties

Emission duration: Continuous

Laser output: Less than 44.6  $\mu$ W

(This output is the value measured at a distance of about 200 mm from the objective lens surface on the optical pick-up block with 7 mm aperture.)

##### Number of channels

2

##### Frequency response

20 - 20 000 Hz +1/-2 dB

##### Wow and flutter

Below measurable limit

#### Radio section

##### Frequency range

FM: 87.5 - 108 MHz

CND, E92, MX model:

AM: 530 - 1 710 kHz

TW model:

AM: 531 - 1 611 kHz

EXCEPT CND, E92, MX, TW model:

AM: 531 - 1 611 kHz (9 kHz step)

530 - 1 610 kHz (10 kHz step)

##### IF

FM: 10.7 MHz

AM: 450 kHz

##### Antennas

#### Cassette-corder section

##### Recording system

4-track 2 channel stereo

##### Fast winding time

Approx. 150 s (sec.) with Sony cassette C-60

##### Frequency response

TYPE I (normal): 80 - 10 000 Hz

#### General

##### Speaker

Full range: 8 cm dia., 4  $\Omega$ , cone type (2)

##### Outputs

Headphones jack (stereo minijack):

For 16 - 32  $\Omega$  impedance headphones

##### Power output

1.7 W + 1.7 W (at 4  $\Omega$ , 10% harmonic distortion)

##### Power requirements

For CD radio cassette-corder:

120 V AC, 60 Hz (CND, E92, MX, TW model)

230 V AC, 50 Hz (AEP, UK, E41, AUS, CET, IT, SP, TH model)

220 V AC, 60 Hz (KR model)

220 - 230 V AC, 50 Hz (AR model)

9 V DC, 6 R14 (size C) batteries

##### Power consumption

AC 13 W (CND, E92, MX, TW model)

AC 11 W (EXCEPT CND, E92, MX, TW model)

**Battery life**

For CD radio cassette-corder:

**FM recording**

Sony R14P: approx. 6 h

Sony alkaline LR14: approx. 20 h

**Tape playback**

Sony R14P: approx. 3 h

Sony alkaline LR14: approx. 12 h

**CD playback**

Sony R14P: approx. 1.5 h

Sony alkaline LR14: approx. 7 h

**Dimensions**

Approx. 360 × 141 × 235 mm (w/h/d)  
(incl. projecting parts)

**Mass**

Approx. 2.6 kg (incl. batteries)

**Supplied accessory**

AC power cord (1)

Design and specifications are subject to change without notice.

• **Abbreviation**

CND : Canadian model

E41 : AC 230V area in E model

E92 : AC 120V area in E model

AUS : Australian model

AR : Argentina model

CET : East European & Russian model

IT : Italian model

KR : Korea model

MX : Mexican model

SP : Singapore model

TH : Thai model

TW : Taiwan model

**CAUTION**

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

**Flexible Circuit Board Repairing**

- Keep the temperature of the soldering iron around 270°C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

**Notes on Chip Component Replacement**

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

**NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT**

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.

During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.

The flexible board is easily damaged and should be handled with care.

**NOTES ON LASER DIODE EMISSION CHECK**

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

**Notes on DualDiscs**

A DualDisc is a two sided disc product which mates DVD recorded material on one side with digital audio material on the other side. However, since the audio material side does not conform to the Compact Disc (CD) standard, playback on this product is not guaranteed.

**SAFETY-RELATED COMPONENT WARNING!!**

**COMPONENTS IDENTIFIED BY MARK  $\triangle$  OR DOTTED LINE WITH MARK  $\triangle$  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.**

**ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!!**

**LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE  $\triangle$  SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.**

● **UNLEADED SOLDER**

Boards requiring use of unleaded solder are printed with the lead-free mark (LF) indicating the solder contains no lead.  
(Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size.)



**: LEAD FREE MARK**

Unleaded solder has the following characteristics.

- Unleaded solder melts at a temperature about 40°C higher than ordinary solder.

Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time.

Soldering irons using a temperature regulator should be set to about 350°C.

Caution: The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful!

- Strong viscosity

Unleaded solder is more viscous (sticky, less prone to flow) than ordinary solder so use caution not to let solder bridges occur such as on IC pins, etc.

- Usable with ordinary solder

It is best to use only unleaded solder but unleaded solder may also be added to ordinary solder.

**TABLE OF CONTENTS**

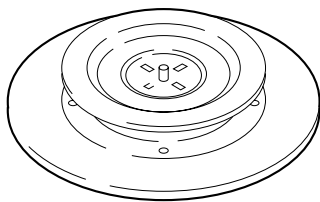
<b>1. SERVICING NOTES</b>	4
<b>2. GENERAL</b>	5
<b>3. DISASSEMBLY</b>	
3-1. Cabinet (Rear) Assy	7
3-2. Cabinet (Front) Assy, Cabinet (Upper) Assy	7
3-3. Main Board	8
3-4. CD Block Assy	8
3-5. CD Motor Board	9
3-6. Optical Pick-up	9
3-7. Control Board	10
3-8. CD Lid	10
3-9. Tape Mechanism Block, Belt (1), Belt (2)	11
3-10. TC Board	11
3-11. Key (FUNC) Board, Key (VOL) Board	12
3-12. Power Board	12
<b>4. MECHANICAL ADJUSTMENTS</b>	13
<b>5. ELECTRICAL ADJUSTMENTS</b>	
Tape Section	13
Tuner Section	14
CD Section	16
<b>6. DIAGRAMS</b>	
6-1. Block Diagram – CD Section –	17
6-2. Block Diagram – Main Section –	18
6-3. Circuit Boards Location	19
6-4. Schematic Diagram – Main Section (1/4) –	20
6-5. Schematic Diagram – Main Section (2/4) –	21
6-6. Schematic Diagram – Main Section (3/4) –	22
6-7. Schematic Diagram – Main Section (4/4) –	23
6-8. Printed Wiring Board – Main Section –	24
6-9. Printed Wiring Boards – TC Section –	25
6-10. Schematic Diagram – TC Section –	26
6-11. Printed Wiring Boards – Control Section –	27
6-12. Schematic Diagram – Control Section –	28
6-13. Printed Wiring Boards – Power Supply Section –	29
6-14. Schematic Diagram – Power Supply Section –	30
<b>7. EXPLODED VIEWS</b>	
7-1. Rear Cabinet Section	38
7-2. Front Cabinet Section (1)	39
7-3. Front Cabinet Section (2)	40
7-4. Upper Cabinet Section (1)	41
7-5. Upper Cabinet Section (2)	42
7-6. CD Mechanism Section	43
<b>8. ELECTRICAL PARTS LIST</b>	44

## SECTION 1 SERVICING NOTES

### CHUCK PLATE JIG ON REPAIRING

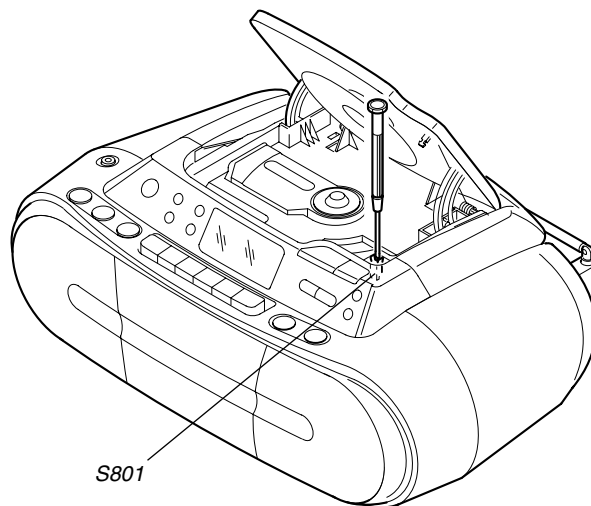
On repairing CD section, playing a disc without the lid (CD), use Chuck Plate Jig.

- Code number of Chuck Plate Jig: X-4918-255-1



### LASER DIODE AND FOCUS SEARCH OPERATION CHECK

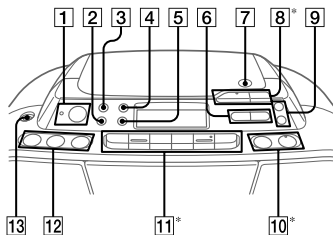
1. Turn ON the **OPERATE** button and press **CD** button to CD position.
2. Open the CD lid.
3. Turn on S801 with screwdriver, etc. as following figure.
4. Press the **▶||** (CD) button.
5. Confirm the laser diode emission while observing the objecting lens. When there is no emission, Auto Power Control circuit or Optical Pick-up is broken. Objective lens moves up and down three times for focus search.



## SECTION 2 GENERAL

This section is extracted from instruction manual.

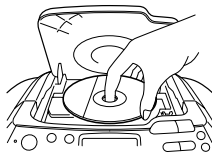
### Basic Operations



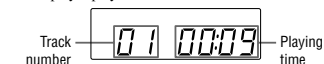
\* VOLUME + [12] [8], and [11] have a tactile dot.

#### Playing a CD

- Press CD [12] (direct power-on).
- Press ▲ PUSH OPEN/CLOSE [7] and place a disc with the label side up on the CD compartment.  
To close the CD compartment, press ▲ PUSH OPEN/CLOSE [7].



- Press ►► [8].  
The player plays all the tracks once.



To	Press
Pause playback	►► [8]. To resume play, press it again.
Stop playback	■ [8].
Go to the next track	►► [6].
Go back to the previous track	◄◄ [6].
Locate a point while listening to the sound	►► (forward) or ◄◄ (backward) [6] while playing and hold it until you find the point.
Locate a point while observing the display	►► (forward) or ◄◄ (backward) [6] in pause and hold it until you find the point.
Remove the CD	▲ PUSH OPEN/CLOSE [7]

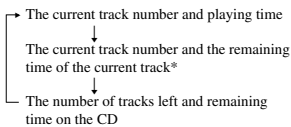
#### Using the display

##### To check the total track number and playing time

Press DISPLAY•ENTER [5] in stop mode.

##### To check the remaining time

Press DISPLAY•ENTER [5] repeatedly while playing a CD. The display changes as follows:



\* For a track whose number is more than 20, the remaining time appears as ":-:-" in the display.

#### Selecting the play mode

Press MODE [4] until "1", "2", "SHUF", "SHUF" and "PGM", or "PGM" and "1" appear in the display. Then proceed as follows:

To Select	Select	Then do this
Repeat a single track	"1"	Press ◄◄ or ►► [6] to select the track that you want to repeat, then press ►► [8].
Repeat all tracks	"2"	Press ►► [8].
Shuffle play	"SHUF"	Press ►► [8].
Repeat tracks in random order	"SHUF" and "1"	Press ►► [8].
Program play	"PGM"	Press ◄◄ or ►► [6] then press DISPLAY•ENTER [5] for the tracks you want to program in the order you want up to 20 tracks. Then press ►► [8].



Repeat programmed tracks	"PGM" and "1"	Press ◄◄ or ►► [6] then press DISPLAY•ENTER [5] for the tracks you want to program in the order you want up to 20 tracks. Then press ►► [8].
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#### To cancel selected play mode

Press MODE [4] repeatedly until the selected mode disappears from the display.

#### To check the programmed track and playing order in the display

To check the order of tracks before play, press DISPLAY•ENTER [5].

Every time you press the button, the track number appears in the programmed order.

#### To change the current program

Press ■ [8] once if the CD is stopped and twice if the CD is playing. The current program will be erased. Then create a new program following the programming procedure.

#### Tips

- You can play the same program again, since the program is saved until you open the CD compartment.
- You can record your own program. After you've created the program, insert a blank tape and press ● [11] to start recording.

#### Listening to the radio

- Press RADIO BAND•AUTO PRESET [12] repeatedly (direct power-on).

Each time you press the button, the indication changes as follows:

"FM" → "AM"

- Hold down TUNE + or - [9] until the frequency digits begin to change in the display.

The player automatically scans the radio frequencies and stops when it finds a clear station.

If you can't tune in a station, press the button repeatedly to change the frequency step by step.

When an FM stereo broadcast is received, "ST" appears.

#### Tip

If the FM broadcast is noisy, press MODE [4] until "Mono" appears in the display and radio will play in monaural.

#### Changing the AM tuning interval

If you need to change the AM tuning interval, do the following:

- While keeping the RADIO BAND•AUTO PRESET [12] and CD [12] pressed, disconnect the AC power cord from the wall outlet.
- While keeping the RADIO BAND•AUTO PRESET [12] and CD [12] pressed, reconnect the AC power cord to the wall outlet. The tuning interval is changed and "AM 9" or "AM 10" appears in the display for 4 seconds.

After changing the tuning interval, you need to reset your preset radio stations.

#### Presetting radio stations

You can store radio stations into the player's memory. You can preset up to 30 radio stations, 20 for FM and 10 for AM in any order.

- Press RADIO BAND•AUTO PRESET [12] to select the band.
- Hold down RADIO BAND•AUTO PRESET [12] for 2 seconds until "AUTO" flashes in the display.

- Press DISPLAY•ENTER [5].

The stations are stored in memory from the lower frequencies to the higher ones.

#### If a station cannot be preset automatically

You need to preset a station with a weak signal manually.

- Press RADIO BAND•AUTO PRESET [12] to select the band.
- Tune in a station you want.
- Hold down DISPLAY•ENTER [5] for 2 seconds until the preset number flashes in the display.
- Press PRESET + or - [6] until the preset number you want for the station flashes in the display.
- Press DISPLAY•ENTER [5].  
The new station replaces the old one.

#### Tip

The preset radio stations remain in memory even if you unplug the AC power cord or remove the batteries.

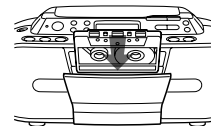
#### Playing preset radio stations

- Press RADIO BAND•AUTO PRESET [12] to select the band.
- Press PRESET + or - [6] to tune in the stored station.

#### Playing a tape

- Press TAPE [12] (direct power-on).
- Press ■▲ [11], and insert the tape into the tape compartment with the side you want to play facing you. Use TYPE I (normal) tape only. Close the compartment.

Make sure there is no slack in the tape to avoid damaging the tape or the unit.



- Press ◄ [11].

The player starts playing.

To	Press
Pause playback	■ [11]. To resume play, press it again.
Stop playback	■▲ [11].
Fast-forward or rewind*	◄◄ or ►► (fast forward or rewind) [11].
Eject the cassette	■▲ [11].

\* When the tape is wound to the end, press ■▲ [11] to release ◄◄ or ►► [11].

#### Recording on a tape

- Press ■▲ [11] to open the tape compartment and insert a blank tape with the side you want to record on facing you. Use TYPE I (normal) tape only. Close the compartment.
- Select the program source you want to record.  
To record from the CD player, place a CD and press CD [12].  
To record from the radio, tune in the station you want.
- Press ● [11] to start recording  
(◄ is depressed automatically).

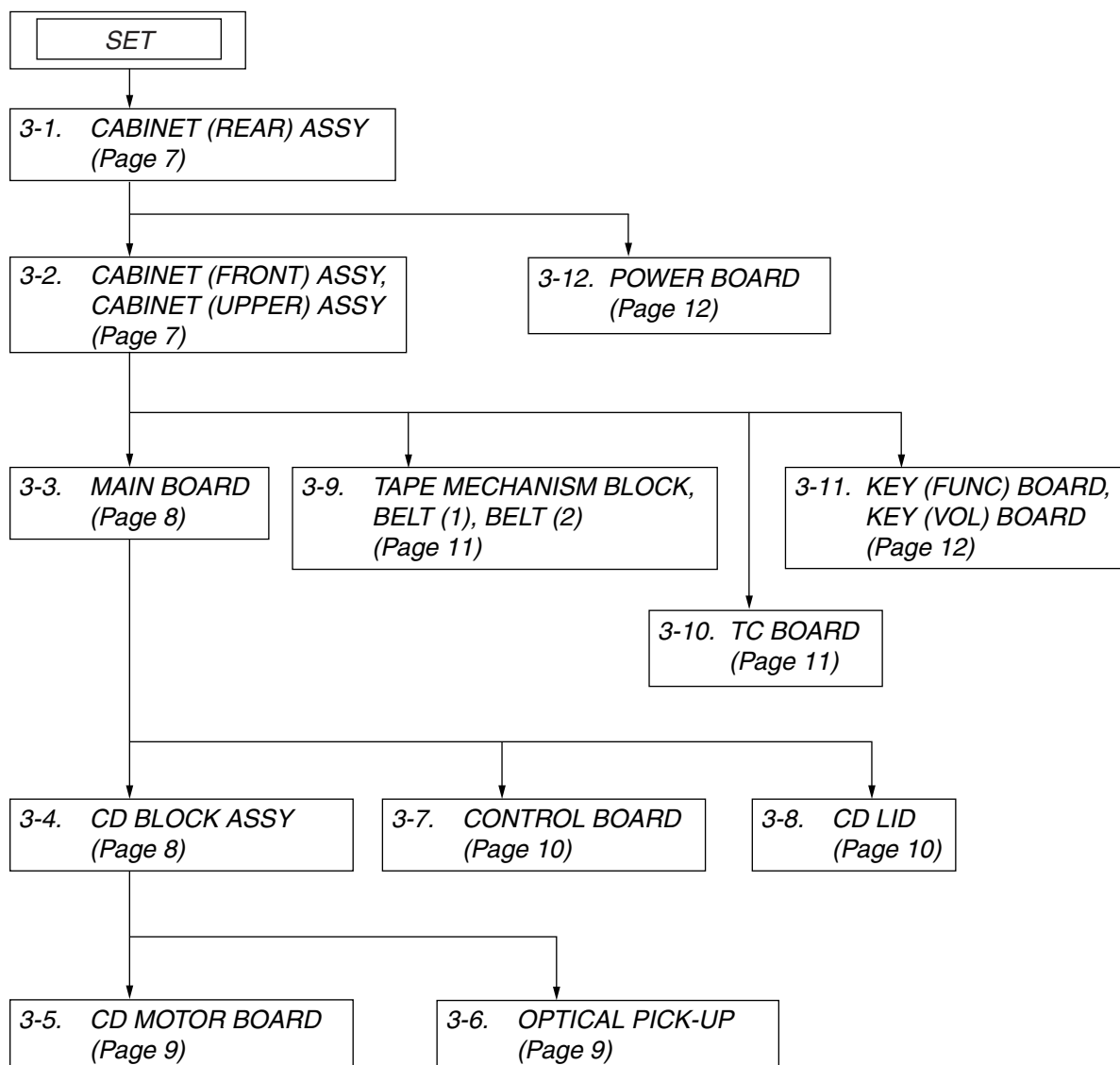
To	Press
Pause recording	■ [11]. To resume recording, press it again.
Stop recording	■▲ [11].

#### Tips

- Adjusting the volume or the audio emphasis will not affect the recording level.
- For the best results, use wall outlet as a power source for recording.
- To erase a recording, proceed as follows:
  - Insert the tape whose recording you want to erase.
  - Press TAPE [12].
  - Press ● [11].

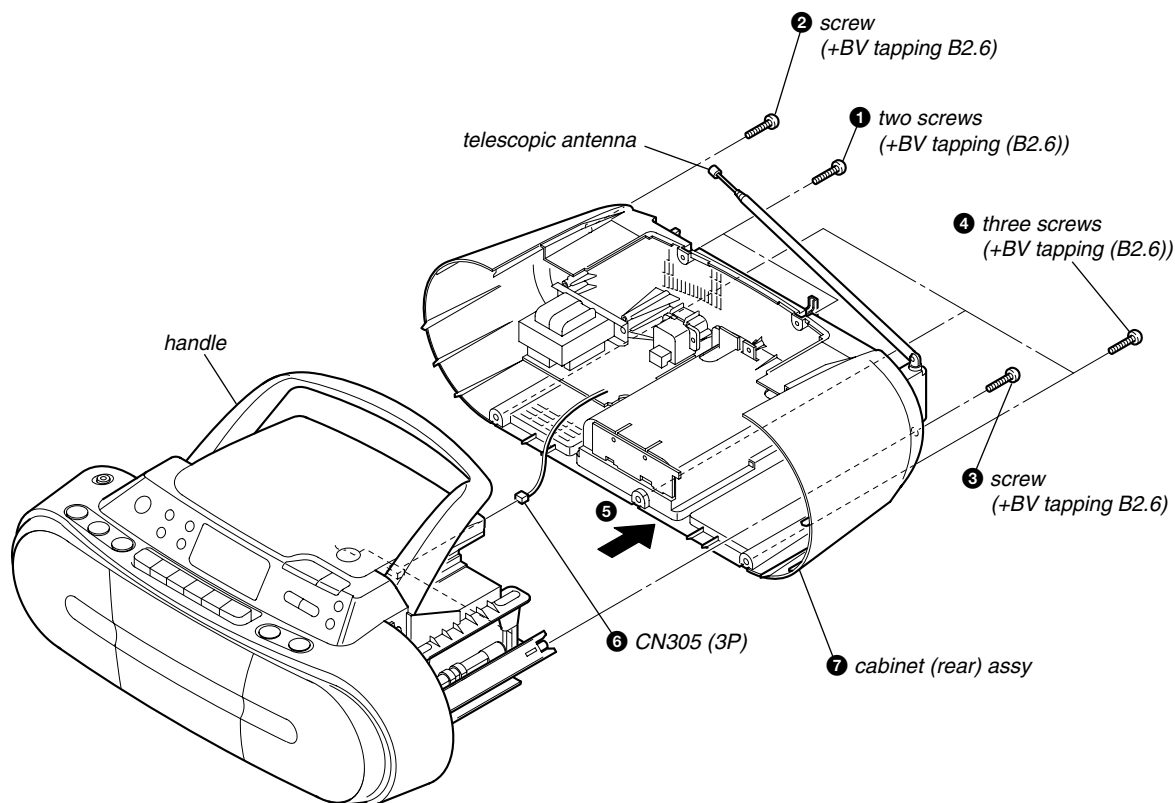
## SECTION 3 DISASSEMBLY

**Note:** This set can be disassemble according to the following sequence.

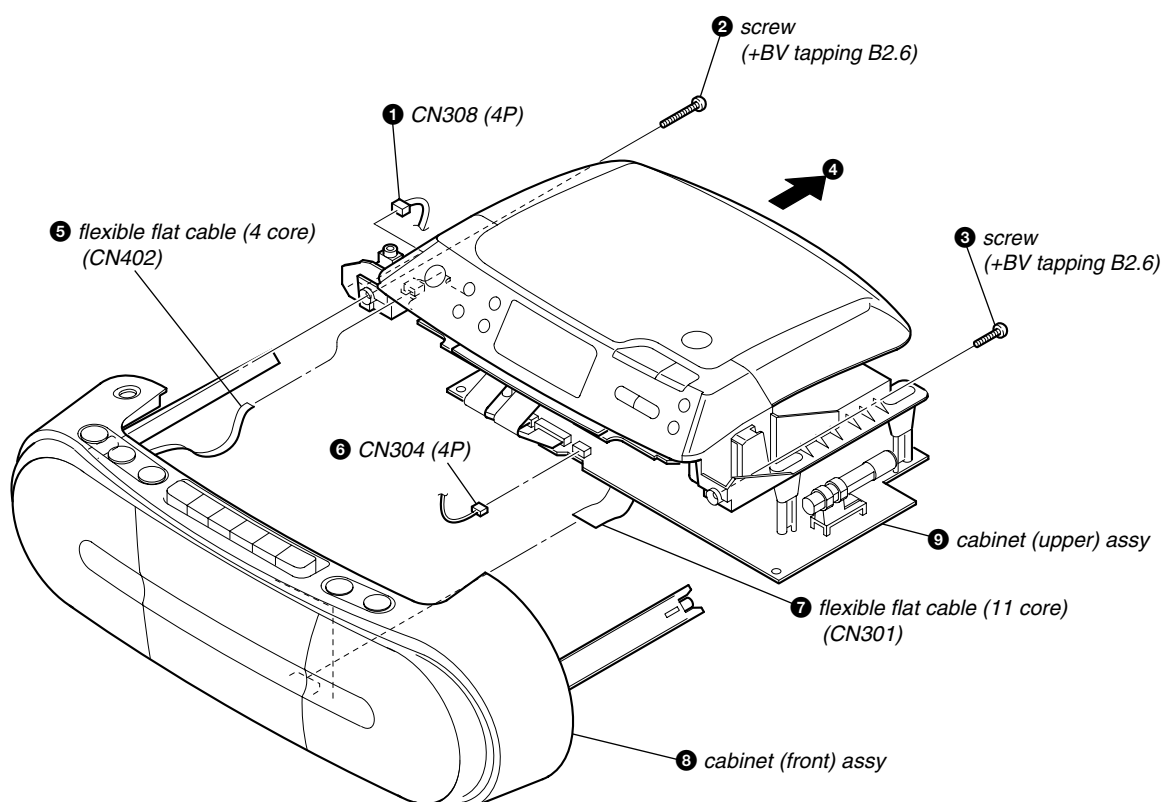


**Note:** Follow the disassembly procedure in the numerical order given.

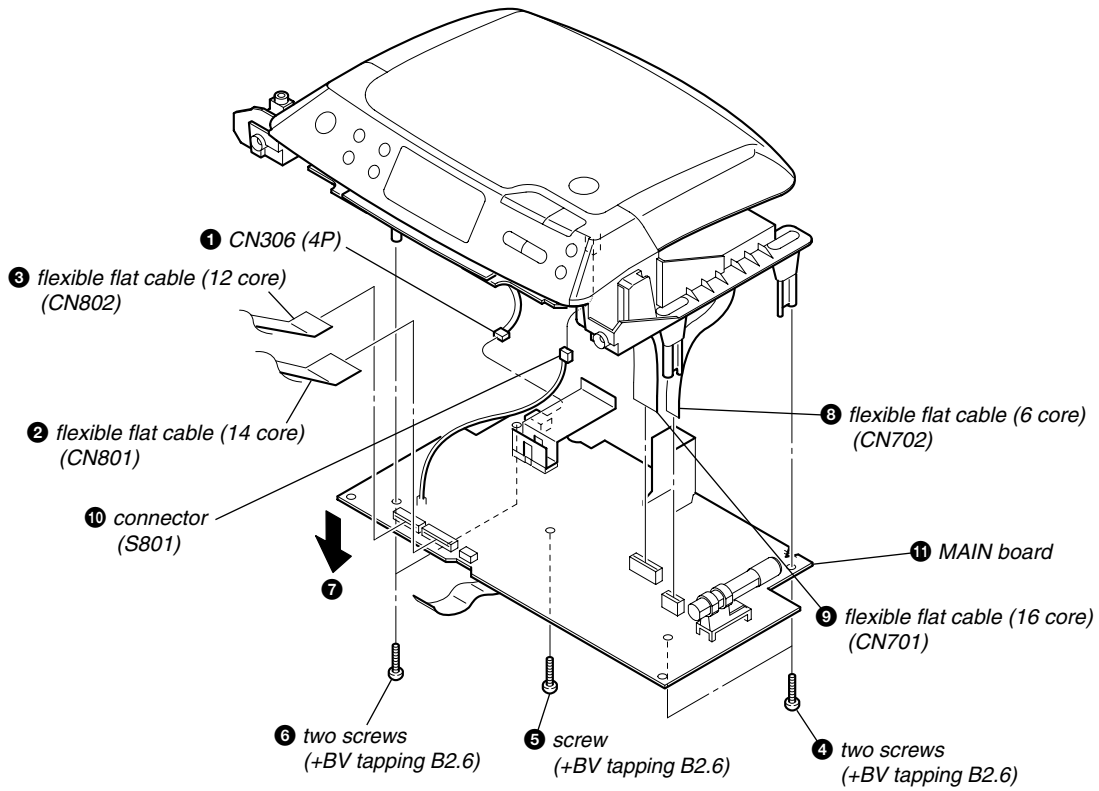
### 3-1. CABINET (REAR) ASSY



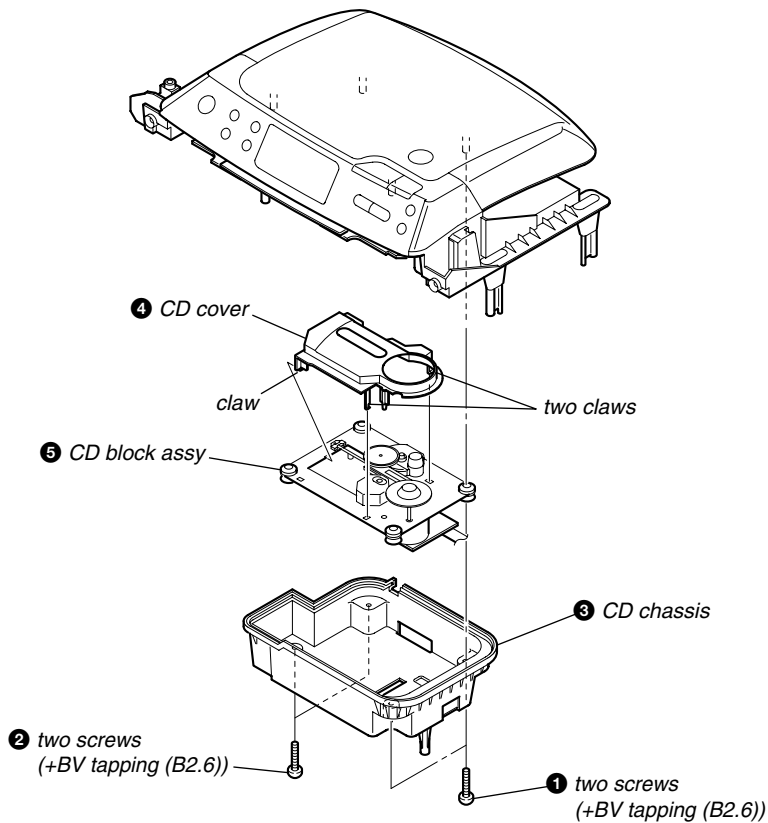
### 3-2. CABINET (FRONT) ASSY, CABINET (UPPER) ASSY



3-3. MAIN BOARD

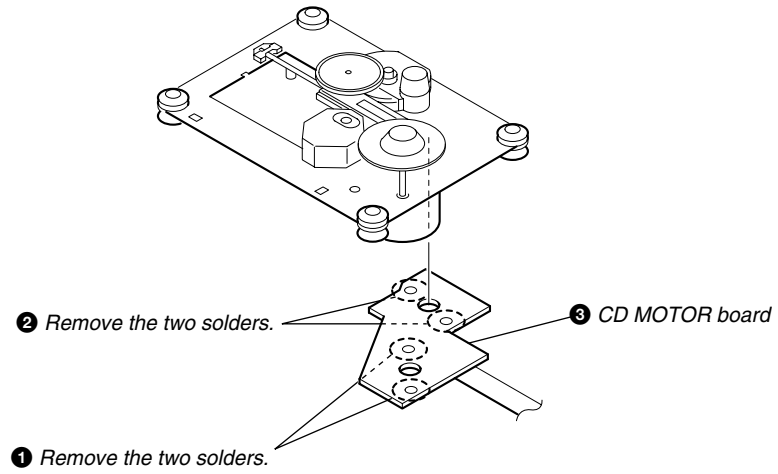


3-4. CD BLOCK ASSY

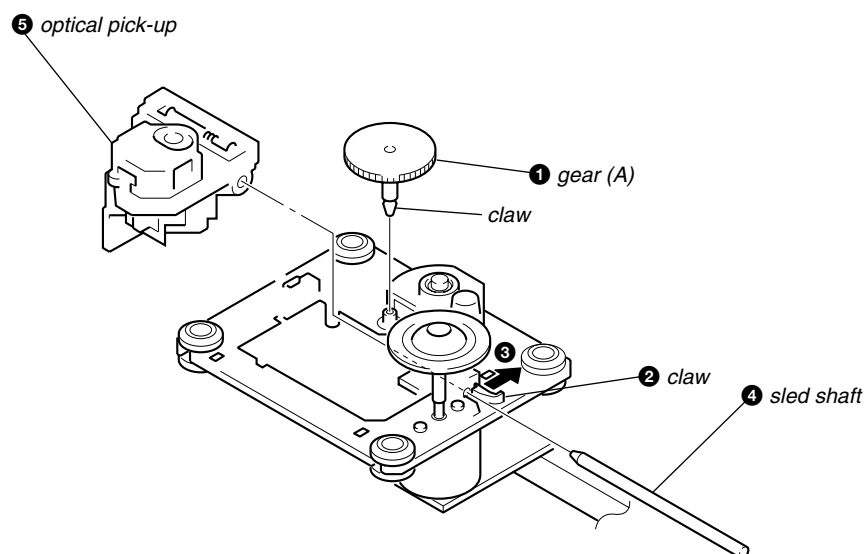




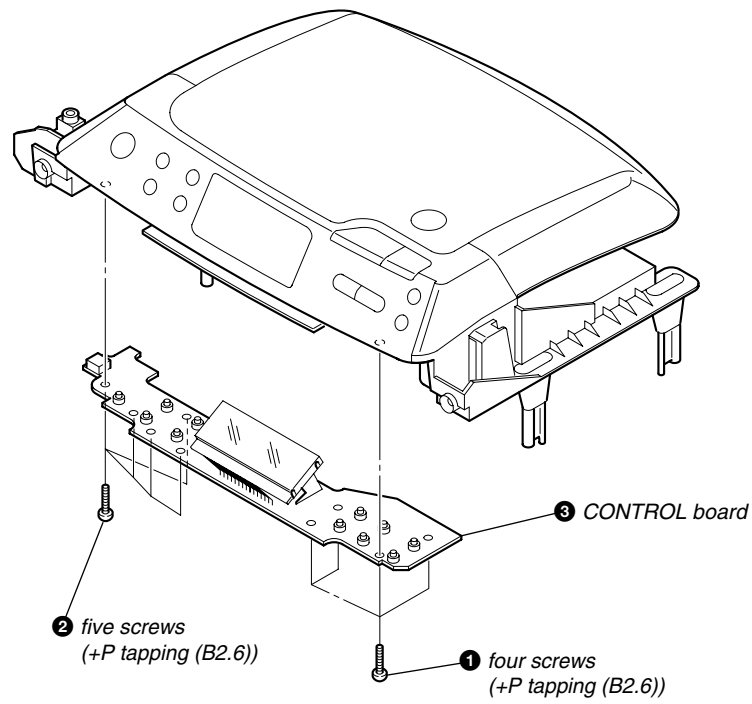
## 3-5. CD MOTOR BOARD



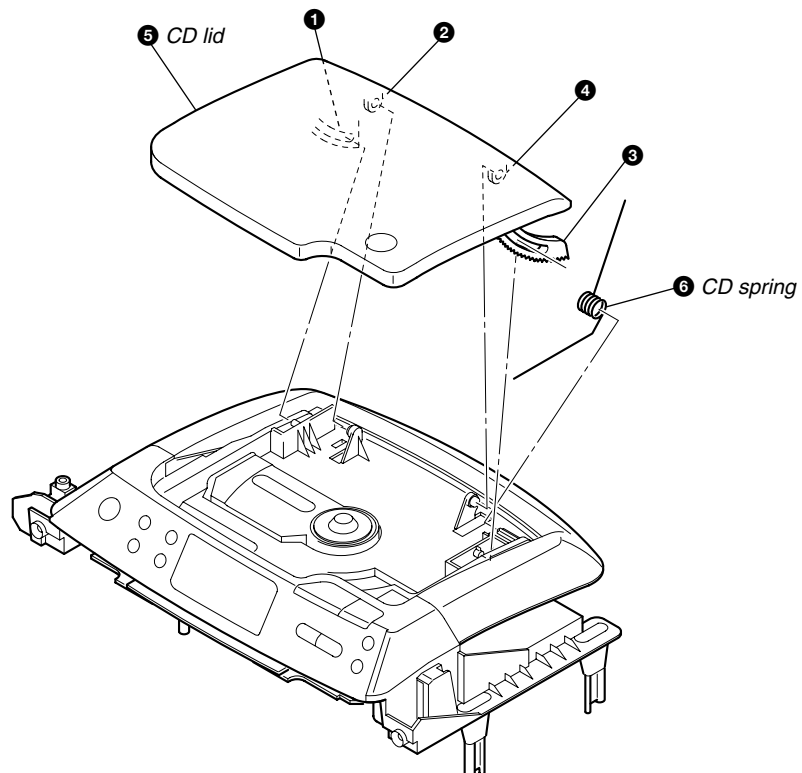
## 3-6. OPTICAL PICK-UP



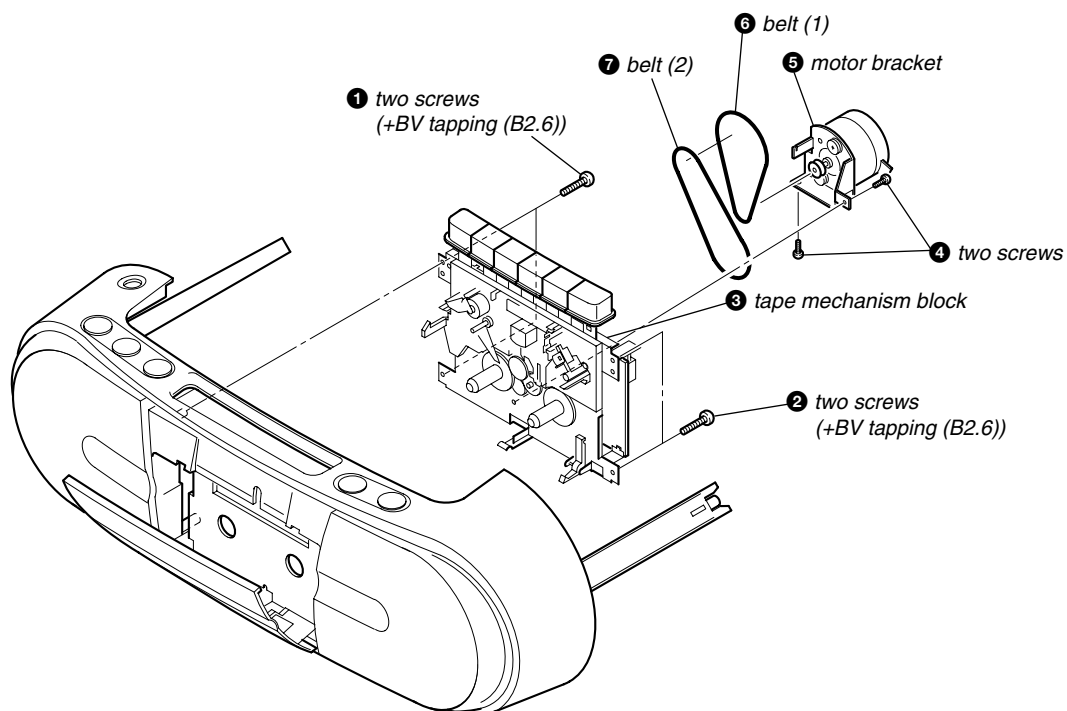
3-7. CONTROL BOARD



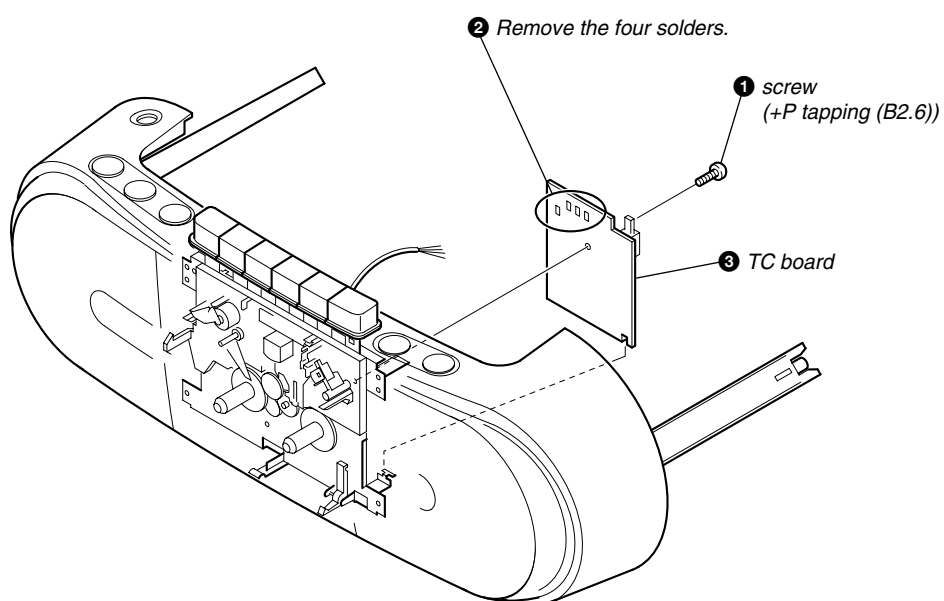
3-8. CD LID



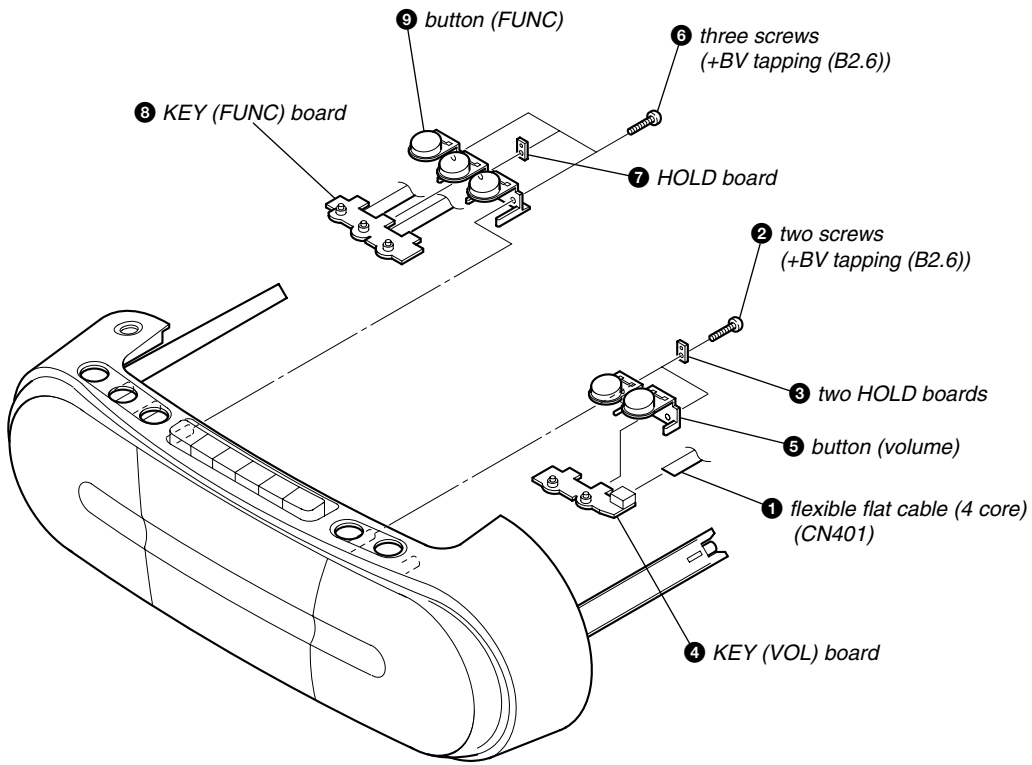
### 3-9. TAPE MECHANISM BLOCK, BELT (1), BELT (2)



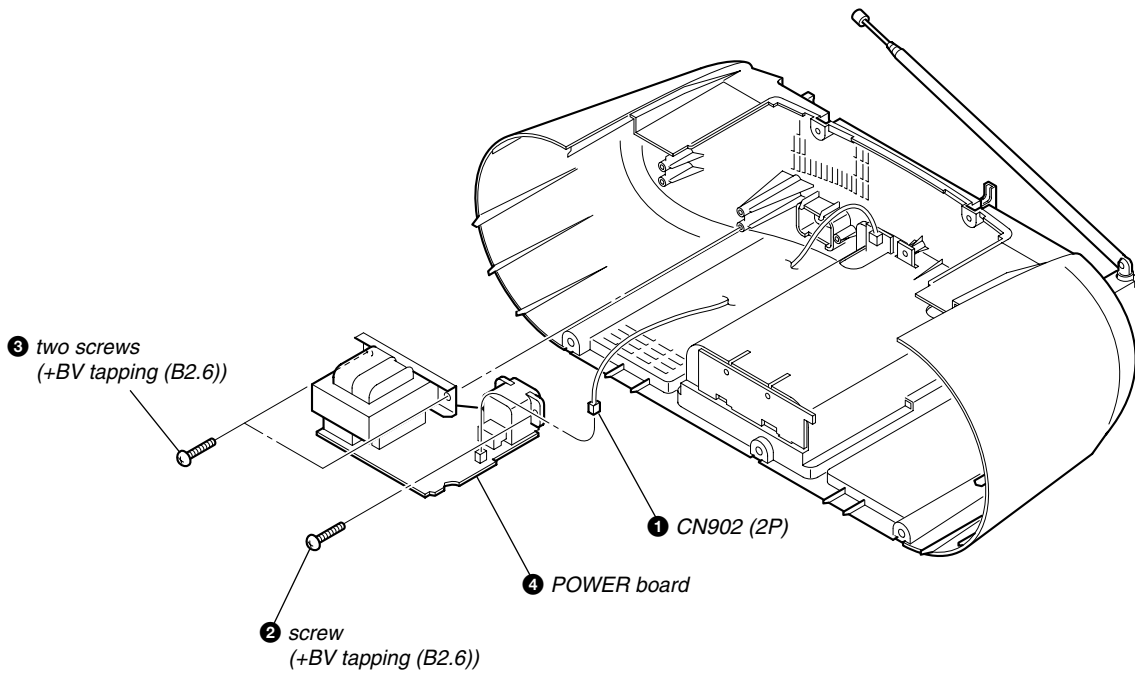
### 3-10. TC BOARD



3-11. KEY (FUNC) BOARD, KEY (VOL) BOARD



3-12. POWER BOARD



## SECTION 4 MECHANICAL ADJUSTMENTS

### PRECAUTION

- Clean the following parts with a denatured-alcohol-moistened swab :
 

record/playback head	pinch roller
erase head	rubber belts
capstan	idlers
- Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head magnetizer close to the erase head.)
- Do not use a magnetized screwdriver for the adjustments.
- The adjustments should be performed with the rated power supply voltage (9V) unless otherwise noted.

### Torque Measurement

Mode	Torque meter	Meter reading
FWD	CQ-102C	2.95 – 6.86 mN • m (30 – 70 g • cm) (0.42 – 0.97 oz • inch)
FWD Back Tension	CQ-102C	0.15 – 0.53 mN • m (1.5 – 5.5 g • cm) (0.021 – 0.076 oz • inch)
FF	CQ-201B	more than 5.88 mN • m (more than 60 g • cm) (more than 0.83 oz • inch)
REW	CQ-201B	more than 5.88 mN • m (more than 60 g • cm) (more than 0.83 oz • inch)

### Tape Tension Measurement

Mode	Tension meter	Meter reading
FWD	CQ-403A	more than 100 g (more than 3.53 oz)

## SECTION 5 ELECTRICAL ADJUSTMENTS

<b>TAPE SECTION</b>	<b>0 dB = 0.775 V</b>
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### • Standard Output Level

Output terminal	HP OUT
load impedance	32 Ω
output signal level	0.25 V (–10 dB)

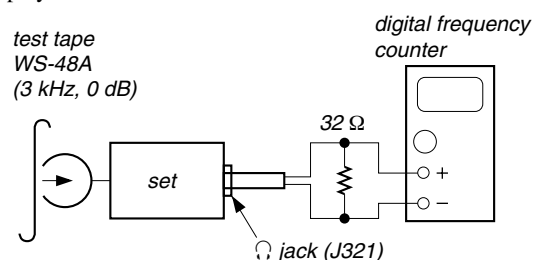
### • Test Tape

Type	Signal	Used for
WS-48A	3 kHz, 0 dB	tape speed adjustment

### Tape Speed Adjustment

#### Procedure:

Mode: playback



Adjust so that the value on the digital frequency counter is 3,000 Hz.

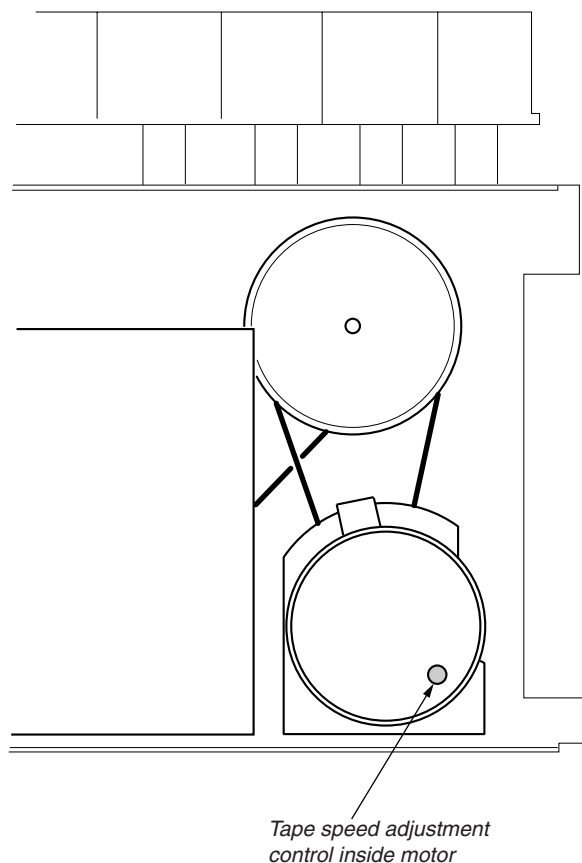
#### Specification Value:

<b>Digital frequency counter</b>
----------------------------------

2,910 to 3,090 Hz
-------------------

Adjust so that the frequency at the beginning and that at the end of tape winding are between 2,910 to 3,090 Hz.

#### Adjustment Location:

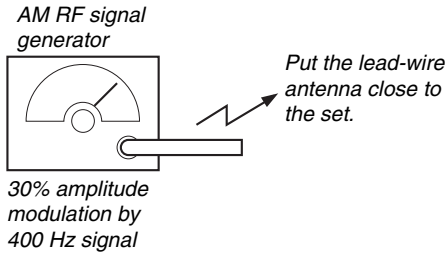


**TUNER SECTION**    **0 dB = 1  $\mu$ V**

• **AM Section**

**Setting:**

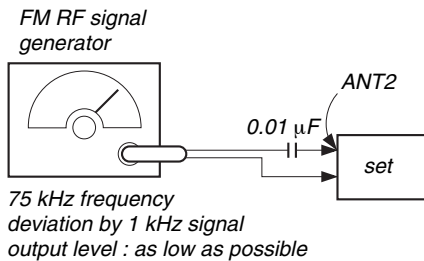
RADIO BAND•AUTO PRESET button: AM



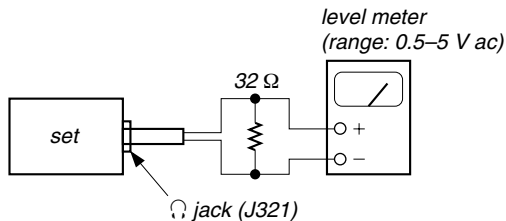
• **FM Section**

**Setting:**

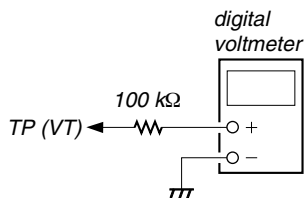
RADIO BAND•AUTO PRESET button: FM



• **Connecting Level Meter (FM, AM)**



• **Connecting Digital Voltmeter (FM, AM)**



• Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

AM IF ADJUSTMENT	
Adjust for a maximum reading on level meter.	
T1	
450 kHz	

AM FREQUENCY COVERAGE CHECK (CND, E92, MX)		
Frequency Display	530 kHz	1,710 kHz
Reading on Digital voltmeter	0.8 ± 0.05 V	5.3 ± 0.7 V
Adjustment Part	L3	<confirmation>

AM FREQUENCY COVERAGE CHECK (EXCEPT CND, E92, MX)		
Frequency Display	531 kHz	1,611 kHz
Reading on Digital voltmeter	0.8 ± 0.05 V	4.8 ± 0.7 V
Adjustment Part	L3	<confirmation>

AM TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter.	
ANT1	CT3
621 kHz	1,404 kHz

FM IF ADJUSTMENT	
Adjust for a maximum reading on level meter.	
L6	
10.7 MHz	

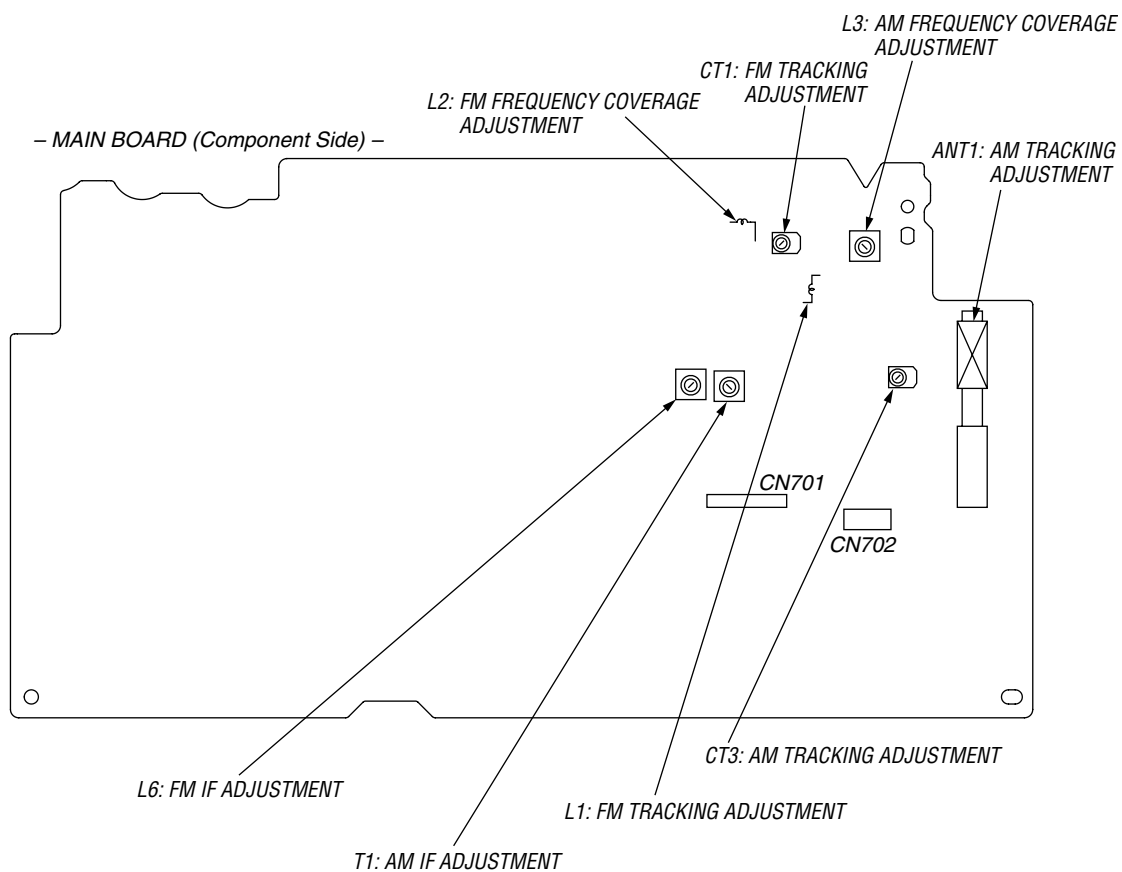
FM FREQUENCY COVERAGE ADJUSTMENT		
Frequency Display	87.5 MHz	108 MHz
Reading on Digital voltmeter	1.5 ± 0.3 V	3.0 ± 0.2 V
Adjustment Part	<confirmation>	L2

FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter.	
L1	CT1
87.5 MHz	108 MHz

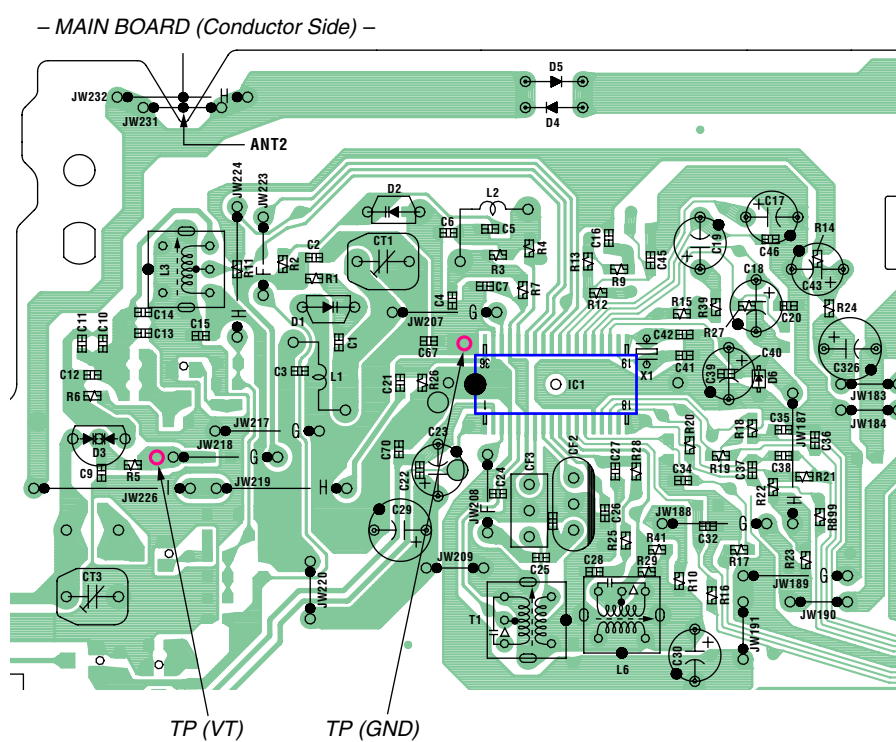
**Adjustment Location:** See page 15.

- Abbreviation  
CND : Canadian model  
E92 : AC 120V area in E model  
MX : Mexican model

**Adjustment Location:**



**Test Point:**



**CD SECTION**

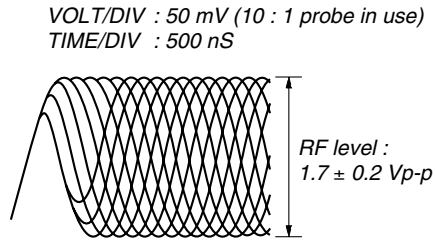
CD section adjustments are done automatically in this set.  
 In case of operation check, confirm that focus bias.

**FOCUS BIAS CHECK**

1. Connect the oscilloscope between IC701 pin ⑤ and pin ④ (or TP (RF) and TP (VREF)).
2. Insert the disc (PATD-012 (Tr 15)). (Part No. : 4-225-203-01)
3. Press the **▶ ||** (CD) button.
4. Confirm that the oscilloscope waveform is as shown in the figure below. (eye pattern)

A good eye pattern means that the diamond shape (◇) in the center of the waveform can be clearly distinguished.

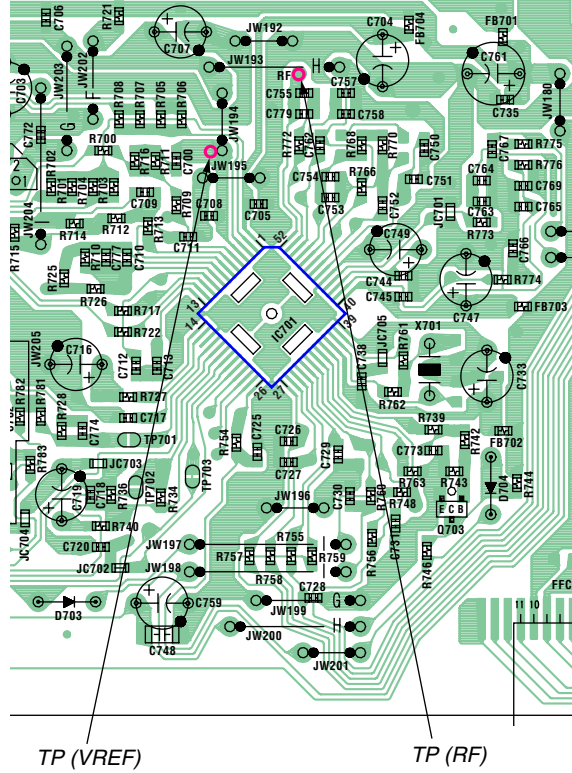
- RF signal reference waveform (eye pattern)



When observing the eye pattern, set the oscilloscope for AC range and raise vertical sensitivity.

**Test Point:**

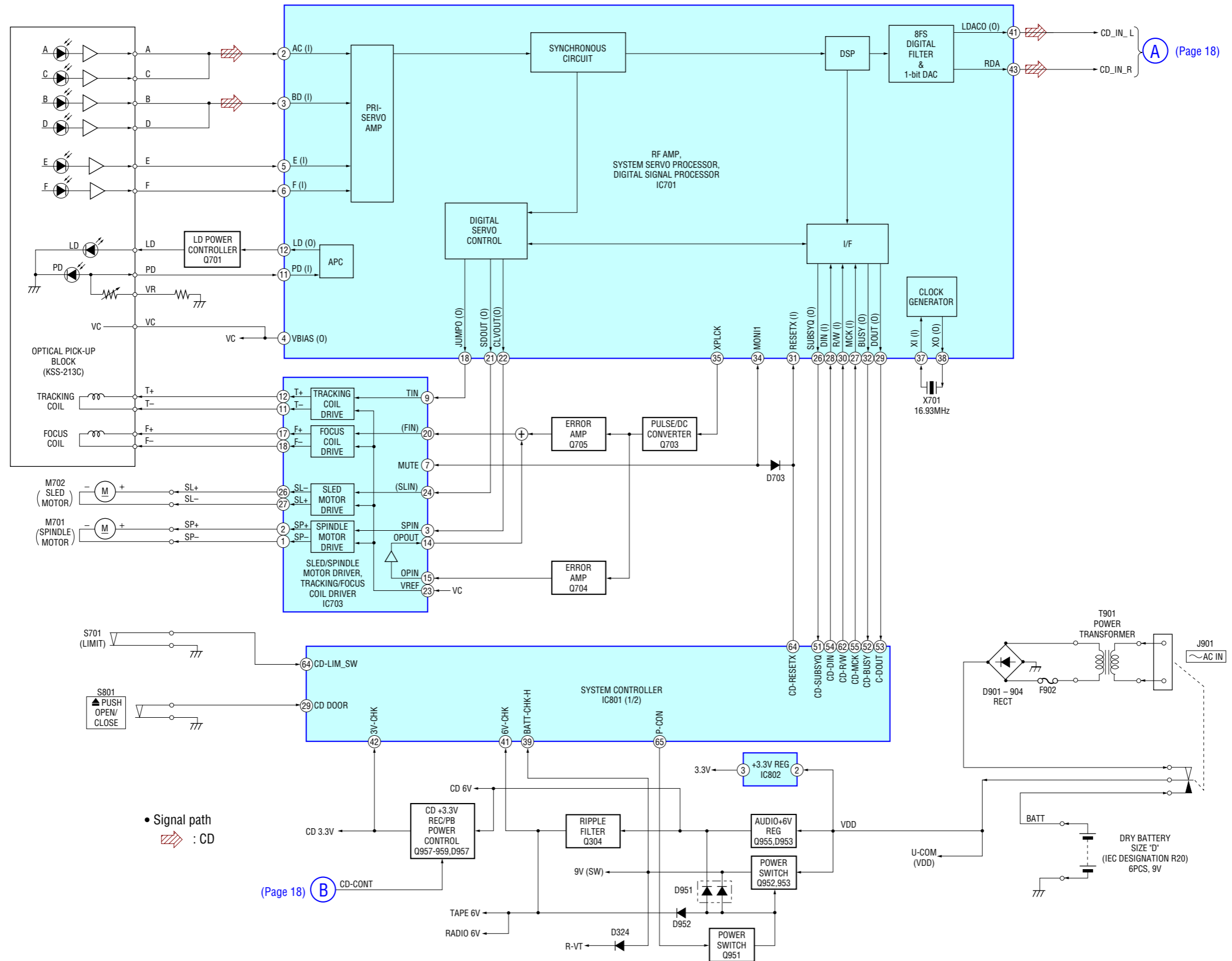
– MAIN BOARD (Conductor Side) –





SECTION 6  
DIAGRAMS

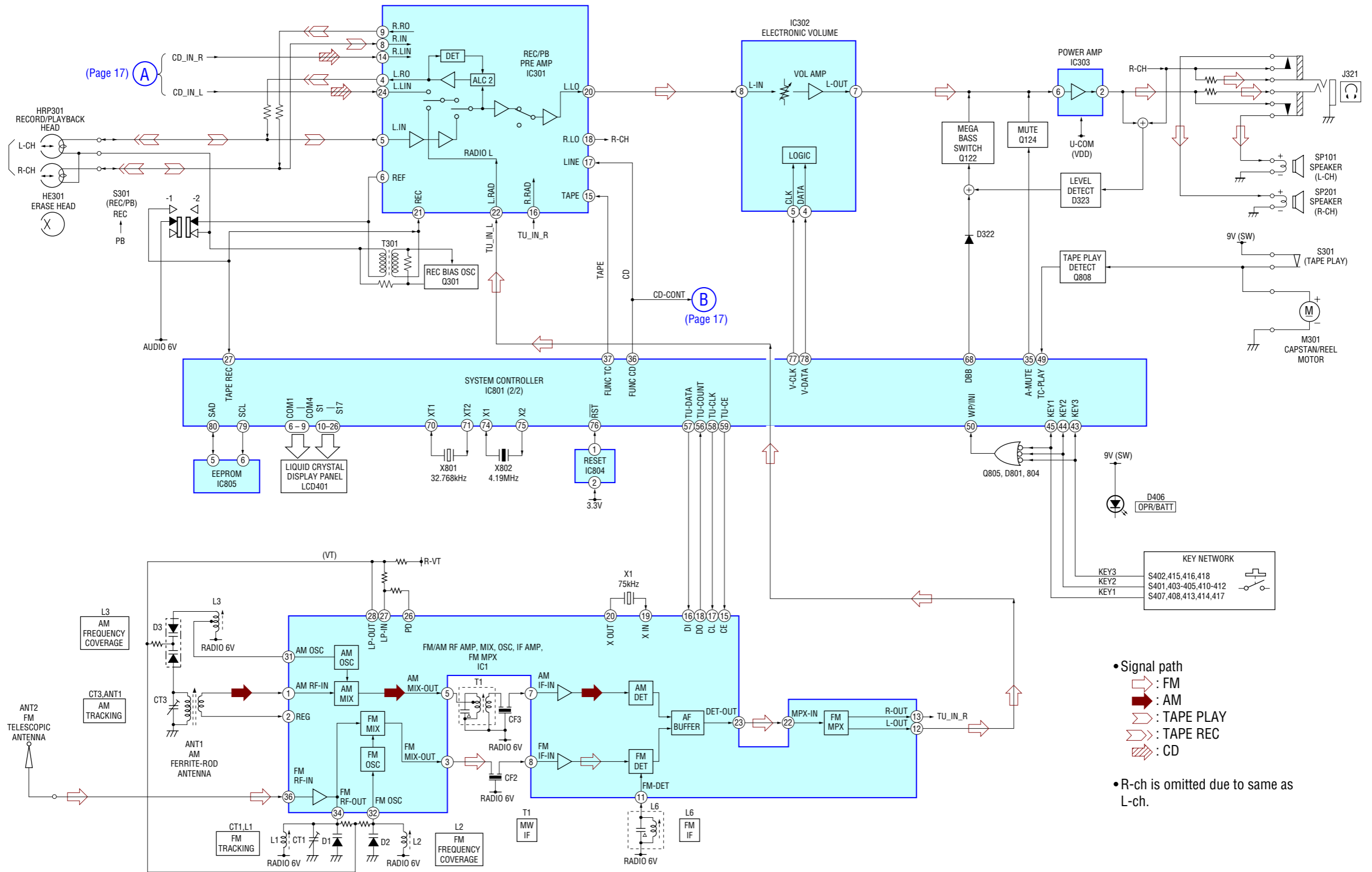
6-1. BLOCK DIAGRAM — CD SECTION —



(Page 18)

(Page 18)

6-2. BLOCK DIAGRAM — MAIN SECTION —



• NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

**THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.**  
(In addition to this, the necessary note is printed in each block.)

**For schematic diagrams.**

**Note:**

- All capacitors are in  $\mu\text{F}$  unless otherwise noted. (p: pF) 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $1/4\text{ W}$  or less unless otherwise specified.
- $\Delta$  : internal component.
- $\square$  : panel designation.

**Note:**  
The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

**Note:**  
Les composants identifiés par une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- $\text{---}$  : B+ Line.
- $\text{---}$  : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.

- MAIN (1/4) Board –  
no mark : CD PLAY
- MAIN (2/4) Board –  
no mark : FM  
( ) : AM
- MAIN (3/4), (4/4) and Other Boards –  
no mark : FM  
( ) : PB  
< > : REC  
[ ] : CD PLAY

- Voltages are taken with a VOM (Input impedance 10 M $\Omega$ ). Voltage variations may be noted due to normal production tolerances.

- Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.

- Circled numbers refer to waveforms.

• Signal path.

- $\Rightarrow$  : FM
- $\Rightarrow$  : AM
- $\Rightarrow$  : PB
- $\Rightarrow$  : REC
- $\Rightarrow$  : CD PLAY

• Abbreviation

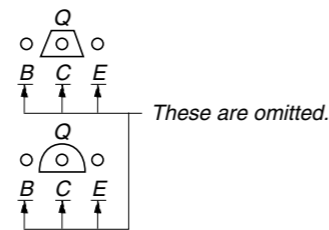
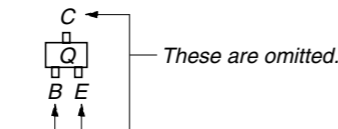
- CND : Canadian model.
- E41 : AC 230V area in E model.
- E92 : AC 120V area in E model.
- AUS : Australian model.
- AR : Argentina model.
- CET : East European & Russian model.
- IT : Italian model.
- KR : Korea model.
- MX : Mexican model.
- SP : Singapore model.
- TH : Thai model.
- TW : Taiwan model.

**For printed wiring boards.**

**Note:**

- $\text{---}$  : parts extracted from the component side.
- $\text{---}$  : parts extracted from the conductor side.
- $\square$  : indicates side identified with part number.
- $\Delta$  : internal component.
- $\text{---}$  : Pattern from the side which enables seeing. (The other layers' patterns are not indicated.)

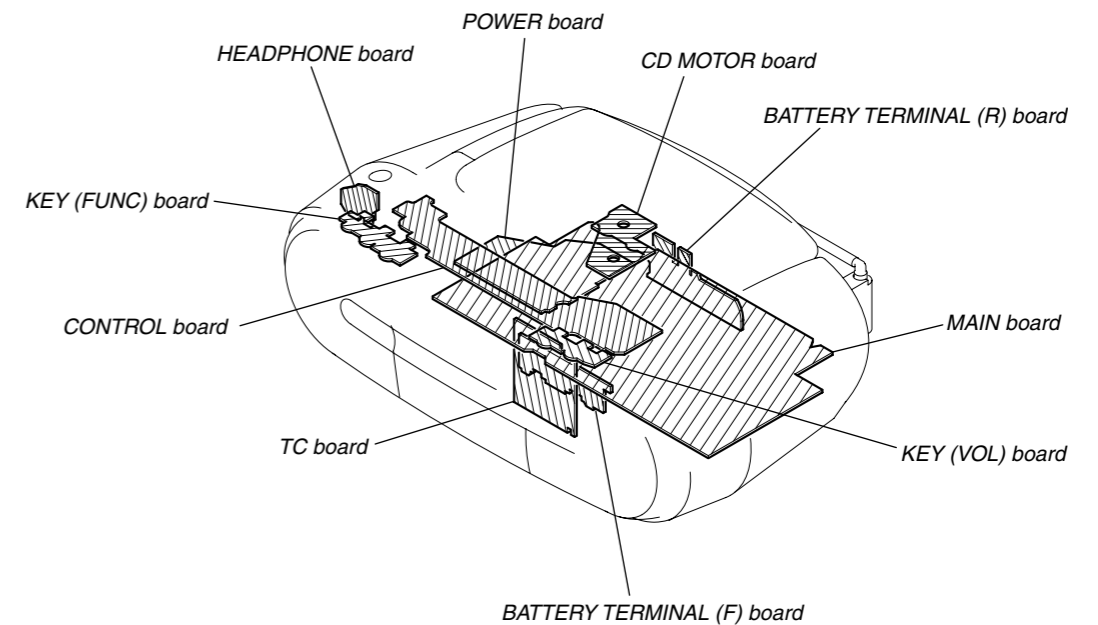
**Caution:**  
Pattern face side: Parts on the pattern face side seen from the pattern face are indicated.  
(Conductor Side)  
Parts face side: Parts on the parts face side seen from the parts face are indicated.  
(Component Side)



• Abbreviation

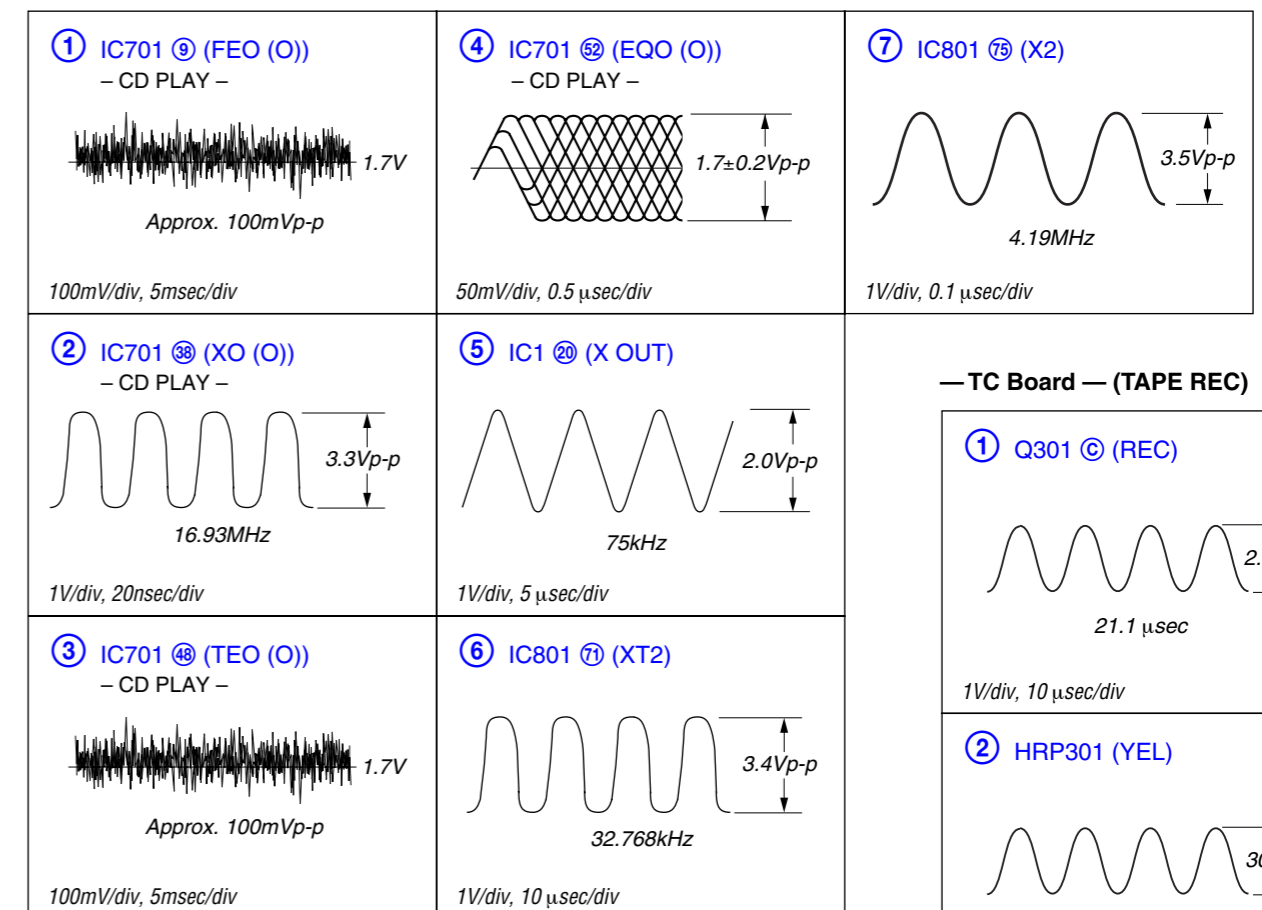
- CND : Canadian model.
- E41 : AC 230V area in E model.
- E92 : AC 120V area in E model.
- AUS : Australian model.
- AR : Argentina model.
- CET : East European & Russian model.
- IT : Italian model.
- KR : Korea model.
- MX : Mexican model.
- SP : Singapore model.
- TH : Thai model.
- TW : Taiwan model.

6-3. CIRCUIT BOARDS LOCATION

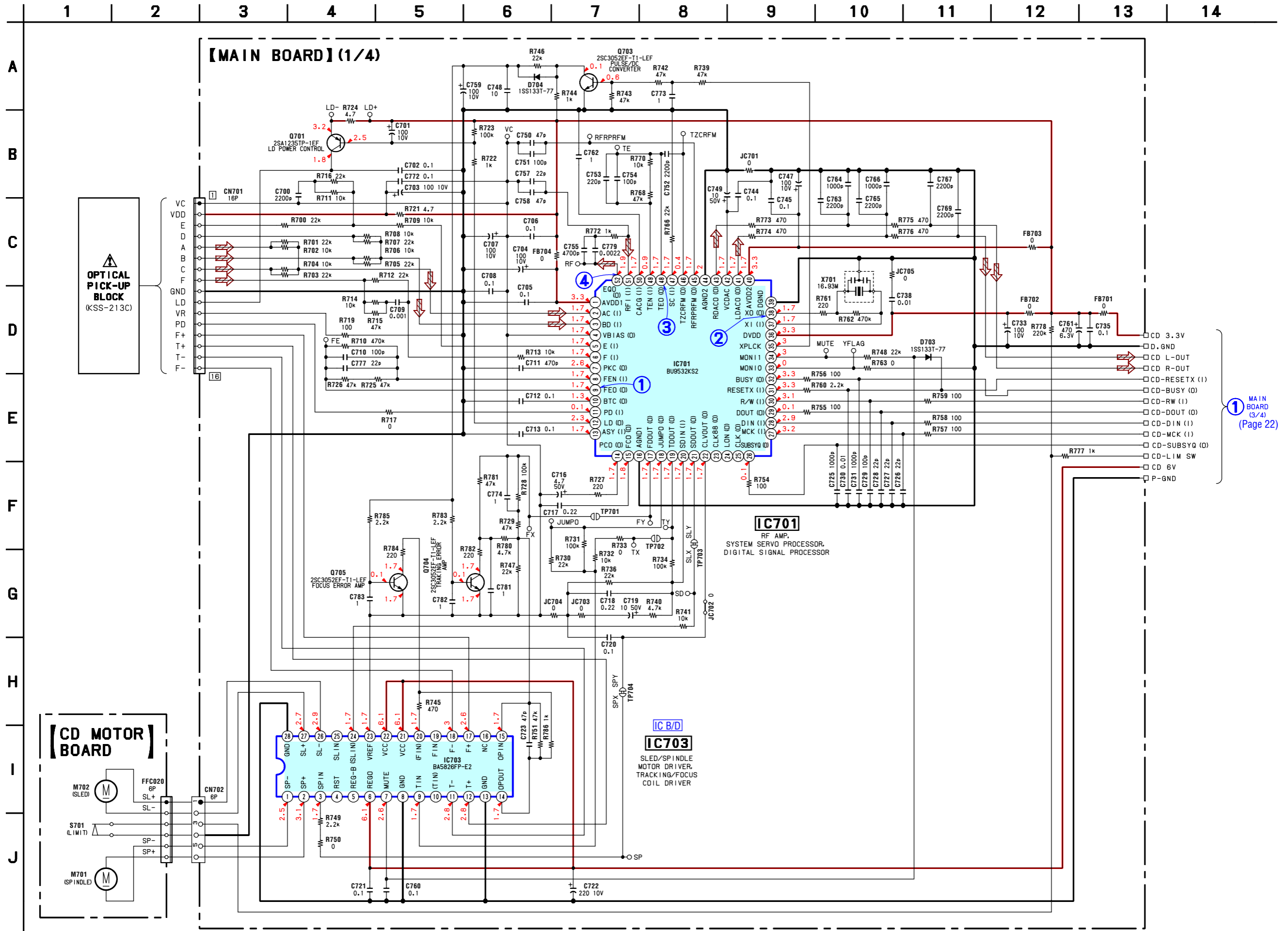


• Waveforms

— MAIN Board —

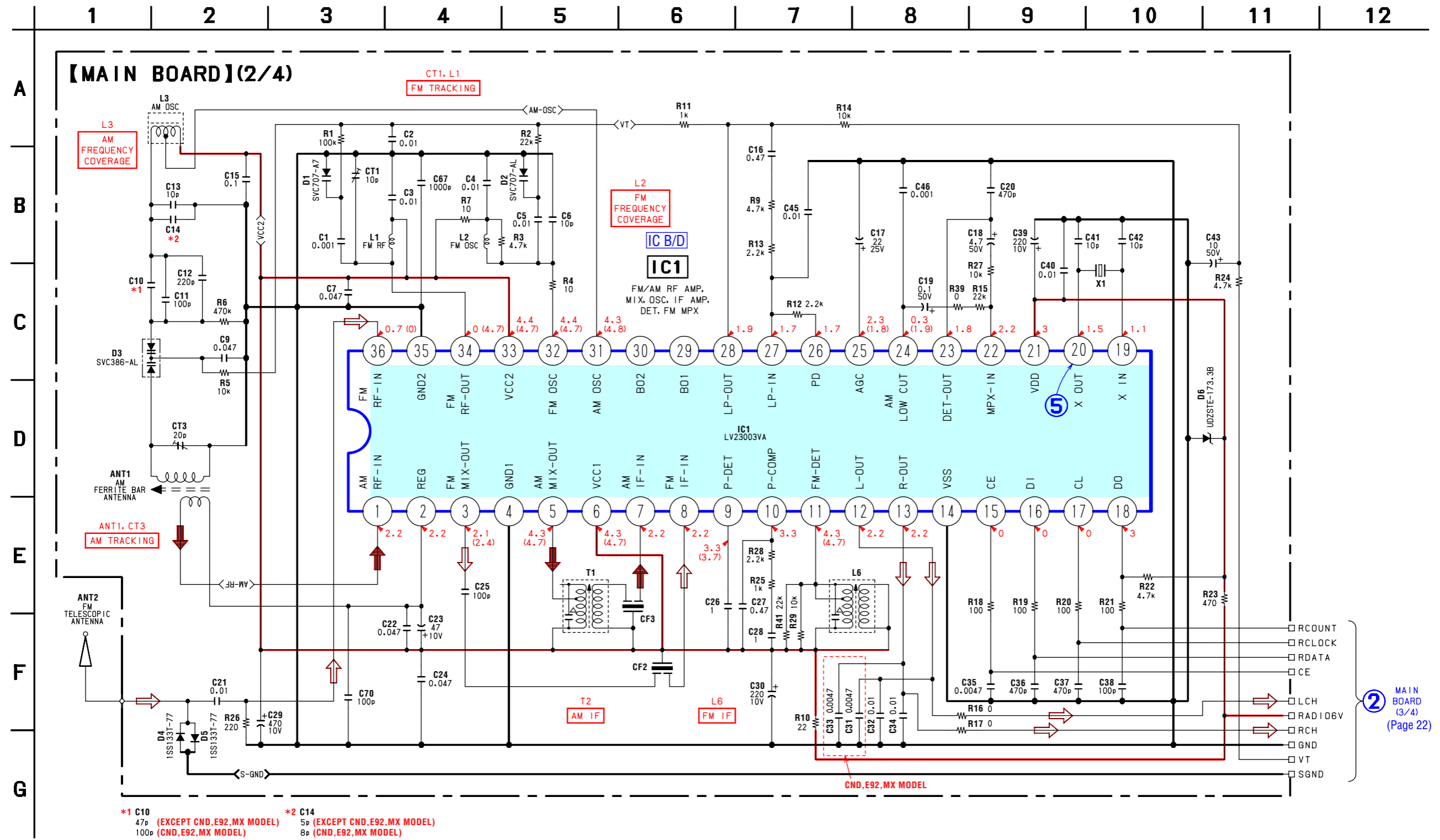


6-4. SCHEMATIC DIAGRAM — MAIN SECTION (1/4) — • Refer to page 19 for Waveforms. • Refer to page 32 for IC Block Diagram. • Refer to page 34 for IC Pin Description of IC701.

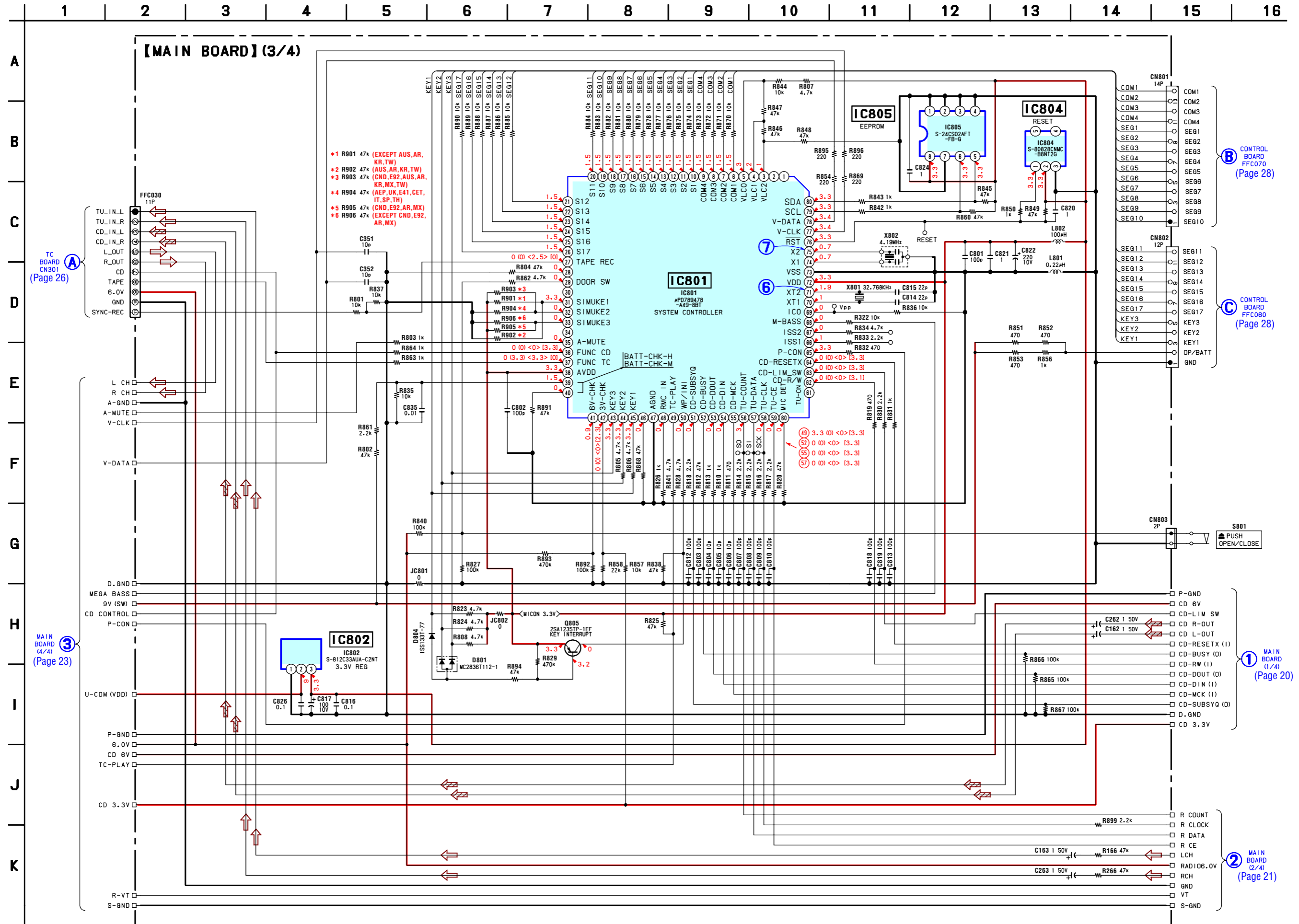


1 MAIN BOARD (3/4) (Page 22)

6-5. SCHEMATIC DIAGRAM — MAIN SECTION (2/4) — • Refer to page 19 for Waveforms. • Refer to page 31 for IC Block Diagram.



6-6. SCHEMATIC DIAGRAM — MAIN SECTION (3/4) — • Refer to page 19 for Waveforms. • Refer to page 36 for IC Pin Description of IC801.



TC BOARD CN301 (Page 26)

MAIN BOARD (4/4) (Page 23)

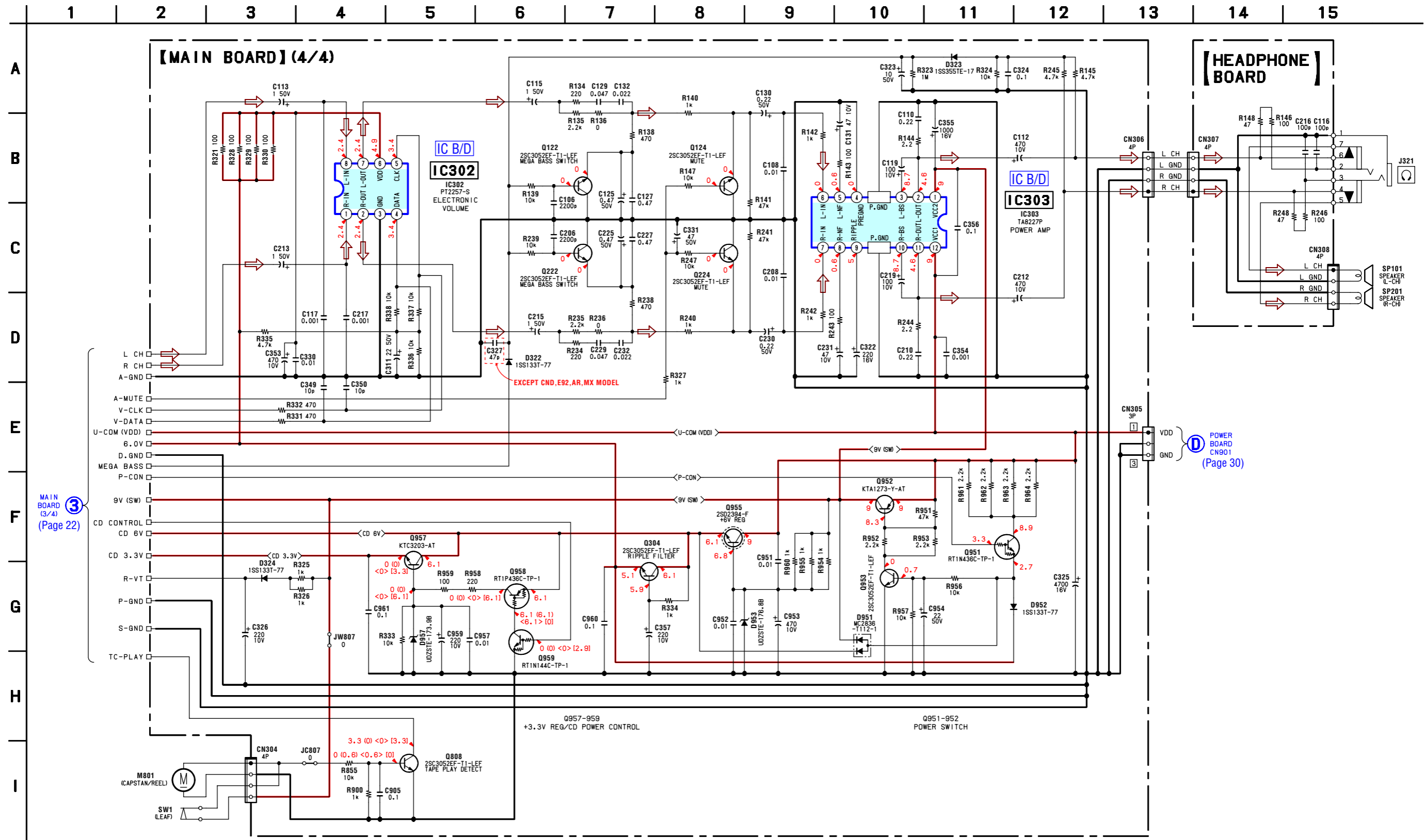
CONTROL BOARD FFC070 (Page 28)


CONTROL BOARD FFC060 (Page 28)

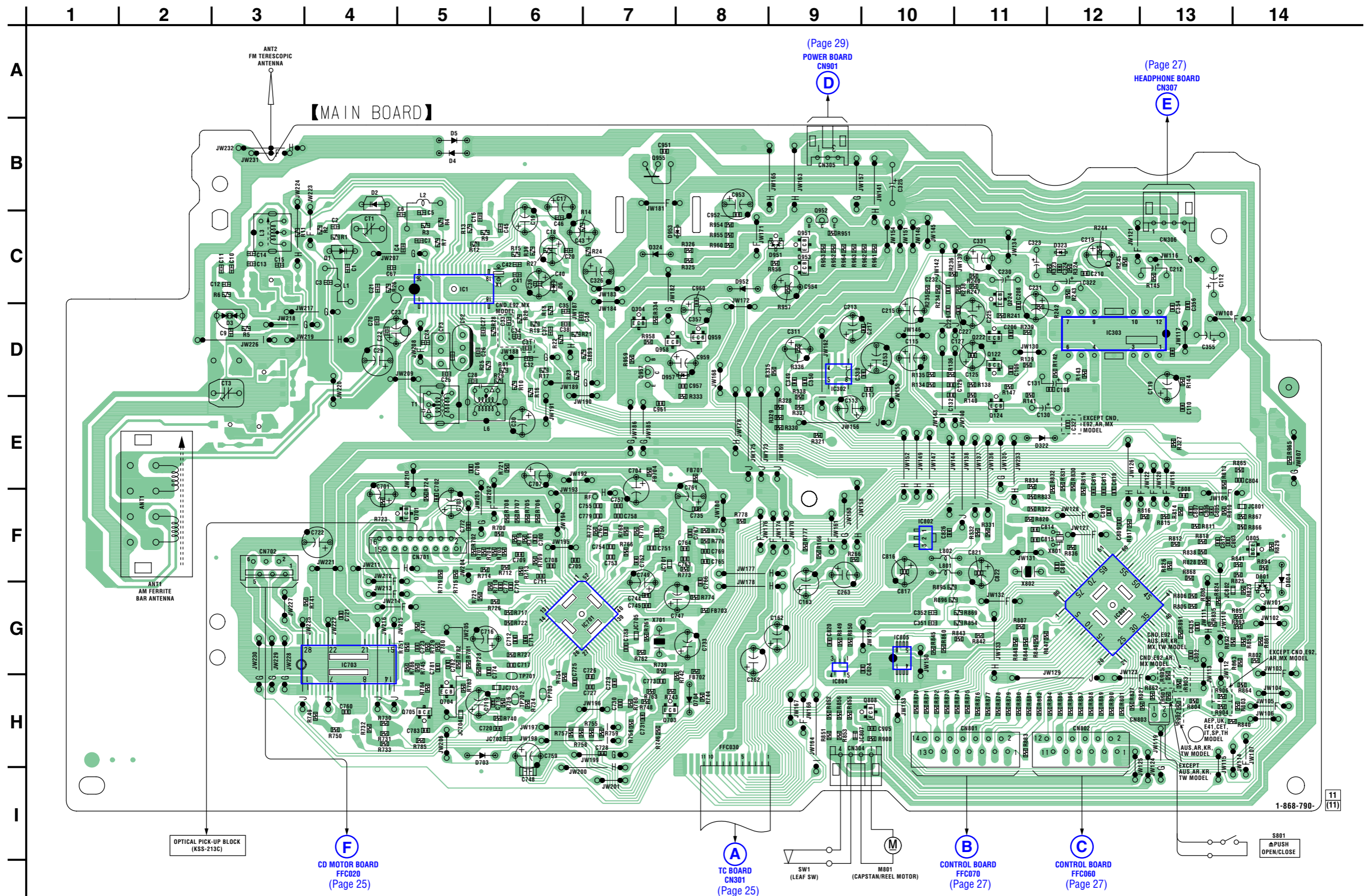
MAIN BOARD (1/4) (Page 20)

MAIN BOARD (2/4) (Page 21)

6-7. SCHEMATIC DIAGRAM — MAIN SECTION (4/4) — • Refer to page 32 for IC Block Diagrams.



6-8. PRINTED WIRING BOARD — MAIN SECTION — • Refer to page 19 for Circuit Boards Location.  : Uses unleaded solder.

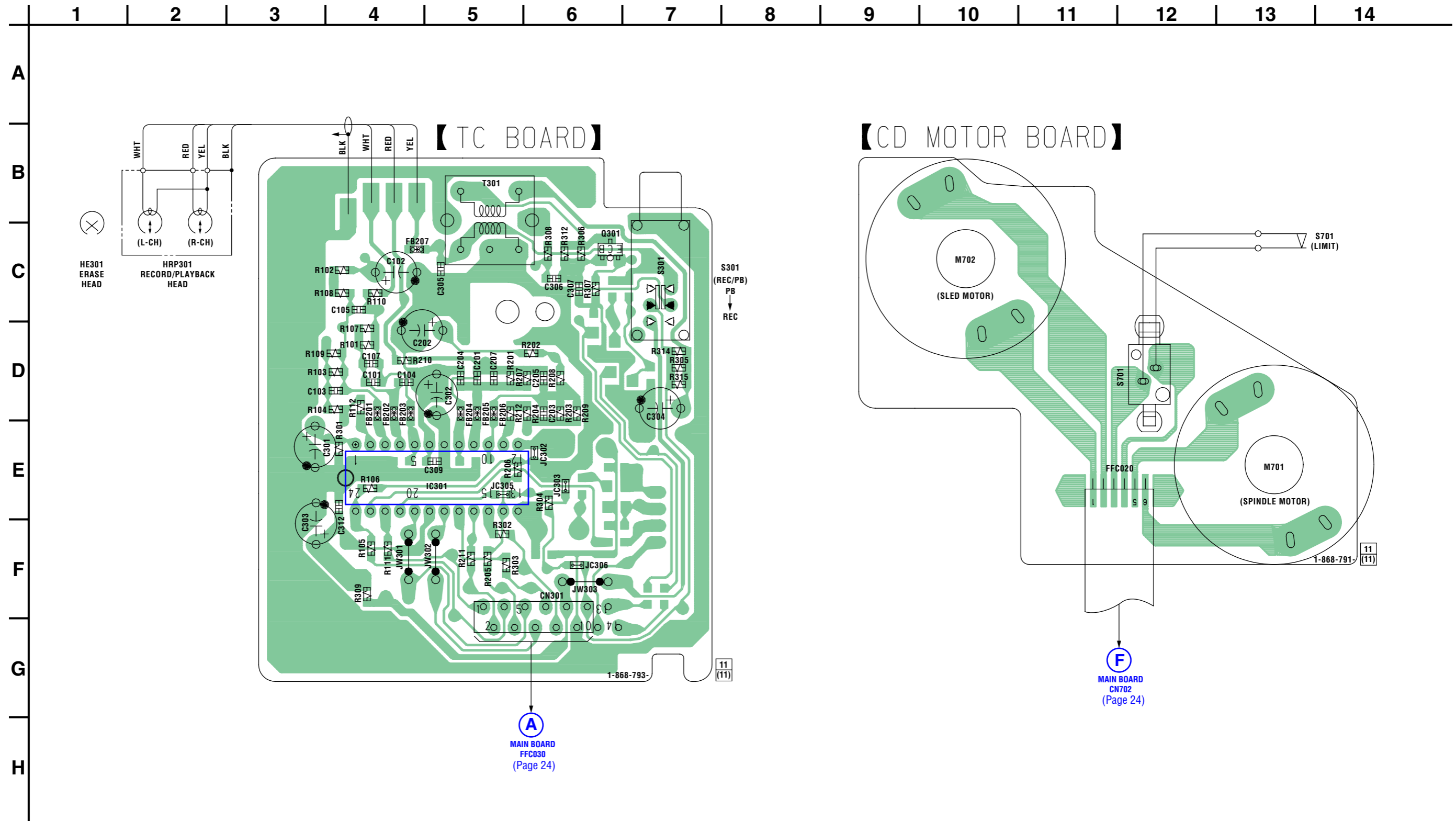


• Semiconductor Location

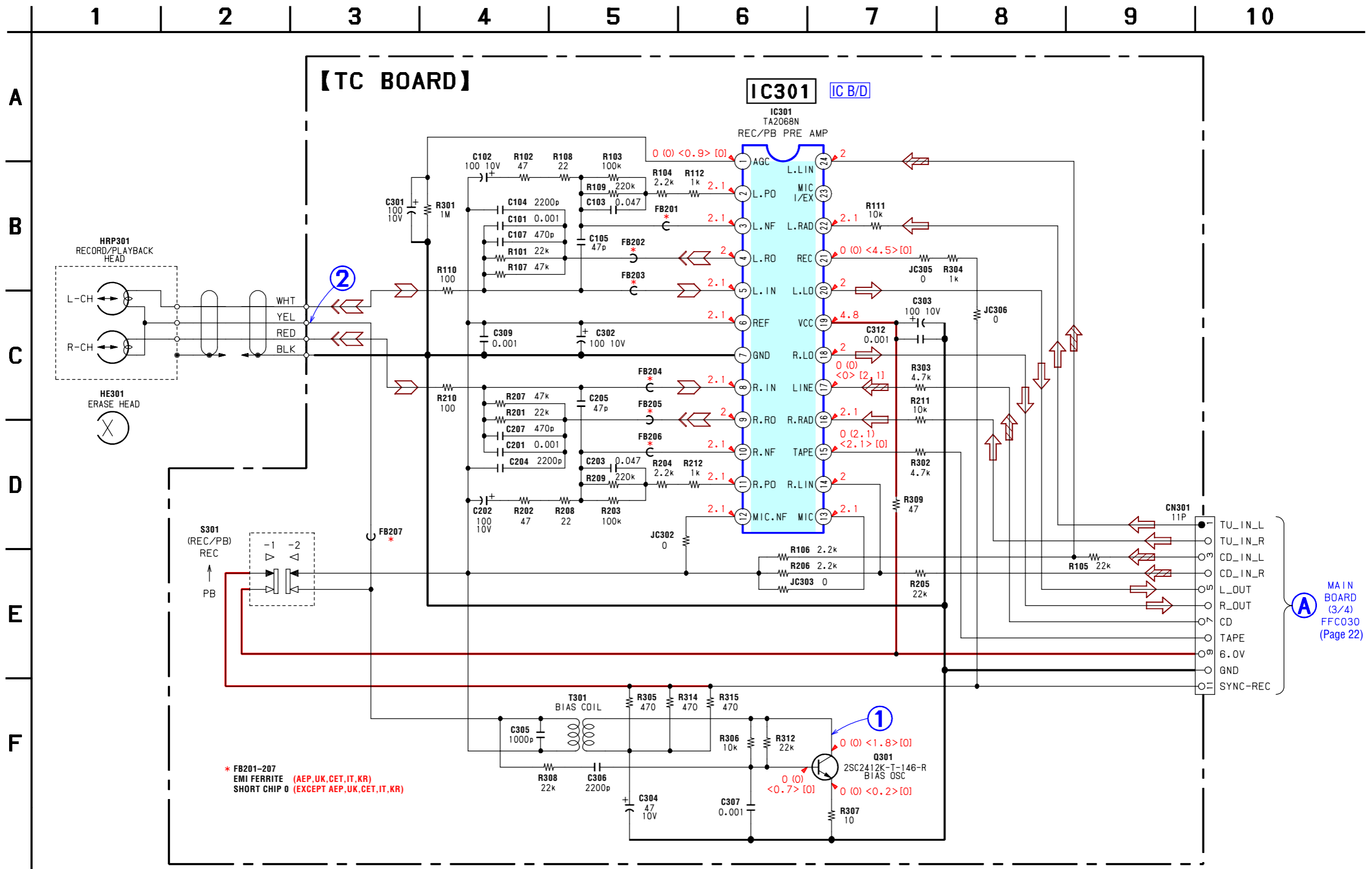
Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D1	C-4	D324	C-7	D957	D-7	IC802	F-10	Q304	D-7	Q952	C-9
D2	B-4	D703	H-5			IC804	H-9	Q701	F-5	Q953	C-9
D3	D-3	D704	H-8	IC1	C-5	IC805	G-10	Q703	H-7	Q955	B-7
D4	B-5	D801	F-14	IC302	D-9			Q704	H-5	Q957	D-7
D5	B-5	D804	F-14	IC303	D-12	Q122	D-11	Q705	H-5	Q958	D-7
D6	C-6	D951	C-9	IC701	G-7	Q124	E-11	Q805	F-14	Q959	D-8
D322	E-11	D952	C-8	IC703	G-4	Q222	D-11	Q808	H-10		
D323	C-12	D953	C-7	IC801	G-12	Q224	C-11	Q951	C-9		



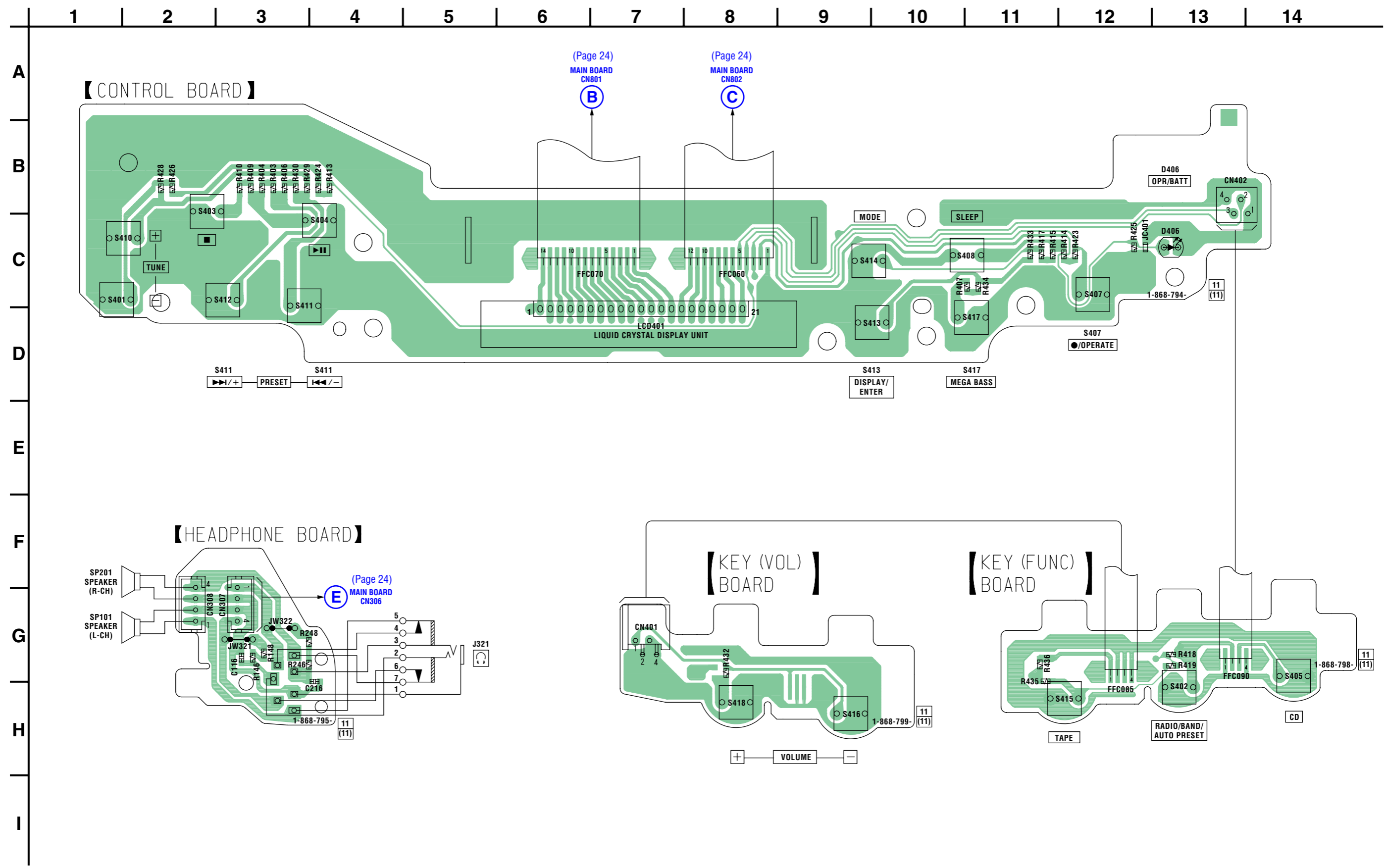
6-9. PRINTED WIRING BOARDS — TC SECTION — • Refer to page 19 for Circuit Boards Location.  : Uses unleaded solder.



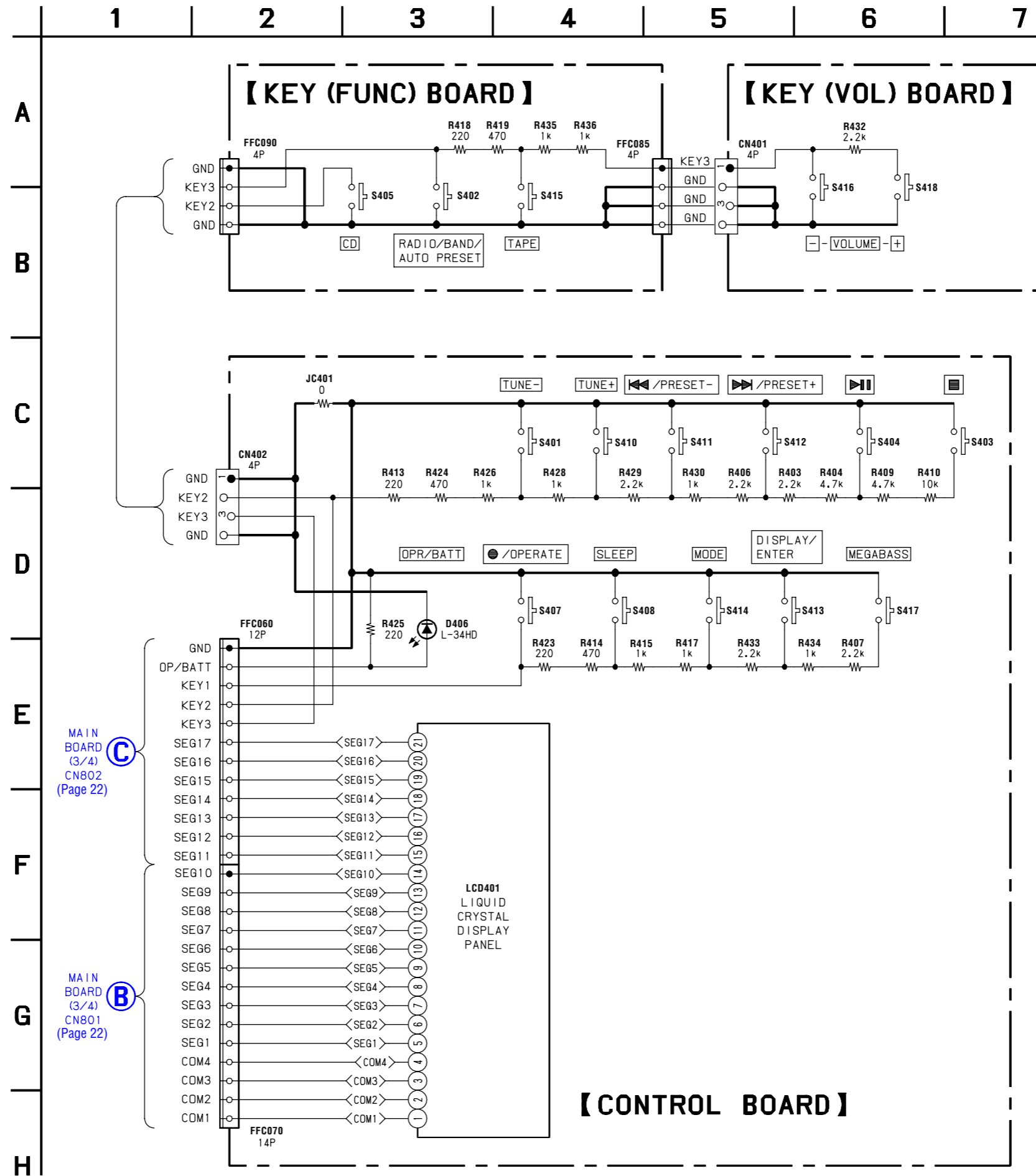
6-10. SCHEMATIC DIAGRAM — TC SECTION — • Refer to page 19 for Waveforms. • Refer to page 33 for IC Block Diagram.




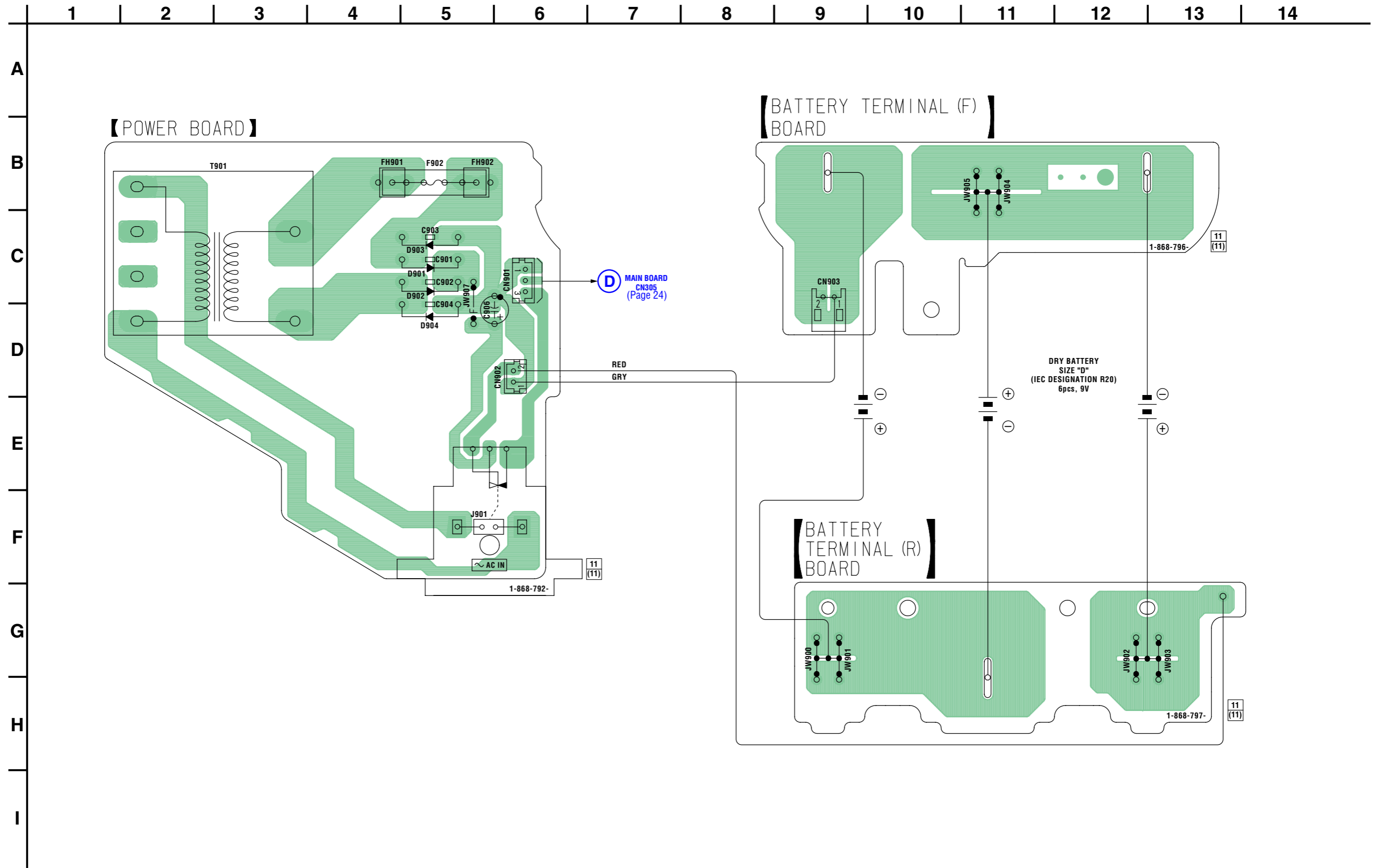
6-11. PRINTED WIRING BOARDS — CONTROL SECTION — • Refer to page 19 for Circuit Boards Location.  : Uses unleaded solder.



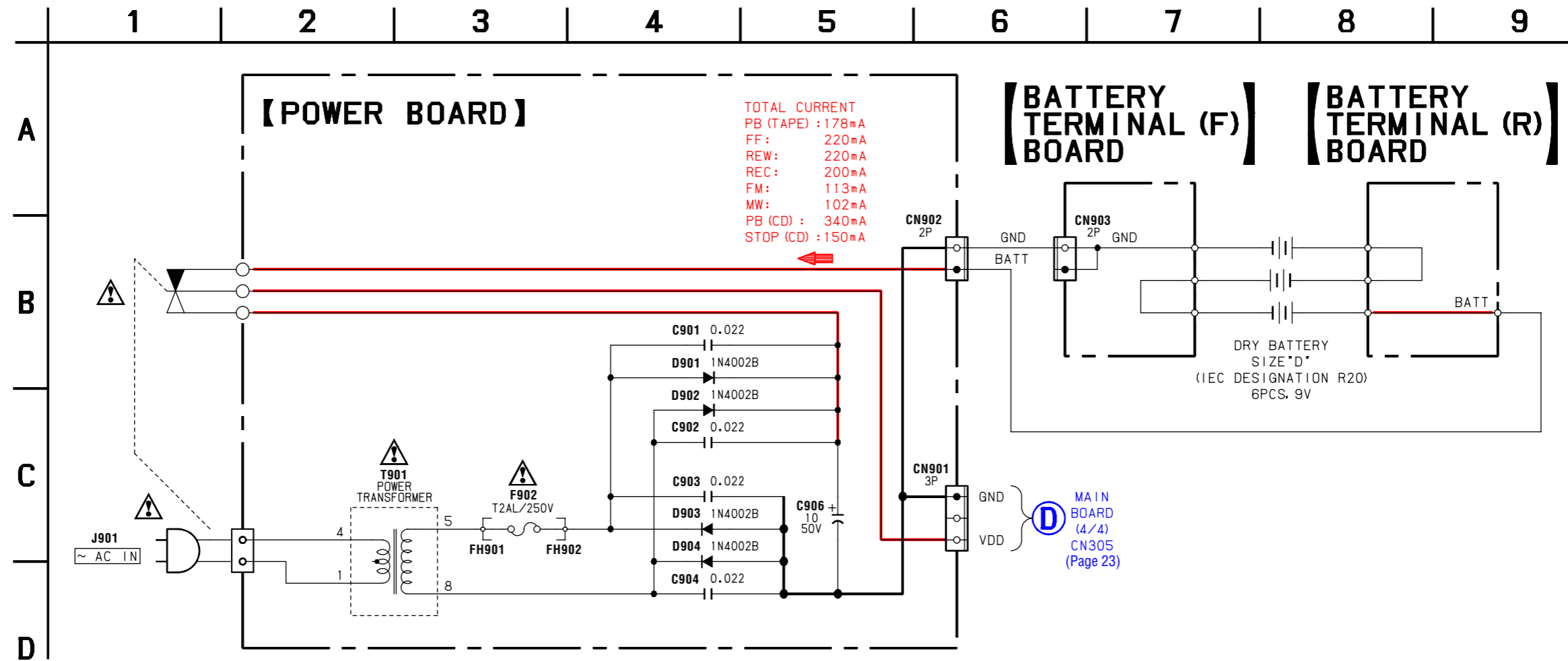
6-12. SCHEMATIC DIAGRAM — CONTROL SECTION —



6-13. PRINTED WIRING BOARDS — POWER SUPPLY SECTION — • Refer to page 19 for Circuit Boards Location.  : Uses unleaded solder.

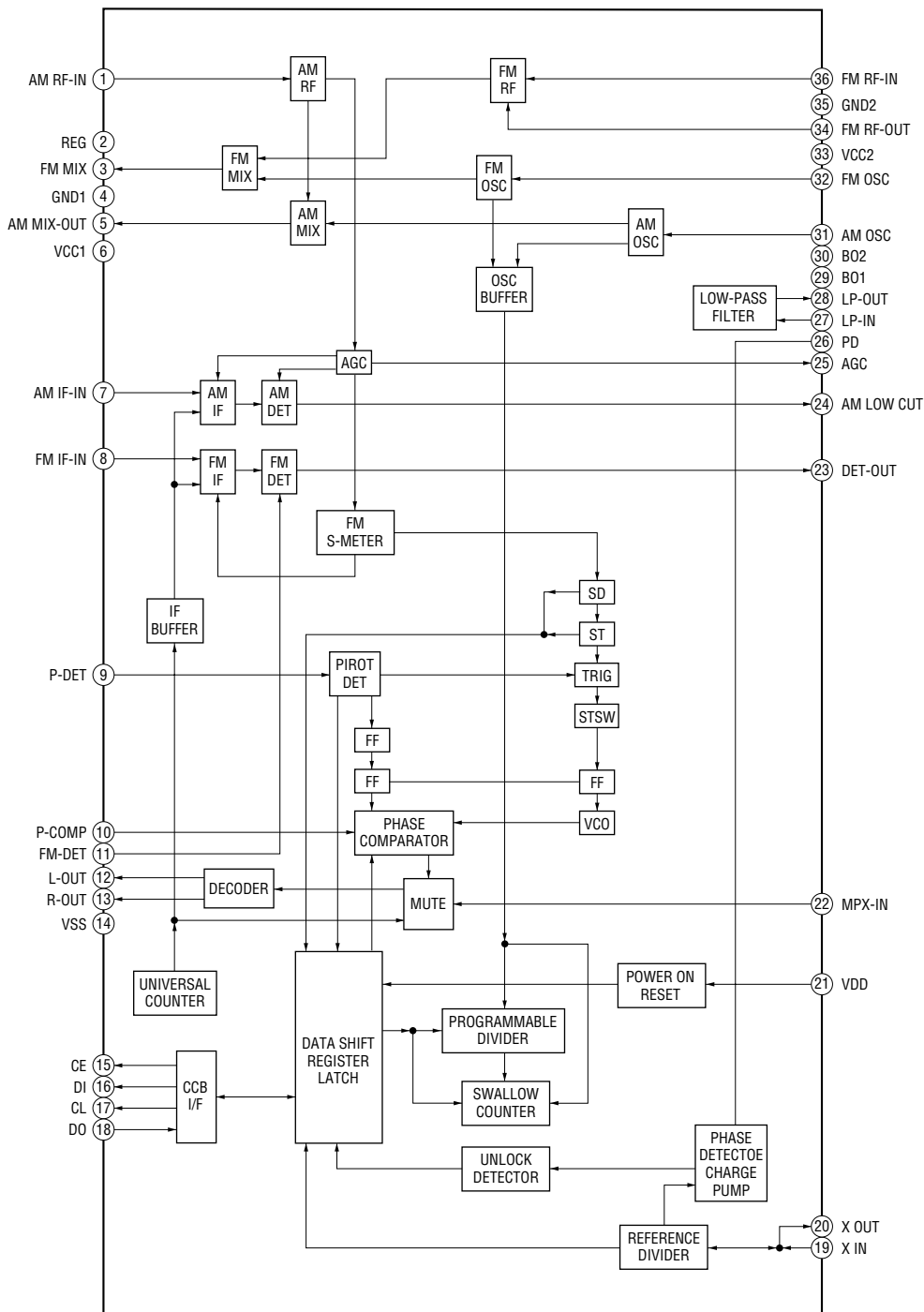


6-14. SCHEMATIC DIAGRAM — POWER SUPPLY SECTION —

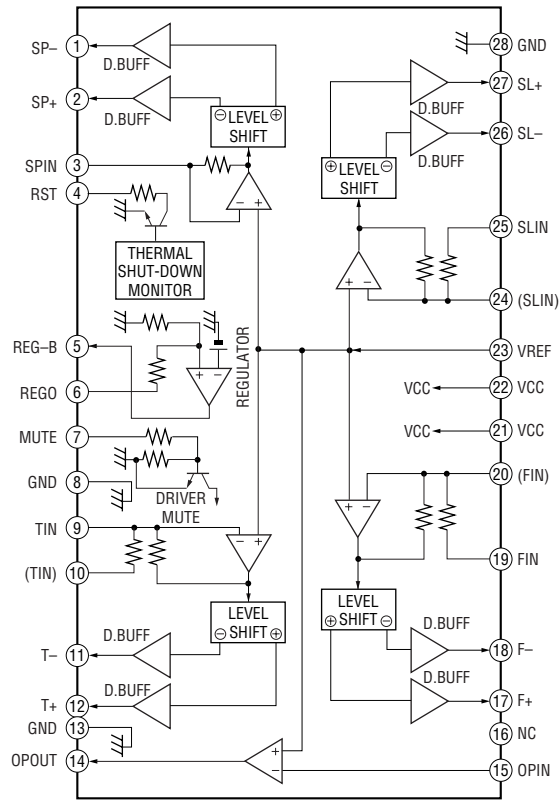


• IC BLOCK DIAGRAMS

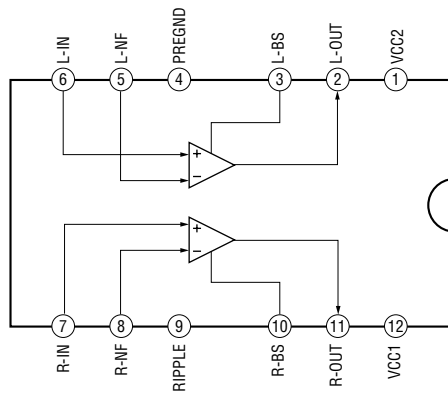
IC1 LV23003VA (MAIN Board (2/4))



**IC703 BA5826FP-E2 (MAIN Board (1/4))**

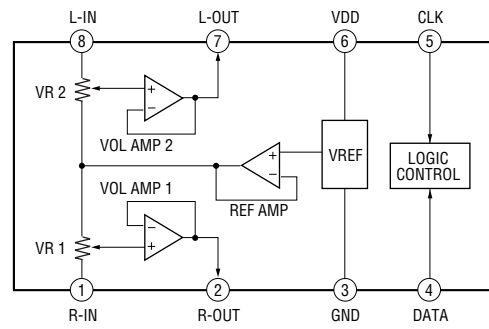


**IC303 TA8227P (MAIN Board (4/4))**

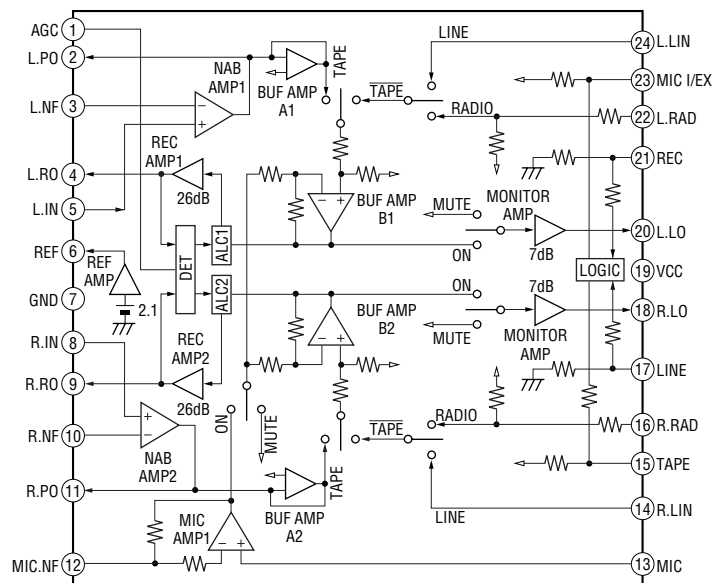




**IC302 PT2257-S (MAIN Board (4/4))**



**IC301 TA2068N (TC Board)**



## • IC PIN DESCRIPTIONS

## • IC701 BU9532KS2 (RF AMP, SYSTEM SERVO PROCESSOR, DIGITAL SIGNAL PROCESSOR) (MAIN BOARD (1/4))

Pin No.	Pin Name	I/O	Pin Description
1	AVDD1	I	Power supply pin (+3.3V)
2	AC (I)	I	A+C RF signal input
3	BD (I)	I	B+D RF signal input
4	VBIAS (O)	O	VC voltage output
5	E (I)	I	E RF signal input
6	F (I)	I	F RF signal input
7	PKC (O)	O	RF signal peak detector capacitor fitted
8	FEN (I)	I	Focus error amp input
9	FEO (O)	O	Focus error output
10	BTC (O)	O	RF signal bottom detector capacitor fitted
11	PD (I)	I	Photo detector signal input
12	LD (O)	O	Laser diode drive signal outout
13	ASY (I)	I	Asymmentric correction input
14	PCO (O)	O	PLL PCO output
15	FCO (O)	O	PLL FCO-DAC output
16	AGND1	—	Ground
17	FDOUT (O)	O	Focus drive signal output
18	JUMPO (O)	O	track jump pulse drive signal input
19	TDOUT (O)	O	Tracking drive sigmal outout
20	SDIN (I)	I	Sled drive signal input
21	SDOUT (O)	O	Sled drive signal output
22	CLVOUT (O)	O	CLV drive signal output
23	CLK88 (O)	O	Not used (Open)
24	LON (O)	O	Not used (Open)
25	CLK (O)	O	Not used (Open)
26	SUBSYQ (O)	O	Sub code synchronous signal output
27	MCK (I)	I	Command transfer clock input
28	DIN (I)	I	Status and SUB-Q data input
29	DOUT (O)	O	Command data output
30	R/W (I)	I	Command read/write signal input
31	RESETX (I)	I	Reset signal input
32	BUSY (O)	O	BUSY signal output
33	MONI 0	I	Test input (Not used (pull duwn))
34	MONI 1	I	Muting signal input
35	XPCLK	O	XPCLK signal output
36	DVDD	—	Power supply pin (+3.3V)
37	XI (I)	I	Main clock input (18.432MHz)
38	XO (O)	O	Main clock output (18.432MHz)
39	DGND	—	Ground
40	AVDD2	—	Power supply pin (+3.3V)
41	LDACO (O)	O	Audio L-CH output
42	VCDAC	O	Audio DAC reference voltage output
43	RDACO (O)	O	Audio R-CH output
44	AGND2	—	Ground
45	RFRPRFM (O)	O	RFRP capacitor fitted
46	TZCRFM (O)	O	TZC capacitor fitted
47	SC (O)	O	Scratch depth ajstment output
48	TEO (O)	O	Tracking error outpot

Pin No.	Pin Name	I/O	Pin Description
49	TEN (O)	O	Tracking error input
50	CACG (O)	O	RFAGC time constant capacitor fitted
51	RFI (I)	O	RF capacitor fitted
52	EQO (O)	O	RF EQ output

• IC801  $\mu$ PD78947GC-A49-8BT-A (SYSTEM CONTROL) (MAIN BOARD (3/4))

Pin No.	Pin Name	I/O	Pin Description
1, 2	NC	I	Not used. (Open)
3 to 5	VLC2 to 0	O	LCD drive bias voltage input
6 to 9	COM1 to 4	O	LCD drive common output
10 to 26	S1 to 17	I	LCD drive segment output
27	TAPE REC	I	Tape record signal input H: REC
28	NC	I	Not used. (Pull down)
29	DOOR SW	I	CD door open/close switch input L: Close
30	NC	O	Not used (Open)
31	SIMUKE1	I	Model discrimination input
32	SIMUKE2	I	Model discrimination input
33	SIMUKE3	I	Model discrimination input
34	NC	O	Not used (Open)
35	A-MUTE	O	Audio mute output H: Mute
36	FUNC CD	O	CD power control signal output H: CD ON
37	FUNC TC	O	Tape function output H: Tape
38	AVDD	—	Power supply (+3.3 V)
39	BATT-CHK-H	I	Battery voltage check input
40	BATT-CHK-M	I	Battery voltage check input (Not used (Pull down))
41	6V-CHK	I	Power supply 6V check signal input
42	3V-CHK	I	Power supply CD 3.3V check signal input
43 to 45	KEY3 to 1	I	Key input
46	NC	I	Not used (Pull down)
47	AGND	I	Ground
48	RMC IN	I	Remote commander receiver data input (Not used)
49	TC-PLAY	I	Tape play switch input L: Tape play
50	WP/INI	I	Wake-up/Interrupt signal input
51	CD-SUBSYQ	I	CD sub code synchronous signal input
52	CD-BUSY	I	CD BUSY signal input
53	CD-DOUT	I	CD command data input
54	CD-DIN	O	CD status and SUB-Q data output
55	CD-MCK	O	CD command transfer clock output
56	TU-COUNT	I	Tuner PLL serial data input
57	TU-DATA	O	Tuner PLL serial data output
58	TU-CLK	O	Tuner PLL serial transfer clock output
59	TU-CE	O	Tuner PLL chip enable signal output
60	MIC DET	I	Not used (Pull down)
61	TU-ON	O	Not used (Open)
62	CD-R/W	O	CD command read/write signal output
63	CD-LIM_SW	I	CD optical inner limit signal input
64	CD-RESETX	O	CD system reset output
65	P-CON	O	System power control output H: Power on
66	ISS1	O	Not used (Open)
67	ISS2	O	Not used (Open)
68	M-BASS	O	MEGA BASS control signal output H: MEGA BASS on
69	ICO	I	Not used (Pull down)
70	XT1	I	Sub system oscillation input (32.768 kHz)
71	XT2	O	Sub system oscillation output (32.768 kHz)
72	VDD	—	Power supply (+3.3 V)
73	VSS	—	Ground

Pin No.	Pin Name	I/O	Pin Description
74	X1	I	Main system oscillation input (4.19 MHz)
75	X2	O	Main system oscillation output (4.19 MHz)
76	RST	I	System reset input
77	V-CLK	O	Volume command transfer clock output
78	V-DATA	O	Volume command data output
79	SCULL	O	EEPROM serial clock output
80	SAD	I/O	EEPROM serial data input/output

## SECTION 7 EXPLODED VIEWS

**NOTE:**

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked “\*\*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts

Example :

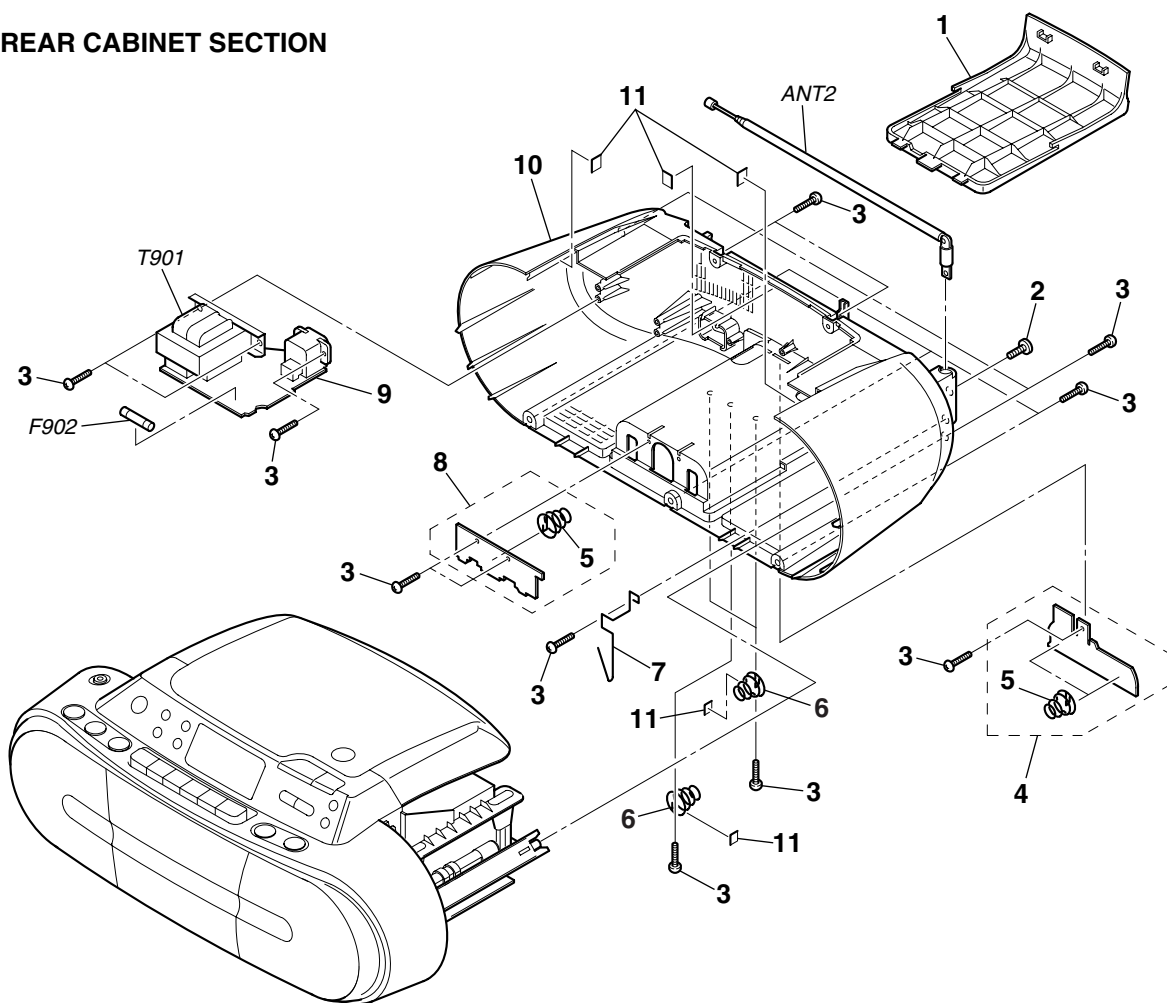
    KNOB, BALANCE (WHITE) ... (RED)  
  ↑  ↑  
   Parts Color Cabinet’s Color

- Accessories are given in the last of this parts list.
- Abbreviation  
CND : Canadian model  
E41 : AC 230V area in E model  
E92 : AC 120V area in E model  
AUS : Australian model  
AR : Argentina model  
CET : East European & Russian model  
IT : Italian model  
KR : Korea model  
MX : Mexican model  
SP : Singapore model  
TH : Thai model  
TW : Taiwan model

The components identified by mark  $\triangle$  or dotted line with mark.  $\triangle$  are critical for safety. Replace only with part number specified.

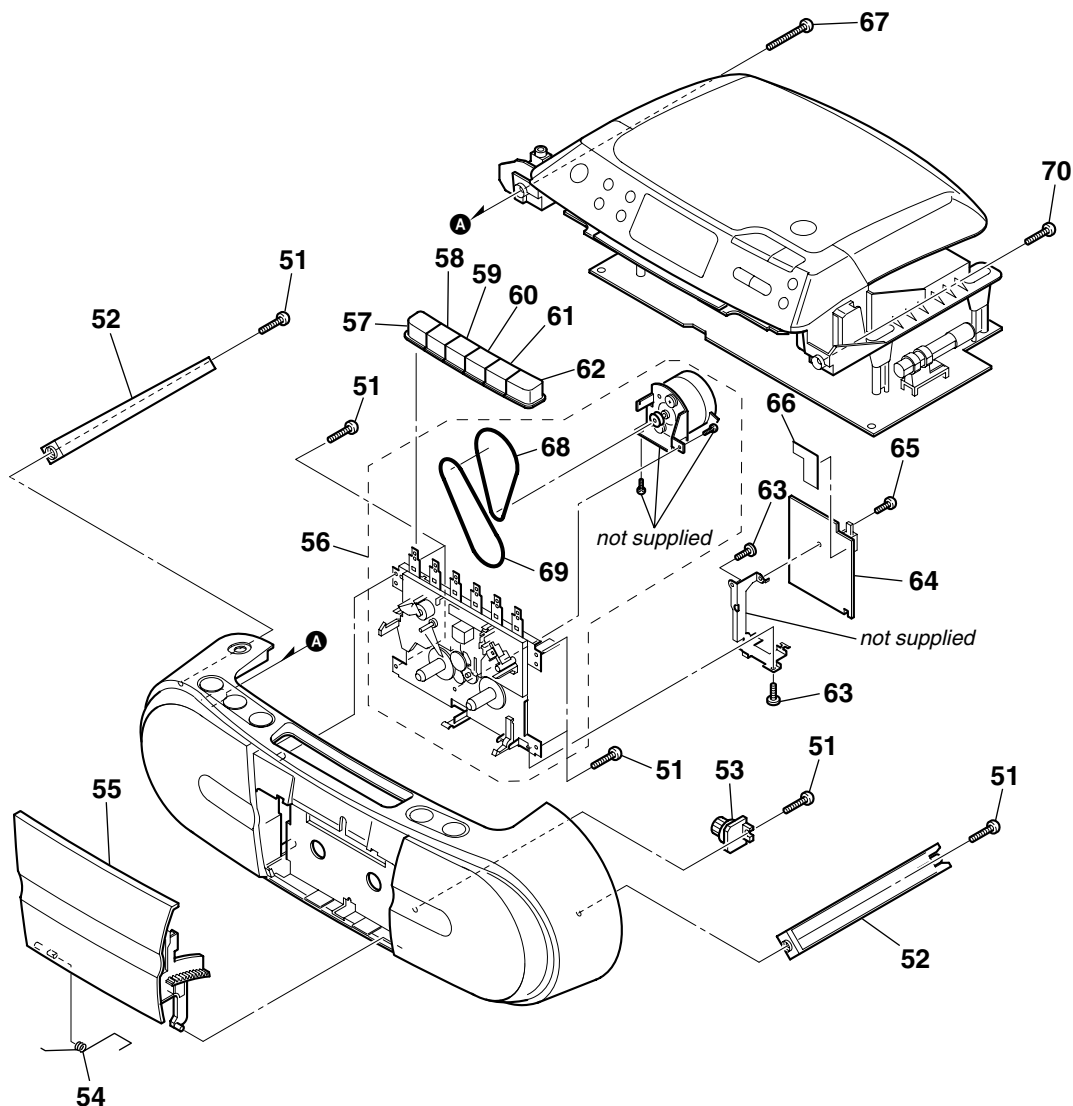
Les composants identifiés par une marque  $\triangle$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

### 7-1. REAR CABINET SECTION



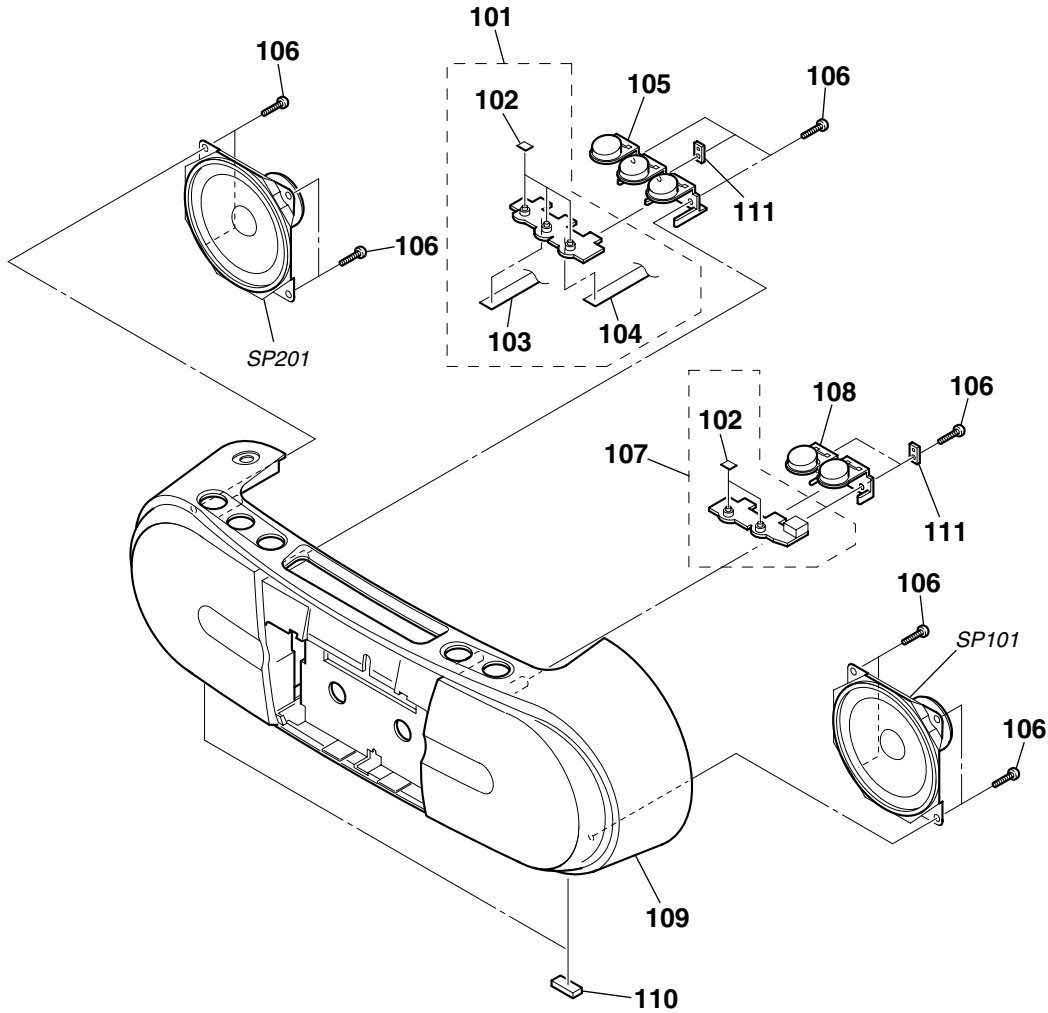
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	2-654-054-01	LID, BATTERY (GRAY)...(GRAY)		9	A-1147-591-A	POWER BOARD, COMPLETE	
1	2-654-054-11	LID, BATTERY (LIGHT GRAY)...(SILVER)				(EXCEPT CND,E92,MX)	
2	3-252-833-01	SCREW (M3), (+) P		9	A-1154-888-A	POWER BOARD, COMPLETE (E92,MX)	
3	3-252-827-01	SCREW (B2.6), (+) BV TAPPING		9	A-1174-394-A	POWER BOARD, COMPLETE (CND)	
4	A-1147-599-A	BATTERY TERMINAL (R) BOARD, COMPLETE		10	2-654-040-02	CABINET (REAR) (GRAY)...(GRAY)	
				10	2-654-040-32	CABINET (REAR) (LIGHT GRAY)...(SILVER)	
5	3-229-975-01	SPRING, BATTERY (-)		11	3-831-441-99	SHEET (1)	
6	3-252-540-01	SPRING (+,-), BATTERY		ANT2	1-754-376-11	ANTENNA, TELESCOPIC (FM)	
7	2-654-073-01	TERMINAL, ANTENNA		$\triangle$ F902	1-533-468-12	FUSE, GLASS TUBE (DIA. 5) (2A/250V)	
8	A-1147-598-A	BATTERY TERMINAL (F) BOARD, COMPLETE		$\triangle$ T901	1-443-861-11	TRANSFORMER, POWER	
						(EXCEPT CND,E92,MX,TW)	
				$\triangle$ T901	1-443-871-11	TRANSFORMER, POWER (CND,E92,MX,TW)	

7-2. FRONT CABINET SECTION (1)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	3-252-827-01	SCREW (B2.6), (+) BV TAPPING		60	2-654-044-01	BUTTON (FF) (GRAY)...(GRAY)	
52	2-655-159-01	JOINT, CABINET		60	2-654-044-11	BUTTON (FF) (GRAY)...(SILVER)	
53	3-047-468-01	DAMPER		61	2-654-042-01	BUTTON (PLAY) (GRAY)...(GRAY)	
54	2-654-071-01	SPRING, CASSETTE		61	2-654-042-11	BUTTON (PLAY) (GRAY)...(SILVER)	
55	X-2102-580-1	HOLDER SUB ASSY, CASSETTE (DARK BLUE)...(GRAY)		62	2-654-043-01	BUTTON (REC) (GRAY)...(GRAY)	
55	X-2103-200-1	HOLDER SUB ASSY, CASSETTE (GRAY)...(SILVER)		62	2-654-043-11	BUTTON (REC) (GRAY)...(SILVER)	
56	1-797-376-11	DECK, MECHANICAL		63	3-254-029-01	SCREW	
57	2-654-047-01	BUTTON (PAUSE) (GRAY)...(GRAY)		64	A-1147-592-A	TC BOARD, COMPLETE (AEP,UK,CET,IT,KR)	
57	2-654-047-11	BUTTON (PAUSE) (GRAY)...(SILVER)		64	A-1158-702-A	TC BOARD, COMPLETE (EXCEPT AEP,UK,CET,IT,KR)	
58	2-654-046-01	BUTTON (STOP) (GRAY)...(GRAY)		65	3-253-143-01	SCREW (B2.6), (+) P TAPPING	
58	2-654-046-11	BUTTON (STOP) (GRAY)...(SILVER)		66	2-668-660-01	PAPER (C), SHIELD	
59	2-654-045-01	BUTTON (REW) (GRAY)...(GRAY)		67	3-254-141-01	SCREW (B2.6), (+) BV TAPPING	
59	2-654-065-11	BUTTON (REW) (GRAY)...(SILVER)		68	2-670-389-01	BELT (1) φ42	
				69	2-670-390-01	BELT (2) φ39	
				70	3-254-140-01	SCREW (B2.6), (+) BV TAPPING	

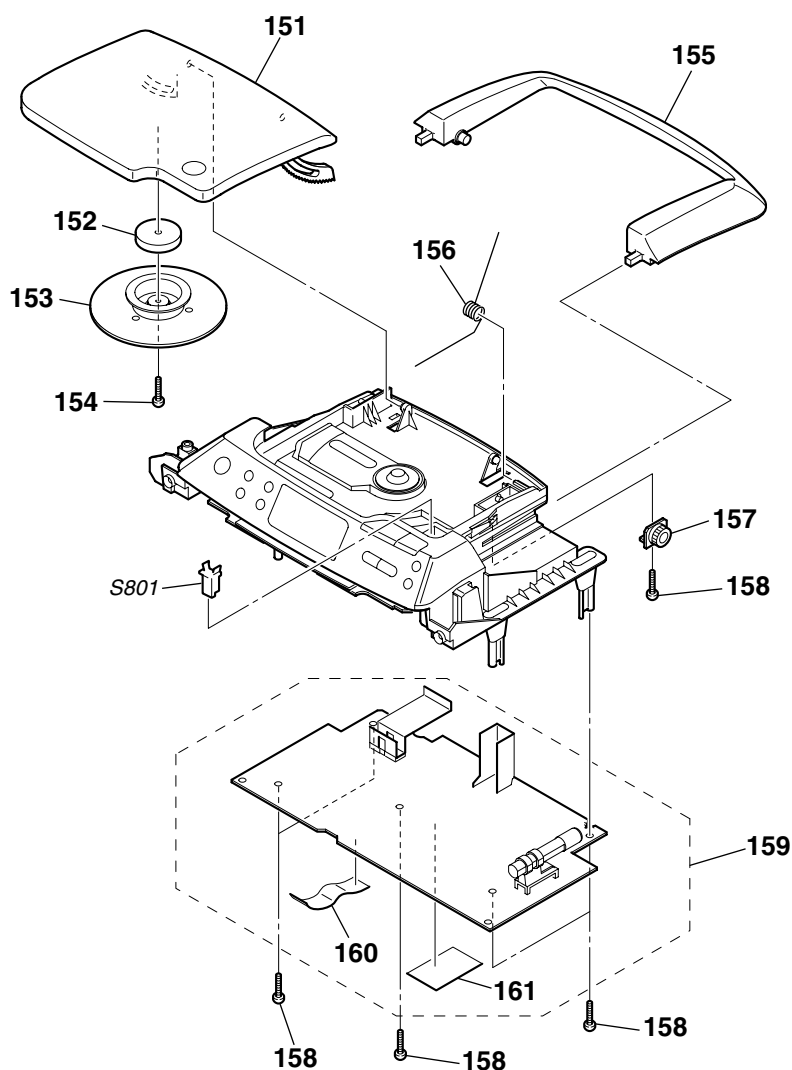
7-3. FRONT CABINET SECTION (2)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
101	A-1147-581-A	KEY (FUNC) BOARD, COMPLETE		109	X-2102-579-1	CABINET (FRONT) SUB ASSY (GUN METALLIC)...(GRAY)	
102	3-831-441-99	SHEET (1)		109	X-2103-199-1	CABINET (FRONT) SUB ASSY (SILVER)...(SILVER) (CND,AUS,KR,SP,TH,TW)	
103	1-831-616-11	CABLE, FLEXIBLE FLAT (4 CORE)		109	X-2103-330-1	CABINET (FRONT) SUB ASSY (SILVER)...(SILVER) (E41,E92,AR,MX)	
104	1-831-613-11	CABLE, FLEXIBLE FLAT (4 CORE)		110	3-040-916-01	FOOT (FRONT), RUBBER	
105	2-654-050-01	BUTTON (FUNC)		111	1-868-845-11	RETAINER BOARD	
106	3-252-827-01	SCREW (B2.6), (+) BV TAPPING		SP101	1-826-280-11	SPEAKER (7.7cm) (L-CH)	
107	A-1147-583-A	KEY (VOL) BOARD, COMPLETE		SP201	1-826-280-11	SPEAKER (7.7cm) (R-CH)	
108	2-654-051-01	BUTTON (VOLUME) (GRAY)...(GRAY)					
108	2-654-051-11	BUTTON (VOLUME) (LIGHT GRAY)...(SILVER)					

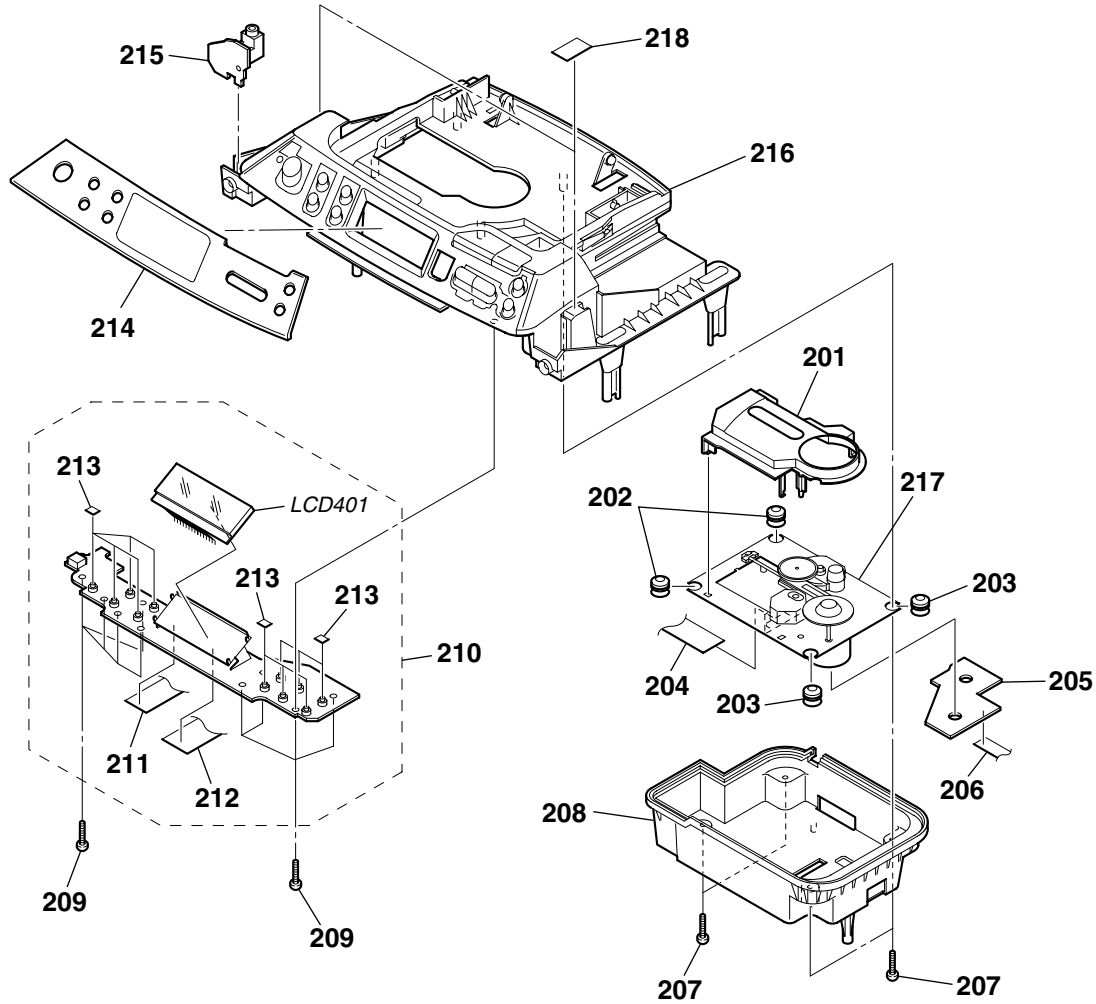


7-4. UPPER CABINET SECTION (1)



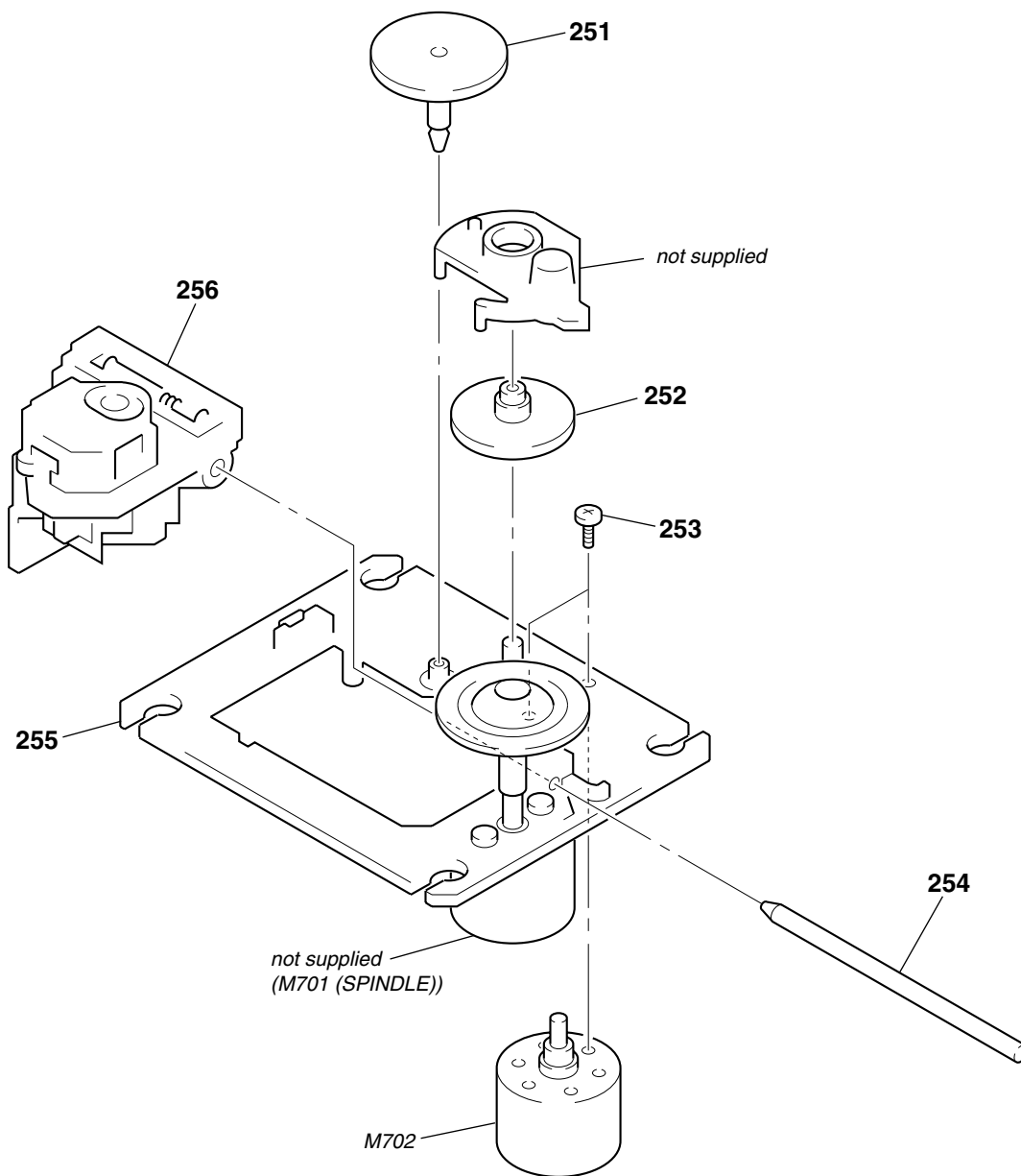
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	2-654-053-01	LID, CD (DARK BLUE)...(GRAY)		158	3-252-827-01	SCREW (B2.6), (+) BV TAPPING	
151	2-654-053-11	LID, CD (GRAY)...(SILVER)		159	A-1147-588-A	MAIN BOARD, COMPLETE	
152	1-452-899-11	MAGNET		159	A-1154-775-A	MAIN BOARD, COMPLETE (AUS,KR,TW)	(AEP,UK,CET,SP,E41,IT,TH)
153	3-019-395-01	PLATE, CHUCKING		159	A-1161-097-A	MAIN BOARD, COMPLETE (CND,E92,MX)	
154	3-253-143-01	SCREW (B2.6), (+) P TAPPING		159	A-1161-260-A	MAIN BOARD, COMPLETE (AR)	
155	2-654-056-01	HANDLE (DARK BLUE)...(GRAY)		160	1-831-619-11	CABLE, FLEXIBLE FLAT (11 CORE)	
155	2-654-056-11	HANDLE (GRAY)...(SILVER)		161	2-666-526-01	PAPER (B), SHIELD	
156	2-654-072-01	SPRING, CD		S801	1-692-960-21	SWITCH, PUSH (1 KEY)	(▲ PUSH OPEN/CLOSE)
157	3-047-468-21	DAMPER					

7-5. UPPER CABINET SECTION (2)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
201	3-923-736-01	COVER, CD		212	1-831-617-11	CABLE, FLEXIBLE FLAT (14 CORE)	
202	3-931-379-21	RUBBER, VIBRATION PROOF (RED)		213	3-831-441-99	SHEET (1)	
203	3-931-379-31	RUBBER, VIBRATION PROOF (GREEN)		214	2-654-057-02	WINDOW, LCD (for GRAY)	
204	1-831-623-11	CABLE, FLEXIBLE FLAT (16 CORE)		214	2-654-057-13	WINDOW, LCD (for SILVER)	
205	A-1147-593-A	CD MOTOR BOARD, COMPLETE		215	A-1147-585-A	HEADPHONE BOARD, COMPLETE	
206	1-831-614-11	CABLE, FLEXIBLE FLAT (6 CORE)		216	X-2102-582-1	CABINET (UPPER) SUB ASSY (DARK BLUE)...(GRAY)	
207	3-252-827-01	SCREW (B2.6), (+) BV TAPPING		216	X-2103-201-1	CABINET (UPPER) SUB ASSY (GRAY)...(SILVER)	
208	2-654-055-01	CHASSIS, CD		△217	8-820-126-01	OPTICAL PICK-UP (KSM-213CDP/C2NP)	
209	3-254-151-01	SCREW (B2.6), (+) P TAPPING		218	3-831-441-11	CUSHION (D)	
210	A-1147-586-A	CONTROL BOARD, COMPLETE		LCD401	1-802-024-11	DISPLAY PANEL, LIQUID CRYSTAL	
211	1-831-615-11	CABLE, FLEXIBLE FLAT (12 CORE)					

7-6. CD MECHANISM SECTION  
(KSM-213CDP)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
251	2-626-907-11	GEAR (A)		255	X-2162-709-2	CHASSIS ASSY (CDP), MOTOR (SPINDLE) (including M701)	
252	2-627-003-01	GEAR (B) (RP)		△256	8-848-483-12	OPTICAL PICK-UP (KSS-213C/C2RP1)	
253	2-174-500-01	SCREW (2X3)		M702	X-2625-769-1	GEAR ASSY (MB) (RP), MOTOR (SLED)	
254	2-626-908-01	SHAFT, SLED					

**BATTERY TERMINAL (F)**

**BATTERY TERMINAL (R)**

**CD MOTOR CONTROL**

**HEADPHONE**

## SECTION 8 ELECTRICAL PARTS LIST

**NOTE:**

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- RESISTORS  
All resistors are in ohms.  
METAL: Metal-film resistor.  
METAL OXIDE: Metal oxide-film resistor.  
F: nonflammable
- SEMICONDUCTORS  
In each case, u :  $\mu$ , for example:  
uA.. :  $\mu$ A.. uPA.. :  $\mu$ PA..  
uPB.. :  $\mu$ PB.. uPC.. :  $\mu$ PC.. uPD.. :  $\mu$ PD..
- CAPACITORS  
uF :  $\mu$ F

- COILS  
uH :  $\mu$ H
- Abbreviation  
CND : Canadian model  
E41 : AC 230V area in E model  
E92 : AC 120V area in E model  
AUS : Australian model  
AR : Argentina model  
CET : East European & Russian model  
IT : Italian model  
KR : Korea model  
MX : Mexican model  
SP : Singapore model  
TH : Thai model  
TW : Taiwan model

The components identified by mark  $\Delta$  or dotted line with mark.  $\Delta$  are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark
	A-1147-598-A	BATTERY TERMINAL (F) BOARD, COMPLETE *****	
	3-229-975-01	SPRING, BATTERY (-)  < CONNECTOR >	
CN903	1-815-550-11	PIN, CONNECTOR (PWB) 2P *****	
	A-1147-599-A	BATTERY TERMINAL (R) BOARD, COMPLETE *****	
	3-229-975-01	SPRING, BATTERY (-) *****	
	A-1147-593-A	CD MOTOR BOARD, COMPLETE *****	
		< SWITCH >	
S701	1-572-085-21	SWITCH, LEAF (LIMIT) *****	
	A-1147-586-A	CONTROL BOARD, COMPLETE *****	
	1-831-615-11	CABLE, FLEXIBLE FLAT (12 CORE) (FFC060)	
	1-831-617-11	CABLE, FLEXIBLE FLAT (14 CORE) (FFC070)	
	3-831-441-99	SHEET (1)  < CONNECTOR >	
CN402	1-784-726-11	CONNECTOR, FFC 4P  < DIODE >	
D406	8-719-059-97	LED L-34HD (OPR/BATT)  < JUMPER RESISTOR >	
JC401	1-216-864-11	SHORT CHIP 0  < LIQUID CRYSTAL DISPLAY >	
LCD401	1-802-024-11	DISPLAY PANEL, LIQUID CRYSTAL  < RESISTOR >	
R403	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
R404	1-216-829-11	METAL CHIP 4.7K 5% 1/10W	
R406	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
R407	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	

Ref. No.	Part No.	Description	Remark
R409	1-216-829-11	METAL CHIP 4.7K 5% 1/10W	
R410	1-216-833-11	METAL CHIP 10K 5% 1/10W	
R413	1-216-813-11	METAL CHIP 220 5% 1/10W	
R414	1-216-817-11	METAL CHIP 470 5% 1/10W	
R415	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R417	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R423	1-216-813-11	METAL CHIP 220 5% 1/10W	
R424	1-216-817-11	METAL CHIP 470 5% 1/10W	
R425	1-216-813-11	METAL CHIP 220 5% 1/10W	
R426	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R428	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R429	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
R430	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R433	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
R434	1-216-821-11	METAL CHIP 1K 5% 1/10W	
		< SWITCH >	
S401	1-786-050-21	SWITCH, KEYBOARD (TUNE -)	
S403	1-786-050-21	SWITCH, KEYBOARD (■)	
S404	1-786-050-21	SWITCH, KEYBOARD (▶▶)	
S407	1-786-050-21	SWITCH, KEYBOARD (●/OPERATE)	
S408	1-786-050-21	SWITCH, KEYBOARD (SLEEP)	
S410	1-786-050-21	SWITCH, KEYBOARD (TUNE +)	
S411	1-786-050-21	SWITCH, KEYBOARD (◀◀/PRESET -)	
S412	1-786-050-21	SWITCH, KEYBOARD (▶▶/PRESET +)	
S413	1-786-050-21	SWITCH, KEYBOARD (DISPLAY/ENTER)	
S414	1-786-050-21	SWITCH, KEYBOARD (MODE)	
S417	1-786-050-21	SWITCH, KEYBOARD (MEGA BASS) *****	
	A-1147-585-A	HEADPHONE BOARD, COMPLETE *****	
		< CAPACITOR >	
C116	1-162-927-11	CERAMIC CHIP 100PF 5% 50V	
C216	1-162-927-11	CERAMIC CHIP 100PF 5% 50V	
		< CONNECTOR >	
CN308	1-815-445-11	PIN, CONNECTOR (PWB) 4P  < JACK >	
J321	1-815-325-11	JACK (♫)	

HEADPHONE

KEY (FUNC)

KEY (VOL)

MAIN

Ref. No.	Part No.	Description	Remark
		< RESISTOR >	
R146	1-216-809-11	METAL CHIP 100 5% 1/10W	
R148	1-216-805-11	METAL CHIP 47 5% 1/10W	
R246	1-216-809-11	METAL CHIP 100 5% 1/10W	
R248	1-216-805-11	METAL CHIP 47 5% 1/10W	
*****			
A-1147-581-A		KEY (FUNC) BOARD, COMPLETE *****	
	1-831-613-11	CABLE, FLEXIBLE FLAT (4 CORE) (FFC085)	
	1-831-616-11	CABLE, FLEXIBLE FLAT (4 CORE) (FFC090)	
	3-831-441-99	SHEET (1)	
		< RESISTOR >	
R418	1-216-813-11	METAL CHIP 220 5% 1/10W	
R419	1-216-817-11	METAL CHIP 470 5% 1/10W	
R435	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R436	1-216-821-11	METAL CHIP 1K 5% 1/10W	
		< SWITCH >	
S402	1-786-050-21	SWITCH, KEYBOARD (RADIO/BAND/AUTO PRESET)	
S405	1-786-050-21	SWITCH, KEYBOARD (CD)	
S415	1-786-050-21	SWITCH, KEYBOARD (TAPE)	
*****			
A-1147-583-A		KEY (VOL) BOARD, COMPLETE *****	
	3-831-441-99	SHEET (1)	
		< CONNECTOR >	
CN401	1-784-726-11	CONNECTOR, FFC 4P	
		< RESISTOR >	
R432	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
		< SWITCH >	
S416	1-786-050-21	SWITCH, KEYBOARD (VOLUME -)	
S418	1-786-050-21	SWITCH, KEYBOARD (VOLUME +)	
*****			
A-1147-588-A		MAIN BOARD, COMPLETE (AEP,UK,CET,SP,E41,IT,TH)	
	A-1154-775-A	MAIN BOARD, COMPLETE (AUS,KR,TW)	
	A-1161-097-A	MAIN BOARD, COMPLETE (CND,E92,MX)	
	A-1161-260-A	MAIN BOARD, COMPLETE (AR) *****	
	1-831-619-11	CABLE, FLEXIBLE FLAT (11 CORE) (FFC030)	
	2-666-526-01	PAPER (B), SHIELD	
	3-254-142-01	SCREW (B3), (+) BV TAPPING	
		< ANTENNA >	
ANT1	1-754-117-12	ANTENNA, FERRITE-ROD (AM)	
		< CAPACITOR >	
C1	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
C2	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C3	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C4	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C5	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C6	1-162-915-11	CERAMIC CHIP 10PF 0.5PF 50V	
C7	1-165-176-11	CERAMIC CHIP 0.047uF 10% 16V	

Ref. No.	Part No.	Description	Remark
C9	1-165-176-11	CERAMIC CHIP 0.047uF 10% 16V	
C10	1-162-923-11	CERAMIC CHIP 47PF 5% 50V	
		(EXCEPT CND,E92,MX)	
C10	1-162-927-11	CERAMIC CHIP 100PF 5% 50V	
		(CND,E92,MX)	
C11	1-162-927-11	CERAMIC CHIP 100PF 5% 50V	
C12	1-164-230-11	CERAMIC CHIP 220PF 5% 50V	
C13	1-162-915-11	CERAMIC CHIP 10PF 0.5PF 50V	
C14	1-162-910-11	CERAMIC CHIP 5PF 0.25PF 50V	
		(EXCEPT CND,E92,MX)	
C14	1-162-913-11	CERAMIC CHIP 8PF 0.5PF 50V	
		(CND,E92,MX)	
C15	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
C16	1-125-891-11	CERAMIC CHIP 0.47uF 10% 10V	
C17	1-104-662-91	ELECT 22uF 20% 25V	
C18	1-126-963-11	ELECT 4.7uF 20% 50V	
C19	1-126-956-91	ELECT 0.1uF 20% 50V	
C20	1-164-315-11	CERAMIC CHIP 470PF 5% 50V	
C21	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C22	1-165-176-11	CERAMIC CHIP 0.047uF 10% 16V	
C23	1-126-947-11	ELECT 47uF 20% 35V	
C24	1-165-176-11	CERAMIC CHIP 0.047uF 10% 16V	
C25	1-162-927-11	CERAMIC CHIP 100PF 5% 50V	
C26	1-115-156-11	CERAMIC CHIP 1uF 10V	
C27	1-125-891-11	CERAMIC CHIP 0.47uF 10% 10V	
C28	1-115-156-11	CERAMIC CHIP 1uF 10V	
C29	1-126-925-91	ELECT 470uF 20% 10V	
C30	1-126-923-91	ELECT 220uF 20% 10V	
C31	1-162-968-11	CERAMIC CHIP 0.0047uF 10% 50V	
		(CND,E92,MX)	
C32	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C33	1-162-968-11	CERAMIC CHIP 0.0047uF 10% 50V	
		(CND,E92,MX)	
C34	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C35	1-162-968-11	CERAMIC CHIP 0.0047uF 10% 50V	
C36	1-162-962-11	CERAMIC CHIP 470PF 10% 50V	
C37	1-162-962-11	CERAMIC CHIP 470PF 10% 50V	
C38	1-162-927-11	CERAMIC CHIP 100PF 5% 50V	
C39	1-126-923-91	ELECT 220uF 20% 10V	
C40	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C41	1-162-915-11	CERAMIC CHIP 10PF 0.5PF 50V	
C42	1-162-915-11	CERAMIC CHIP 10PF 0.5PF 50V	
C43	1-126-964-11	ELECT 10uF 20% 50V	
C45	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C46	1-115-416-11	CERAMIC CHIP 0.001uF 5% 25V	
C67	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
C70	1-162-927-11	CERAMIC CHIP 100PF 5% 50V	
C106	1-162-966-11	CERAMIC CHIP 0.0022uF 10% 50V	
C108	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C110	1-127-715-91	CERAMIC CHIP 0.22uF 10% 16V	
C112	1-126-925-91	ELECT 470uF 20% 10V	
C113	1-126-960-11	ELECT 1uF 20% 50V	
C115	1-126-960-11	ELECT 1uF 20% 50V	
C117	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
C119	1-104-658-91	ELECT 100uF 20% 10V	
C125	1-126-959-11	ELECT 0.47uF 20% 50V	
C127	1-125-891-11	CERAMIC CHIP 0.47uF 10% 10V	
C129	1-165-176-11	CERAMIC CHIP 0.047uF 10% 16V	
C130	1-126-957-11	ELECT 0.22uF 20% 50V	
C131	1-126-947-11	ELECT 47uF 20% 35V	
C132	1-164-227-11	CERAMIC CHIP 0.022uF 10% 25V	
C162	1-126-960-11	ELECT 1uF 20% 50V	



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark	
C835	1-162-974-11	CERAMIC CHIP	0.01uF	50V	IC703	6-701-787-11	IC BA5826FP-E2	
C905	1-164-156-11	CERAMIC CHIP	0.1uF	25V	IC801	6-806-100-01	IC uPD789478GC-A49-8BT-A	
C951	1-162-974-11	CERAMIC CHIP	0.01uF	50V	IC802	6-703-285-01	IC S-812C33AUA-C2NT2G	
C952	1-162-974-11	CERAMIC CHIP	0.01uF	50V	IC804	6-704-118-01	IC S-80828CNMC-B8NT2G	
C953	1-126-925-91	ELECT	470uF	20%	10V	IC805	6-703-740-01	IC S-24CS02AFT-TB-G
C954	1-126-965-91	ELECT	22uF	20%	50V	< JUMPER RESISTOR >		
C957	1-162-974-11	CERAMIC CHIP	0.01uF	50V	JC701	1-216-864-11	SHORT CHIP 0	
C959	1-126-923-91	ELECT	220uF	20%	10V	JC702	1-216-864-11	SHORT CHIP 0
C960	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	JC703	1-216-864-11	SHORT CHIP 0
C961	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	JC704	1-216-864-11	SHORT CHIP 0
< FILTER >				JC705	1-216-864-11	SHORT CHIP 0		
CF2	1-767-555-11	FILTER, CERAMIC		JC801	1-216-864-11	SHORT CHIP 0		
CF3	1-781-962-21	FILTER, CERAMIC		JC802	1-216-864-11	SHORT CHIP 0		
< CONNECTOR >				JC807	1-216-864-11	SHORT CHIP 0		
CN304	1-815-552-11	PIN, CONNECTOR (PWB)	4P	< COIL >				
CN305	1-815-551-11	PIN, CONNECTOR (PWB)	3P	L1	1-419-847-11	COIL, AIR-CORE		
CN306	1-815-552-11	PIN, CONNECTOR (PWB)	4P	L2	1-419-655-11	COIL, AIR-CORE		
CN701	1-770-646-11	CONNECTOR, FFC/FPC	16P	L3	1-411-199-31	COIL, AM OSC		
CN702	1-784-767-11	CONNECTOR, FFC	6P	L6	1-457-168-11	COIL, DET		
CN801	1-784-736-11	CONNECTOR, FFC	14P	L801	1-414-137-31	INDUCTOR	0.22uH	
CN802	1-784-734-11	CONNECTOR, FFC	12P	L802	1-410-521-11	INDUCTOR	100uH	
< TRIMMER >				< TRANSISTOR >				
CT1	1-141-304-21	CAP, CERAMIC TRIMMER	10PF	Q122	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
CT3	1-141-442-91	CAP, CERAMIC TRIMMER	20PF	Q124	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
< DIODE >				Q222	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
D1	6-501-440-01	DIODE	SVC707-AL	Q224	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
D2	6-501-440-01	DIODE	SVC707-AL	Q304	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
D3	6-501-392-01	DIODE	SVC386-AL	Q701	8-729-600-22	TRANSISTOR	2SA1235-F	
D4	8-719-991-33	DIODE	1SS133T-77	Q703	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
D5	8-719-991-33	DIODE	1SS133T-77	Q704	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
D6	6-500-697-01	DIODE	UDZSTE-173.3B	Q705	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
D322	8-719-991-33	DIODE	1SS133T-77	Q805	8-729-600-22	TRANSISTOR	2SA1235-F	
D323	8-719-988-61	DIODE	1SS355TE-17	Q808	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
D324	8-719-991-33	DIODE	1SS133T-77	Q951	6-551-444-01	TRANSISTOR	RT1N436C-TP-1	
D703	8-719-991-33	DIODE	1SS133T-77	Q952	8-729-040-76	TRANSISTOR	KTA1273-Y-AT	
D704	8-719-991-33	DIODE	1SS133T-77	Q953	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
D801	6-500-334-01	DIODE	MC2836-T112-1	Q955	8-729-018-99	TRANSISTOR	2SD2394-F	
D804	8-719-991-33	DIODE	1SS133T-77	Q957	8-729-036-86	TRANSISTOR	KTC3203Y-AT	
D951	6-500-334-01	DIODE	MC2836-T112-1	Q958	6-551-443-01	TRANSISTOR	RT1P436C-TP-1	
D952	8-719-991-33	DIODE	1SS133T-77	Q959	8-729-027-46	TRANSISTOR	DTC114YKA-T146	
D953	8-719-978-33	DIODE	DTZ-TT11-6.8B	< RESISTOR >				
D957	8-719-083-58	DIODE	UDZSTE-173.9B	R1	1-216-845-11	METAL CHIP	100K 5% 1/10W	
< JUMPER RESISTOR >				R2	1-216-837-11	METAL CHIP	22K 5% 1/10W	
FB701	1-216-295-91	SHORT CHIP	0	R3	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	
FB702	1-216-295-91	SHORT CHIP	0	R4	1-216-797-11	METAL CHIP	10 5% 1/10W	
FB703	1-216-295-91	SHORT CHIP	0	R5	1-216-833-11	METAL CHIP	10K 5% 1/10W	
FB704	1-216-295-91	SHORT CHIP	0	R6	1-216-853-11	METAL CHIP	470K 5% 1/10W	
< IC >				R7	1-216-797-11	METAL CHIP	10 5% 1/10W	
IC1	6-708-840-01	IC	LV23003VA	R9	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	
IC302	6-701-919-01	IC	PT2257-S	R10	1-216-801-11	METAL CHIP	22 5% 1/10W	
IC303	6-703-710-01	IC	TA8227P	R11	1-216-821-11	METAL CHIP	1K 5% 1/10W	
IC701	6-708-984-01	IC	BU9532KS2	R12	1-216-825-11	METAL CHIP	2.2K 5% 1/10W	
				R13	1-216-825-11	METAL CHIP	2.2K 5% 1/10W	
				R14	1-216-833-11	METAL CHIP	10K 5% 1/10W	

# CFD-S01

<b>MAIN</b>
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Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
R15	1-216-837-11	METAL CHIP	22K	5%	1/10W	R336	1-216-833-11	METAL CHIP	10K	5%	1/10W
R16	1-216-864-11	SHORT CHIP	0			R337	1-216-833-11	METAL CHIP	10K	5%	1/10W
R17	1-216-864-11	SHORT CHIP	0			R338	1-216-833-11	METAL CHIP	10K	5%	1/10W
R18	1-216-809-11	METAL CHIP	100	5%	1/10W	R700	1-216-837-11	METAL CHIP	22K	5%	1/10W
R19	1-216-809-11	METAL CHIP	100	5%	1/10W	R701	1-216-837-11	METAL CHIP	22K	5%	1/10W
R20	1-216-809-11	METAL CHIP	100	5%	1/10W	R702	1-216-833-11	METAL CHIP	10K	5%	1/10W
R21	1-216-809-11	METAL CHIP	100	5%	1/10W	R703	1-216-837-11	METAL CHIP	22K	5%	1/10W
R22	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R704	1-216-833-11	METAL CHIP	10K	5%	1/10W
R23	1-216-817-11	METAL CHIP	470	5%	1/10W	R705	1-216-837-11	METAL CHIP	22K	5%	1/10W
R24	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R706	1-216-833-11	METAL CHIP	10K	5%	1/10W
R25	1-216-821-11	METAL CHIP	1K	5%	1/10W	R707	1-216-837-11	METAL CHIP	22K	5%	1/10W
R26	1-216-813-11	METAL CHIP	220	5%	1/10W	R708	1-216-833-11	METAL CHIP	10K	5%	1/10W
R27	1-216-833-11	METAL CHIP	10K	5%	1/10W	R709	1-216-833-11	METAL CHIP	10K	5%	1/10W
R28	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R710	1-216-853-11	METAL CHIP	470K	5%	1/10W
R29	1-216-833-11	METAL CHIP	10K	5%	1/10W	R711	1-216-833-11	METAL CHIP	10K	5%	1/10W
R39	1-216-864-11	SHORT CHIP	0			R712	1-216-837-11	METAL CHIP	22K	5%	1/10W
R41	1-216-837-11	METAL CHIP	22K	5%	1/10W	R713	1-216-833-11	METAL CHIP	10K	5%	1/10W
R134	1-216-813-11	METAL CHIP	220	5%	1/10W	R714	1-216-833-11	METAL CHIP	10K	5%	1/10W
R135	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R715	1-216-841-11	METAL CHIP	47K	5%	1/10W
R136	1-216-864-11	SHORT CHIP	0			R716	1-216-837-11	METAL CHIP	22K	5%	1/10W
R138	1-216-817-11	METAL CHIP	470	5%	1/10W	R717	1-216-864-11	SHORT CHIP	0		
R139	1-216-833-11	METAL CHIP	10K	5%	1/10W	R719	1-216-809-11	METAL CHIP	100	5%	1/10W
R140	1-216-821-11	METAL CHIP	1K	5%	1/10W	R721	1-216-793-11	METAL CHIP	4.7	5%	1/10W
R141	1-216-841-11	METAL CHIP	47K	5%	1/10W	R722	1-216-821-11	METAL CHIP	1K	5%	1/10W
R142	1-216-821-11	METAL CHIP	1K	5%	1/10W	R723	1-216-845-11	METAL CHIP	100K	5%	1/10W
R143	1-216-809-11	METAL CHIP	100	5%	1/10W	R724	1-216-793-11	METAL CHIP	4.7	5%	1/10W
R144	1-216-789-11	METAL CHIP	2.2	5%	1/10W	R725	1-216-841-11	METAL CHIP	47K	5%	1/10W
R145	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R726	1-216-841-11	METAL CHIP	47K	5%	1/10W
R147	1-216-833-11	METAL CHIP	10K	5%	1/10W	R727	1-216-813-11	METAL CHIP	220	5%	1/10W
R166	1-216-841-11	METAL CHIP	47K	5%	1/10W	R728	1-216-845-11	METAL CHIP	100K	5%	1/10W
R234	1-216-813-11	METAL CHIP	220	5%	1/10W	R729	1-216-841-11	METAL CHIP	47K	5%	1/10W
R235	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R730	1-216-837-11	METAL CHIP	22K	5%	1/10W
R236	1-216-864-11	SHORT CHIP	0			R731	1-216-845-11	METAL CHIP	100K	5%	1/10W
R238	1-216-817-11	METAL CHIP	470	5%	1/10W	R732	1-216-833-11	METAL CHIP	10K	5%	1/10W
R239	1-216-833-11	METAL CHIP	10K	5%	1/10W	R733	1-216-864-11	SHORT CHIP	0		
R240	1-216-821-11	METAL CHIP	1K	5%	1/10W	R734	1-216-845-11	METAL CHIP	100K	5%	1/10W
R241	1-216-841-11	METAL CHIP	47K	5%	1/10W	R736	1-216-837-11	METAL CHIP	22K	5%	1/10W
R242	1-216-821-11	METAL CHIP	1K	5%	1/10W	R739	1-216-841-11	METAL CHIP	47K	5%	1/10W
R243	1-216-809-11	METAL CHIP	100	5%	1/10W	R740	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R244	1-216-789-11	METAL CHIP	2.2	5%	1/10W	R741	1-216-833-11	METAL CHIP	10K	5%	1/10W
R245	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R742	1-216-841-11	METAL CHIP	47K	5%	1/10W
R247	1-216-833-11	METAL CHIP	10K	5%	1/10W	R743	1-216-841-11	METAL CHIP	47K	5%	1/10W
R266	1-216-841-11	METAL CHIP	47K	5%	1/10W	R744	1-216-821-11	METAL CHIP	1K	5%	1/10W
R321	1-216-809-11	METAL CHIP	100	5%	1/10W	R745	1-216-817-11	METAL CHIP	470	5%	1/10W
R322	1-216-833-11	METAL CHIP	10K	5%	1/10W	R746	1-216-837-11	METAL CHIP	22K	5%	1/10W
R323	1-216-857-11	METAL CHIP	1M	5%	1/10W	R747	1-216-837-11	METAL CHIP	22K	5%	1/10W
R324	1-216-833-11	METAL CHIP	10K	5%	1/10W	R748	1-216-837-11	METAL CHIP	22K	5%	1/10W
R325	1-216-821-11	METAL CHIP	1K	5%	1/10W	R749	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R326	1-216-821-11	METAL CHIP	1K	5%	1/10W	R750	1-216-864-11	SHORT CHIP	0		
R327	1-216-821-11	METAL CHIP	1K	5%	1/10W	R751	1-216-841-11	METAL CHIP	47K	5%	1/10W
R328	1-216-809-11	METAL CHIP	100	5%	1/10W	R754	1-216-809-11	METAL CHIP	100	5%	1/10W
R329	1-216-809-11	METAL CHIP	100	5%	1/10W	R755	1-216-809-11	METAL CHIP	100	5%	1/10W
R330	1-216-809-11	METAL CHIP	100	5%	1/10W	R756	1-216-809-11	METAL CHIP	100	5%	1/10W
R331	1-216-817-11	METAL CHIP	470	5%	1/10W	R757	1-216-809-11	METAL CHIP	100	5%	1/10W
R332	1-216-817-11	METAL CHIP	470	5%	1/10W	R758	1-216-809-11	METAL CHIP	100	5%	1/10W
R333	1-216-833-11	METAL CHIP	10K	5%	1/10W	R759	1-216-809-11	METAL CHIP	100	5%	1/10W
R334	1-216-821-11	METAL CHIP	1K	5%	1/10W	R760	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R335	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R761	1-216-813-11	METAL CHIP	220	5%	1/10W



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R762	1-216-853-11	METAL CHIP	470K 5% 1/10W	R847	1-216-841-11	METAL CHIP	47K 5% 1/10W
R763	1-216-864-11	SHORT CHIP	0	R848	1-216-841-11	METAL CHIP	47K 5% 1/10W
R766	1-216-837-11	METAL CHIP	22K 5% 1/10W	R849	1-216-841-11	METAL CHIP	47K 5% 1/10W
R768	1-216-841-11	METAL CHIP	47K 5% 1/10W	R850	1-216-821-11	METAL CHIP	1K 5% 1/10W
R770	1-216-833-11	METAL CHIP	10K 5% 1/10W	R851	1-216-817-11	METAL CHIP	470 5% 1/10W
R772	1-216-821-11	METAL CHIP	1K 5% 1/10W	R852	1-216-817-11	METAL CHIP	470 5% 1/10W
R773	1-216-817-11	METAL CHIP	470 5% 1/10W	R853	1-216-817-11	METAL CHIP	470 5% 1/10W
R774	1-216-817-11	METAL CHIP	470 5% 1/10W	R854	1-216-813-11	METAL CHIP	220 5% 1/10W
R775	1-216-817-11	METAL CHIP	470 5% 1/10W	R855	1-216-833-11	METAL CHIP	10K 5% 1/10W
R776	1-216-817-11	METAL CHIP	470 5% 1/10W	R856	1-216-821-11	METAL CHIP	1K 5% 1/10W
R777	1-216-821-11	METAL CHIP	1K 5% 1/10W	R857	1-216-833-11	METAL CHIP	10K 5% 1/10W
R778	1-216-849-11	METAL CHIP	220K 5% 1/10W	R858	1-216-837-11	METAL CHIP	22K 5% 1/10W
R780	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R860	1-216-841-11	METAL CHIP	47K 5% 1/10W
R781	1-216-841-11	METAL CHIP	47K 5% 1/10W	R861	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R782	1-216-813-11	METAL CHIP	220 5% 1/10W	R862	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R783	1-216-825-11	METAL CHIP	2.2K 5% 1/10W	R863	1-216-821-11	METAL CHIP	1K 5% 1/10W
R784	1-216-813-11	METAL CHIP	220 5% 1/10W	R864	1-216-821-11	METAL CHIP	1K 5% 1/10W
R785	1-216-825-11	METAL CHIP	2.2K 5% 1/10W	R865	1-216-845-11	METAL CHIP	100K 5% 1/10W
R786	1-216-821-11	METAL CHIP	1K 5% 1/10W	R866	1-216-845-11	METAL CHIP	100K 5% 1/10W
R801	1-216-833-11	METAL CHIP	10K 5% 1/10W	R867	1-216-845-11	METAL CHIP	100K 5% 1/10W
R802	1-216-841-11	METAL CHIP	47K 5% 1/10W	R868	1-216-841-11	METAL CHIP	47K 5% 1/10W
R803	1-216-821-11	METAL CHIP	1K 5% 1/10W	R869	1-216-813-11	METAL CHIP	220 5% 1/10W
R804	1-216-841-11	METAL CHIP	47K 5% 1/10W	R870	1-216-833-11	METAL CHIP	10K 5% 1/10W
R805	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R871	1-216-833-11	METAL CHIP	10K 5% 1/10W
R806	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R872	1-216-833-11	METAL CHIP	10K 5% 1/10W
R807	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R873	1-216-833-11	METAL CHIP	10K 5% 1/10W
R808	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R874	1-216-833-11	METAL CHIP	10K 5% 1/10W
R810	1-216-821-11	METAL CHIP	1K 5% 1/10W	R875	1-216-833-11	METAL CHIP	10K 5% 1/10W
R811	1-216-817-11	METAL CHIP	470 5% 1/10W	R876	1-216-833-11	METAL CHIP	10K 5% 1/10W
R812	1-216-841-11	METAL CHIP	47K 5% 1/10W	R877	1-216-833-11	METAL CHIP	10K 5% 1/10W
R813	1-216-821-11	METAL CHIP	1K 5% 1/10W	R878	1-216-833-11	METAL CHIP	10K 5% 1/10W
R814	1-216-825-11	METAL CHIP	2.2K 5% 1/10W	R879	1-216-833-11	METAL CHIP	10K 5% 1/10W
R815	1-216-825-11	METAL CHIP	2.2K 5% 1/10W	R880	1-216-833-11	METAL CHIP	10K 5% 1/10W
R816	1-216-825-11	METAL CHIP	2.2K 5% 1/10W	R881	1-216-833-11	METAL CHIP	10K 5% 1/10W
R817	1-216-825-11	METAL CHIP	2.2K 5% 1/10W	R882	1-216-833-11	METAL CHIP	10K 5% 1/10W
R818	1-216-825-11	METAL CHIP	2.2K 5% 1/10W	R883	1-216-833-11	METAL CHIP	10K 5% 1/10W
R819	1-216-817-11	METAL CHIP	470 5% 1/10W	R884	1-216-833-11	METAL CHIP	10K 5% 1/10W
R820	1-216-841-11	METAL CHIP	47K 5% 1/10W	R885	1-216-833-11	METAL CHIP	10K 5% 1/10W
R823	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R886	1-216-833-11	METAL CHIP	10K 5% 1/10W
R824	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R887	1-216-833-11	METAL CHIP	10K 5% 1/10W
R825	1-216-841-11	METAL CHIP	47K 5% 1/10W	R888	1-216-833-11	METAL CHIP	10K 5% 1/10W
R826	1-216-821-11	METAL CHIP	1K 5% 1/10W	R889	1-216-833-11	METAL CHIP	10K 5% 1/10W
R827	1-216-845-11	METAL CHIP	100K 5% 1/10W	R890	1-216-833-11	METAL CHIP	10K 5% 1/10W
R828	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R891	1-216-841-11	METAL CHIP	47K 5% 1/10W
R829	1-216-853-11	METAL CHIP	470K 5% 1/10W	R892	1-216-845-11	METAL CHIP	100K 5% 1/10W
R830	1-216-825-11	METAL CHIP	2.2K 5% 1/10W	R893	1-216-853-11	METAL CHIP	470K 5% 1/10W
R831	1-216-821-11	METAL CHIP	1K 5% 1/10W	R894	1-216-841-11	METAL CHIP	47K 5% 1/10W
R832	1-216-817-11	METAL CHIP	470 5% 1/10W	R895	1-216-813-11	METAL CHIP	220 5% 1/10W
R833	1-216-825-11	METAL CHIP	2.2K 5% 1/10W	R896	1-216-813-11	METAL CHIP	220 5% 1/10W
R834	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R899	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R835	1-216-833-11	METAL CHIP	10K 5% 1/10W	R900	1-216-821-11	METAL CHIP	1K 5% 1/10W
R836	1-216-833-11	METAL CHIP	10K 5% 1/10W	R901	1-216-841-11	METAL CHIP	47K 5% 1/10W
R837	1-216-833-11	METAL CHIP	10K 5% 1/10W			(EXCEPT AUS,AR,KR,TW)	
R838	1-216-841-11	METAL CHIP	47K 5% 1/10W	R902	1-216-841-11	METAL CHIP	47K 5% 1/10W
R840	1-216-845-11	METAL CHIP	100K 5% 1/10W			(AUS,AR,KR,TW)	
R841	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R903	1-216-841-11	METAL CHIP	47K 5% 1/10W
R842	1-216-821-11	METAL CHIP	1K 5% 1/10W			(CND,E92,AUS,AR,KR,MX,TW)	
R843	1-216-821-11	METAL CHIP	1K 5% 1/10W	R904	1-216-841-11	METAL CHIP	47K 5% 1/10W
R844	1-216-833-11	METAL CHIP	10K 5% 1/10W			(AEP,UK,E41,CET,IT,SP,TH)	
R845	1-216-841-11	METAL CHIP	47K 5% 1/10W	R905	1-216-841-11	METAL CHIP	47K 5% 1/10W
R846	1-216-841-11	METAL CHIP	47K 5% 1/10W			(CND,E92,AR,MX)	

# CFD-S01

Ver. 1.2

**MAIN** **POWER** **TC**

Ref. No.	Part No.	Description	Remark
R906	1-216-841-11	METAL CHIP 47K 5% 1/10W (EXCEPT CND,E92,AR,MX)	
R951	1-216-841-11	METAL CHIP 47K 5% 1/10W	
R952	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
R953	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
R954	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R955	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R956	1-216-833-11	METAL CHIP 10K 5% 1/10W	
R957	1-216-833-11	METAL CHIP 10K 5% 1/10W	
R958	1-216-813-11	METAL CHIP 220 5% 1/10W	
R959	1-216-809-11	METAL CHIP 100 5% 1/10W	
R960	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R961	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
R962	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
R963	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
R964	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
< TRANSFORMER >			
T1	1-433-741-11	TRANSFORMER, IF  < VIBRATOR >	
X1	1-795-449-11	VIBRATOR, CRYSTAL (75kHz)	
X701	1-795-563-21	VIBRATOR, CERAMIC (16.93MHz)	
X801	1-795-915-11	VIBRATOR, CRYSTAL (32.768kHz)	
X802	1-795-054-21	VIBRATOR, CERAMIC (4.19MHz)	
*****			
A-1147-591-A	POWER BOARD, COMPLETE (EXCEPT CND,E92,MX)		
A-1154-888-A	POWER BOARD, COMPLETE (E92,MX)		
A-1174-394-A	POWER BOARD, COMPLETE (CND) *****		
1-533-217-41	HOLDER, FUSE  < CAPACITOR >		
C901	1-162-995-11	CERAMIC CHIP 0.022uF 50V	
C902	1-162-995-11	CERAMIC CHIP 0.022uF 50V	
C903	1-162-995-11	CERAMIC CHIP 0.022uF 50V	
C904	1-162-995-11	CERAMIC CHIP 0.022uF 50V	
C906	1-126-964-11	ELECT 10uF 20% 50V	
< CONNECTOR >			
CN902	1-815-443-11	PIN, CONNECTOR (PWB) 2P  < DIODE >	
D901	8-719-063-79	DIODE 1N4002B	
D902	8-719-063-79	DIODE 1N4002B	
D903	8-719-063-79	DIODE 1N4002B	
D904	8-719-063-79	DIODE 1N4002B	
< AC INLET >			
△J901	1-526-818-11	INLET, AC (∼ AC IN) (E92,MX)	
△J901	1-526-838-11	INLET, AC 2P (∼ AC IN) (EXCEPT CND,E92,MX)	
△J901	1-540-009-11	INLET, AC (∼ AC IN) (CND) *****	

Ref. No.	Part No.	Description	Remark
A-1147-592-A	TC BOARD, COMPLETE (AEP,UK,CET,IT,KR)		
A-1158-702-A	TC BOARD, COMPLETE (EXCEPT AEP,UK,CET,IT,KR) *****		
< CAPACITOR >			
C101	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
C102	1-104-658-91	ELECT 100uF 20% 10V	
C103	1-165-176-11	CERAMIC CHIP 0.047uF 10% 16V	
C104	1-162-966-11	CERAMIC CHIP 0.0022uF 10% 50V	
C105	1-162-923-11	CERAMIC CHIP 47PF 5% 50V	
C107	1-162-962-11	CERAMIC CHIP 470PF 10% 50V	
C201	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
C202	1-104-658-91	ELECT 100uF 20% 10V	
C203	1-165-176-11	CERAMIC CHIP 0.047uF 10% 16V	
C204	1-162-966-11	CERAMIC CHIP 0.0022uF 10% 50V	
C205	1-162-923-11	CERAMIC CHIP 47PF 5% 50V	
C207	1-162-962-11	CERAMIC CHIP 470PF 10% 50V	
C301	1-104-658-91	ELECT 100uF 20% 10V	
C302	1-104-658-91	ELECT 100uF 20% 10V	
C303	1-104-658-91	ELECT 100uF 20% 10V	
C304	1-126-947-11	ELECT 47uF 20% 35V	
C305	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
C306	1-162-966-11	CERAMIC CHIP 0.0022uF 10% 50V	
C307	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
C309	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
C312	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
< CONNECTOR >			
CN301	1-568-830-11	CONNECTOR, FFC 11P  < FERRITE BEAD >	
FB201	1-216-864-11	SHORT CHIP 0 (EXCEPT AEP,UK,CET,IT,KR)	
FB201	1-414-445-11	FERRITE, EMI (SMD) (1608) (AEP,UK,CET,IT,KR)	
FB202	1-216-864-11	SHORT CHIP 0 (EXCEPT AEP,UK,CET,IT,KR)	
FB202	1-414-445-11	FERRITE, EMI (SMD) (1608) (AEP,UK,CET,IT,KR)	
FB203	1-216-864-11	SHORT CHIP 0 (EXCEPT AEP,UK,CET,IT,KR)	
FB203	1-414-445-11	FERRITE, EMI (SMD) (1608) (AEP,UK,CET,IT,KR)	
FB204	1-216-864-11	SHORT CHIP 0 (EXCEPT AEP,UK,CET,IT,KR)	
FB204	1-414-445-11	FERRITE, EMI (SMD) (1608) (AEP,UK,CET,IT,KR)	
FB205	1-216-864-11	SHORT CHIP 0 (EXCEPT AEP,UK,CET,IT,KR)	
FB205	1-414-445-11	FERRITE, EMI (SMD) (1608) (AEP,UK,CET,IT,KR)	
FB206	1-216-864-11	SHORT CHIP 0 (EXCEPT AEP,UK,CET,IT,KR)	
FB206	1-414-445-11	FERRITE, EMI (SMD) (1608) (AEP,UK,CET,IT,KR)	
FB207	1-216-864-11	SHORT CHIP 0 (EXCEPT AEP,UK,CET,IT,KR)	
FB207	1-414-445-11	FERRITE, EMI (SMD) (1608) (AEP,UK,CET,IT,KR)	
< IC >			
IC301	8-759-264-71	IC TA2068N  < JUMPER RESISTOR >	
JC302	1-216-864-11	SHORT CHIP 0	
JC303	1-216-864-11	SHORT CHIP 0	
JC305	1-216-864-11	SHORT CHIP 0	
JC306	1-216-864-11	SHORT CHIP 0	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		< TRANSISTOR >				MISCELLANEOUS	
						*****	
Q301	8-729-901-81	TRANSISTOR 2SC2412K-T-146-R		56	1-797-376-11	DECK, MECHANICAL	
		< RESISTOR >		152	1-452-899-11	MAGNET	
R101	1-216-837-11	METAL CHIP 22K	5% 1/10W	204	1-831-623-11	CABLE, FLEXIBLE FLAT (16 CORE)	
R102	1-216-805-11	METAL CHIP 47	5% 1/10W	206	1-831-614-11	CABLE, FLEXIBLE FLAT (6 CORE)	
R103	1-216-845-11	METAL CHIP 100K	5% 1/10W	△217	8-820-126-01	OPTICAL PICK-UP (KSM-213CDP/C2NP)	
R104	1-216-825-11	METAL CHIP 2.2K	5% 1/10W	255	X-2162-709-2	CHASSIS ASSY (CDP), MOTOR (SPINDLE)	(including M701)
R105	1-216-837-11	METAL CHIP 22K	5% 1/10W	△256	8-848-483-12	OPTICAL PICK-UP (KSS-213C/C2RP1)	
R106	1-216-825-11	METAL CHIP 2.2K	5% 1/10W	ANT2	1-754-376-11	ANTENNA, TELESCOPIC (FM)	
R107	1-216-841-11	METAL CHIP 47K	5% 1/10W	△F902	1-533-468-12	FUSE, GLASS TUBE (DIA. 5) (2A/250V)	
R108	1-216-801-11	METAL CHIP 22	5% 1/10W	M702	X-2625-769-1	GEAR ASSY (MB) (RP), MOTOR (SLED)	
R109	1-216-849-11	METAL CHIP 220K	5% 1/10W	S801	1-692-960-21	SWITCH, PUSH (1 KEY)	(▲ PUSH OPEN/CLOSE)
R110	1-216-809-11	METAL CHIP 100	5% 1/10W	SP101	1-826-280-11	SPEAKER (7.7cm) (L-CH)	
R111	1-216-833-11	METAL CHIP 10K	5% 1/10W	SP201	1-826-280-11	SPEAKER (7.7cm) (R-CH)	
R112	1-216-821-11	METAL CHIP 1K	5% 1/10W	△T901	1-443-861-11	TRANSFORMER, POWER	(EXCEPT CND,E92,MX,TW)
R201	1-216-837-11	METAL CHIP 22K	5% 1/10W	△T901	1-443-871-11	TRANSFORMER, POWER (CND,E92,MX,TW)	
R202	1-216-805-11	METAL CHIP 47	5% 1/10W			*****	
R203	1-216-845-11	METAL CHIP 100K	5% 1/10W			ACCESSORIES	
R204	1-216-825-11	METAL CHIP 2.2K	5% 1/10W			*****	
R205	1-216-837-11	METAL CHIP 22K	5% 1/10W	△	1-590-342-12	CORD, POWER (E92,MX)	
R206	1-216-825-11	METAL CHIP 2.2K	5% 1/10W	△	1-769-412-22	CORD, POWER (AEP,UK,CET,SP,E41,IT,TH)	
R207	1-216-841-11	METAL CHIP 47K	5% 1/10W	△	1-770-019-61	ADAPTOR, CONVERSION PLUG (UK)	
R208	1-216-801-11	METAL CHIP 22	5% 1/10W	△	1-776-985-12	CORD, POWER (KR)	
R209	1-216-849-11	METAL CHIP 220K	5% 1/10W	△	1-782-126-11	CORD, POWER (CND)	
R210	1-216-809-11	METAL CHIP 100	5% 1/10W	△	1-783-952-21	CORD, POWER (AR)	
R211	1-216-833-11	METAL CHIP 10K	5% 1/10W	△	1-827-945-12	CORD, POWER (AUS)	
R212	1-216-821-11	METAL CHIP 1K	5% 1/10W	△	1-827-946-21	CORD, POWER (UK)	
R301	1-216-857-11	METAL CHIP 1M	5% 1/10W	△	1-829-433-11	CORD, POWER (TW)	
R302	1-216-829-11	METAL CHIP 4.7K	5% 1/10W		2-655-834-13	MANUAL, INSTRUCTION (ENGLISH)	(CND,E92,TW)
R303	1-216-829-11	METAL CHIP 4.7K	5% 1/10W		2-655-834-21	MANUAL, INSTRUCTION (FRENCH) (CND)	
R304	1-216-821-11	METAL CHIP 1K	5% 1/10W		2-655-834-32	MANUAL, INSTRUCTION (ENGLISH)	(AEP,UK,AUS,KR,SP,AR,TH)
R305	1-216-817-11	METAL CHIP 470	5% 1/10W		2-655-834-41	MANUAL, INSTRUCTION (FRENCH,GERMAN)	(AEP,SP)
R306	1-216-833-11	METAL CHIP 10K	5% 1/10W		2-655-834-51	MANUAL, INSTRUCTION	(DUTCH,PORTUGUESE) (AEP)
R307	1-216-797-11	METAL CHIP 10	5% 1/10W		2-655-834-61	MANUAL, INSTRUCTION (ITALIAN) (IT)	
R308	1-216-837-11	METAL CHIP 22K	5% 1/10W		2-655-834-71	MANUAL, INSTRUCTION (FINNISH,SWEDISH)	(CET)
R309	1-216-805-11	METAL CHIP 47	5% 1/10W		2-655-834-81	MANUAL, INSTRUCTION (POLISH) (CET)	
R312	1-216-837-11	METAL CHIP 22K	5% 1/10W		2-655-834-91	MANUAL, INSTRUCTION (CZECH,HUNGARIAN)	(CET)
R314	1-216-817-11	METAL CHIP 470	5% 1/10W		2-655-835-11	MANUAL, INSTRUCTION	(SLOVAKIAN,RUSSIAN) (CET)
R315	1-216-817-11	METAL CHIP 470	5% 1/10W		2-655-835-21	MANUAL, INSTRUCTION (KOREAN) (KR)	
		< SWITCH >				2-655-835-41	MANUAL, INSTRUCTION (SPANISH) (E92,MX)
S301	1-786-126-11	SWITCH, SLIDE (REC/PB)				2-655-835-51	MANUAL, INSTRUCTION (SPANISH)
		< TRANSFORMER >					(AEP,E41,AR)
T301	1-443-758-11	TRANSFORMER, BIAS OSCILLATION				2-655-835-61	MANUAL, INSTRUCTION
		*****					(TRADITIONAL CHINESE) (TW)
						2-655-835-71	MANUAL, INSTRUCTION (UKRAINIAN) (CET)

