

# XR-CA350X

## SERVICE MANUAL

Ver 1.3 2003.11

US Model  
Canadian Model



Model Name Using Similar Mechanism	NEW
Tape Transport Mechanism Type	MG-36SZ13-32

### SPECIFICATIONS

#### AUDIO POWER SPECIFICATIONS (US model)

##### POWER OUTPUT AND TOTAL HARMONIC DISTORTION

22 watts per channel minimum continuous average power into 4 ohms, 4 channels driven from 20 Hz to 20 kHz with no more than 5 % total harmonic distortion.

#### Other specifications

##### Cassette player section

Tape track	4-track 2-channel stereo
Wow and flutter	0.13 % (WRMS)
Frequency response	30 – 15,000 Hz
Signal-to-noise ratio	55 dB

##### Tuner section

<b>FM</b>	
Tuning range	FM tuning interval: 87.5 – 107.9 MHz (at 200 kHz step)
Antenna terminal	External antenna connector
Intermediate frequency	10.7 MHz / 450 kHz
Usable sensitivity	9 dBf
Selectivity	75 dB at 400 kHz
Signal-to-noise ratio	67 dB (stereo), 69 dB (mono)
Harmonic distortion at 1 kHz	0.5 % (stereo), 0.3 % (mono)
Separation	35 dB at 1 kHz
Frequency response	30 – 15,000 Hz

##### AM

Tuning range	AM tuning interval: 530 – 1,710 kHz (at 10 kHz step)
Antenna terminal	External antenna connector
Intermediate frequency	10.7 MHz / 450 kHz
Sensitivity	30 µV

##### Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	4 – 8 ohms
Maximum power output	45 W × 4 (at 4 ohms)

##### General

Outputs	Audio output Power antenna relay control lead Power amplifier control lead
Inputs	BUS control input terminal BUS audio input terminal
Tone controls	Low: ±10 dB at 60 Hz (Xplod) Mid: ±10 dB at 1 kHz (Xplod) High: ±10 dB at 10 kHz (Xplod)
Power requirements	12 V DC car battery (negative ground)
Dimensions	Approx. 178 × 50 × 178 mm (7 <sup>1</sup> / <sub>8</sub> × 2 × 7 <sup>1</sup> / <sub>8</sub> in) (w/h/d)
Mounting dimensions	Approx. 182 × 53 × 161 mm (7 <sup>1</sup> / <sub>8</sub> × 2 <sup>1</sup> / <sub>8</sub> × 6 <sup>3</sup> / <sub>8</sub> in) (w/h/d)
Mass	Approx. 1.2 kg (2 lb 10 oz)
Supplied accessories	Parts for installation and connections (1 set) Front panel case (1)

*Design and specifications are subject to change  
without notice.*

## FM/AM CASSETTE CAR STEREO

9-874-222-04  
2003K05-1  
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**Sony Corporation**  
e Vehicle Company  
Published by Sony Engineering Corporation

# SONY®

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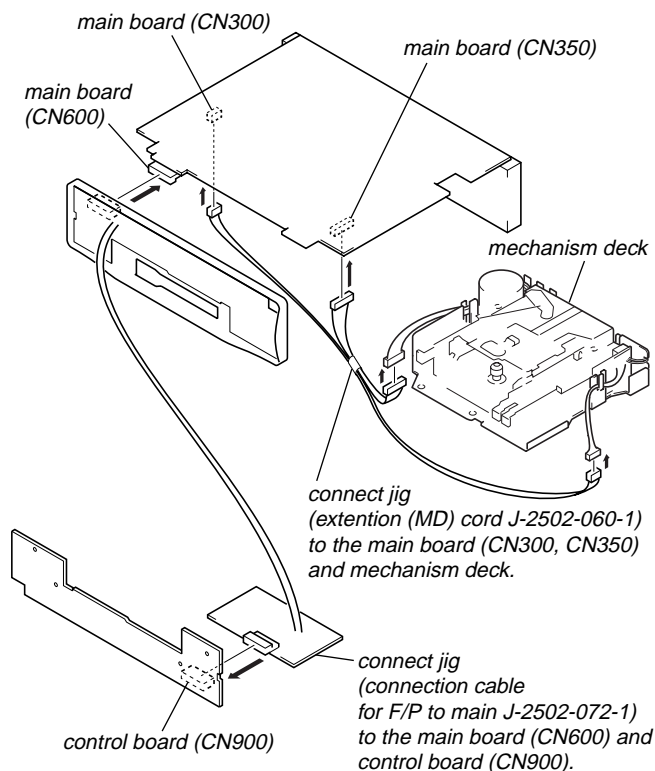
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**SERVICING NOTES**

**SERVICE POSITION**

In checking the control board and main board, prepare two jigs (extension (MD) cord J-2502-060-1 and connection cable for F/P to main J-2502-072-1).



**Note of replacing of the IC1**

In this set, the IC101 on the MAIN board is changed from the midway of the production.

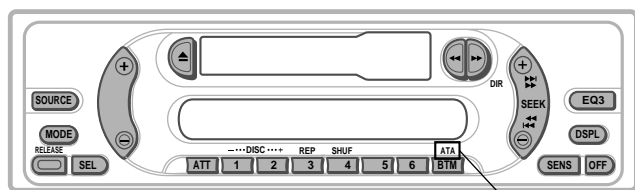
When the replacing of the IC1, be sure to check the model name printed by IC, and replace the IC1 by following the instructions below.

- When replacing of the IC1 (MN101C49HAS)  
Replace the IC1 with the MN101C49HEA (Part No.: 6-603-178-01), and replace the TU101 (A-3220-944-A) simultaneously.
- When replacing of the IC1 (MN101C49HEA)  
Perform the usual replacing.

**Note of replacing of the front panel**

In this set, the front panel is changed from the midway of the production.

When the replacing of the FRONT PANEL or FRONT PANEL ASSY, be sure to check the front panel in which type, and replace.



ATA: TYPE ATA  
ATA/CAT: TYPE CAT

**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.

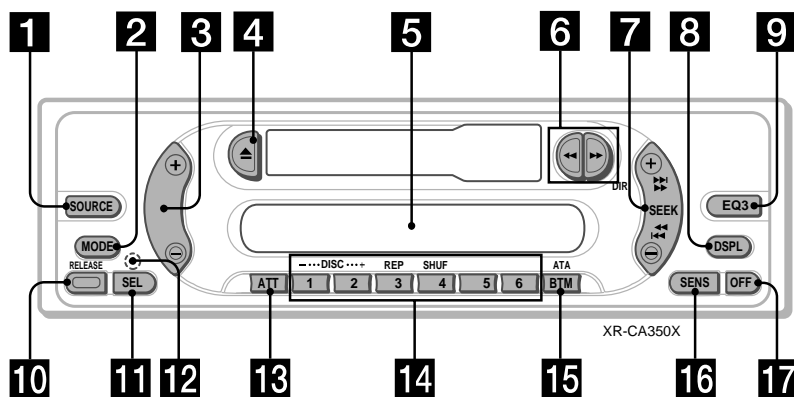
**Notes on chip component replacement**

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

# SECTION 1 GENERAL

This section is extracted from instruction manual.

## Location of controls



Refer to the pages listed for details.

- 1** SOURCE (Radio/CD/MD) button
- 2** MODE button  
During radio reception:  
Band select  
During CD/MD playback:  
CD/MD unit select
- 3** Volume +/- button
- 4** ▲ (eject) button
- 5** Display window
- 6** ◀◀/▶▶ (fast winding)/DIR (tape transport direction change) buttons
- 7** SEEK button  
Seek  
Automatic Music Sensor  
Manual search
- 8** DSPL (display mode change) button
- 9** EQ3 button
- 10** RELEASE (front panel release) button
- 11** SEL (select) button
- 12** RESET button (located on the front side of the unit behind the front panel)

- 13** ATT (attenuate) button
- 14** Number buttons  
During radio reception:  
Preset number select  
During CD/MD playback:  
① DISC -  
② DISC +  
③ REP  
④ SHUF

- 15** BTM/ATA button
- 16** SENS button
- 17** OFF button\*

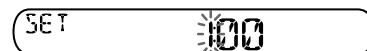
\* **Warning when installing in a car without ACC (accessory) position on the ignition key switch**  
Be sure to press (OFF) on the unit for 2 seconds to turn off the clock display after turning off the engine.  
When you press (OFF) momentarily, the clock display does not turn off and this causes battery wear.

## Setting the clock

The clock uses a 12-hour digital indication.

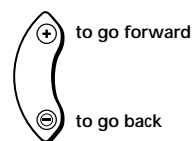
Example: To set the clock to 10:08

**1** Press (DSPL) for 2 seconds.



The hour indication flashes.

**1** Press either side of the volume button to set the hour.

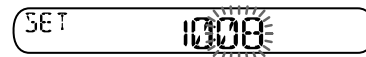
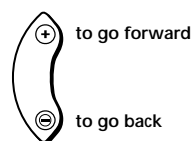


**2** Press (SEL).

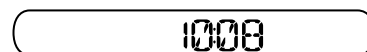


The minute indication flashes.

**3** Press either side of the volume button to set the minute.



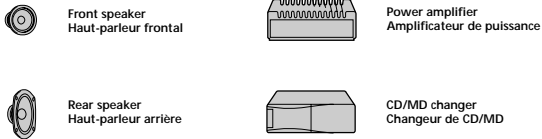
**2** Press (DSPL).



The clock starts.

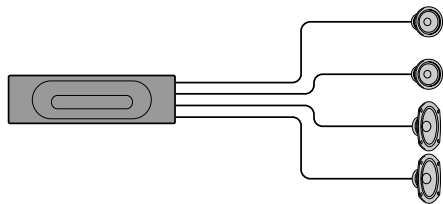
After the clock setting is complete, the display returns to normal play mode.

## Equipment used in illustrations (not supplied) Appareils utilisés dans les illustrations (non fournis)



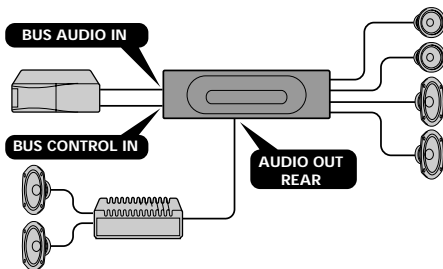
### 2

#### A

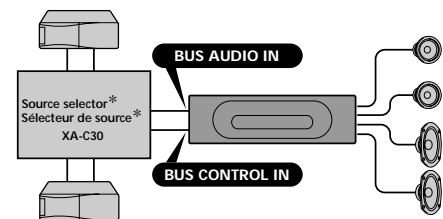


### B

#### a



#### b



\* not supplied  
\* non fourni

## Cautions

- This unit is designed for negative ground 12 V DC operation only.
- Do not get the wires under a screw, or caught in moving parts (e.g., seat railing).
- Before making connections, turn the car ignition off to avoid short circuits.
- Connect the **yellow** and **red** power input leads only after all other leads have been connected.
- **Run all ground wires to a common ground point.**
- Be sure to insulate any loose unconnected wires with electrical tape for safety.

## Notes on the power supply cord (yellow)

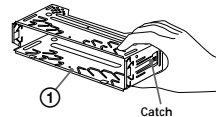
- When connecting this unit in combination with other stereo components, the connected car circuit's rating must be higher than the sum of each component's fuse.
- When no car circuits are rated high enough, connect the unit directly to the battery.

## Parts list (1)

- The numbers in the list are keyed to those in the instructions.
- The bracket (1) and the protection collar (3) are attached to the unit before shipping. Before mounting the unit, use the release keys (2) to remove the bracket (1) and the protection collar (3) from the unit. For details, see "Removing the protection collar and the bracket (4)" on the reverse side of the sheet.
- **Keep the release keys (2) for future use as they are also necessary if you remove the unit from your car.**

## Caution

Handle the bracket (1) carefully to avoid injuring your fingers.



**Note**  
Before installing, make sure that the catches on both sides of the bracket 1 are bent inwards 2 mm (1/8 in). If the catches are straight or bent outwards, the unit will not be installed securely and may spring out.

## Connection example (2)

### Notes (2-B-3)

- Be sure to connect the ground cord before connecting the amplifier.
- If you connect an optional power amplifier and do not use the built-in amplifier, the beep sound will be deactivated.

### Tip (2-B-6)

For connecting two or more CD/MD changers, the source selector XA-C30 (optional) is necessary.

## Connection diagram (3)

- 1 To a metal surface of the car  
First connect the black ground lead, then connect the yellow and red power input leads.
- 2 To the power antenna control lead or power supply lead of antenna booster amplifier

### Notes

- It is not necessary to connect this lead if there is no power antenna or antenna booster, or with a manually-operated telescopic antenna.
- When your car has a built-in FM/AM antenna in the rear/side glass, see "Notes on the control and power supply leads."

- 3 To AMP REMOTE IN of an optional power amplifier

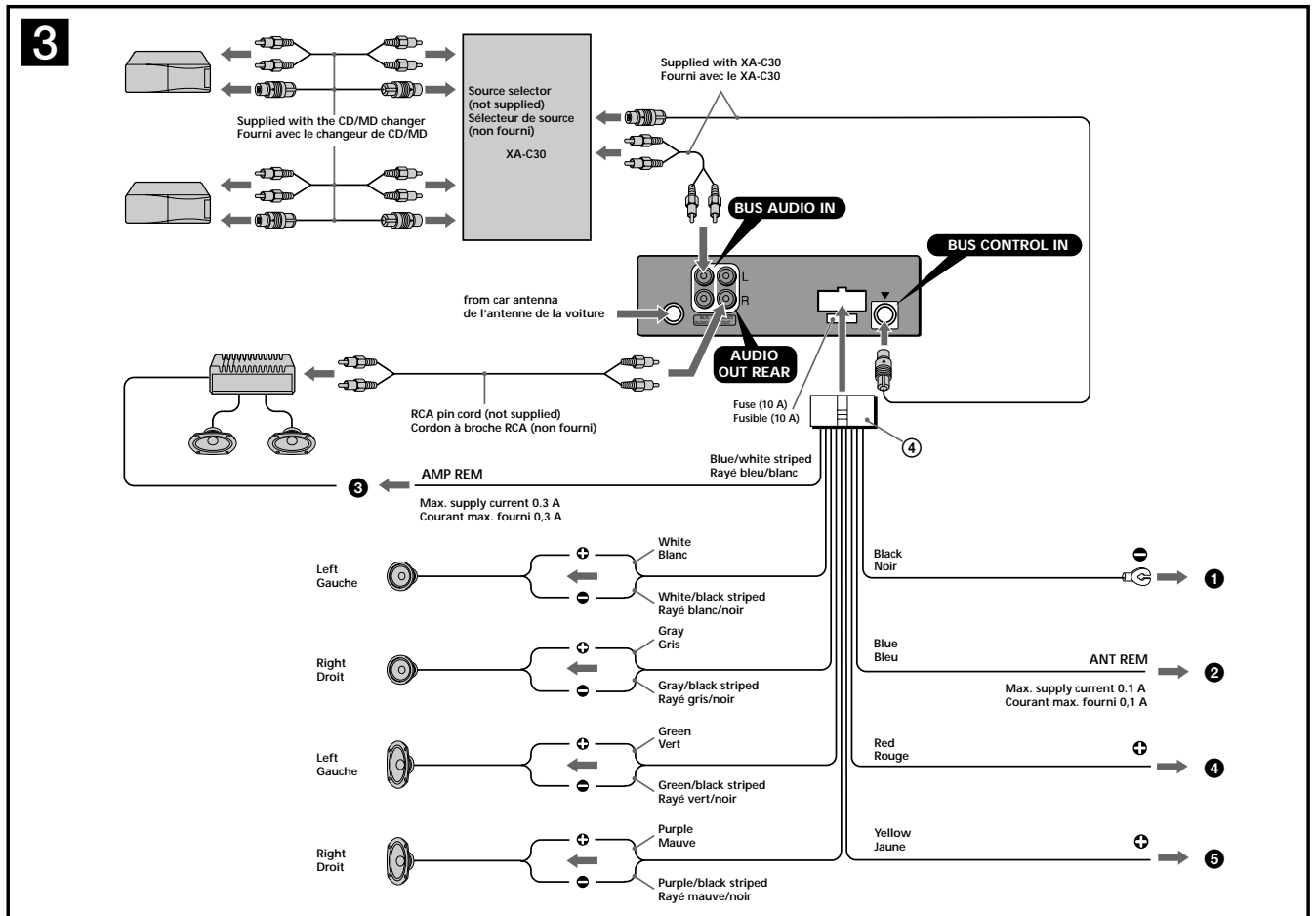
This connection is only for amplifiers. Connecting any other system may damage the unit.

- 4 To the +12 V power terminal which is energized in the accessory position of the ignition key switch

### Notes

- If there is no accessory position, connect to the +12 V power (battery) terminal which is energized at all times.  
Be sure to connect the black ground lead to it first.
- When your car has a built-in FM/AM antenna in the rear/side glass, see "Notes on the control and power supply leads."

- 5 To the +12 V power terminal which is energized at all times  
Be sure to connect the black ground lead to it first.



**Notes on the control and power supply leads**

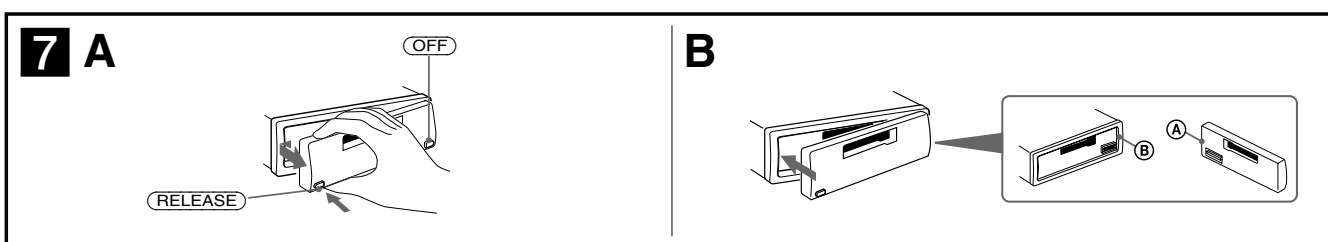
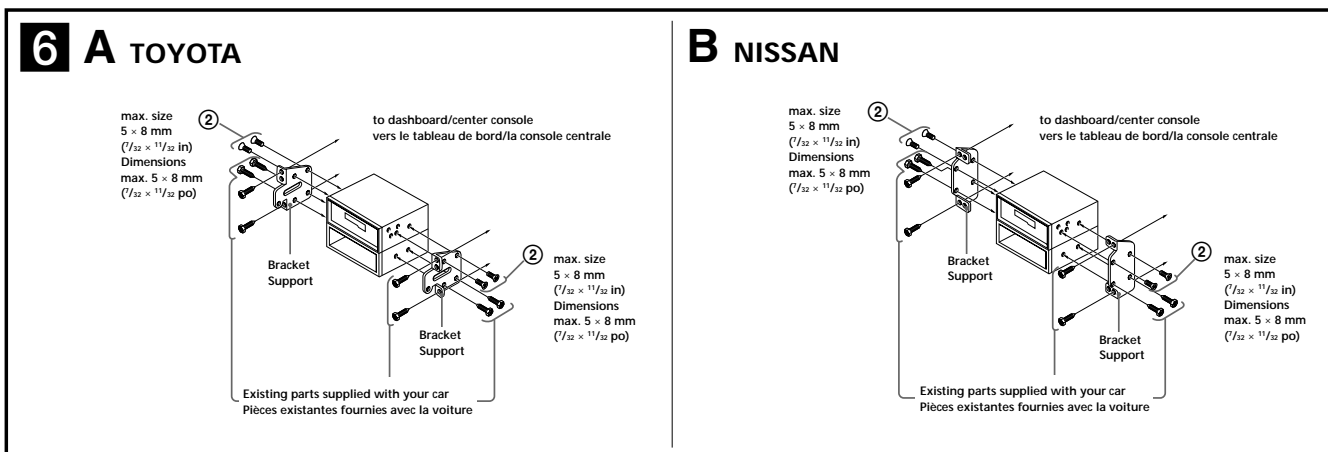
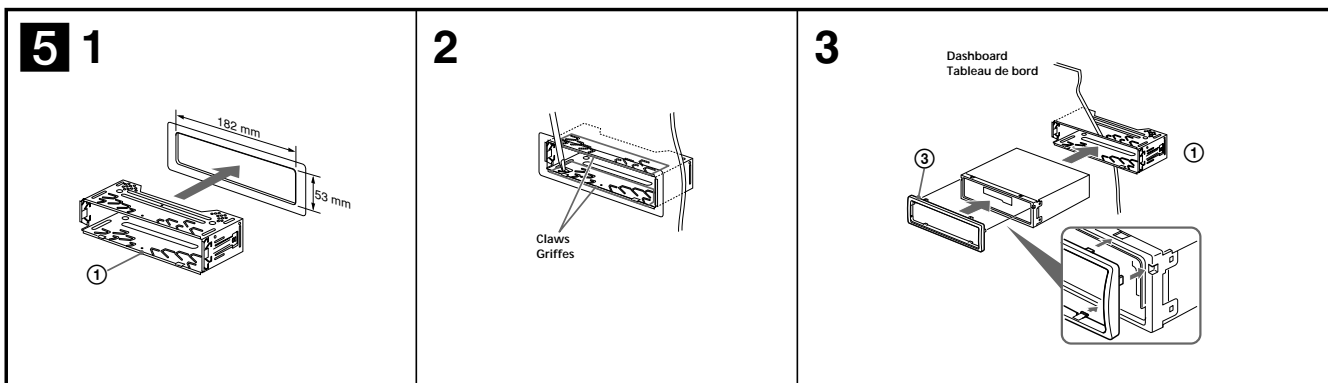
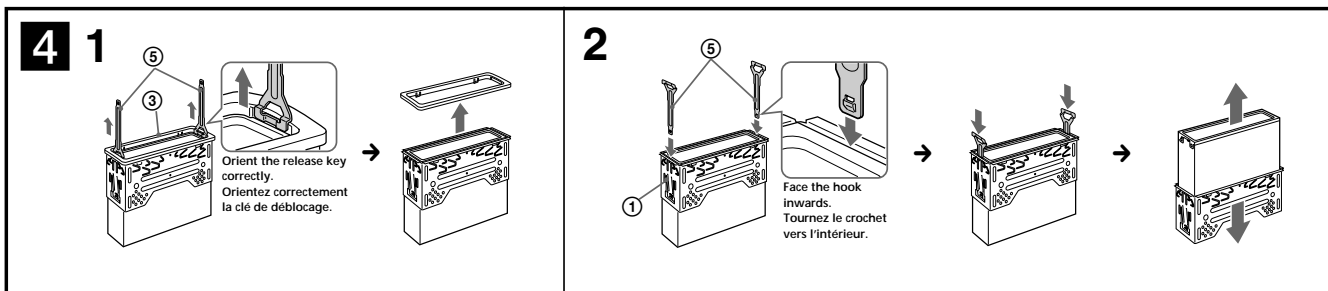
- The power antenna control lead (blue) supplies +12 V DC when you turn on the tuner.
- When your car has built-in FM/AM antenna in the rear-side glass, connect the power antenna control lead (blue) or the accessory power input lead (red) to the power terminal of the existing antenna booster. For details, consult your dealer.
- A power antenna without relay box cannot be used with this unit.

**Memory hold connection**

When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition key is turned off.

**Notes on speaker connection**

- Before connecting the speakers, turn the unit off.
- Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities to avoid its damage.
- Do not connect the speaker terminals to the car chassis, or connect the terminals of the right speakers with those of the left speaker.
- Do not connect the ground lead of this unit to the negative (-) terminal of the speaker.
- Do not attempt to connect the speakers in parallel.
- Connect only passive speakers. Connecting active speakers (with built-in amplifiers) to the speaker terminals may damage the unit.
- To avoid a malfunction, do not use the built-in speaker wires installed in your car if the unit shares a common negative (-) lead for the right and left speakers.
- Do not connect the unit's speaker cords to each other.



**Precautions**

- Choose the installation location carefully so that the unit will not interfere with normal driving operations.
- Avoid installing the unit in areas subject to dust, dirt, excessive vibration, or high temperatures, such as in direct sunlight or near heater ducts.
- Use only the supplied mounting hardware for a safe and secure installation.

**Mounting angle adjustment**

Adjust the mounting angle to less than 20°.

**Removing the protection collar and the bracket (4)**

Before installing the unit, remove the protection collar (2) and the bracket (1) from the unit.

- Remove the protection collar (2).
  - Engage the release keys (3) together with the protection collar (2).
  - Pull out the release keys (3) to remove the protection collar (2).
- Remove the bracket (1).
  - Insert both release keys (3) together between the unit and the bracket until they click.
  - Pull down the bracket (1), then pull up the unit to separate.

**Mounting example (5)**

Installation in the dashboard

- Notes**
- Bend these claws outward for a tight fit, if necessary (5-2).
  - Make sure that the 4 catches on the protection collar (2) are properly engaged in the slots of the unit (5-3).

**Mounting the unit in a Japanese car (6)**

You may not be able to install this unit in some makes of Japanese cars. In such a case, consult your Sony dealer.

**Note**  
To prevent malfunction, install only with the supplied screws (3).

**How to detach and attach the frontpanel (7)**

Before installing the unit, detach the front panel.

**7-A To detach**

Before detaching the front panel, be sure to press OFF. Press RELEASE, then slide the front panel a little to the left, and pull it off towards you.

**7-B To attach**

Attach part (2) of the front panel to part (3) of the unit as illustrated and push the left side into position until it clicks.

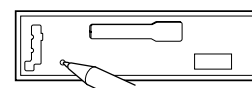
**Warning when installing in a car without ACC (accessory) position on the ignition key switch**

Be sure to press OFF on the unit for two seconds to turn off the clock display after turning off the engine.

When you press OFF only momentarily, the clock display does not turn off and this causes battery wear.

**RESET button**


When the installation and connections are completed, be sure to press the RESET button with a ball-point pen, etc., after detaching the front panel.




## SECTION 2 DISASSEMBLY

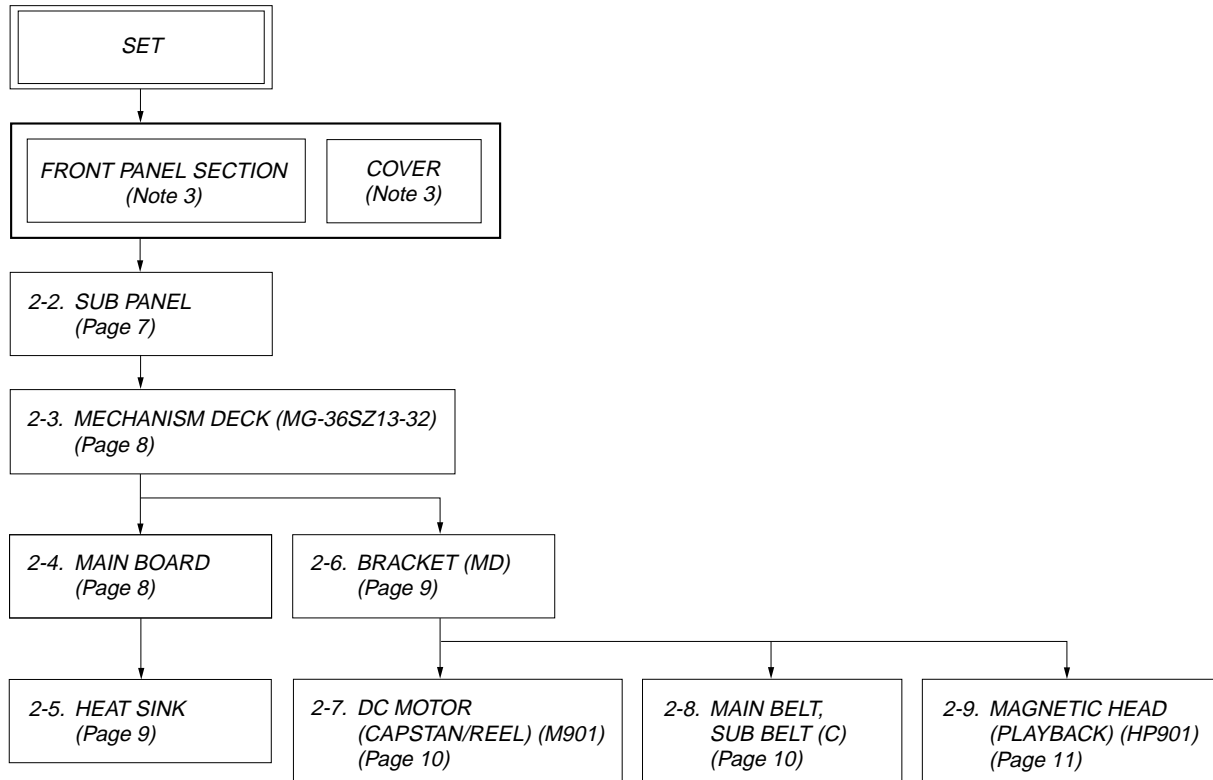
• This set can be disassembled in the order shown below.

### 2-1. DISASSEMBLY FLOW

**Note 1:** The process described in  can be performed in any order.

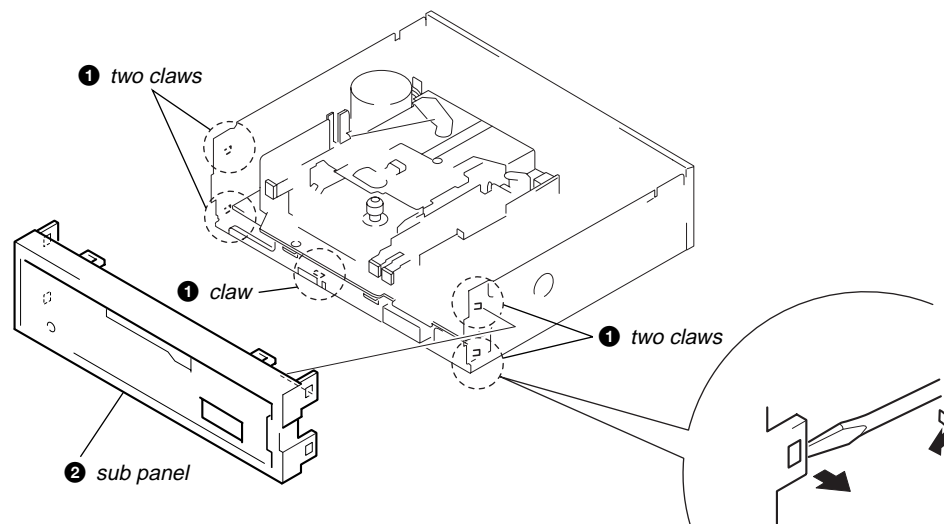
**Note 2:** Without completing the process described in , the next process can not be performed.

**Note 3:** Illustration of disassembly is omitted.

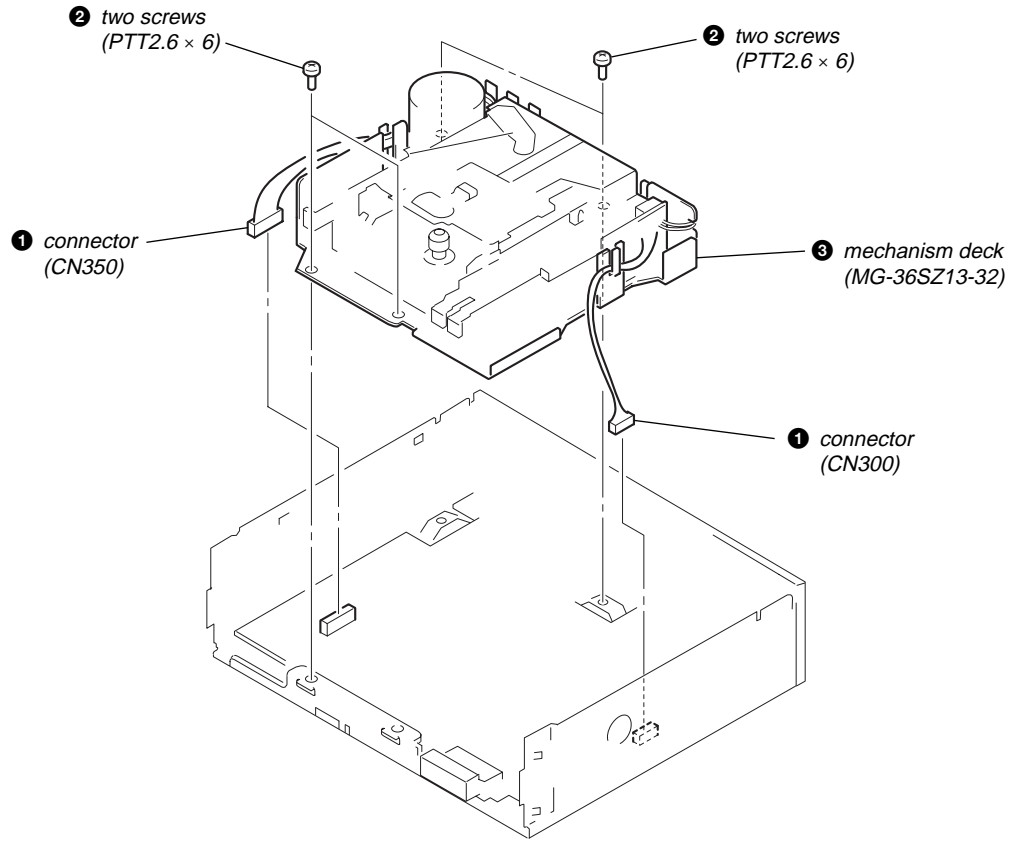


**Note:** Follow the disassembly procedure in the numerical order given.

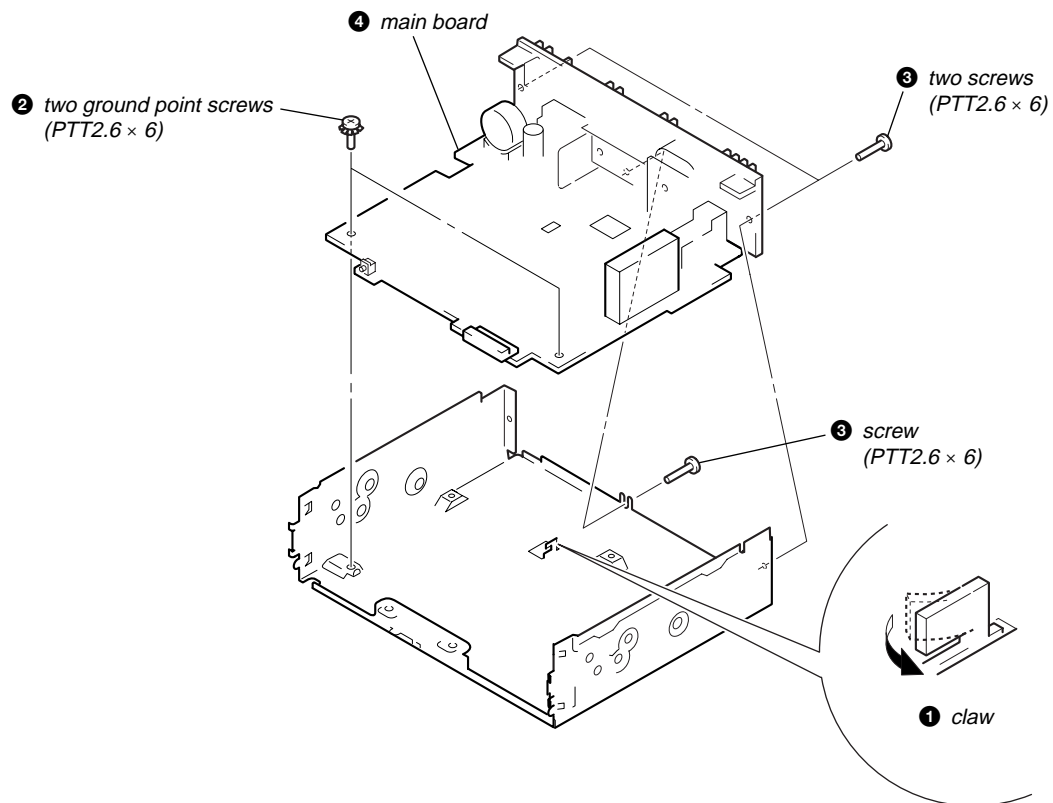
### 2-2. SUB PANEL



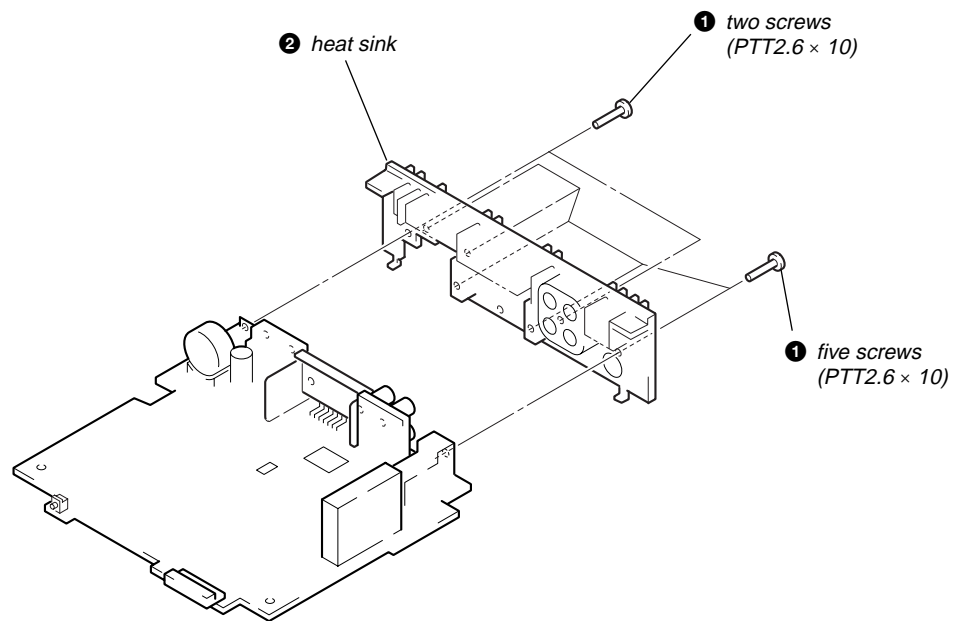
2-3. MECHANISM DECK (MG-36SZ13-32)



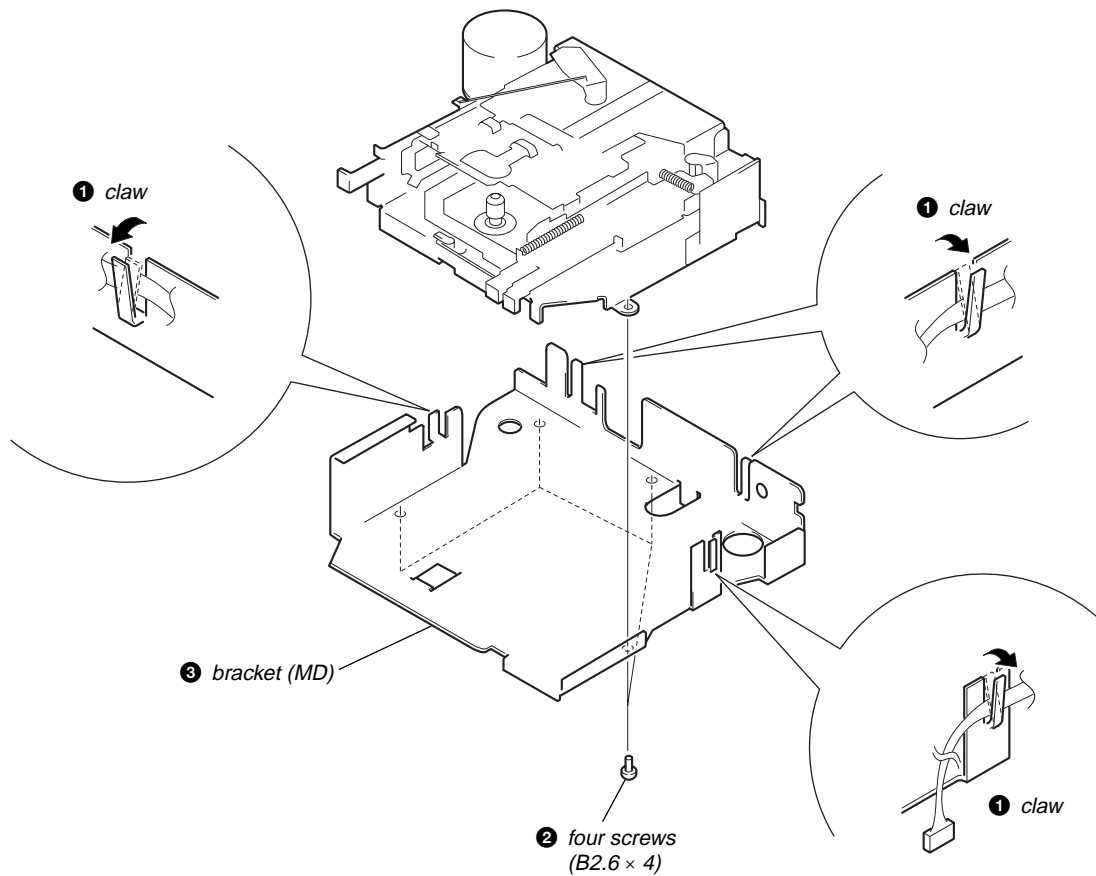
2-4. MAIN BOARD



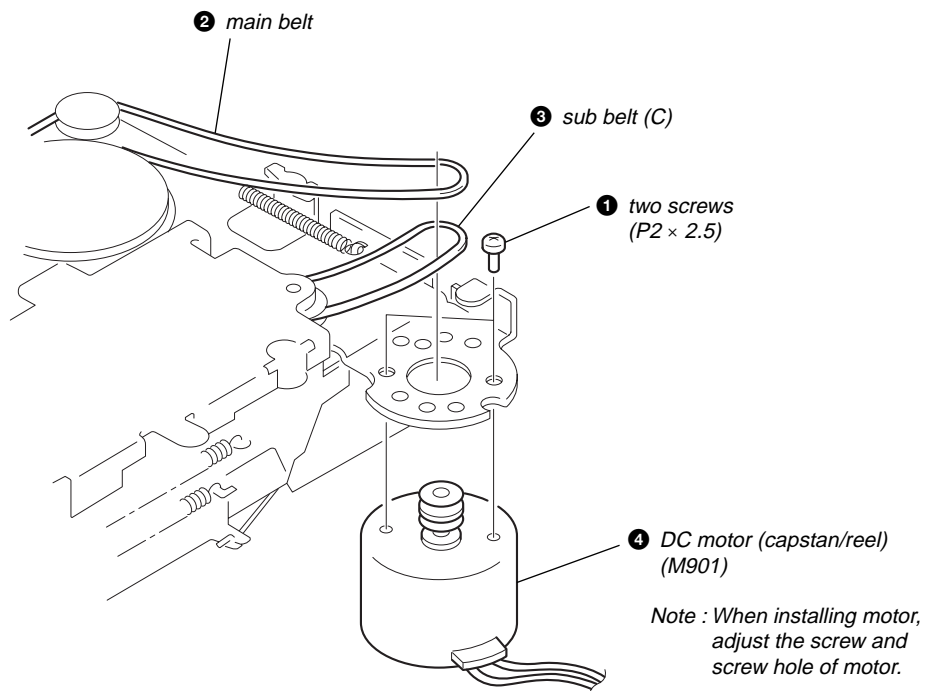
2-5. HEAT SINK



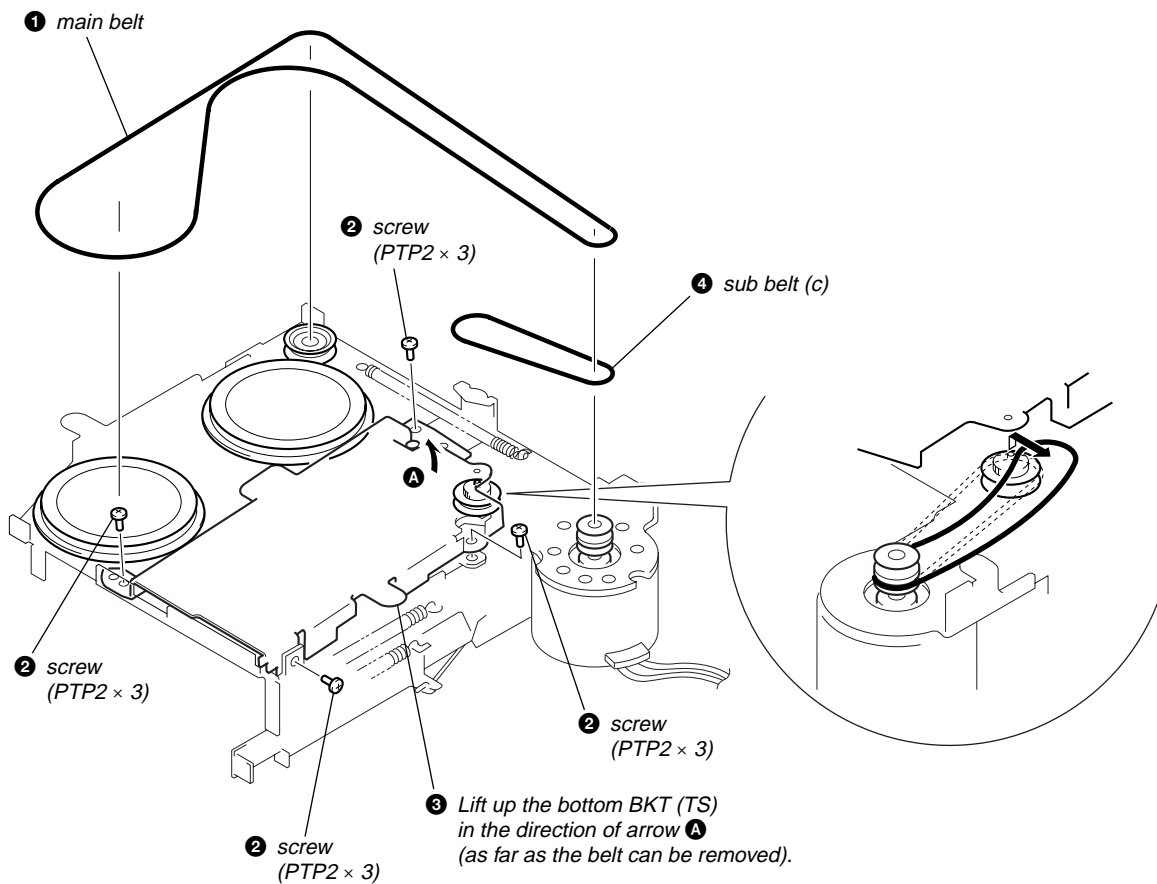
2-6. BRACKET (MD)



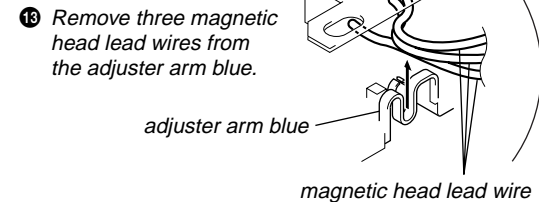
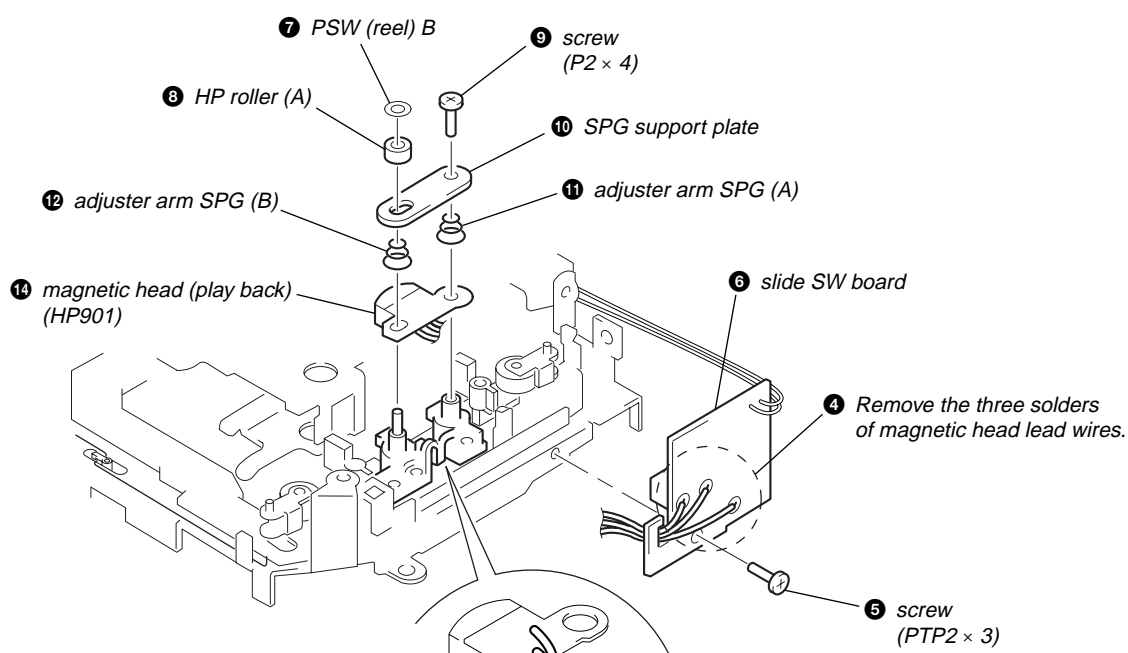
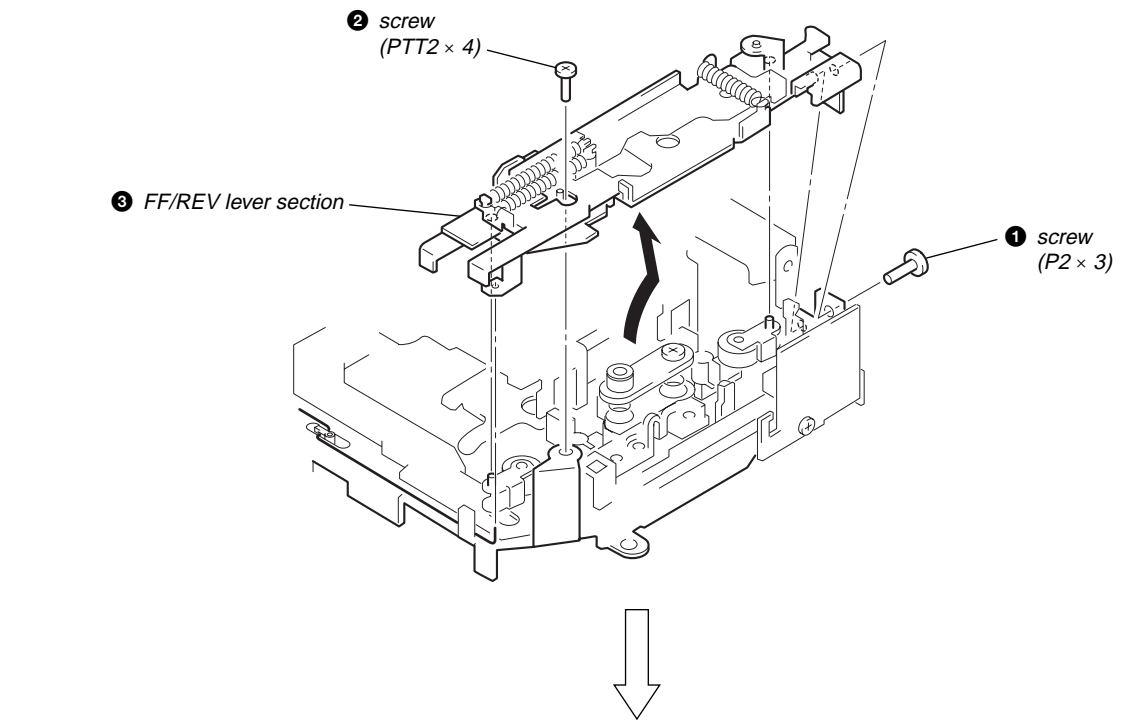
2-7. DC MOTOR (CAPSTAN/REEL) (M901)



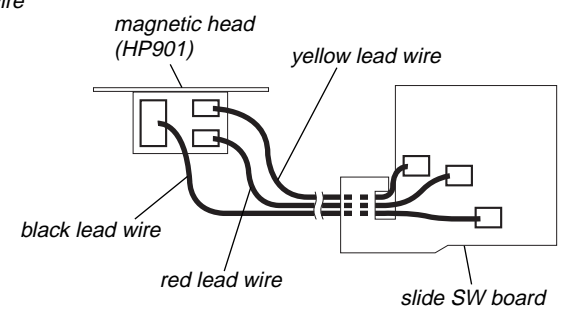
2-8. MAIN BELT, SUB BELT (C)



2-9. MAGNETIC HEAD (PLAYBACK) (HP901)



• MAGNETIC HEAD LEAD WIRE COLOR INDICATION ON HEAD (HP901) AND SLIDE SW BOARD.



## SECTION 3 MECHANICAL ADJUSTMENTS

1. Clean the following parts with a denatured-alcohol-moistened swab:
  - playback head      pinch roller
  - rubber belt        capstan
  - idler
2. Demagnetize the playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. The adjustments should be performed with the power supply voltage (14.4 V) unless otherwise noted.

**Note:** With this set, it is not necessary to apply suitable locking compound to the parts after the azimuth adjustment.

### •TORQUE MEASUREMENT

Mode	Torque Meter	Meter Reading
Forward	CQ-102C	2.46 – 5.39 mN•m (25 – 55 g•cm) (0.35 – 0.76 oz•inch)
Forward Back Tension	CQ-102C	0.15 – 0.39 mN•m (1.5 – 4 g•cm) (0.02 – 0.06 oz•inch)
Reverse	CQ-102RC	2.46 – 5.39 mN•m (25 – 55 g•cm) (0.35 – 0.76 oz•inch)
Reverse Back Tension	CQ-102RC	0.15 – 0.39 mN•m (1.5 – 4 g•cm) (0.02 – 0.06 oz•inch)
FF, REW	CQ-201B	4.91 – 14.70 mN•m (50 – 150 g•cm) (0.69 – 2.08 oz•inch)

### •TAPE TENSION MEASUREMENT

Mode	Tension Meter	Meter Reading
Forward	CQ-403A	more than 5.89 mN•m (more than 60 g) (more than 2.12 oz)
Reverse	CQ-403R	

## SECTION 4 ELECTRICAL ADJUSTMENTS

**TAPE DECK SECTION**      0 dB= 0.775 V

1. The adjustments should be performed in the order given in this service manual.
2. The adjustments should be performed for both L-CH and R-CH.

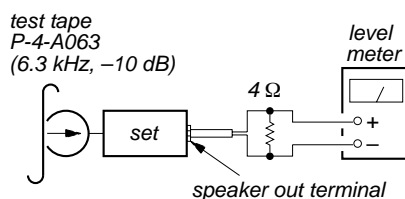
### TEST TAPE

Type	Signal	Used for
P-4-A063	6.3 kHz, -10 dB	head azimuth adjustment
WS-48A	3 kHz, 0 dB	tape speed adjustment

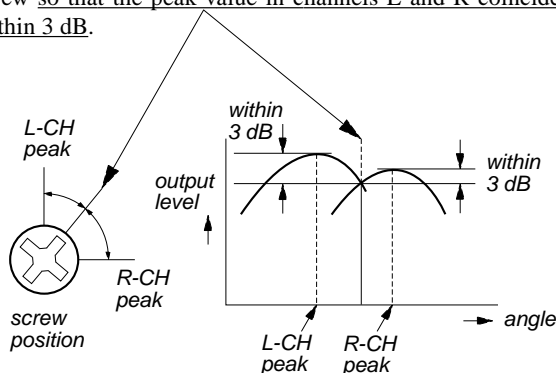
### PB HEAD AZIMUTH ADJUSTMENT

#### Procedure:

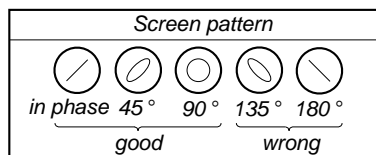
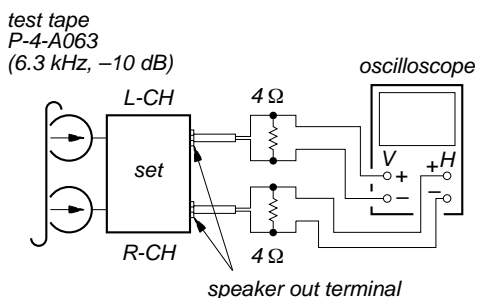
1. Put the set into the FWD PB mode.



2. Turn the screw and check the output peak value. Adjust the screw so that the peak value in channels L and R coincides within 3 dB.



3. Check the phase in the FWD PB mode.

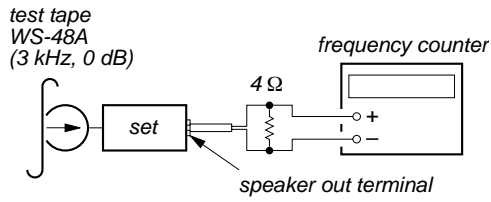


4. Repeat the above adjustment for the REV PB mode.
5. Check that output level difference between FWD PB mode and REV PB mode is within 4 dB.

**Adjustment Location:** PB head (See page 13)

**TAPE SPEED ADJUSTMENT**

Setting:



**Procedure:**

1. Put the set into the FWD PB mode.
2. Adjust adjustment resistor for inside capstan motor so that the reading on the frequency counter becomes in 3,015 Hz.

**Specified Value:** 2,940 to 3,090 Hz

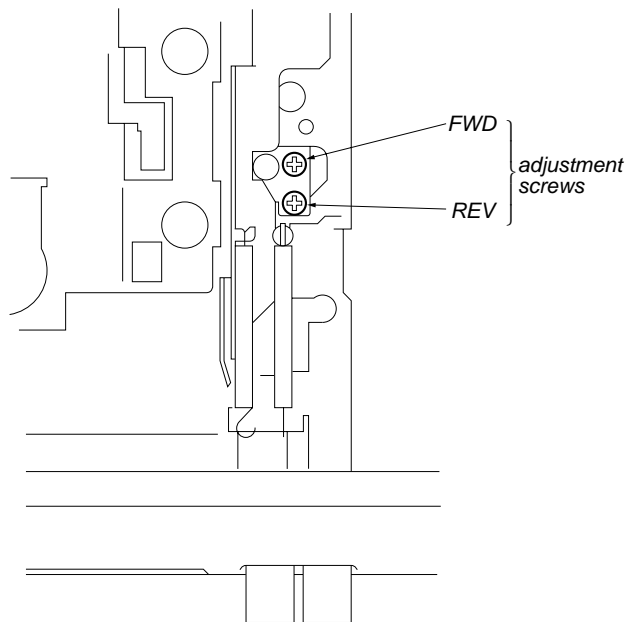
**Adjustment Location:** DC motor

**TUNER SECTION**

Tuner section adjustments are done automatically in this set.

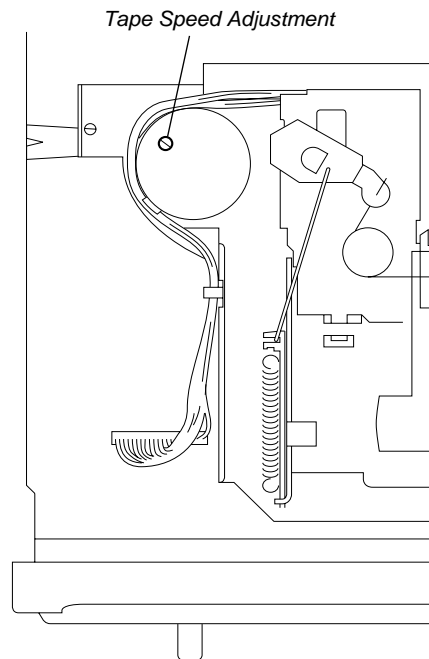
**Adjustment Location:** PB head

– Set Upper View –



**Adjustment Location:** DC motor

– Set Upper View –



## SECTION 5 DIAGRAMS

### 5-1. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

#### Note on Printed Wiring Board:

- — : parts extracted from the component side.
- : parts extracted from the conductor side.
- : Through hole.
- : Pattern from the side which enables seeing.
- : Carbon pattern.

(The other layers' patterns are not indicated.)

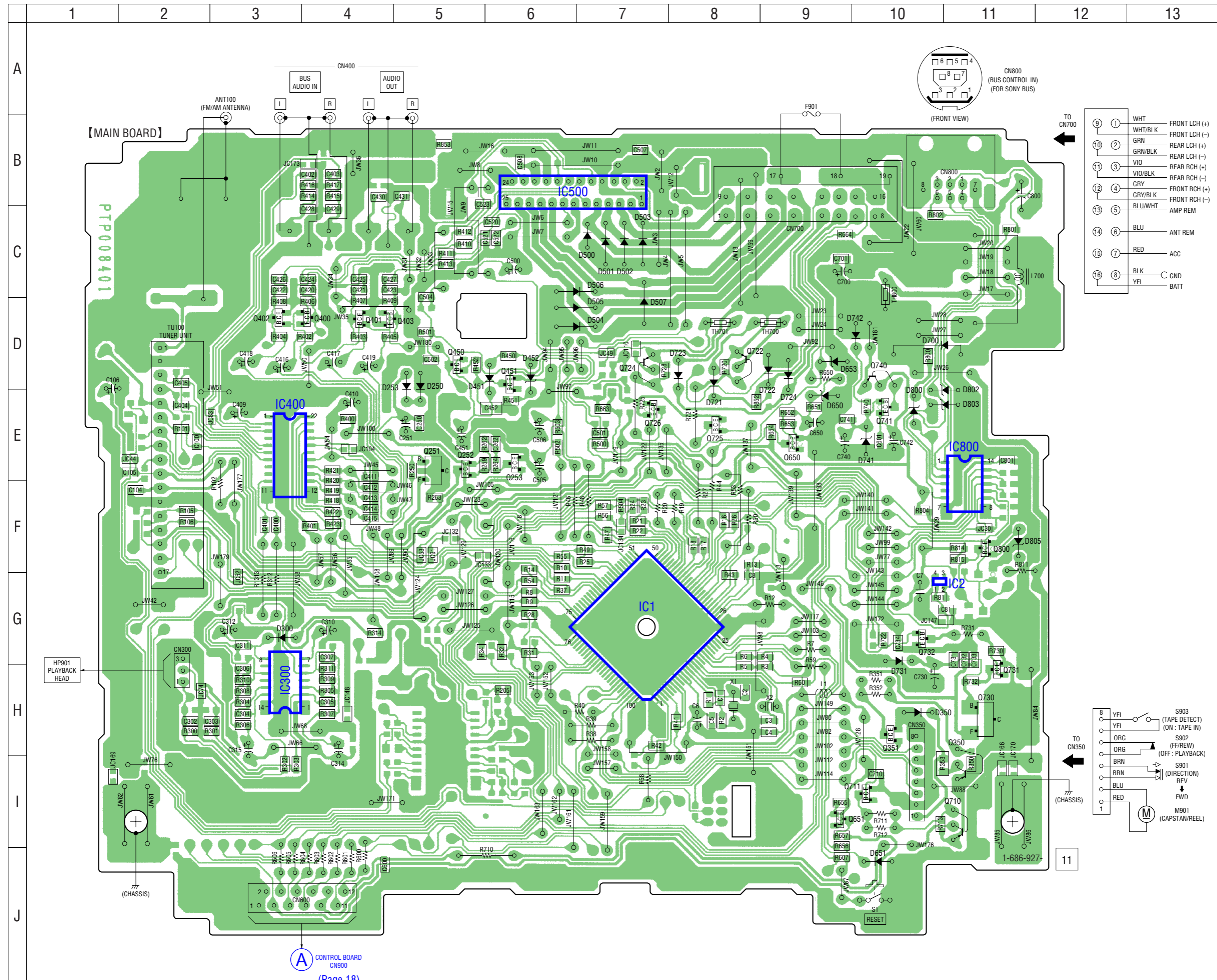
Caution:	
Pattern face side:	Parts on the pattern face side seen from the pattern face are indicated.
(Conductor Side)	
Parts face side:	Parts on the parts face side seen from the parts face are indicated.
(Component Side)	

- When replacing the IC1, refer to servicing note (Page 2 "When replacing the IC1").
- About the type ATA/type CAT, refer to servicing note (Page 2 "When replacing the front panel").

#### Note on Schematic Diagram:

- All capacitors are in  $\mu\text{F}$  unless otherwise noted. pF:  $\mu\mu\text{F}$  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.
- □ : panel designation.
- — : B+ Line.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.  
no mark : FM  
( ) : AM  
<< >> : TAPE PLAYBACK
- 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.  
⇒ : FM  
➡ : AM  
⌋⌋ : TAPE PLAYBACK  
⇒⇒ : BUS AUDIO IN
- When replacing the IC1, refer to servicing note (Page 2 "When replacing the IC1").
- About the type ATA/type CAT, refer to servicing note (Page 2 "When replacing the front panel").

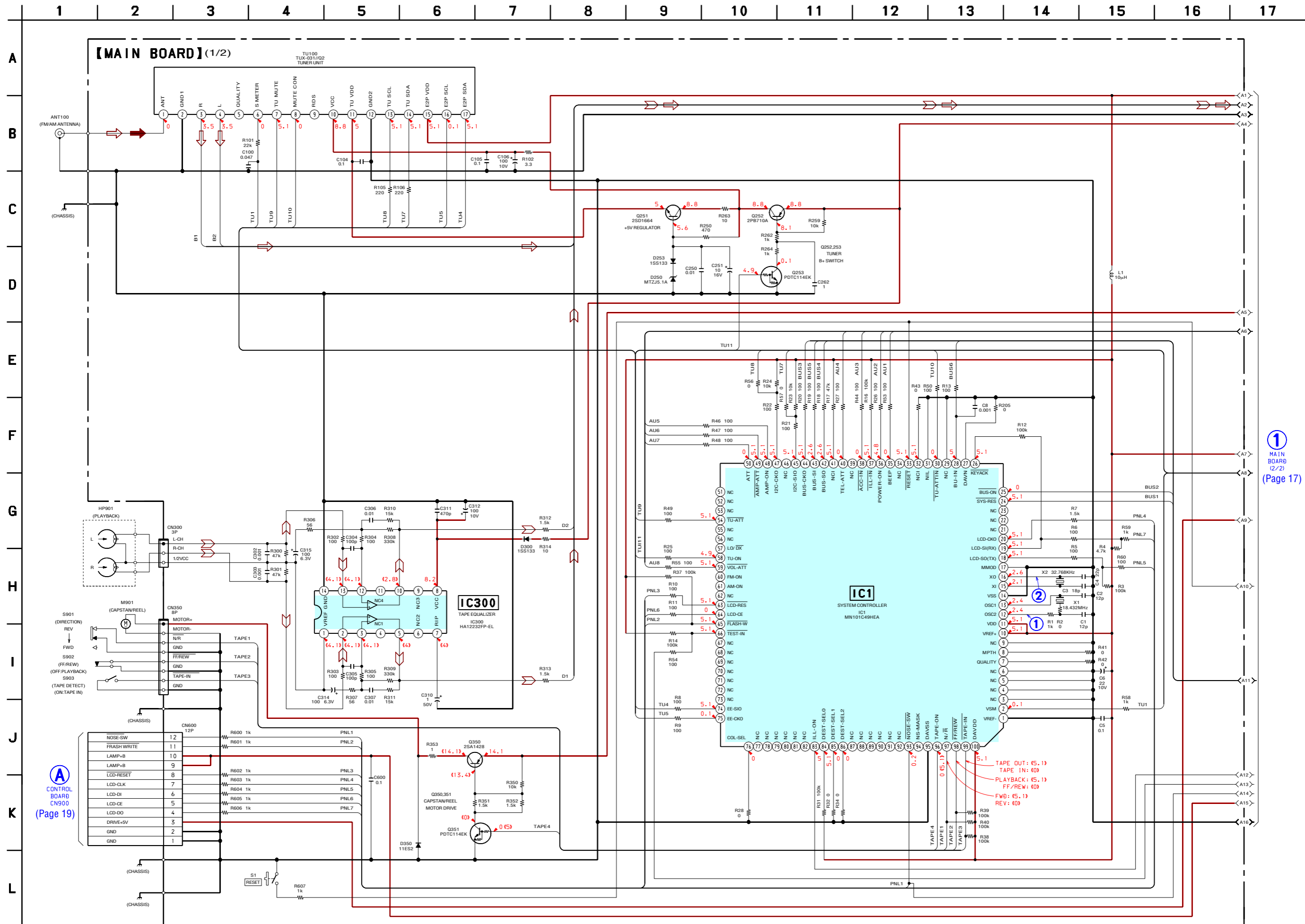
5-2. PRINTED WIRING BOARD – MAIN Board – Note: When replacing the IC1, refer to servicing note (Page 2 “When replacing the IC1”).



• Semiconductor Location

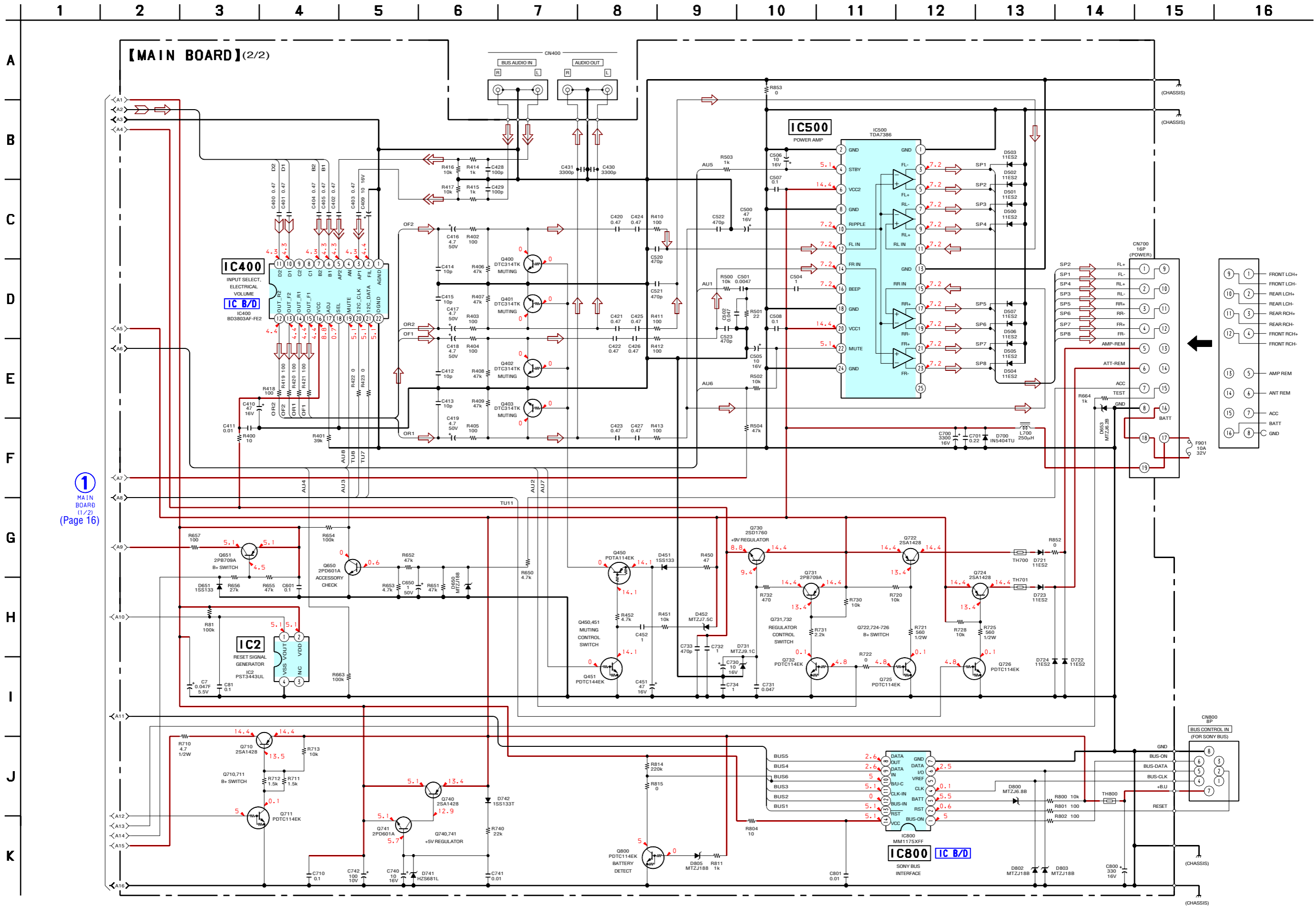
Ref. No.	Location
D250	D-5
D253	D-5
D300	G-3
D350	H-10
D451	D-6
D452	D-6
D500	C-7
D501	C-7
D502	C-7
D503	C-7
D504	D-7
D505	D-7
D506	C-7
D507	D-7
D650	E-9
D651	J-10
D653	D-9
D700	D-10
D721	D-8
D722	D-9
D723	D-8
D724	D-9
D731	H-11
D740	D-10
D741	E-10
D800	E-10
D802	E-11
D803	E-11
D805	F-11
IC1	G-7
IC2	G-11
IC300	H-3
IC400	E-3
IC500	B-6
IC800	E-11
Q251	E-5
Q252	E-5
Q253	E-6
Q350	I-11
Q351	H-10
Q400	D-4
Q401	D-4
Q402	D-3
Q403	D-4
Q450	D-5
Q451	D-6
Q650	E-9
Q651	I-9
Q710	I-11
Q711	I-10
Q722	D-8
Q724	D-7
Q725	E-8
Q726	E-7
Q730	H-11
Q731	G-11
Q732	G-10
Q740	D-10
Q741	E-10
Q800	F-11

5-3. SCHEMATIC DIAGRAM – MAIN Board (1/2) – • See page 20 for Waveforms. Note: When replacing the IC1, refer to servicing note (Page 2 “When replacing the IC1”).



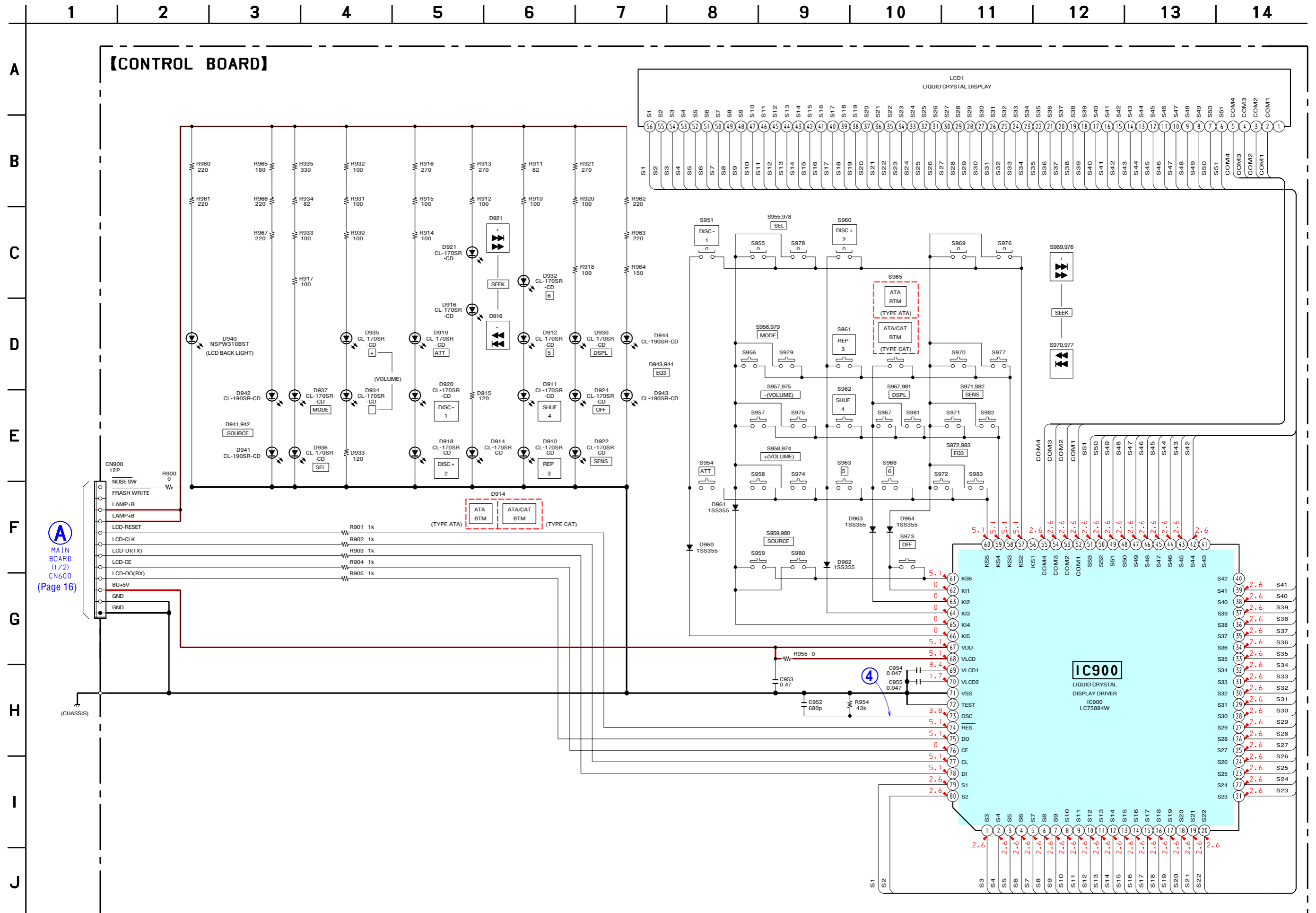
① MAIN BOARD (2/2) (Page 17)

5-4. SCHEMATIC DIAGRAM – MAIN Board (2/2) – • See page 20 for IC Block Diagrams.





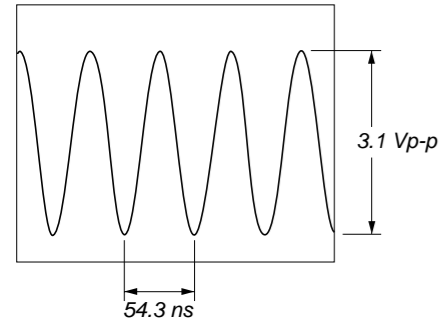
5-6. SCHEMATIC DIAGRAM – CONTROL Board – • See page 20 for Waveform. Note: About the type ATA/type CAT, refer to servicing note (Page 2 “When replacing the front panel”).



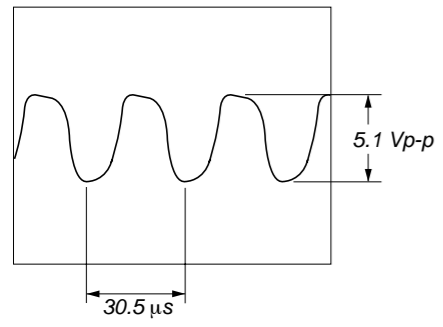
# XR-CA350X

## • Waveforms – MAIN Board –

1 IC1 ⑫ (OSC2)

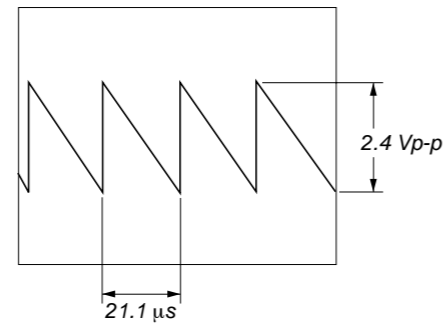


2 IC1 ⑩ (XO)



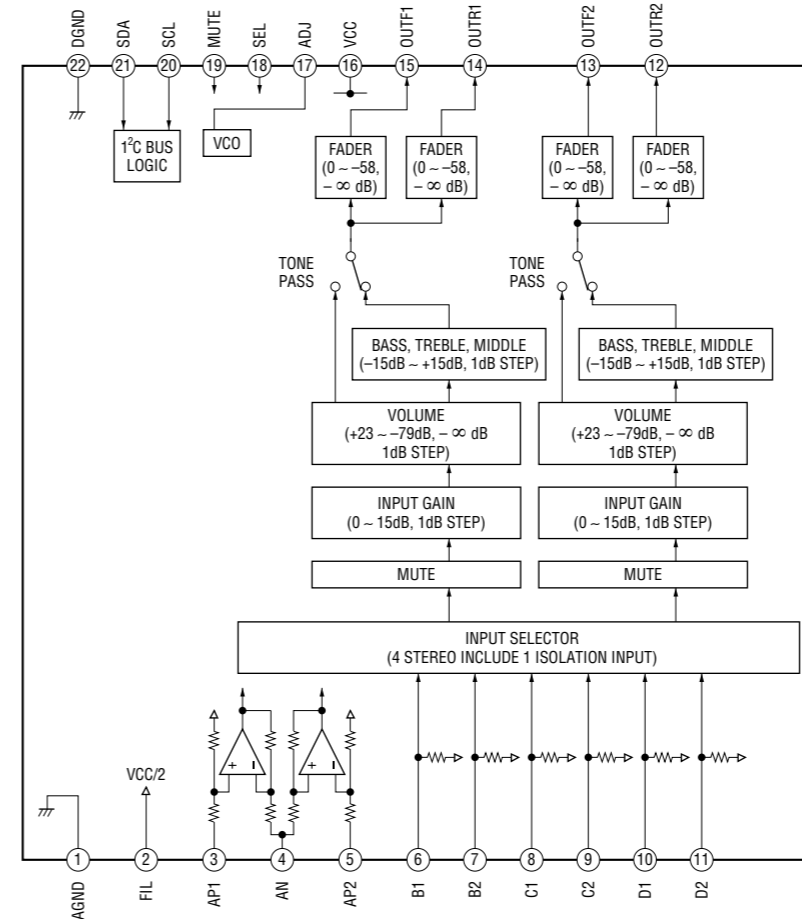
## – CONTROL Board –

4 IC900 ⑬ (OSC)

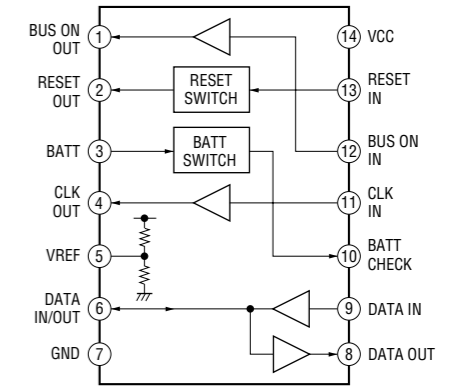


## • IC Block Diagrams – MAIN Board –

IC400 BD3803F-FE2



IC800 MM1175XFF



## 5-7. IC PIN FUNCTION DESCRIPTION

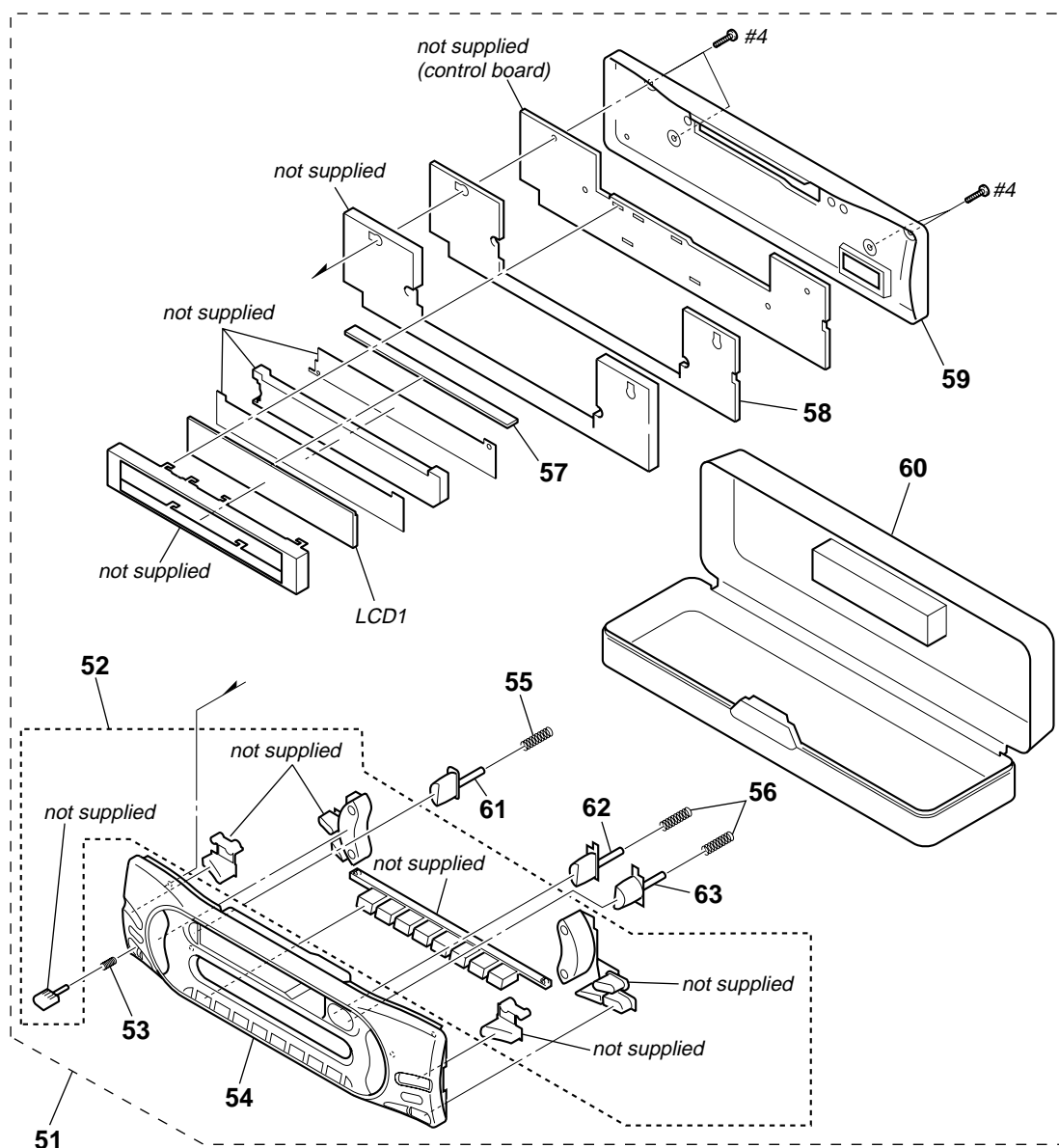
### • MAIN BOARD IC1 MN101C49HEA (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1	VREF -	—	Reference voltage (0V) terminal (for A/D converter)
2	VSM	I	FM and AM signal meter voltage detection input from the tuner unit (A/D input)
3 to 6	NC	I	Not used
7	QUALITY	I	Not used
8	MPTH	I	Not used
9	NC	I	Not used
10	VREF +	—	Reference voltage (+5V) terminal (for A/D converter)
11	VDD	—	Power supply terminal (+5V)
12	OSC2	O	Main system clock output terminal (18.432 MHz)
13	OSC1	I	Main system clock input terminal (18.432 MHz)
14	VSS	—	Ground terminal
15	XI	I	Sub system clock input terminal (32.768 kHz)
16	XO	O	Sub system clock output terminal (32.768 kHz)
17	MMOD	I	Setting terminal for the single chip mode “L”: single chip (fixed at “L” in this set)
18	LCD-SO (TX)	O	LCD serial data output to the liquid crystal display driver
19	LCD-SI (RX)	I	LCD serial data input from the liquid crystal display driver
20	LCD-CKO	O	LCD serial transfer clock signal output to the liquid crystal display driver
21 to 23	NC	O	Not used
24	<u>SYS-RES</u>	O	System reset signal output to the SONY bus interface “L”: reset
25	<u>BUS-ON</u>	O	Bus interface control signal output to the SONY bus interface “L”: uni-link on
26	<u>KEYACK</u>	I	Key acknowledge signal detection input from the liquid crystal display driver
27	DAVN	I	Not used
28	BU-IN	I	Battery detection signal input from the bus interface and battery detect circuit “L” is input at low voltage
29	NC	I	Not used
30	<u>TU-ATTIN</u>	I	Tuner muting on/off control signal input from the tuner unit “L”: muting on
31, 32	NC	I	Not used
33	<u>RESET</u>	I	System reset signal input from the reset signal generator and reset switch “L”: reset “L” is input for several 100 msec after power on, then it changes to “H”
34	NC	O	Not used
35	BEEP	O	Beep sound drive signal output to the power amplifier “H”: beep on
36	POWER-ON	O	Main system power supply on/off control signal output “H”: power on
37	<u>ILL-IN</u>	I	Illuminate line detection signal input terminal “L”: ill on Not used
38	<u>ACC-IN</u>	I	Accessory detection signal input “L”: accessory on “H” is input for several 200 msec after accessory on, then it changes to “L”
39	NC	O	Not used
40	TEL-ATT	I	Telephone muting signal input terminal At input of “H”, the signal is attenuated by -20 dB Not used
41	NCI	I	Not used
42	BUS-SO	O	Serial data output to the SONY bus interface
43	BUS-SI	I	Serial data input from the SONY bus interface
44	BUS-CKO	O	Serial data transfer clock signal output to the SONY bus interface
45	I2C-SIO	I/O	Two-way data bus with the tuner unit and electrical volume
46	NC	O	Not used
47	I2C-CKO	O	Serial data transfer clock signal output to the tuner unit and electrical volume
48	AMP-ON	O	Standby on/off control signal output to the power amplifier “L”: standby mode, “H”: amplifier on
49	<u>AMP-ATT</u>	O	Muting on/off control signal output to the power amplifier “L”: muting on

Pin No.	Pin Name	I/O	Description
50	ATT	O	Audio line muting on/off control signal output "H": muting on
51 to 53	NC	O	Not used
54	TU-ATT	O	Tuner muting on/off control signal output to the tuner unit "L": muting on
55, 56	NC	O	Not used
57	LO/DX	O	Local/DX selection signal output terminal "L": DX, "H": local Not used
58	TU-ON	O	Tuner system power supply on/off control signal output "H": tuner power on
59	VOL-ATT	O	Electrical volume muting on/off control signal output to the electrical volume "L": muting on
60	FM-ON	O	FM system power supply on/off control signal output terminal "H": FM power on Not used
61	AM-ON	O	AM system power supply on/off control signal output terminal "H": AM power on Not used
62	NC	O	Not used
63	LCD-RES	O	LCD reset signal output to the liquid crystal display driver "L": reset
64	LCD-CE	O	Chip enable signal output to the liquid crystal display driver "H" active
65	FLASH-W	I	Internal flash memory data write mode detection signal input "L": data write mode Normally: fixed at "H"
66	TEST-IN	I	Setting terminal for the test mode "L": test mode Normally: fixed at "H"
67 to 73	NC	O	Not used
74	EE-SIO	I/O	Two-way data bus with the tuner unit
75	EE-CKO	O	Serial data transfer clock signal output to the tuner unit
76	COL-SEL	I	Illumination color selection signal input "L": amber illumination "H": green illumination (fixed at "L" in this set)
77 to 82	NC	O	Not used
83	ILL-ON	O	Power on/off control signal output of the illumination LED and LCD back light "H": power on
84	DEST-SEL0	I	Destination setting terminal (fixed at "H" in this set)
85	DEST-SEL1	I	Destination setting terminal (fixed at "L" in this set)
86	DEST-SEL2	I	Destination setting terminal (fixed at "L" in this set)
87 to 92	NC	O	Not used
93	NOSE-SW	I	Front panel block remove/attach detection signal input "L": front panel is attached
94	NS-MASK	O	Not used
95	DAVSS	—	Ground terminal (for D/A converter)
96	TAPE-ON	O	Capstan/reel motor drive signal output "H": motor on
97	N/R	I	Tape direction switch input terminal "L": reverse direction, "H": forward direction
98	FF/REW	I	FF/REW detection switch input terminal "L": FF/REW mode, "H": PLAYBACK mode
99	TAPE-IN	I	Tape in detection switch input terminal "L": tape in
100	DAVDD	—	Power supply terminal (+5V) (for D/A converter)



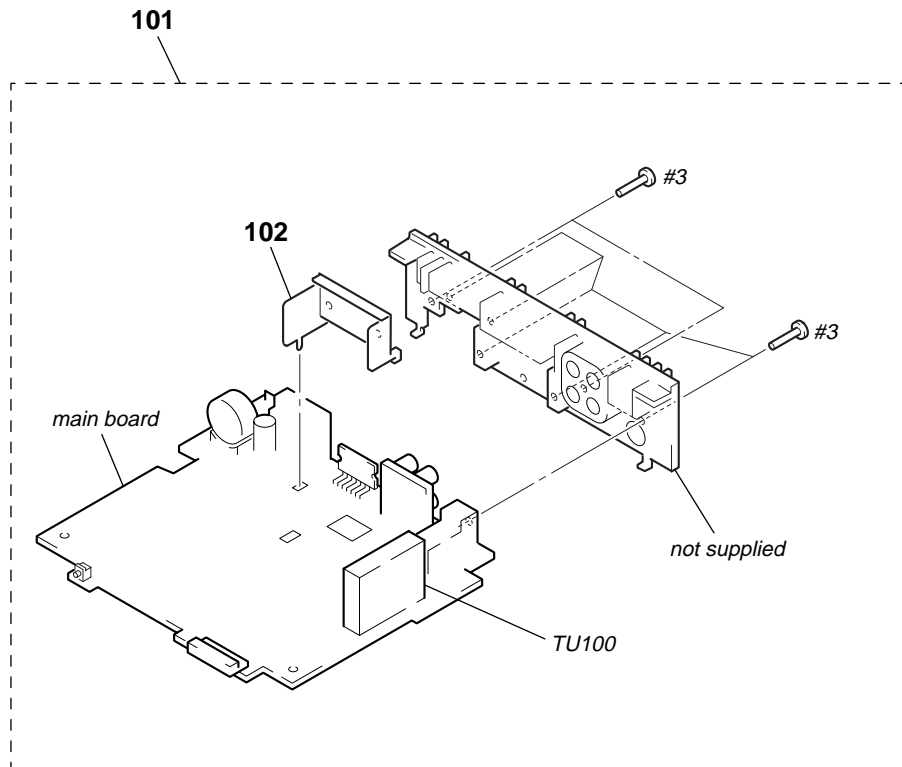
**6-2. FRONT PANEL SECTION**



About the type ATA/type CAT, refer to servicing note (Page 2 "When replacing the front panel").

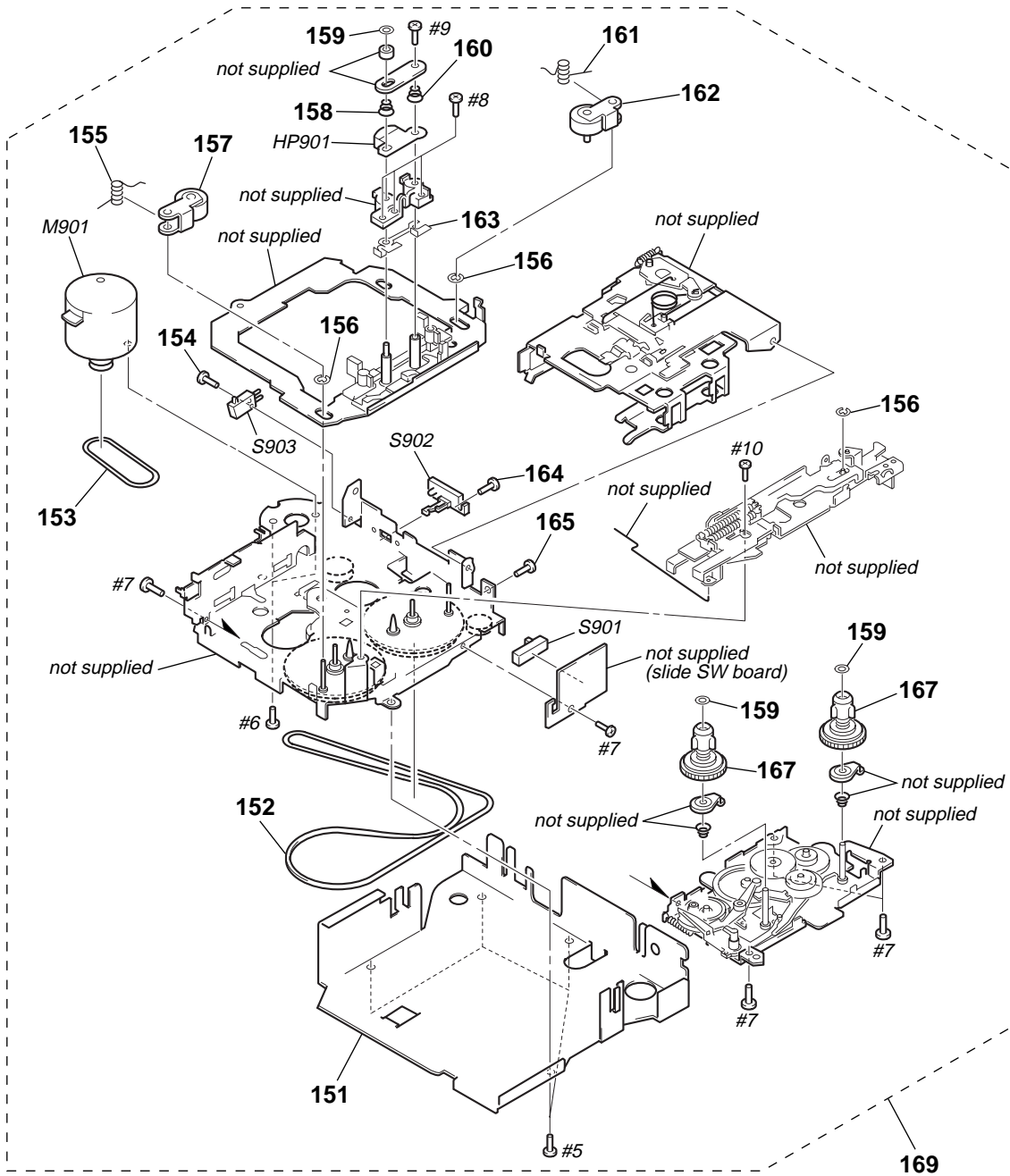
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	A-3315-947-A	PANEL ASSY, FRONT (TYPE ATA)		58	1-786-464-11	SWITCH, SHEET	
51	A-3337-842-A	PANEL ASSY, FRONT (TYPE CAT)		59	3-246-739-01	PANEL, FRONT BACK	
52	X-3383-132-1	BUTTON KIT (SVX) ASSY		60	X-3378-490-2	CASE (PANEL) ASSY	
53	3-231-816-01	SPRING (RELEASE)		61	3-246-744-01	BUTTON (EJECT) (▲)	
54	3-246-738-01	PANEL, FRONT (TYPE CAT)		62	3-246-743-01	BUTTON (REW) (◀◀)	
54	3-246-738-31	PANEL, FRONT (TYPE ATA)		63	3-246-742-01	BUTTON (FF) (▶▶)	
55	3-029-327-01	SPRING (EJECT)		LCD1	1-805-131-11	DISPLAY PANEL, LIQUID CRYSTAL	
56	3-375-372-01	SPRING (F/R)		#4	7-685-105-19	SCREW +P 2X8 TYPE2 NON-SLIT	
57	1-780-021-11	CONDUCTIVE BOARD, CONNECTION					

**6-3. MAIN BOARD SECTION**



<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
101	A-3274-976-A	MAIN BOARD, COMPLETE		TU100	A-3220-944-A	TUNER UNIT (TUX-031//Q2)	
* 102	3-041-578-01	BRACKET (IC)		#3	7-685-794-09	SCREW +PTT 2.6X10 (S)	

**6-4. MECHANISM DECK SECTION**  
(MG-36SZ13-32)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	3-246-754-01	BRACKET (MD)		165	3-713-786-51	SCREW +P 2X3	
152	3-045-943-01	MAIN BELT		167	3-045-893-01	REEL SPINDLE	
153	3-045-945-01	SUB BELT (C)		169	A-3220-926-B	MECHANISM DECK ASSY (MG-36SZ13-32)	
154	3-045-953-01	+MACHINE SCREW M1.7X6		HP901	1-500-661-11	HEAD, MAGNETIC (PLAYBACK)	
155	3-045-940-01	PINCH ARM SPG (R)		M901	1-763-507-11	MOTOR, DC (CAPSTAN/REEL)	
156	3-045-950-01	E-RING (DIA. 2)		S901	1-771-928-11	SWITCH, SLIDE (DIRECTION)	
157	3-045-890-01	PINCH ARM (R)		S902	1-771-926-11	SWITCH, LEAF (FF/REW)	
158	3-045-933-01	ADJUSTER ARM SPG (B)		S903	1-771-927-11	SWITCH, LEAF (TAPE DETECT)	
159	3-045-949-01	PSW (REEL) B		#5	7-621-775-10	SCREW +B 2.6X4	
160	3-045-932-01	ADJUSTER ARM SPG (A)		#6	7-627-854-08	PRECISION SCREW +P 2X2.5 TYPE 3	
161	3-045-939-01	PINCH ARM SPG (F)		#7	7-685-101-11	SCREW +PTP 2X3 NON-SLIT	
162	3-045-891-01	PINCH ARM (F)		#8	7-621-255-35	SCREW +P 2X5	
163	3-045-906-01	ADJUSTER SHIM (X)		#9	7-621-772-18	SCREW +P 2X4	
164	3-045-952-01	+MACHINE SCREW M1.7X4		#10	7-685-781-09	SCREW +PTT 2X4 (S)	



# XR-CA350X

Ver 1.3

**CONTROL**

**MAIN**

Ref. No.	Part No.	Description	Remark
R967	1-216-813-11	RES-CHIP 220 5%	1/10W
*****			
	A-3274-976-A	MAIN BOARD, COMPLETE	*****
*	3-041-578-01	BRACKET (IC)	
	7-685-794-09	SCREW +PTT 2.6X10 (S)	
		< JACK >	
ANT100	1-815-185-13	JACK (ANT) (FM/AM ANTENNA)	
		< CAPACITOR >	
C1	1-162-916-11	CERAMIC CHIP 12PF 5%	50V
C2	1-162-916-11	CERAMIC CHIP 12PF 5%	50V
C3	1-162-918-11	CERAMIC CHIP 18PF 5%	50V
C4	1-162-919-11	CERAMIC CHIP 22PF 5%	50V
C5	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C6	1-124-234-00	ELECT 22uF 20%	16V
C7	1-125-701-11	DOUBLE LAYER 0.047F	5.5V
C8	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
C81	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C100	1-165-176-11	CERAMIC CHIP 0.047uF 10%	16V
C104	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C105	1-164-156-11	CERAMIC CHIP 0.1uF 10%	25V
C106	1-124-584-00	ELECT 100uF 20%	10V
C250	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C251	1-126-157-11	ELECT 10uF 20%	16V
C262	1-165-908-11	CERAMIC CHIP 1uF 10%	10V
C302	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
C303	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
C304	1-162-927-11	CERAMIC CHIP 100PF 5%	50V
C305	1-162-927-11	CERAMIC CHIP 100PF 5%	50V
C306	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C307	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C310	1-104-942-11	ELECT 1uF 20%	50V
C311	1-164-315-11	CERAMIC CHIP 470PF 5%	50V
C312	1-124-584-00	ELECT 100uF 20%	10V
C314	1-124-584-00	ELECT 100uF 20%	10V
C315	1-124-584-00	ELECT 100uF 20%	10V
C400	1-125-891-11	CERAMIC CHIP 0.47uF 10%	10V
C401	1-125-891-11	CERAMIC CHIP 0.47uF 10%	10V
C402	1-125-891-11	CERAMIC CHIP 0.47uF 10%	10V
C403	1-125-891-11	CERAMIC CHIP 0.47uF 10%	10V
C404	1-125-891-11	CERAMIC CHIP 0.47uF 10%	10V
C405	1-125-891-11	CERAMIC CHIP 0.47uF 10%	10V
C409	1-126-157-11	ELECT 10uF 20%	16V
C410	1-124-589-11	ELECT 47uF 20%	16V
C411	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C412	1-162-915-11	CERAMIC CHIP 10PF 0.5PF	50V
C413	1-162-915-11	CERAMIC CHIP 10PF 0.5PF	50V
C414	1-162-915-11	CERAMIC CHIP 10PF 0.5PF	50V
C415	1-162-915-11	CERAMIC CHIP 10PF 0.5PF	50V
C416	1-126-163-11	ELECT 4.7uF 20%	50V
C417	1-126-163-11	ELECT 4.7uF 20%	50V
C418	1-126-163-11	ELECT 4.7uF 20%	50V
C419	1-126-163-11	ELECT 4.7uF 20%	50V
C420	1-125-891-11	CERAMIC CHIP 0.47uF 10%	10V

Ref. No.	Part No.	Description	Remark
C421	1-125-891-11	CERAMIC CHIP 0.47uF 10%	10V
C422	1-125-891-11	CERAMIC CHIP 0.47uF 10%	10V
C423	1-125-891-11	CERAMIC CHIP 0.47uF 10%	10V
C424	1-125-891-11	CERAMIC CHIP 0.47uF 10%	10V
C425	1-125-891-11	CERAMIC CHIP 0.47uF 10%	10V
C426	1-125-891-11	CERAMIC CHIP 0.47uF 10%	10V
C427	1-125-891-11	CERAMIC CHIP 0.47uF 10%	10V
C428	1-162-927-11	CERAMIC CHIP 100PF 5%	50V
C429	1-162-927-11	CERAMIC CHIP 100PF 5%	50V
C430	1-162-967-11	CERAMIC CHIP 0.0033uF 10%	50V
C431	1-162-967-11	CERAMIC CHIP 0.0033uF 10%	50V
C451	1-124-589-11	ELECT 47uF 20%	16V
C452	1-109-982-11	CERAMIC CHIP 1uF 10%	10V
C500	1-124-589-11	ELECT 47uF 20%	16V
C501	1-162-968-11	CERAMIC CHIP 0.0047uF 10%	50V
C502	1-165-176-11	CERAMIC CHIP 0.047uF 10%	16V
C504	1-165-908-11	CERAMIC CHIP 1uF 10%	10V
C505	1-126-157-11	ELECT 10uF 20%	16V
C506	1-126-157-11	ELECT 10uF 20%	16V
C507	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C508	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C520	1-164-315-11	CERAMIC CHIP 470PF 5%	50V
C521	1-164-315-11	CERAMIC CHIP 470PF 5%	50V
C522	1-164-315-11	CERAMIC CHIP 470PF 5%	50V
C523	1-164-315-11	CERAMIC CHIP 470PF 5%	50V
C600	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C601	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C650	1-104-942-11	ELECT 1uF 20%	50V
C700	1-126-936-11	ELECT 3300uF 20%	16V
C701	1-165-128-11	CERAMIC CHIP 0.22uF	16V
C710	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C730	1-126-157-11	ELECT 10uF 20%	16V
C731	1-165-176-11	CERAMIC CHIP 0.047uF 10%	16V
C732	1-165-908-11	CERAMIC CHIP 1uF 10%	10V
C733	1-164-315-11	CERAMIC CHIP 470PF 5%	50V
C734	1-165-908-11	CERAMIC CHIP 1uF 10%	10V
C740	1-126-157-11	ELECT 10uF 20%	16V
C741	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C742	1-124-584-00	ELECT 100uF 20%	10V
C800	1-126-940-11	ELECT 330uF 20%	16V
C801	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
		< CONNECTOR/JACK >	
* CN300	1-564-705-11	PIN, CONNECTOR (PC BOARD) 3P	
* CN350	1-573-486-11	PIN, CONNECTOR (PC BOARD) 8P	
CN400	1-774-699-12	JACK, PIN 4P (BUS AUDIO IN, AUDIO OUT)	
CN600	1-794-311-21	PLUG, CONNECTOR 12P	
CN700	1-774-701-11	PIN, CONNECTOR 16P (POWER)	
CN800	1-580-907-31	PLUG, CONNECTOR (BUS CONTROL IN)	
		< DIODE >	
D250	8-719-921-42	DIODE MTZJ-5.1A	
D253	8-719-991-33	DIODE 1SS133T-77	
D300	8-719-991-33	DIODE 1SS133T-77	
D350	8-719-200-82	DIODE 11ES2	
D451	8-719-991-33	DIODE 1SS133T-77	
D452	8-719-110-03	DIODE RD7.5ESB2	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
D500	8-719-200-82	DIODE 11ES2				< TRANSISTOR >	
D501	8-719-200-82	DIODE 11ES2					
D502	8-719-200-82	DIODE 11ES2					
D503	8-719-200-82	DIODE 11ES2		Q251	8-729-920-85	TRANSISTOR 2SD1664-QR	
				Q252	8-729-049-85	TRANSISTOR 2PB710AR-115	
				Q253	8-729-043-27	TRANSISTOR PDTC114EK-115	
D504	8-719-200-82	DIODE 11ES2		Q350	8-729-205-95	TRANSISTOR 2SA1428-Y	
D505	8-719-200-82	DIODE 11ES2		Q351	8-729-043-27	TRANSISTOR PDTC114EK-115	
D506	8-719-200-82	DIODE 11ES2					
D507	8-719-200-82	DIODE 11ES2		Q400	8-729-920-21	TRANSISTOR DTC314TK-T-146	
D650	8-719-110-49	DIODE RD18ES-B2		Q401	8-729-920-21	TRANSISTOR DTC314TK-T-146	
				Q402	8-729-920-21	TRANSISTOR DTC314TK-T-146	
D651	8-719-991-33	DIODE 1SS133T-77		Q403	8-729-920-21	TRANSISTOR DTC314TK-T-146	
D653	8-719-109-93	DIODE RD6.2ESB2		Q450	8-729-043-32	TRANSISTOR PDTA114EK-115	
D700	8-719-049-38	DIODE 1N5404TU					
D721	8-719-200-82	DIODE 11ES2		Q451	8-729-043-29	TRANSISTOR PDTC144EK-115	
D722	8-719-200-82	DIODE 11ES2		Q650	8-729-422-33	TRANSISTOR 2PD601A-Q-TX	
				Q651	8-729-216-22	TRANSISTOR 2SA1162-G	
D723	8-719-200-82	DIODE 11ES2		Q710	8-729-205-95	TRANSISTOR 2SA1428-Y	
D724	8-719-200-82	DIODE 11ES2		Q711	8-729-043-27	TRANSISTOR PDTC114EK-115	
D731	8-719-110-14	DIODE RD9.1ES-B3					
D741	8-719-935-39	DIODE HZS6B1LTD		Q722	8-729-205-95	TRANSISTOR 2SA1428-Y	
D742	8-719-991-33	DIODE 1SS133T-77		Q724	8-729-205-95	TRANSISTOR 2SA1428-Y	
				Q725	8-729-043-27	TRANSISTOR PDTC114EK-115	
D800	8-719-109-97	DIODE RD6.8ES-B2		Q726	8-729-043-27	TRANSISTOR PDTC114EK-115	
D802	8-719-110-49	DIODE RD18ES-B2		Q730	8-729-921-48	TRANSISTOR 2SD1760F5-Q	
D803	8-719-110-49	DIODE RD18ES-B2					
D805	8-719-110-49	DIODE RD18ES-B2		Q731	8-729-216-22	TRANSISTOR 2SA1162-G	
				Q732	8-729-043-27	TRANSISTOR PDTC114EK-115	
		< IC >		Q740	8-729-205-95	TRANSISTOR 2SA1428-Y	
IC1	6-803-178-01	IC MN101C49HEA		Q741	8-729-422-33	TRANSISTOR 2PD601A-Q-TX	
IC2	6-701-405-01	IC PST3443UL		Q800	8-729-043-27	TRANSISTOR PDTC114EK-115	
IC300	6-802-510-01	IC HA12232FP-EL					
IC400	6-703-302-02	IC BD3803AF-FE2				< RESISTOR >	
IC500	8-759-486-44	IC TDA7386		R1	1-216-821-11	METAL CHIP 1K 5% 1/10W	
IC800	8-759-096-16	IC MM1175XFF		R2	1-216-864-11	SHORT CHIP 0	
				R3	1-216-845-11	METAL CHIP 100K 5% 1/10W	
		< SHORT >		R4	1-216-829-11	METAL CHIP 4.7K 5% 1/10W	
JC30	1-216-864-11	SHORT CHIP 0		R5	1-216-809-11	METAL CHIP 100 5% 1/10W	
JC44	1-216-864-11	SHORT CHIP 0		R6	1-216-809-11	METAL CHIP 100 5% 1/10W	
JC49	1-216-864-11	SHORT CHIP 0		R7	1-249-419-11	CARBON 1.5K 5% 1/4W	
JC52	1-216-864-11	SHORT CHIP 0		R8	1-216-809-11	METAL CHIP 100 5% 1/10W	
JC53	1-216-864-11	SHORT CHIP 0		R9	1-216-809-11	METAL CHIP 100 5% 1/10W	
JC74	1-216-864-11	SHORT CHIP 0		R10	1-216-809-11	METAL CHIP 100 5% 1/10W	
JC83	1-216-864-11	SHORT CHIP 0		R11	1-216-809-11	METAL CHIP 100 5% 1/10W	
JC91	1-216-864-11	SHORT CHIP 0		R12	1-249-441-11	CARBON 100K 5% 1/4W	
JC104	1-216-864-11	SHORT CHIP 0		R13	1-216-809-11	METAL CHIP 100 5% 1/10W	
JC110	1-216-864-11	SHORT CHIP 0		R14	1-216-845-11	METAL CHIP 100K 5% 1/10W	
JC110	1-216-864-11	SHORT CHIP 0		R16	1-216-845-11	METAL CHIP 100K 5% 1/10W	
JC132	1-216-864-11	SHORT CHIP 0		R17	1-216-841-11	METAL CHIP 47K 5% 1/10W	
JC133	1-216-864-11	SHORT CHIP 0		R18	1-216-809-11	METAL CHIP 100 5% 1/10W	
JC134	1-216-864-11	SHORT CHIP 0		R19	1-247-807-31	CARBON 100 5% 1/4W	
JC147	1-216-864-11	SHORT CHIP 0		R20	1-247-807-31	CARBON 100 5% 1/4W	
JC148	1-216-864-11	SHORT CHIP 0		R21	1-216-809-11	METAL CHIP 100 5% 1/10W	
JC166	1-216-864-11	SHORT CHIP 0		R22	1-216-809-11	METAL CHIP 100 5% 1/10W	
JC169	1-216-864-11	SHORT CHIP 0		R23	1-216-833-11	METAL CHIP 10K 5% 1/10W	
JC170	1-216-864-11	SHORT CHIP 0		R24	1-216-833-11	METAL CHIP 10K 5% 1/10W	
JC173	1-216-864-11	SHORT CHIP 0		R25	1-216-809-11	METAL CHIP 100 5% 1/10W	
				R26	1-216-809-11	METAL CHIP 100 5% 1/10W	
		< COIL >		R27	1-247-807-31	CARBON 100 5% 1/4W	
L1	1-410-509-11	INDUCTOR 10uH		R28	1-216-864-11	SHORT CHIP 0	
L700	1-419-476-11	COIL, CHOKE 250uH		R31	1-216-845-11	METAL CHIP 100K 5% 1/10W	
				R32	1-216-864-11	SHORT CHIP 0	
				R34	1-216-864-11	SHORT CHIP 0	

When replacing the IC1, refer to servicing note (Page 2 "When replacing the IC1").

# XR-CA350X

## MAIN

Ref. No.	Part No.	Description	Quantity	Unit	Remark	Ref. No.	Part No.	Description	Quantity	Unit	Remark
R37	1-216-845-11	METAL CHIP	100K	5%	1/10W	R406	1-216-841-11	METAL CHIP	47K	5%	1/10W
R38	1-249-441-11	CARBON	100K	5%	1/4W	R407	1-216-841-11	METAL CHIP	47K	5%	1/10W
R39	1-249-441-11	CARBON	100K	5%	1/4W	R408	1-216-841-11	METAL CHIP	47K	5%	1/10W
R40	1-249-441-11	CARBON	100K	5%	1/4W	R409	1-216-841-11	METAL CHIP	47K	5%	1/10W
R41	1-216-864-11	SHORT CHIP	0			R410	1-216-809-11	METAL CHIP	100	5%	1/10W
R42	1-216-864-11	SHORT CHIP	0			R411	1-216-809-11	METAL CHIP	100	5%	1/10W
R43	1-216-864-11	SHORT CHIP	0			R412	1-216-809-11	METAL CHIP	100	5%	1/10W
R44	1-247-807-31	CARBON	100	5%	1/4W	R413	1-216-809-11	METAL CHIP	100	5%	1/10W
R46	1-247-807-31	CARBON	100	5%	1/4W	R414	1-216-821-11	METAL CHIP	1K	5%	1/10W
R47	1-216-809-11	METAL CHIP	100	5%	1/10W	R415	1-216-821-11	METAL CHIP	1K	5%	1/10W
R48	1-247-807-31	CARBON	100	5%	1/4W	R416	1-216-833-11	METAL CHIP	10K	5%	1/10W
R49	1-216-809-11	METAL CHIP	100	5%	1/10W	R417	1-216-833-11	METAL CHIP	10K	5%	1/10W
R50	1-247-807-31	CARBON	100	5%	1/4W	R418	1-216-809-11	METAL CHIP	100	5%	1/10W
R53	1-247-807-31	CARBON	100	5%	1/4W	R419	1-216-809-11	METAL CHIP	100	5%	1/10W
R54	1-216-809-11	METAL CHIP	100	5%	1/10W	R420	1-216-809-11	METAL CHIP	100	5%	1/10W
R55	1-216-809-11	METAL CHIP	100	5%	1/10W	R421	1-216-809-11	METAL CHIP	100	5%	1/10W
R56	1-216-864-11	SHORT CHIP	0			R422	1-216-864-11	SHORT CHIP	0		
R57	1-216-864-11	SHORT CHIP	0			R423	1-216-864-11	SHORT CHIP	0		
R58	1-249-417-11	CARBON	1K	5%	1/4W	R450	1-216-805-11	METAL CHIP	47	5%	1/10W
R59	1-249-417-11	CARBON	1K	5%	1/4W	R451	1-216-833-11	METAL CHIP	10K	5%	1/10W
R60	1-216-809-11	METAL CHIP	100	5%	1/10W	R452	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R81	1-216-845-11	METAL CHIP	100K	5%	1/10W	R500	1-216-833-11	METAL CHIP	10K	5%	1/10W
R101	1-216-837-11	METAL CHIP	22K	5%	1/10W	R501	1-216-801-11	METAL CHIP	22	5%	1/10W
R102	1-249-387-11	CARBON	3.3	5%	1/4W	R502	1-216-833-11	METAL CHIP	10K	5%	1/10W
R105	1-216-813-11	METAL CHIP	220	5%	1/10W	R503	1-216-821-11	METAL CHIP	1K	5%	1/10W
R106	1-216-813-11	METAL CHIP	220	5%	1/10W	R504	1-216-841-11	METAL CHIP	47K	5%	1/10W
R205	1-216-864-11	SHORT CHIP	0			R600	1-249-417-11	CARBON	1K	5%	1/4W
R250	1-216-817-11	METAL CHIP	470	5%	1/10W	R601	1-249-417-11	CARBON	1K	5%	1/4W
R259	1-216-833-11	METAL CHIP	10K	5%	1/10W	R602	1-249-417-11	CARBON	1K	5%	1/4W
R262	1-216-821-11	METAL CHIP	1K	5%	1/10W	R603	1-249-417-11	CARBON	1K	5%	1/4W
R263	1-216-797-11	METAL CHIP	10	5%	1/10W	R604	1-249-417-11	CARBON	1K	5%	1/4W
R264	1-216-821-11	RES-CHIP	1K	5%	1/10W	R605	1-249-417-11	CARBON	1K	5%	1/4W
R300	1-216-841-11	METAL CHIP	47K	5%	1/10W	R606	1-249-417-11	CARBON	1K	5%	1/4W
R301	1-216-841-11	METAL CHIP	47K	5%	1/10W	R607	1-216-821-11	METAL CHIP	1K	5%	1/10W
R302	1-216-809-11	METAL CHIP	100	5%	1/10W	R650	1-249-425-11	CARBON	4.7K	5%	1/4W
R303	1-216-809-11	METAL CHIP	100	5%	1/10W	R651	1-216-841-11	METAL CHIP	47K	5%	1/10W
R304	1-216-809-11	METAL CHIP	100	5%	1/10W	R652	1-216-841-11	METAL CHIP	47K	5%	1/10W
R305	1-216-809-11	METAL CHIP	100	5%	1/10W	R653	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R306	1-216-806-11	METAL CHIP	56	5%	1/10W	R654	1-216-845-11	METAL CHIP	100K	5%	1/10W
R307	1-216-806-11	METAL CHIP	56	5%	1/10W	R655	1-216-841-11	METAL CHIP	47K	5%	1/10W
R308	1-216-851-11	METAL CHIP	330K	5%	1/10W	R656	1-216-838-11	METAL CHIP	27K	5%	1/10W
R309	1-216-851-11	METAL CHIP	330K	5%	1/10W	R657	1-216-809-11	METAL CHIP	100	5%	1/10W
R310	1-216-835-11	METAL CHIP	15K	5%	1/10W	R663	1-216-845-11	METAL CHIP	100K	5%	1/10W
R311	1-216-835-11	METAL CHIP	15K	5%	1/10W	R664	1-216-821-11	METAL CHIP	1K	5%	1/10W
R312	1-249-419-11	CARBON	1.5K	5%	1/4W	R710	1-260-300-11	CARBON	4.7	5%	1/2W
R313	1-249-419-11	CARBON	1.5K	5%	1/4W	R711	1-249-419-11	CARBON	1.5K	5%	1/4W
R314	1-216-797-11	METAL CHIP	10	5%	1/10W	R712	1-249-419-11	CARBON	1.5K	5%	1/4W
R350	1-216-833-11	METAL CHIP	10K	5%	1/10W	R713	1-216-833-11	METAL CHIP	10K	5%	1/10W
R351	1-249-419-11	CARBON	1.5K	5%	1/4W	R720	1-216-833-11	METAL CHIP	10K	5%	1/10W
R352	1-249-419-11	CARBON	1.5K	5%	1/4W	R721	1-247-749-11	CARBON	560	5%	1/2W F
R353	1-217-671-11	METAL CHIP	1	5%	1/10W	R722	1-216-864-11	SHORT CHIP	0		
R400	1-216-797-11	METAL CHIP	10	5%	1/10W	R725	1-247-749-11	CARBON	560	5%	1/2W F
R401	1-216-840-11	METAL CHIP	39K	5%	1/10W	R728	1-216-833-11	METAL CHIP	10K	5%	1/10W
R402	1-216-809-11	METAL CHIP	100	5%	1/10W	R730	1-216-833-11	METAL CHIP	10K	5%	1/10W
R403	1-216-809-11	METAL CHIP	100	5%	1/10W	R731	1-249-421-11	CARBON	2.2K	5%	1/4W
R404	1-216-809-11	METAL CHIP	100	5%	1/10W	R732	1-216-817-11	METAL CHIP	470	5%	1/10W
R405	1-216-809-11	METAL CHIP	100	5%	1/10W	R740	1-216-837-11	METAL CHIP	22K	5%	1/10W

Ref. No.	Part No.	Description	Remark
R800	1-216-833-11	METAL CHIP 10K	5% 1/10W
R801	1-216-809-11	METAL CHIP 100	5% 1/10W
R802	1-216-809-11	METAL CHIP 100	5% 1/10W
R804	1-216-797-11	METAL CHIP 10	5% 1/10W
R811	1-249-417-11	CARBON 1K	5% 1/4W
R814	1-216-849-11	METAL CHIP 220K	5% 1/10W
R815	1-216-864-11	SHORT CHIP 0	
R852	1-216-864-11	SHORT CHIP 0	
R853	1-216-864-11	SHORT CHIP 0	

< SWITCH >

S1	1-692-431-21	SWITCH, TACTILE (RESET)
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< THERMISTOR >

TH700	1-801-726-11	THERMISTOR, POSITIVE
TH701	1-801-726-11	THERMISTOR, POSITIVE
TH800	1-801-792-21	THERMISTOR, POSITIVE

< TUNER >

TU100	A-3220-944-A	TUNER UNIT (TUX-031//Q2)
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< VIBRATOR >

X1	1-795-539-11	VIBRATOR, CRYSTAL (18.432MHz)
X2	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)

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MISCELLANEOUS

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6	1-776-207-31	CORD (WITH CONNECTOR) (POWER)
57	1-780-021-11	CONDUCTIVE BOARD, CONNECTION
58	1-786-464-11	SWITCH, SHEET
169	A-3220-926-B	MECHANISM DECK ASSY (MG-36SZ13-32)
F901	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) (10A/32V)

HP901	1-500-661-11	HEAD, MAGNETIC (PLAYBACK)
LCD1	1-805-131-11	DISPLAY PANEL, LIQUID CRYSTAL
M901	1-763-507-11	MOTOR, DC (CAPSTAN/REEL)
S901	1-771-928-11	SWITCH, SLIDE (DIRECTION)
S902	1-771-926-11	SWITCH, LEAF (FF/REW)

S903	1-771-927-11	SWITCH, LEAF (TAPE DETECT)
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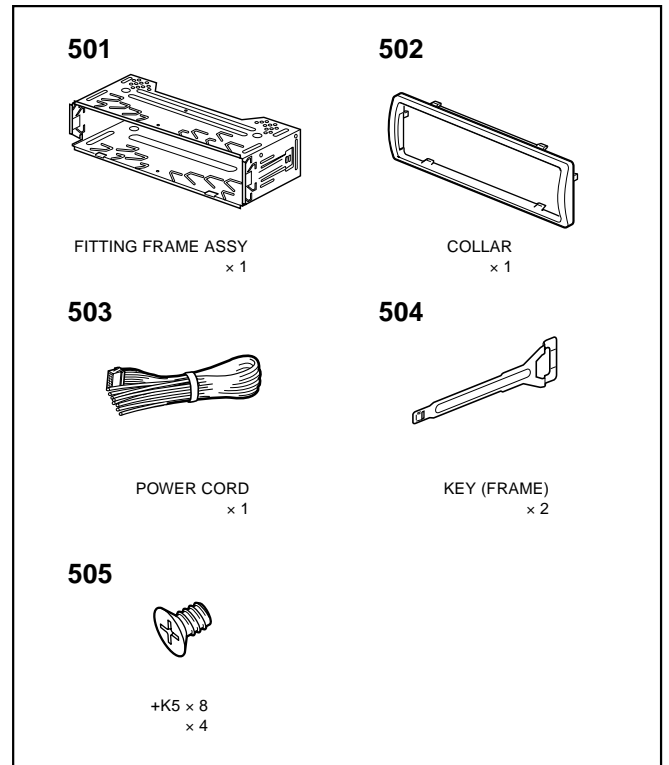
ACCESSORIES

\*\*\*\*\*

3-246-852-12	MANUAL, INSTRUCTION (ENGLISH, FRENCH)
3-246-853-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH, FRENCH)

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Ref. No.	Part No.	Description	Remark
PARTS FOR INSTALLATION AND CONNECTIONS			
*****			
501	X-3382-647-1	FRAME ASSY, FITTING	
502	3-246-758-01	COLLAR	
503	1-776-207-31	CORD (WITH CONNECTOR) (POWER)	
504	3-246-471-01	KEY (FRAME)	
505	3-934-325-01	SCREW, +K (5X8) TAPPING	



MEMO

# XR-CA350X

SONY®

US Model  
Canadian Model

## SERVICE MANUAL

Ver 1.3 2003.10

### SUPPLEMENT-1

File this supplement with the service manual.

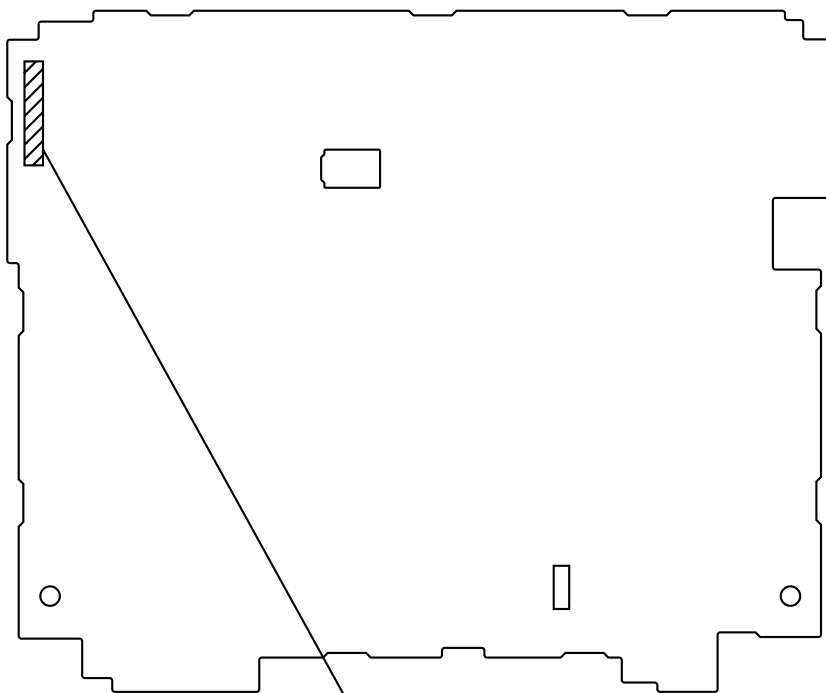
Subject: Change of MAIN board.

(ENG-03018)

In this set, MAIN board have been changed in the midway of production.  
Printed wiring boards and schematic diagrams of type B, and changed parts list are described in this supplement-1.  
Refer to original service manual for other information.

#### • TYPE A/B DISCRIMINATION

– MAIN BOARD (Conductor Side) –



Type A: PTP008401  
Type B: PTP008402

## 1 DIAGRAMS

### 1-1. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

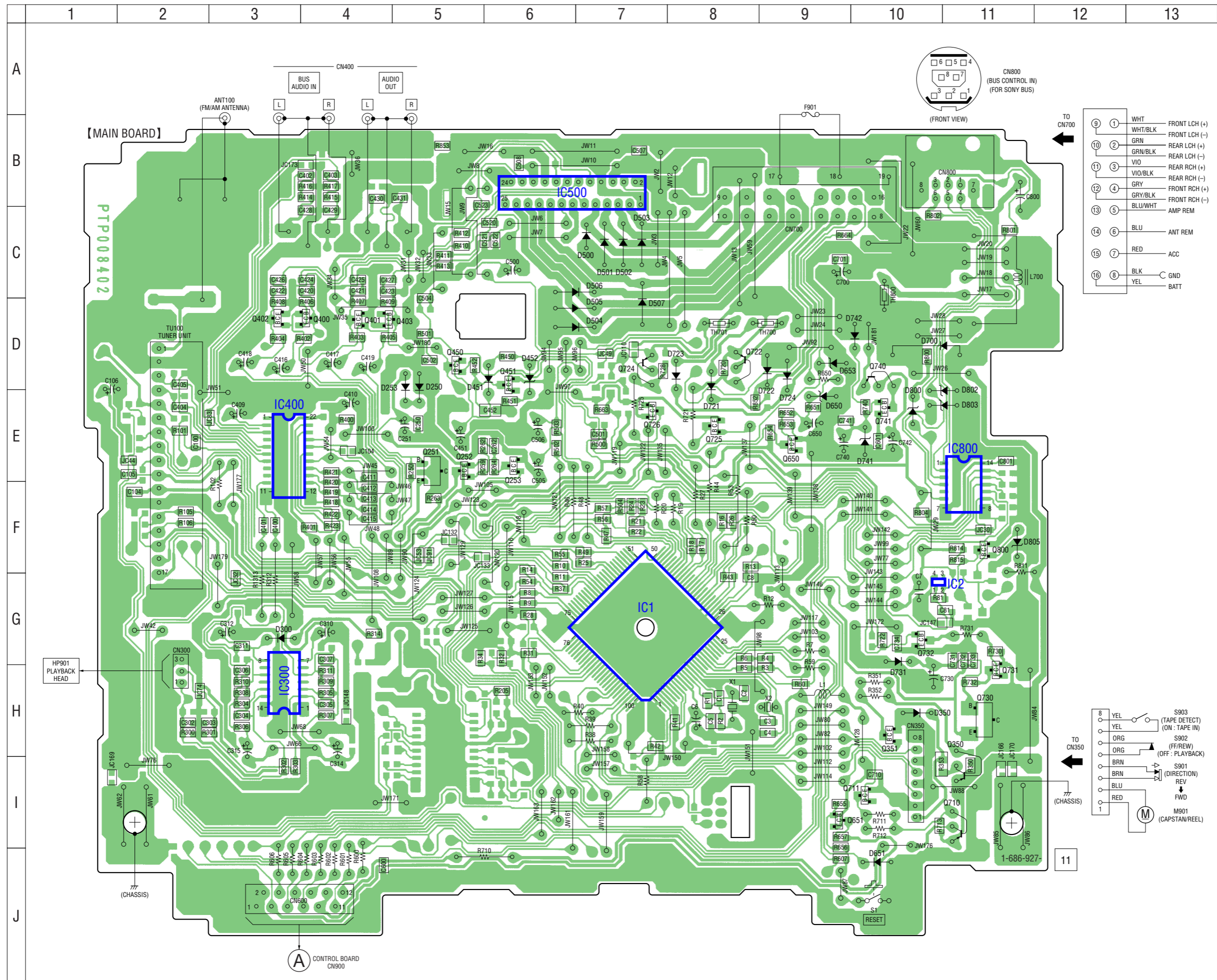
#### Note on Printed Wiring Board:

- — : parts extracted from the component side.
- : Pattern from the side which enables seeing.  
(The other layers' patterns are not indicated.)
- When replacing the IC1, refer to servicing note (Page 2 "When replacing the IC1").

#### Note on Schematic Diagram:

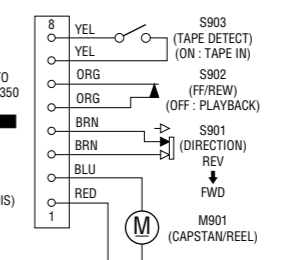
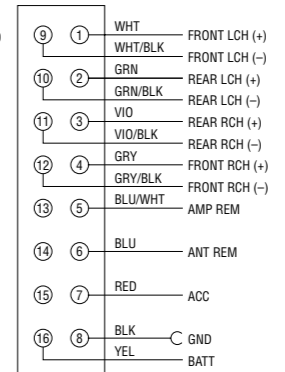
- All capacitors are in  $\mu\text{F}$  unless otherwise noted. pF:  $\mu\mu\text{F}$  50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $\frac{1}{4}\text{W}$  or less unless otherwise specified.
- : panel designation.
- : B+ Line.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.  
no mark : FM  
( ) : AM  
<< >> : TAPE PLAYBACK
- Voltages are taken with a VOM (Input impedance  $10\text{M}\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Signal path.  
⇒ : FM  
➡ : AM  
∑ : TAPE PLAYBACK  
⇒⇒ : BUS AUDIO IN
- When replacing the IC1, refer to servicing note (Page 2 "When replacing the IC1").

1-2. PRINTED WIRING BOARD – MAIN Board (Type B) – Note: When replacing the IC1, refer to servicing note (Page 2 “When replacing the IC1”).

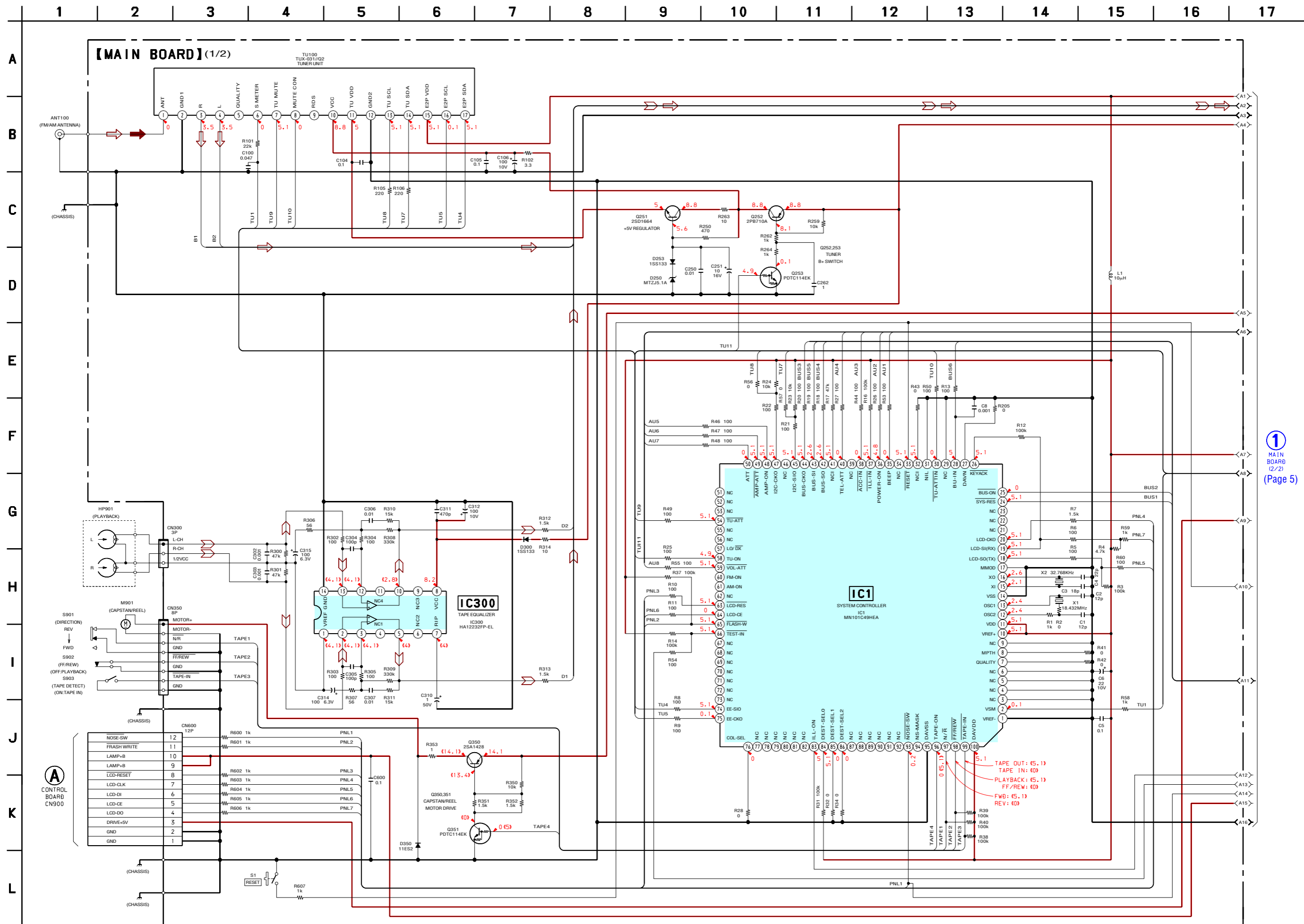


• Semiconductor Location

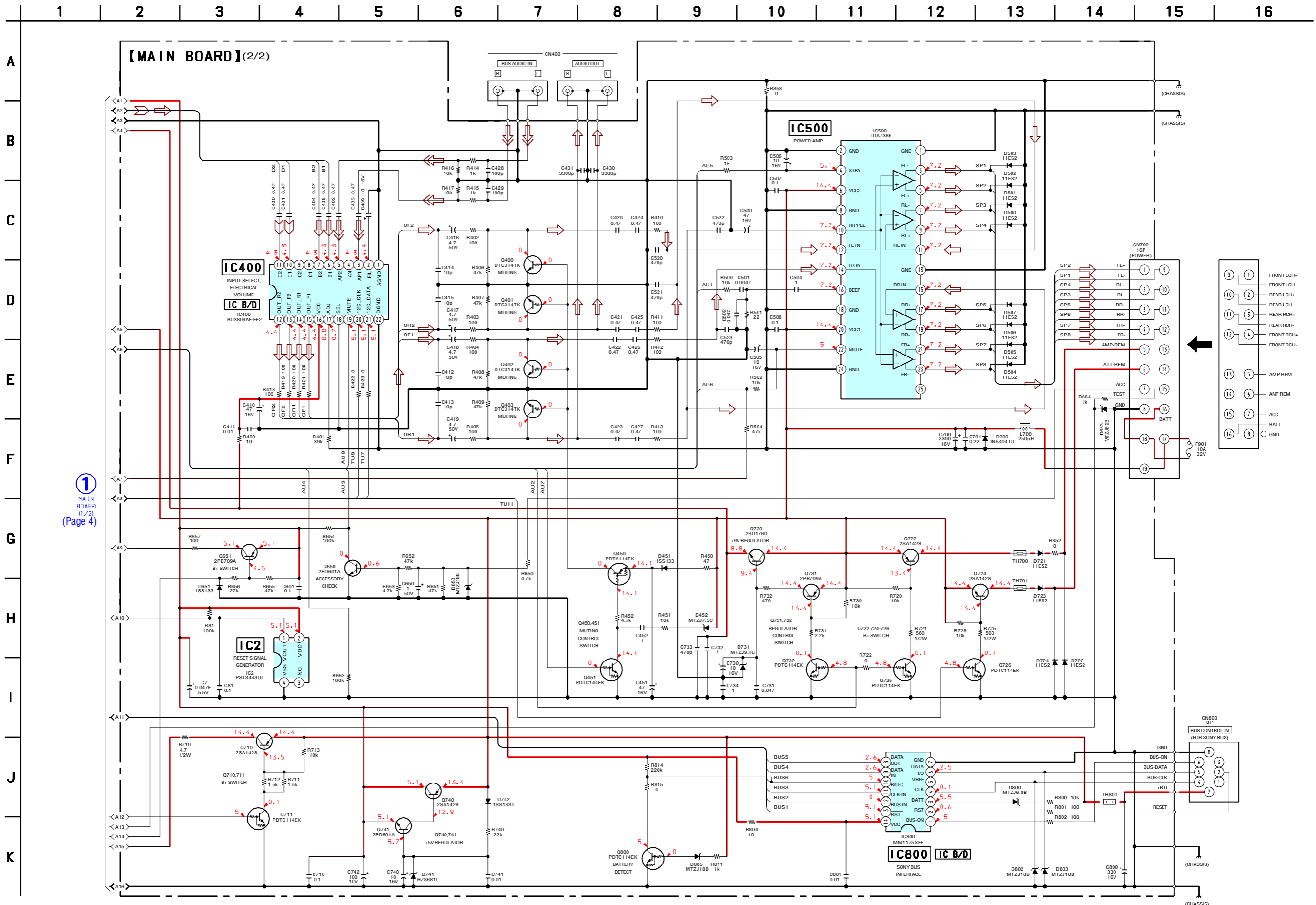
Ref. No.	Location
D250	D-5
D253	D-5
D300	G-3
D350	H-10
D451	D-6
D452	D-6
D500	C-7
D501	C-7
D502	C-7
D503	C-7
D504	D-7
D505	D-7
D506	C-7
D507	D-7
D650	E-9
D651	J-10
D653	D-9
D700	D-10
D721	D-8
D722	D-9
D723	D-8
D724	D-9
D731	H-11
D741	E-10
D742	D-10
D800	E-10
D802	E-11
D803	E-11
D805	F-11
IC1	G-7
IC2	H-11
IC300	H-3
IC400	E-3
IC500	B-6
IC800	E-11
Q251	E-5
Q252	E-5
Q253	E-6
Q350	I-11
Q351	H-10
Q400	D-4
Q401	D-4
Q402	D-3
Q403	D-4
Q450	D-5
Q451	D-6
Q650	E-9
Q651	I-9
Q710	I-11
Q711	I-10
Q722	D-8
Q724	D-7
Q725	E-8
Q726	E-7
Q730	H-11
Q731	G-11
Q732	G-10
Q740	D-10
Q741	E-10
Q800	F-11



1-3. SCHEMATIC DIAGRAM – MAIN Board (Type B) (1/2) – Note: When replacing the IC1, refer to servicing note (Page 2 “When replacing the IC1”).



1-4. SCHEMATIC DIAGRAM – MAIN Board (Type B) (2/2) –



1 MAIN BOARD (1/2) (Page 4)

MEMO

## 2 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.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS  
All resistors are in ohms.  
METAL: Metal-film resistor.  
METAL OXIDE: Metal oxide-film resistor.  
F: nonflammable
- Items marked “\*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- 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

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

- When replacing the IC1, refer to servicing note (Page 2 “When replacing the IC1”).

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
	A-3274-976-A	MAIN BOARD, COMPLETE *****		C410	1-124-589-11	ELECT 47uF 20%	16V
*	3-041-578-01	BRACKET (IC)		C411	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
	7-685-794-09	SCREW +PTT 2.6X10 (S)		C412	1-162-915-11	CERAMIC CHIP 10PF 0.5PF	50V
	< JACK >			C413	1-162-915-11	CERAMIC CHIP 10PF 0.5PF	50V
ANT100	1-815-185-13	JACK (ANT) (FM/AM ANTENNA)		C414	1-162-915-11	CERAMIC CHIP 10PF 0.5PF	50V
	< CAPACITOR >			C415	1-162-915-11	CERAMIC CHIP 10PF 0.5PF	50V
C1	1-162-916-11	CERAMIC CHIP 12PF 5%	50V	C416	1-126-163-11	ELECT 4.7uF 20%	50V
C2	1-162-916-11	CERAMIC CHIP 12PF 5%	50V	C417	1-126-163-11	ELECT 4.7uF 20%	50V
C3	1-162-918-11	CERAMIC CHIP 18PF 5%	50V	C418	1-126-163-11	ELECT 4.7uF 20%	50V
C4	1-162-919-11	CERAMIC CHIP 22PF 5%	50V	C419	1-126-163-11	ELECT 4.7uF 20%	50V
C5	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	C420	1-125-891-11	CERAMIC CHIP 0.47uF 10%	10V
C6	1-124-234-00	ELECT 22uF 20%	16V	C421	1-125-891-11	CERAMIC CHIP 0.47uF 10%	10V
C7	1-125-701-11	DOUBLE LAYER 0.047F	5.5V	C422	1-125-891-11	CERAMIC CHIP 0.47uF 10%	10V
C8	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V	C423	1-125-891-11	CERAMIC CHIP 0.47uF 10%	10V
C81	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	C424	1-125-891-11	CERAMIC CHIP 0.47uF 10%	10V
C100	1-165-176-11	CERAMIC CHIP 0.047uF 10%	16V	C425	1-125-891-11	CERAMIC CHIP 0.47uF 10%	10V
C104	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C426	1-125-891-11	CERAMIC CHIP 0.47uF 10%	10V
C105	1-164-156-11	CERAMIC CHIP 0.1uF 10%	25V	C427	1-125-891-11	CERAMIC CHIP 0.47uF 10%	10V
C106	1-124-584-00	ELECT 100uF 20%	10V	C428	1-162-927-11	CERAMIC CHIP 100PF 5%	50V
C250	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V	C429	1-162-927-11	CERAMIC CHIP 100PF 5%	50V
C251	1-126-157-11	ELECT 10uF 20%	16V	C430	1-162-967-11	CERAMIC CHIP 0.0033uF 10%	50V
C262	1-165-908-11	CERAMIC CHIP 1uF 10%	10V	C431	1-162-967-11	CERAMIC CHIP 0.0033uF 10%	50V
C302	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V	C451	1-124-589-11	ELECT 47uF 20%	16V
C303	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V	C452	1-109-982-11	CERAMIC CHIP 1uF 10%	10V
C304	1-162-927-11	CERAMIC CHIP 100PF 5%	50V	C500	1-124-589-11	ELECT 47uF 20%	16V
C305	1-162-927-11	CERAMIC CHIP 100PF 5%	50V	C501	1-162-968-11	CERAMIC CHIP 0.0047uF 10%	50V
C306	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V	C502	1-165-176-11	CERAMIC CHIP 0.047uF 10%	16V
C307	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V	C504	1-165-908-11	CERAMIC CHIP 1uF 10%	10V
C310	1-104-942-11	ELECT 1uF 20%	50V	C505	1-126-157-11	ELECT 10uF 20%	16V
C311	1-164-315-11	CERAMIC CHIP 470PF 5%	50V	C506	1-126-157-11	ELECT 10uF 20%	16V
C312	1-124-584-00	ELECT 100uF 20%	10V	C507	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C314	1-124-584-00	ELECT 100uF 20%	10V	C508	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C315	1-124-584-00	ELECT 100uF 20%	10V	C520	1-164-315-11	CERAMIC CHIP 470PF 5%	50V
C400	1-125-891-11	CERAMIC CHIP 0.47uF 10%	10V	C521	1-164-315-11	CERAMIC CHIP 470PF 5%	50V
C401	1-125-891-11	CERAMIC CHIP 0.47uF 10%	10V	C522	1-164-315-11	CERAMIC CHIP 470PF 5%	50V
C402	1-125-891-11	CERAMIC CHIP 0.47uF 10%	10V	C523	1-164-315-11	CERAMIC CHIP 470PF 5%	50V
C403	1-125-891-11	CERAMIC CHIP 0.47uF 10%	10V	C600	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C404	1-125-891-11	CERAMIC CHIP 0.47uF 10%	10V	C601	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C405	1-125-891-11	CERAMIC CHIP 0.47uF 10%	10V	C650	1-104-942-11	ELECT 1uF 20%	50V
C409	1-126-157-11	ELECT 10uF 20%	16V	C700	1-126-936-11	ELECT 3300uF 20%	16V
				C701	1-165-128-11	CERAMIC CHIP 0.22uF	16V
				C710	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
				C730	1-126-157-11	ELECT 10uF 20%	16V

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C731	1-165-176-11	CERAMIC CHIP	0.047uF 10% 16V			< SHORT >	
C732	1-165-908-11	CERAMIC CHIP	1uF 10% 10V				
C733	1-164-315-11	CERAMIC CHIP	470PF 5% 50V	JC30	1-216-864-11	SHORT CHIP	0
C734	1-165-908-11	CERAMIC CHIP	1uF 10% 10V	JC44	1-216-864-11	SHORT CHIP	0
C740	1-126-157-11	ELECT	10uF 20% 16V	JC49	1-216-864-11	SHORT CHIP	0
C741	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	JC52	1-216-864-11	SHORT CHIP	0
C742	1-124-584-00	ELECT	100uF 20% 10V	JC53	1-216-864-11	SHORT CHIP	0
C800	1-126-940-11	ELECT	330uF 20% 16V	JC74	1-216-864-11	SHORT CHIP	0
C801	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	JC83	1-216-864-11	SHORT CHIP	0
		< CONNECTOR/JACK >		JC91	1-216-864-11	SHORT CHIP	0
* CN300	1-564-705-11	PIN, CONNECTOR (PC BOARD) 3P		JC104	1-216-864-11	SHORT CHIP	0
* CN350	1-573-486-11	PIN, CONNECTOR (PC BOARD) 8P		JC110	1-216-864-11	SHORT CHIP	0
CN400	1-774-699-12	JACK, PIN 4P (BUS AUDIO IN, AUDIO OUT)		JC132	1-216-864-11	SHORT CHIP	0
CN600	1-794-311-21	PLUG, CONNECTOR 12P		JC133	1-216-864-11	SHORT CHIP	0
CN700	1-774-701-11	PIN, CONNECTOR 16P (POWER)		JC134	1-216-864-11	SHORT CHIP	0
CN800	1-580-907-31	PLUG, CONNECTOR (BUS CONTROL IN)		JC147	1-216-864-11	SHORT CHIP	0
		< DIODE >		JC148	1-216-864-11	SHORT CHIP	0
D250	8-719-921-42	DIODE MTZJ-5.1A		JC166	1-216-864-11	SHORT CHIP	0
D253	8-719-991-33	DIODE 1SS133T-77		JC169	1-216-864-11	SHORT CHIP	0
D300	8-719-991-33	DIODE 1SS133T-77		JC170	1-216-864-11	SHORT CHIP	0
D350	8-719-200-82	DIODE 11ES2		JC173	1-216-864-11	SHORT CHIP	0
D451	8-719-991-33	DIODE 1SS133T-77				< COIL >	
D452	8-719-110-03	DIODE RD7.5ESB2		L1	1-410-509-11	INDUCTOR	10uH
D500	8-719-200-82	DIODE 11ES2		L700	1-419-476-11	COIL, CHOKE	250uH
D501	8-719-200-82	DIODE 11ES2				< TRANSISTOR >	
D502	8-719-200-82	DIODE 11ES2		Q251	8-729-920-85	TRANSISTOR	2SD1664-QR
D503	8-719-200-82	DIODE 11ES2		Q252	8-729-049-85	TRANSISTOR	2PB710AR-115
D504	8-719-200-82	DIODE 11ES2		Q253	8-729-043-27	TRANSISTOR	PDTC114EK-115
D505	8-719-200-82	DIODE 11ES2		Q350	8-729-205-95	TRANSISTOR	2SA1428-Y
D506	8-719-200-82	DIODE 11ES2		Q351	8-729-043-27	TRANSISTOR	PDTC114EK-115
D507	8-719-200-82	DIODE 11ES2		Q400	8-729-920-21	TRANSISTOR	DTC314TK-T-146
D650	8-719-110-49	DIODE RD18ES-B2		Q401	8-729-920-21	TRANSISTOR	DTC314TK-T-146
D651	8-719-991-33	DIODE 1SS133T-77		Q402	8-729-920-21	TRANSISTOR	DTC314TK-T-146
D653	8-719-109-93	DIODE RD6.2ESB2		Q403	8-729-920-21	TRANSISTOR	DTC314TK-T-146
D700	8-719-049-38	DIODE 1N5404TU		Q450	8-729-043-32	TRANSISTOR	PDTA114EK-115
D721	8-719-200-82	DIODE 11ES2		Q451	8-729-043-29	TRANSISTOR	PDTC144EK-115
D722	8-719-200-82	DIODE 11ES2		Q650	8-729-422-33	TRANSISTOR	2PD601A-Q-TX
D723	8-719-200-82	DIODE 11ES2		Q651	8-729-216-22	TRANSISTOR	2SA1162-G
D724	8-719-200-82	DIODE 11ES2		Q710	8-729-205-95	TRANSISTOR	2SA1428-Y
D731	8-719-110-14	DIODE RD9.1ES-B3		Q711	8-729-043-27	TRANSISTOR	PDTC114EK-115
D741	8-719-935-39	DIODE HZS6B1LTD		Q722	8-729-205-95	TRANSISTOR	2SA1428-Y
D742	8-719-991-33	DIODE 1SS133T-77		Q724	8-729-205-95	TRANSISTOR	2SA1428-Y
D800	8-719-109-97	DIODE RD6.8ES-B2		Q725	8-729-043-27	TRANSISTOR	PDTC114EK-115
D802	8-719-110-49	DIODE RD18ES-B2		Q726	8-729-043-27	TRANSISTOR	PDTC114EK-115
D803	8-719-110-49	DIODE RD18ES-B2		Q730	8-729-921-48	TRANSISTOR	2SD1760F5-Q
D805	8-719-110-49	DIODE RD18ES-B2		Q731	8-729-216-22	TRANSISTOR	2SA1162-G
		< IC >		Q732	8-729-043-27	TRANSISTOR	PDTC114EK-115
IC1	6-803-178-01	IC MN101C49HEA		Q740	8-729-205-95	TRANSISTOR	2SA1428-Y
IC2	6-701-405-01	IC PST3443UL		Q741	8-729-422-33	TRANSISTOR	2PD601A-Q-TX
IC300	6-802-510-01	IC HA12232FP-EL		Q800	8-729-043-27	TRANSISTOR	PDTC114EK-115
IC400	6-703-302-02	IC BD3803AF-FE2				< RESISTOR >	
IC500	8-759-486-44	IC TDA7386		R1	1-216-821-11	METAL CHIP	1K 5% 1/10W
IC800	8-759-096-16	IC MM1175XFF		R2	1-216-864-11	SHORT CHIP	0
				R3	1-216-845-11	METAL CHIP	100K 5% 1/10W
				R4	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
				R5	1-216-809-11	METAL CHIP	100 5% 1/10W

When replacing the IC1, refer to servicing note (Page 2 "When replacing the IC1").

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R6	1-216-809-11	METAL CHIP	100 5% 1/10W	R264	1-216-821-11	RES-CHIP	1K 5% 1/10W
R7	1-249-419-11	CARBON	1.5K 5% 1/4W	R300	1-216-841-11	METAL CHIP	47K 5% 1/10W
R8	1-216-809-11	METAL CHIP	100 5% 1/10W	R301	1-216-841-11	METAL CHIP	47K 5% 1/10W
R9	1-216-809-11	METAL CHIP	100 5% 1/10W	R302	1-216-809-11	METAL CHIP	100 5% 1/10W
R10	1-216-809-11	METAL CHIP	100 5% 1/10W	R303	1-216-809-11	METAL CHIP	100 5% 1/10W
R11	1-216-809-11	METAL CHIP	100 5% 1/10W	R304	1-216-809-11	METAL CHIP	100 5% 1/10W
R12	1-249-441-11	CARBON	100K 5% 1/4W	R305	1-216-809-11	METAL CHIP	100 5% 1/10W
R13	1-216-809-11	METAL CHIP	100 5% 1/10W	R306	1-216-806-11	METAL CHIP	56 5% 1/10W
R14	1-216-845-11	METAL CHIP	100K 5% 1/10W	R307	1-216-806-11	METAL CHIP	56 5% 1/10W
R16	1-216-845-11	METAL CHIP	100K 5% 1/10W	R308	1-216-851-11	METAL CHIP	330K 5% 1/10W
R17	1-216-841-11	METAL CHIP	47K 5% 1/10W	R309	1-216-851-11	METAL CHIP	330K 5% 1/10W
R18	1-216-809-11	METAL CHIP	100 5% 1/10W	R310	1-216-835-11	METAL CHIP	15K 5% 1/10W
R19	1-247-807-31	CARBON	100 5% 1/4W	R311	1-216-835-11	METAL CHIP	15K 5% 1/10W
R20	1-247-807-31	CARBON	100 5% 1/4W	R312	1-249-419-11	CARBON	1.5K 5% 1/4W
R21	1-216-809-11	METAL CHIP	100 5% 1/10W	R313	1-249-419-11	CARBON	1.5K 5% 1/4W
R22	1-216-809-11	METAL CHIP	100 5% 1/10W	R314	1-216-797-11	METAL CHIP	10 5% 1/10W
R23	1-216-833-11	METAL CHIP	10K 5% 1/10W	R350	1-216-833-11	METAL CHIP	10K 5% 1/10W
R24	1-216-833-11	METAL CHIP	10K 5% 1/10W	R351	1-249-419-11	CARBON	1.5K 5% 1/4W
R25	1-216-809-11	METAL CHIP	100 5% 1/10W	R352	1-249-419-11	CARBON	1.5K 5% 1/4W
R26	1-216-809-11	METAL CHIP	100 5% 1/10W	R353	1-217-671-11	METAL CHIP	1 5% 1/10W
R27	1-247-807-31	CARBON	100 5% 1/4W	R400	1-216-797-11	METAL CHIP	10 5% 1/10W
R28	1-216-864-11	SHORT CHIP	0	R401	1-216-840-11	METAL CHIP	39K 5% 1/10W
R31	1-216-845-11	METAL CHIP	100K 5% 1/10W	R402	1-216-809-11	METAL CHIP	100 5% 1/10W
R32	1-216-864-11	SHORT CHIP	0	R403	1-216-809-11	METAL CHIP	100 5% 1/10W
R34	1-216-864-11	SHORT CHIP	0	R404	1-216-809-11	METAL CHIP	100 5% 1/10W
R37	1-216-845-11	METAL CHIP	100K 5% 1/10W	R405	1-216-809-11	METAL CHIP	100 5% 1/10W
R38	1-249-441-11	CARBON	100K 5% 1/4W	R406	1-216-841-11	METAL CHIP	47K 5% 1/10W
R39	1-249-441-11	CARBON	100K 5% 1/4W	R407	1-216-841-11	METAL CHIP	47K 5% 1/10W
R40	1-249-441-11	CARBON	100K 5% 1/4W	R408	1-216-841-11	METAL CHIP	47K 5% 1/10W
R41	1-216-864-11	SHORT CHIP	0	R409	1-216-841-11	METAL CHIP	47K 5% 1/10W
R42	1-216-864-11	SHORT CHIP	0	R410	1-216-809-11	METAL CHIP	100 5% 1/10W
R43	1-216-864-11	SHORT CHIP	0	R411	1-216-809-11	METAL CHIP	100 5% 1/10W
R44	1-247-807-31	CARBON	100 5% 1/4W	R412	1-216-809-11	METAL CHIP	100 5% 1/10W
R46	1-247-807-31	CARBON	100 5% 1/4W	R413	1-216-809-11	METAL CHIP	100 5% 1/10W
R47	1-216-809-11	METAL CHIP	100 5% 1/10W	R414	1-216-821-11	METAL CHIP	1K 5% 1/10W
R48	1-247-807-31	CARBON	100 5% 1/4W	R415	1-216-821-11	METAL CHIP	1K 5% 1/10W
R49	1-216-809-11	METAL CHIP	100 5% 1/10W	R416	1-216-833-11	METAL CHIP	10K 5% 1/10W
R50	1-247-807-31	CARBON	100 5% 1/4W	R417	1-216-833-11	METAL CHIP	10K 5% 1/10W
R53	1-247-807-31	CARBON	100 5% 1/4W	R418	1-216-809-11	METAL CHIP	100 5% 1/10W
R54	1-216-809-11	METAL CHIP	100 5% 1/10W	R419	1-216-809-11	METAL CHIP	100 5% 1/10W
R55	1-216-809-11	METAL CHIP	100 5% 1/10W	R420	1-216-809-11	METAL CHIP	100 5% 1/10W
R56	1-216-864-11	SHORT CHIP	0	R421	1-216-809-11	METAL CHIP	100 5% 1/10W
R57	1-216-864-11	SHORT CHIP	0	R422	1-216-864-11	SHORT CHIP	0
R58	1-249-417-11	CARBON	1K 5% 1/4W	R423	1-216-864-11	SHORT CHIP	0
R59	1-249-417-11	CARBON	1K 5% 1/4W	R450	1-216-805-11	METAL CHIP	47 5% 1/10W
R60	1-216-809-11	METAL CHIP	100 5% 1/10W	R451	1-216-833-11	METAL CHIP	10K 5% 1/10W
R81	1-216-845-11	METAL CHIP	100K 5% 1/10W	R452	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R101	1-216-837-11	METAL CHIP	22K 5% 1/10W	R500	1-216-833-11	METAL CHIP	10K 5% 1/10W
R102	1-249-387-11	CARBON	3.3 5% 1/4W	R501	1-216-801-11	METAL CHIP	22 5% 1/10W
R105	1-216-813-11	METAL CHIP	220 5% 1/10W	R502	1-216-833-11	METAL CHIP	10K 5% 1/10W
R106	1-216-813-11	METAL CHIP	220 5% 1/10W	R503	1-216-821-11	METAL CHIP	1K 5% 1/10W
R205	1-216-864-11	SHORT CHIP	0	R504	1-216-841-11	METAL CHIP	47K 5% 1/10W
R250	1-216-817-11	METAL CHIP	470 5% 1/10W	R600	1-249-417-11	CARBON	1K 5% 1/4W
R259	1-216-833-11	METAL CHIP	10K 5% 1/10W	R601	1-249-417-11	CARBON	1K 5% 1/4W
R262	1-216-821-11	METAL CHIP	1K 5% 1/10W	R602	1-249-417-11	CARBON	1K 5% 1/4W
R263	1-216-797-11	METAL CHIP	10 5% 1/10W	R603	1-249-417-11	CARBON	1K 5% 1/4W
				R604	1-249-417-11	CARBON	1K 5% 1/4W
				R605	1-249-417-11	CARBON	1K 5% 1/4W

# XR-CA350X

## MAIN

Ref. No.	Part No.	Description			Remark
R606	1-249-417-11	CARBON	1K	5%	1/4W
R607	1-216-821-11	METAL CHIP	1K	5%	1/10W
R650	1-249-425-11	CARBON	4.7K	5%	1/4W
R651	1-216-841-11	METAL CHIP	47K	5%	1/10W
R652	1-216-841-11	METAL CHIP	47K	5%	1/10W
R653	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R654	1-216-845-11	METAL CHIP	100K	5%	1/10W
R655	1-216-841-11	METAL CHIP	47K	5%	1/10W
R656	1-216-838-11	METAL CHIP	27K	5%	1/10W
R657	1-216-809-11	METAL CHIP	100	5%	1/10W
R663	1-216-845-11	METAL CHIP	100K	5%	1/10W
R664	1-216-821-11	METAL CHIP	1K	5%	1/10W
R710	1-260-300-11	CARBON	4.7	5%	1/2W
R711	1-249-419-11	CARBON	1.5K	5%	1/4W
R712	1-249-419-11	CARBON	1.5K	5%	1/4W
R713	1-216-833-11	METAL CHIP	10K	5%	1/10W
R720	1-216-833-11	METAL CHIP	10K	5%	1/10W
R721	1-247-749-11	CARBON	560	5%	1/2W F
R722	1-216-864-11	SHORT CHIP	0		
R725	1-247-749-11	CARBON	560	5%	1/2W F
R728	1-216-833-11	METAL CHIP	10K	5%	1/10W
R730	1-216-833-11	METAL CHIP	10K	5%	1/10W
R731	1-249-421-11	CARBON	2.2K	5%	1/4W
R732	1-216-817-11	METAL CHIP	470	5%	1/10W
R740	1-216-837-11	METAL CHIP	22K	5%	1/10W
R800	1-216-833-11	METAL CHIP	10K	5%	1/10W
R801	1-216-809-11	METAL CHIP	100	5%	1/10W
R802	1-216-809-11	METAL CHIP	100	5%	1/10W
R804	1-216-797-11	METAL CHIP	10	5%	1/10W
R811	1-249-417-11	CARBON	1K	5%	1/4W
R814	1-216-849-11	METAL CHIP	220K	5%	1/10W
R815	1-216-864-11	SHORT CHIP	0		
R852	1-216-864-11	SHORT CHIP	0		
R853	1-216-864-11	SHORT CHIP	0		
< SWITCH >					
S1	1-692-431-21	SWITCH, TACTILE (RESET)			
< THERMISTOR >					
TH700	1-801-726-11	THERMISTOR, POSITIVE			
TH701	1-801-726-11	THERMISTOR, POSITIVE			
TH800	1-801-792-21	THERMISTOR, POSITIVE			
< TUNER >					
TU100	A-3220-944-A	TUNER UNIT (TUX-031//Q2)			
< VIBRATOR >					
X1	1-795-539-11	VIBRATOR, CRYSTAL (18.432MHz)			
X2	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)			

MEMO

