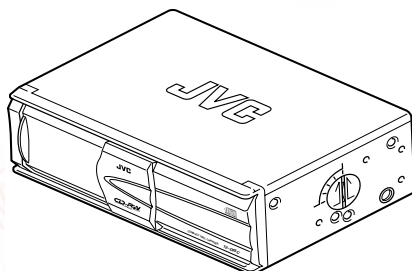


JVC

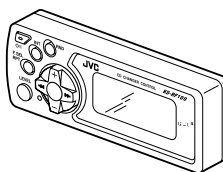
SERVICE MANUAL

CD CHANGER, CD CHANGER FM SYSTEM

CH-X1100, CH-X1100RF, CH-X470RF



CH-X1100

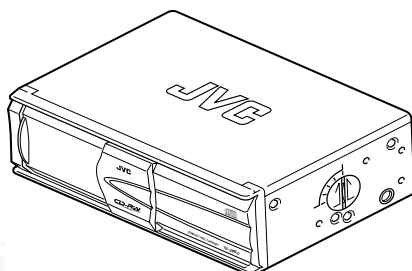


KS-RF100

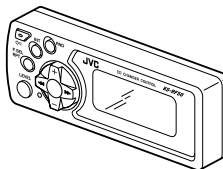
COMPACT
disc
DIGITAL AUDIO

CD-RW
PLAYBACK

- CH-X1100RF is a combination of CH-X1100 and KS-RF100.
- KS-RF100 is a combination of Remote control and the RF unit.



CH-X470



KS-RF50

COMPACT
disc
DIGITAL AUDIO

CD-RW
PLAYBACK

- CH-X470RF is a combination of CH-X470 and KS-RF50.
- KS-RF50 is a combination of Remote control and the RF unit.

Area Suffix

J ----- Northern America

TABLE OF CONTENTS


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2	SPECIFIC SERVICE INSTRUCTIONS.....	1-5
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SPECIFICATION

CD CHANGER SECTION	Frequency response		5 Hz - 20000Hz
	Dynamic range		93dB
	S/N ratio		96dB
	Distortion		0.006%
	Wow & Flutter		Less than measurable limit
	Output terminal		Analog (8 pin × 1), 1.5V (full scale)/less than 1k Ω
GENERAL	Power requirement	Operating voltage	DC 14.4 V (11 V - 16 V allowable)
		Grounding system	Negative ground
	Allowable working temperature		10°C to +50°C
	Dimensions (W × H × D)		252 mm × 88 mm × 174 mm (9-15/16" × 3-1/2" × 6-7/8")
	Mass		2.3 kg (5.1lbs.) (excluding accessories)

SECTION 1 PRECAUTION

1.1 Safety Precautions

 **CAUTION** Burrs formed during molding may be left over on some parts of the chassis. Therefore, pay attention to such burrs in the case of performing repair of this system.

 **CAUTION** Please use enough caution not to see the beam directly or touch it in case of an adjustment or operation check.

1.2 Preventing static electricity

Electrostatic discharge (ESD), which occurs when static electricity stored in the body, fabric, etc. is discharged, can destroy the laser diode in the traverse unit (optical pickup). Take care to prevent this when performing repairs.

1.2.1 Grounding to prevent damage by static electricity

Static electricity in the work area can destroy the optical pickup (laser diode) in devices such as CD players.

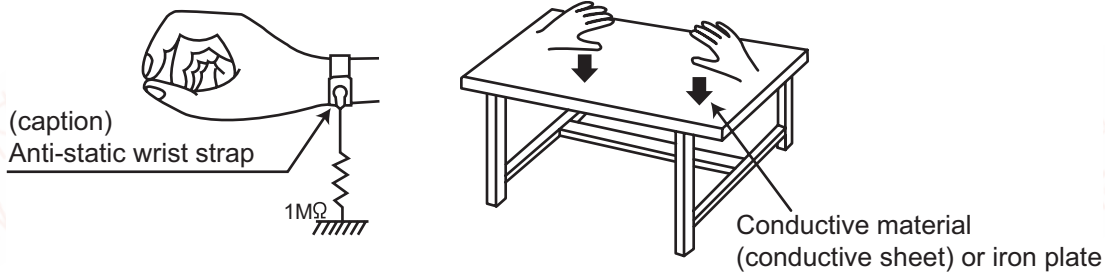
Be careful to use proper grounding in the area where repairs are being performed.

(1) Ground the workbench

Ground the workbench by laying conductive material (such as a conductive sheet) or an iron plate over it before placing the traverse unit (optical pickup) on it.

(2) Ground yourself

Use an anti-static wrist strap to release any static electricity built up in your body.



(3) Handling the optical pickup

- In order to maintain quality during transport and before installation, both sides of the laser diode on the replacement optical pickup are shorted. After replacement, return the shorted parts to their original condition. (Refer to the text.)
- Do not use a tester to check the condition of the laser diode in the optical pickup. The tester's internal power source can easily destroy the laser diode.

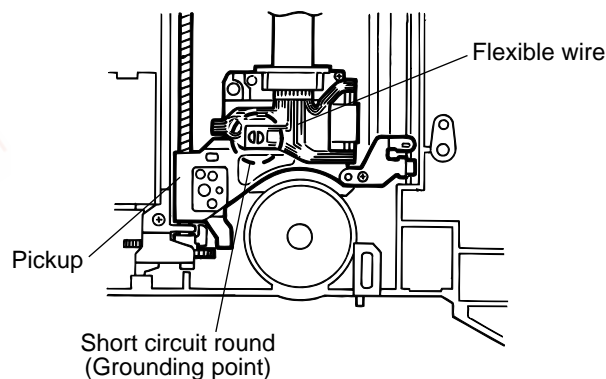
1.3 Handling the traverse unit (optical pickup)

- (1) Do not subject the traverse unit (optical pickup) to strong shocks, as it is a sensitive, complex unit.
- (2) Cut off the shorted part of the flexible cable using nippers, etc. after replacing the optical pickup. For specific details, refer to the replacement procedure in the text. Remove the anti-static pin when replacing the traverse unit. Be careful not to take too long a time when attaching it to the connector.
- (3) Handle the flexible cable carefully as it may break when subjected to strong force.
- (4) It is not possible to adjust the semi-fixed resistor that adjusts the laser power. Do not turn it.

1.4 Attention when traverse unit is decomposed

***Please refer to "Disassembly method" in the text for the CD pickup unit.**

- Apply solder to the short land before the flexible wire is disconnected from the connector on the CD pickup unit. (If the flexible wire is disconnected without applying solder, the CD pickup may be destroyed by static electricity.)
- In the assembly, be sure to remove solder from the short land after connecting the flexible wire.

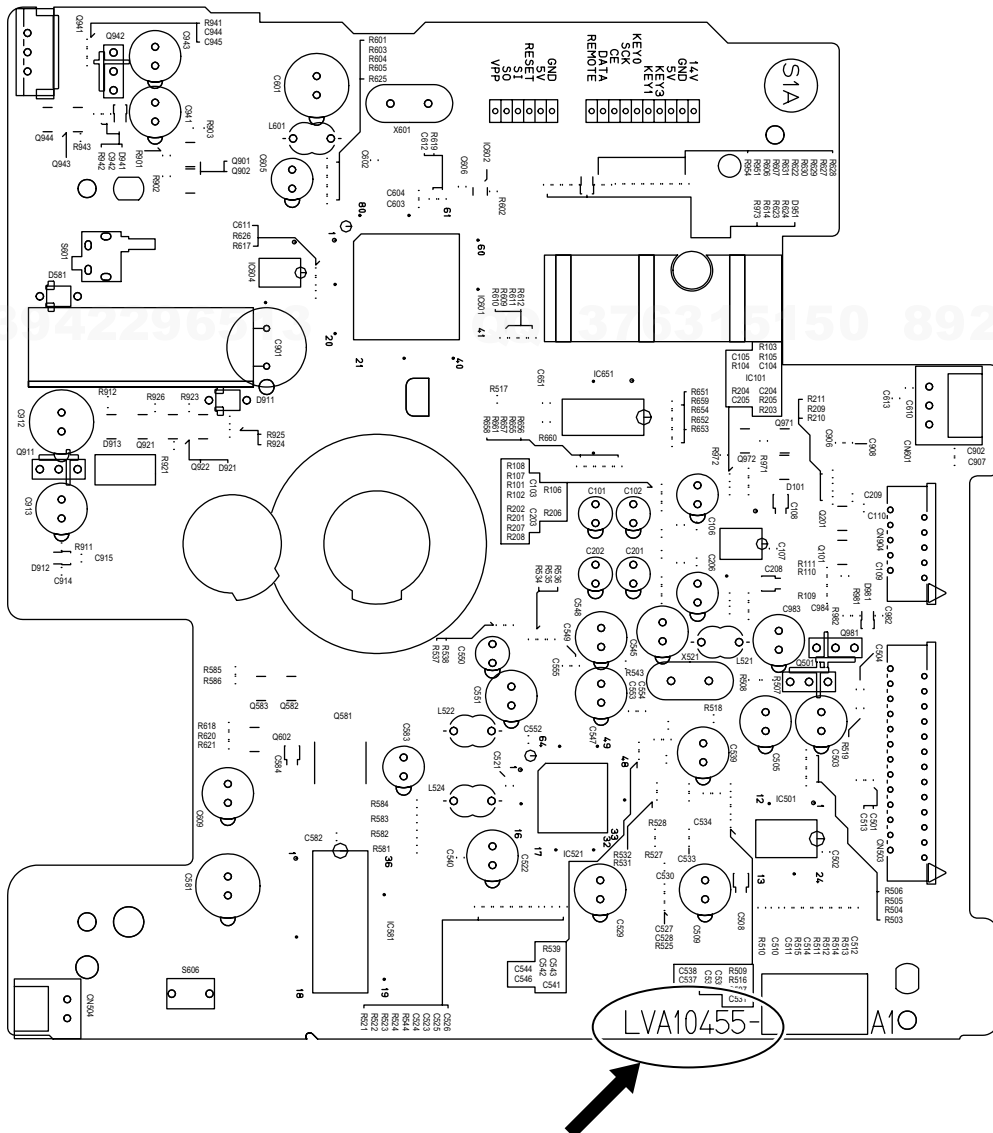


SECTION 2 SPECIFIC SERVICE INSTRUCTIONS

2.1 How to recognize



A new board has the display of "N3" in a nameplate.



A new board has the display of "LVA10455" in a circuit board.

SECTION 3 DISASSEMBLY

- Perform operations according to the items to be disassembled.

Replacement of the pickup

- (1) After removing the exterior (top and bottom).
- (2) Proceed to the pickup replacement section.
- (3) When applying grease, refer to the exploded view. Use new grease.

Mechanism section

- (1) Remove the exterior (required section only).
- (2) The mechanism section is designed so that each unit can be removed separately.
- (3) When reassembling, refer to the assembling precautions. (Use new grease when applying grease.)

3.1 Exterior section

3.1.1 Removing the bottom cover and front panel assembly (See Fig.1 to 4)

- (1) Remove the two screw **A** to unlock the mounting direction knob located on the side of the main unit.
- (2) Turn the mounting direction knob in the direction of the arrow using a coin, etc. to remove it. (The knob can be removed only when it is set to this position.)
- (3) Remove the four top cover fixing screws **B** at the triangle marks on the side of the main unit. (Perform the same operation on both sides.)
- (4) Turn the unit upside down so the bottom surface is facing upward.
- (5) Lift the rear edge of the bottom cover slightly and lift the side by grasping the DIN jack section on the side panel, then turn it toward the front (raise upward) to remove the bottom cover.
- (6) Unhook the four catches located on both sides of the front panel, and turn the front panel toward the top cover (lower down) to remove the front panel.

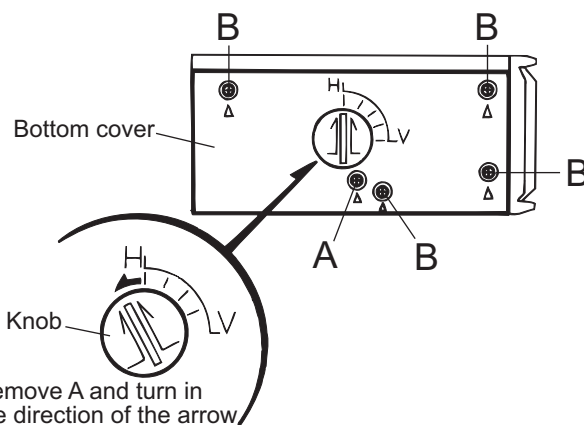


Fig.2

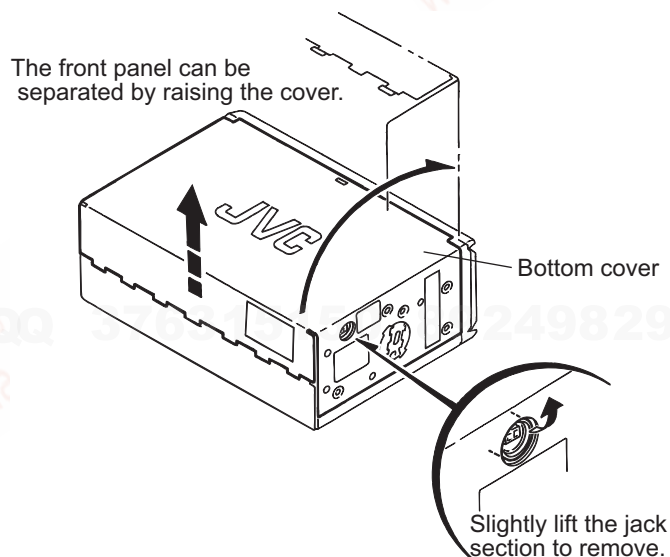


Fig.3

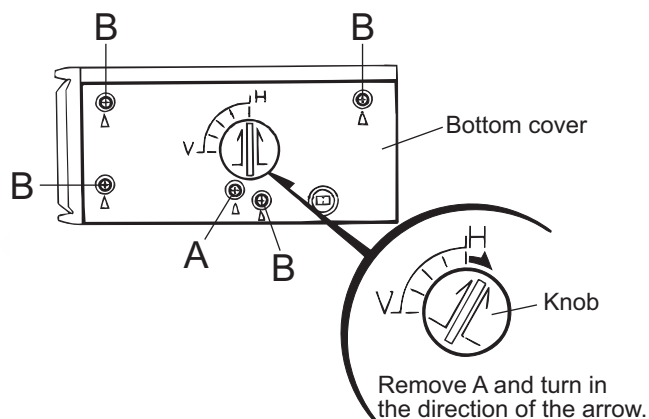


Fig.1

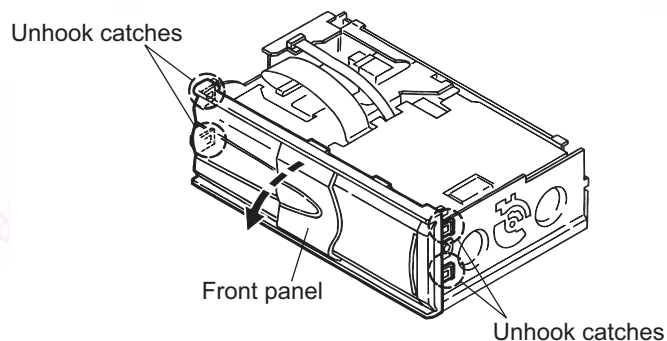
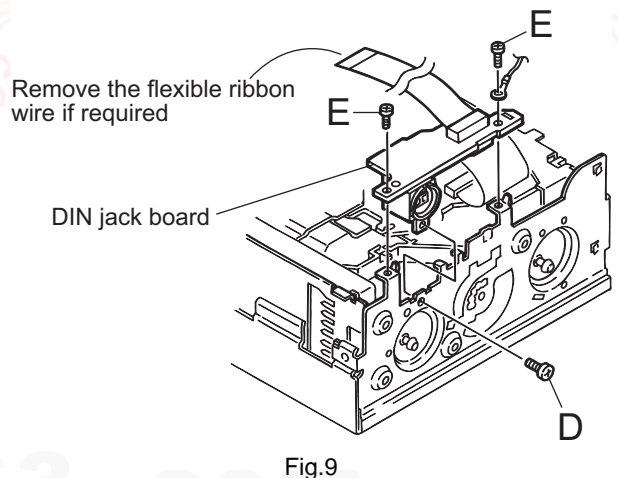
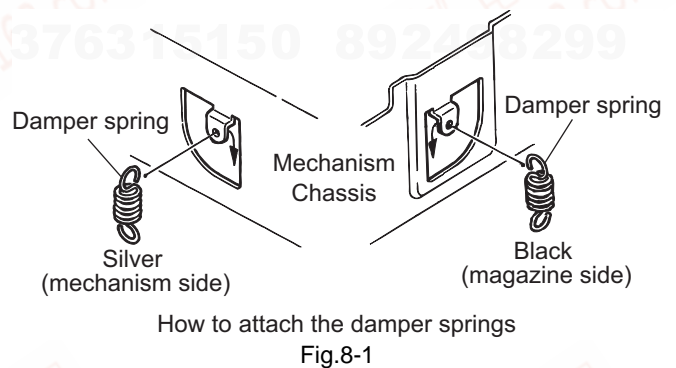
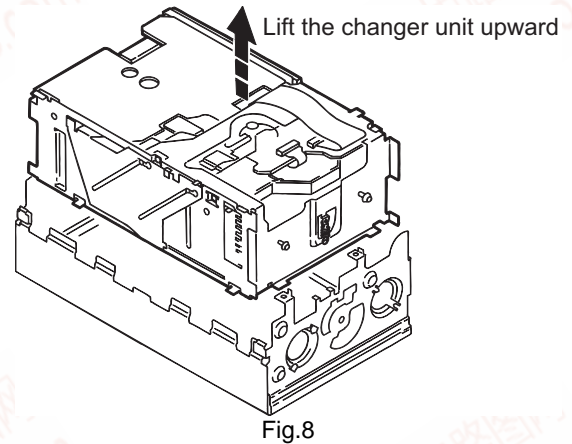
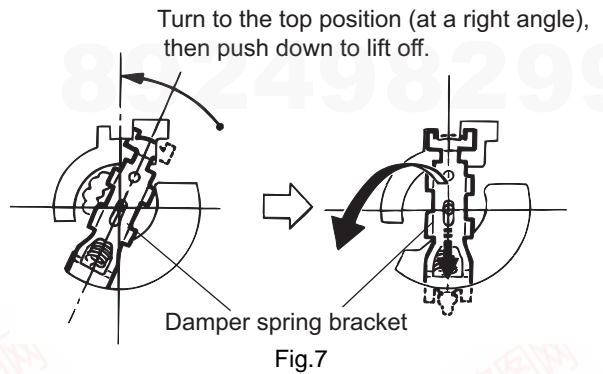
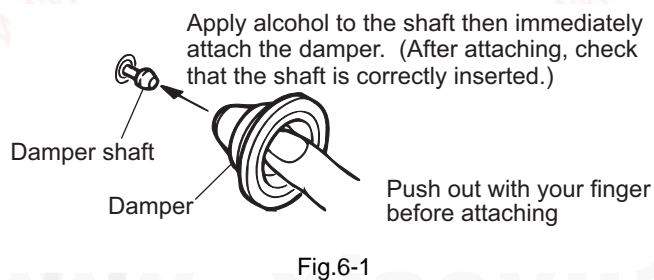
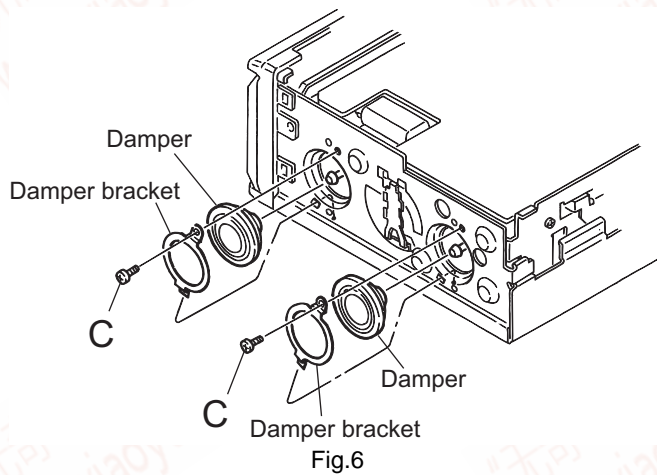
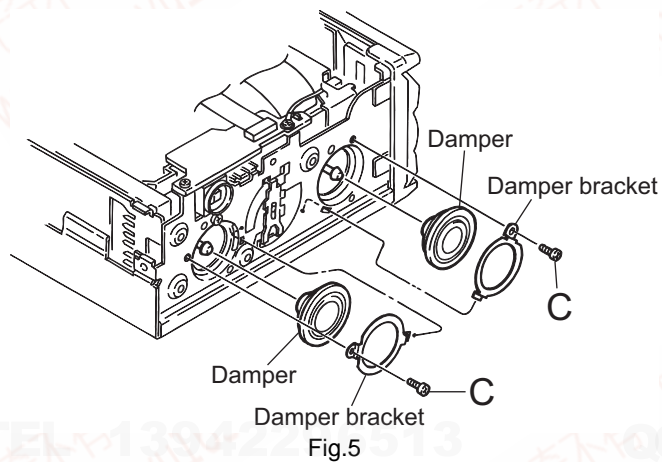


Fig.4

3.1.2 Removing the top cover (See Fig.5 to 9)

- (1) Remove the four damper bracket fixing screws **C** to remove the damper brackets.
- (2) Pull out the dampers, being careful not to damage them. When reattaching a damper, insert your finger to push out the center of the damper to mount it on the damper shaft, as shown in Fig. 6-1.
- (3) Turn the damper spring bracket toward the top at a right angle as shown in Fig. 7, then push down the lower side of the damper spring bracket to lift it off.
- (4) Remove the three fixing screws **D** and **E** on the DIN jack board assembly.
- (5) Lift the changer unit upward.
- (6) Remove the damper springs from the mechanism chassis if required. To reassemble, refer to the diagram below.



3.1.3 Removing the fittings (See Fig.10)

- (1) Remove the fixing screw **F**.
- (2) Unhook the two catches **a** on the top edge of the fitting, then unhook the two catches **b** at the left / right bottom edges.

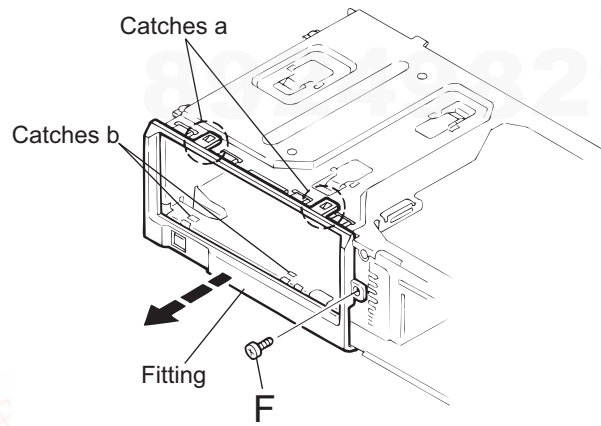


Fig.10

3.1.4 Removing the main PCB assembly (See Fig.11)

- (1) Remove the power IC fixing screw **G**.
- (2) Remove the four screws **H** securing the main board assembly.
- (3) Disconnect position motor wire connector [CN504](#) from the main board assembly.
- (4) Disconnect sensor board assembly wire connector [CN601](#) from the main board assembly.
- (5) Remove the flexible ribbon wire from [CN502](#) on the traverse mechanism board assembly. When reinstalling the board boards, refer to the reassembling procedures for protecting switches, etc.

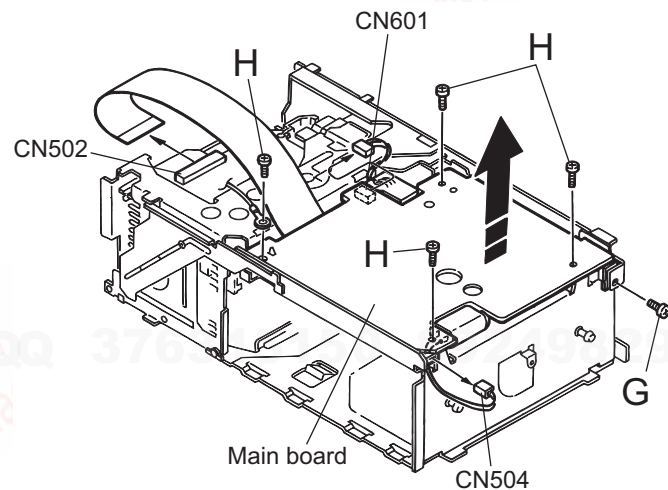


Fig.11

3.2 CD mechanism assembly

3.2.1 Sensor assembly unit

(See Fig.1)

- (1) Remove the two screws **I** securing the sensor assembly unit.
- (2) Unhook the spring on the back of the sensor assembly unit from the holes on the chassis.

3.2.2 Magazine lock arm

(See Fig.1 and 2)

- (1) Remove the magazine lock spring from the front side of the chassis.
- (2) Remove the poly-washer **c** securing the magazine lock arm.
- (3) Turn the magazine lock arm in the direction of the arrow until the notch is at the **d** position to remove it from the chassis.

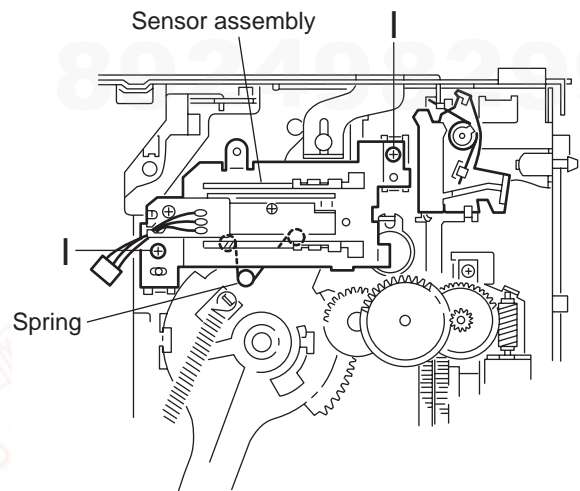


Fig.1

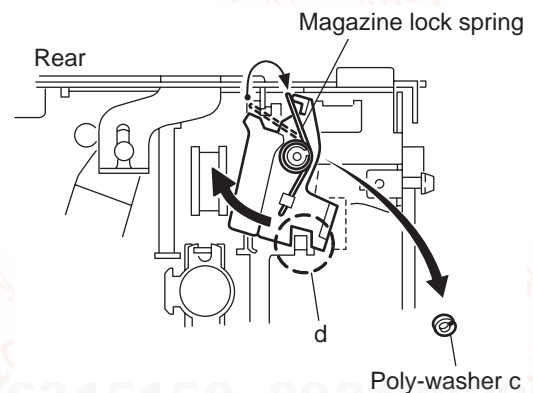


Fig.2

3.2.3 Positioning motor assembly

(See Fig.3)

- (1) Remove the two screws **J** securing the positioning motor.
- (2) Slightly lift the positioning motor assembly to remove it from the two burrs on the chassis.

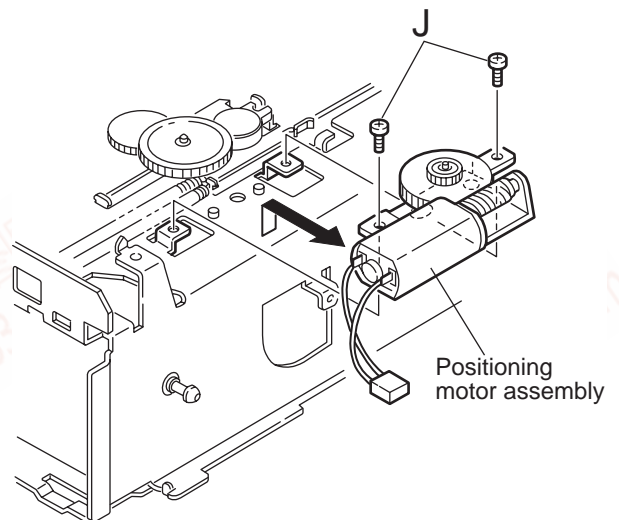


Fig.3

3.2.4 Rear slider (See Fig.4)

- (1) Position the unit with the front section facing down. Rotate the third gear located on the back of the main unit in the direction of the arrow (clockwise).
- (2) Shift the rear slider in the direction of the arrow and remove it at the rear slider mounting position (at the widest hole).

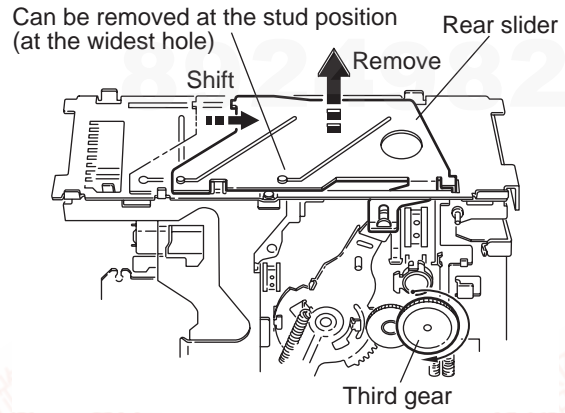


Fig.4

3.2.5 Front slider (See Fig.5)

- (1) Position the unit with the rear section facing down. Rotate the third gear located on the bottom of the unit in the direction of the arrow (clockwise) until the front slider is shifted to the outermost position.
- (2) Remove the E-washer securing the front slider to remove the front slider from the chassis

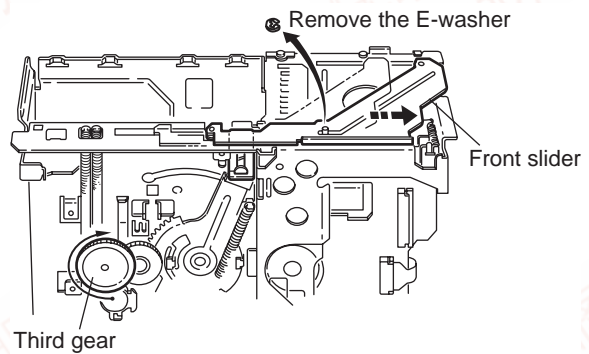


Fig.5

3.2.6 Top plate (See Fig.6 and 7)

- (1) Remove the nine screws **K** securing the top plate.
- (2) Disconnect the section **e** attached to the rear of the unit, then lift the top plate slightly.
- (3) Slide the top plate toward the rear of the unit to remove the upper rod from the top plate.

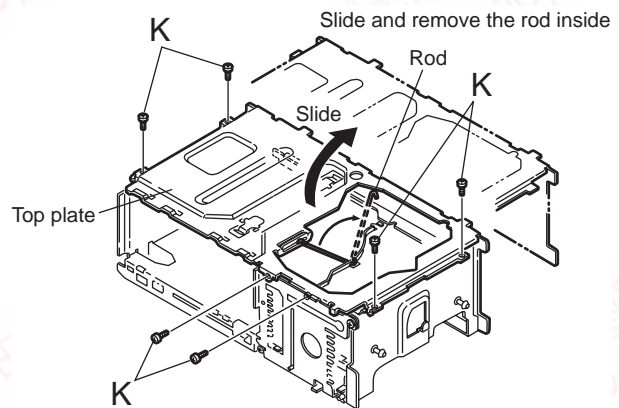


Fig.6

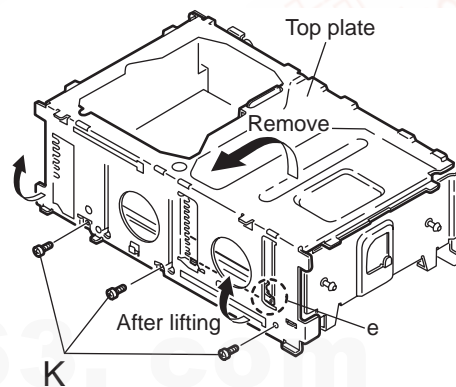


Fig.7

3.2.7 Lifter unit (See Fig.8 and 9)

- (1) Unhook the elevator spring located on the front side of the unit. (Be sure to first unhook the spring from the lifter side as shown in the upper part of the diagram.)
- (2) Lift the lifter unit upward, then remove the lower rod to remove the lifter unit from the chassis.

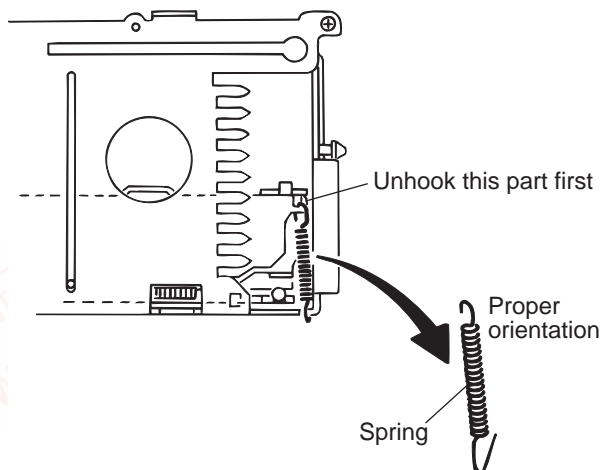


Fig.8

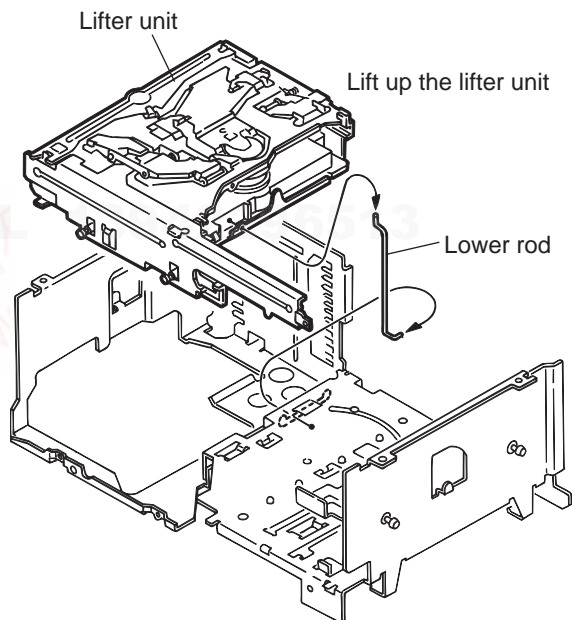


Fig.9

3.2.8 Lifter bracket (See Fig.10)

- (1) Remove the two lifter bracket fixing screws L located on the back of the lifter unit.
- (2) Remove the lower rod.

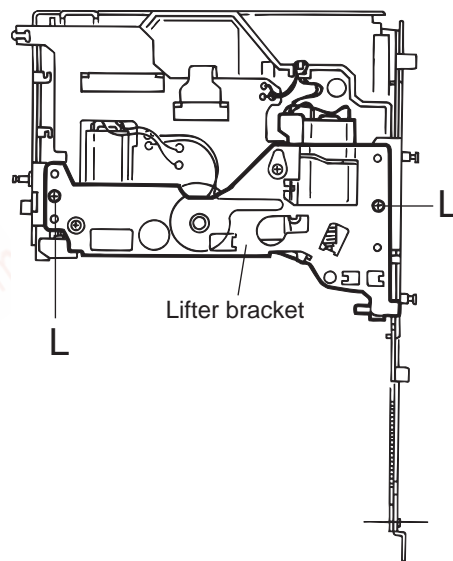


Fig.10

3.2.9 Side bracket and traverse mechanism assembly (See Fig.11)

- (1) Remove the two side bracket unit fixing screws M to disconnect the side bracket unit from the lifter unit.
- (2) Remove the three shafts on the traverse mechanism assembly from the lifter unit.

CAUTION:

For reassembling, refer to the reassembling procedures.

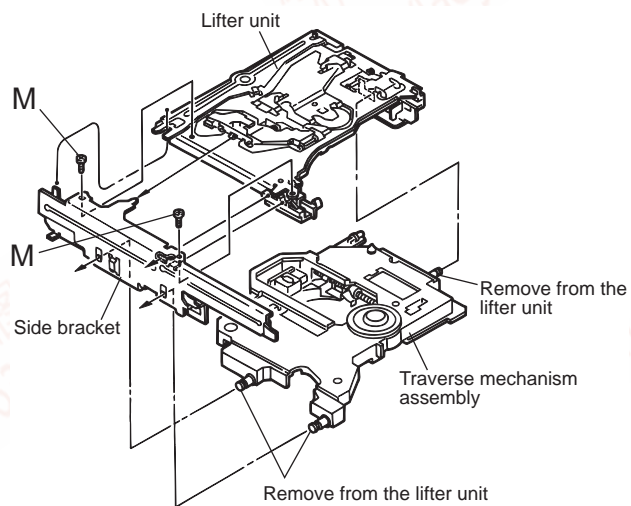


Fig.11

3.2.10 Removing the mechanism board / pickup assembly (See Fig.12 to 15)

- (1) Remove the three screws **N** fixing the mechanism board on the back of the traverse mechanism.
- (2) Disconnect the two feed motor wires (blue and white), two spindle motor wires (red and black) and two tray motor wires (brown and black) that are soldered to the mechanism board.
- (3) Short-circuit the grounding point on the mechanism board. Move the mechanism board without disconnecting the wire from connector **CN501**. Solder the short circuit round on the pickup assembly.
- (4) Disconnect the wire from connector **CN501** on the mechanism board.
- (5) Remove the screw **O** to remove the feed motor assembly.
- (6) Remove the screw **P** to remove the shaft holder retaining the feed slide shaft assembly and the middle gear.
- (7) Move the middle gear.
- (8) Move the pickup assembly upward from the gear section and remove it from the traverse chassis assembly.
- (9) Remove the two screws **Q** to remove the rack arm.
- (10) Pull out the feed slide shaft assembly.
- (11) Remove the screw **R** to remove the spring.

CAUTION:

To reattach the mechanism board, connect the pickup flexible wire to connector **CN501** on the mechanism board before unsoldering the short circuit round. Subsequently, fix the mechanism board using screws.

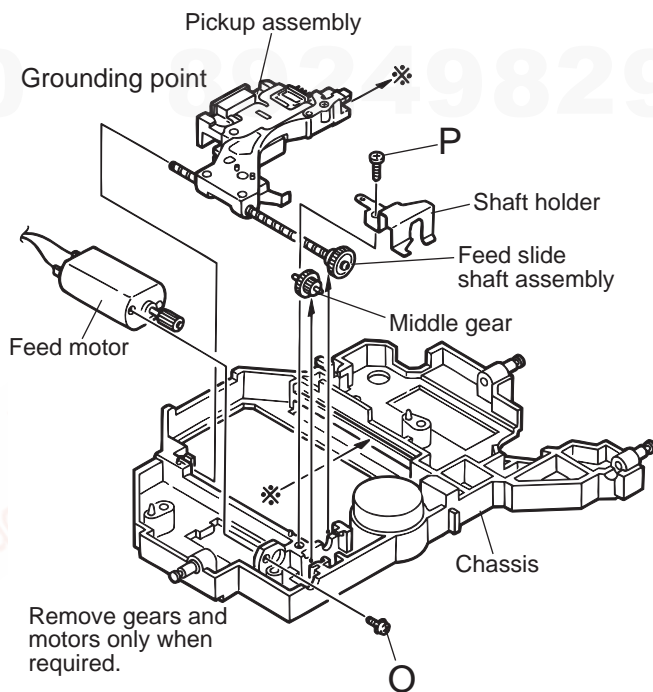


Fig.14

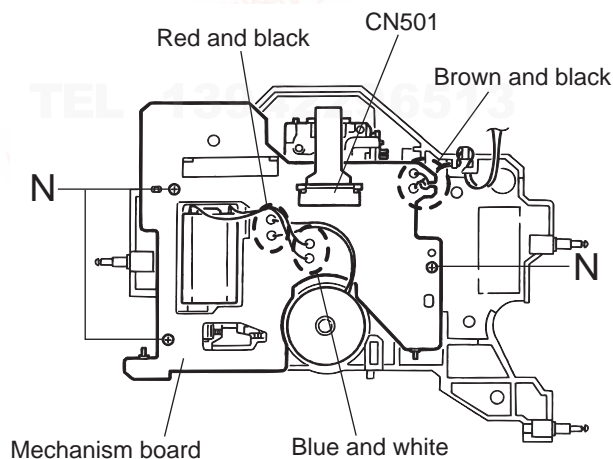


Fig.12

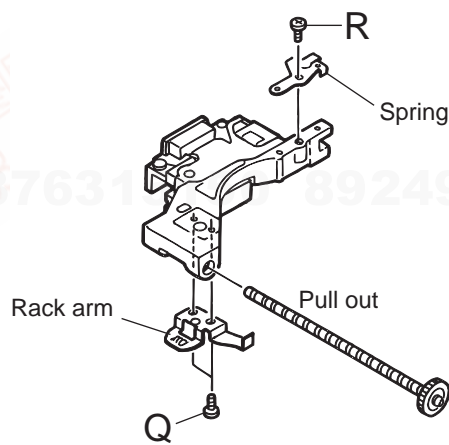


Fig.15

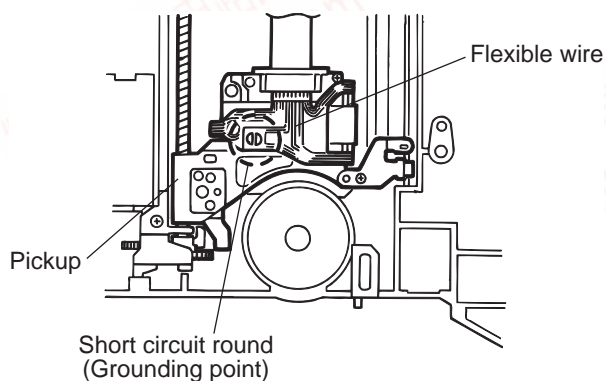
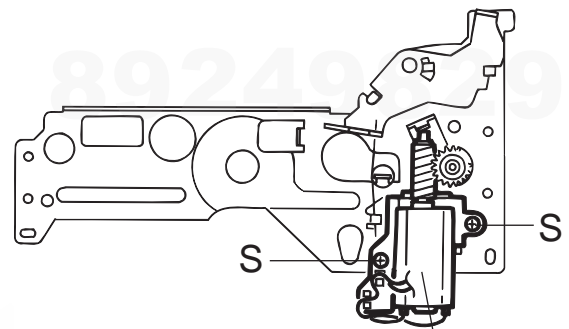


Fig.13

3.2.11 Tray motor

(See Fig.16 and 17)

- (1) Remove the two screws **S** securing the tray motor.
- (2) Remove the two screws **T** to remove the tray motor assembly from the tray motor holder.



Tray motor assembly

Fig.16

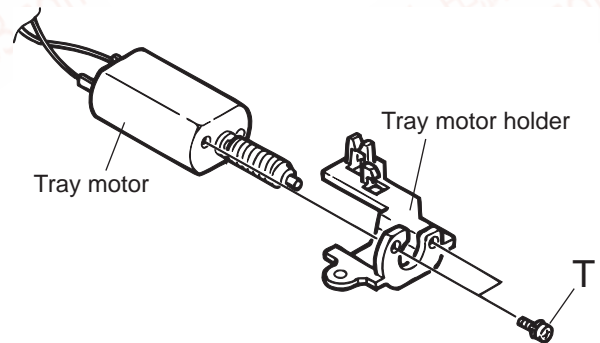


Fig.17

3.2.12 Separation of the chassis (L) assembly and chassis (R) assembly

(See Fig.18)

- (1) Remove the two screws **U** retaining the chassis (L) and (R) assemblies.
- (2) Slide the chassis (L) assembly toward the front and detach it, then remove the chassis (L) upward.

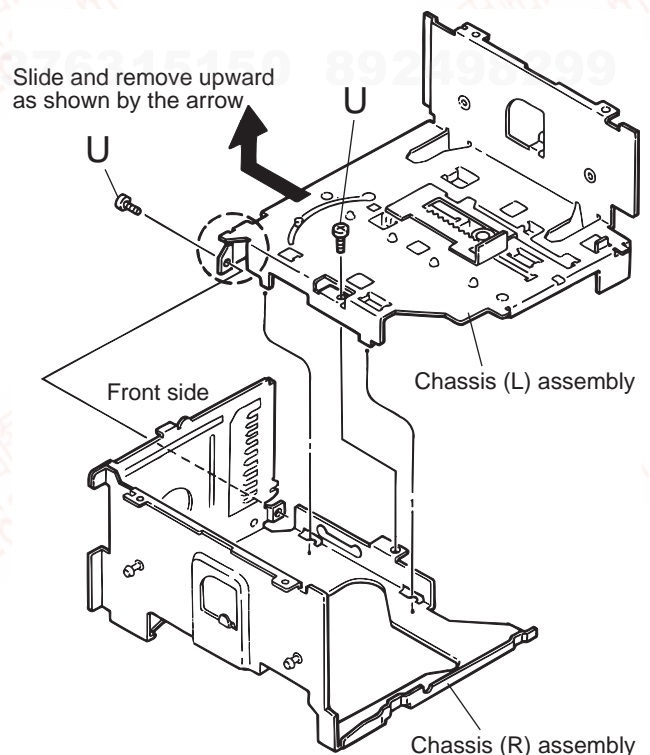


Fig.18

3.2.13 Precautions on reassembling

CAUTION:

When reassembling, also refer to the disassembling procedures.

3.2.13.1 Mounting the traverse mechanism (See Fig.19 to 23)

- (1) When mounting the pickup assembly, attach the feed slide shaft assembly to the traverse chassis. Apply E-JC-525 grease to the shaft.
- (2) Mount the middle gear and the feed slide shaft to the traverse chassis and secure them with the screw **P** through the shaft holder.
- (3) Before mounting the mechanism board, move the pickup to the outer edge position, then secure the board assembly using the screw **N**.
At this time, check that the rest switch is correctly placed.
- (4) To mount the rack arm, first move the pickup to the middle position and secure it with the screws **Q**.

CAUTION:

To reattach the mechanism board, connect the pickup flexible wire to connector **CN501** on the mechanism board before unsoldering the short circuit round. Subsequently, fix the mechanism board using screws.

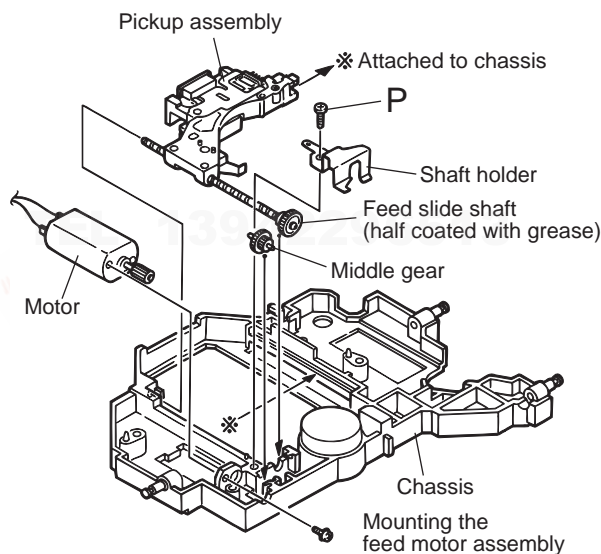


Fig.19

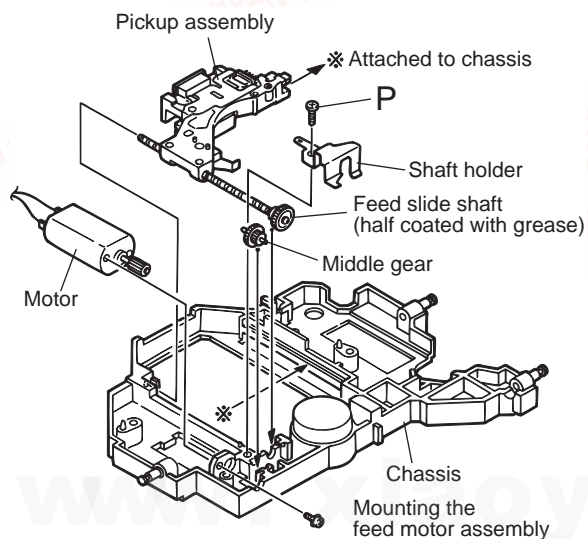


Fig.20

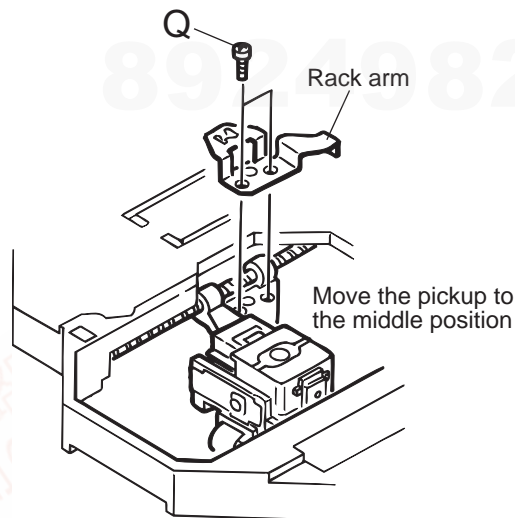


Fig.21

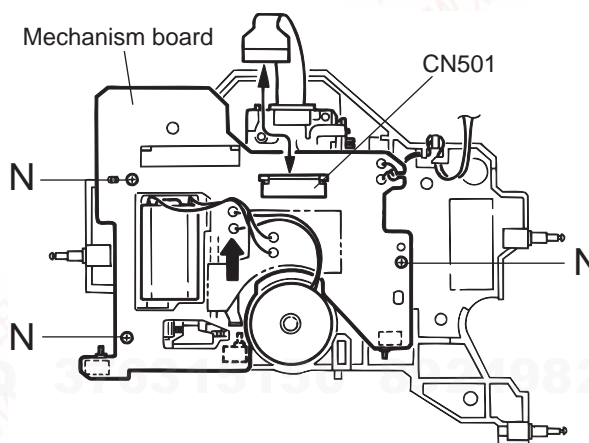


Fig.22

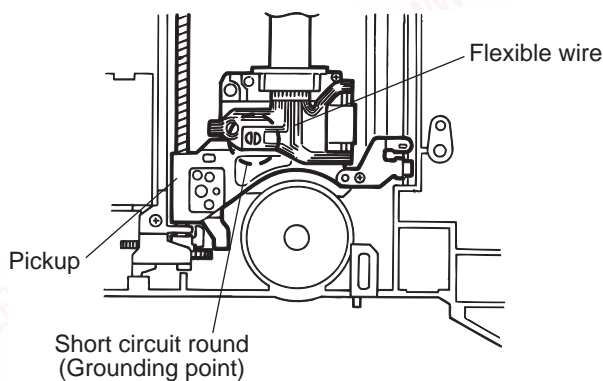


Fig.23

3.2.13.2 Mounting the lifter unit (See Fig.24 to 26)

- (1) Insert the shafts **f** of the traverse mechanism assembly into the slide grooves **g** on the lifter unit.
- (2) Shift the hook of the lifter unit to the edge, and shift the sliding lever inside the side bracket unit to the edge as well.
- (3) With each hole and lever shifted to the edge, mount the lifter unit and side bracket unit from the side. (Check each attached section, and check that the two shafts **h** of the lifter unit are correctly inserted into the holes **i** of the side bracket unit. After mounting, check that the levers move together.)
- (4) Turn the lifter unit upside down. As shown in Fig. 35, slide the lever 30mm away from the edge, then mount the lifter bracket assembly.

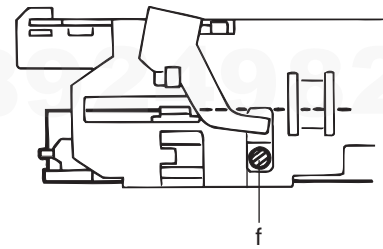


Fig.24

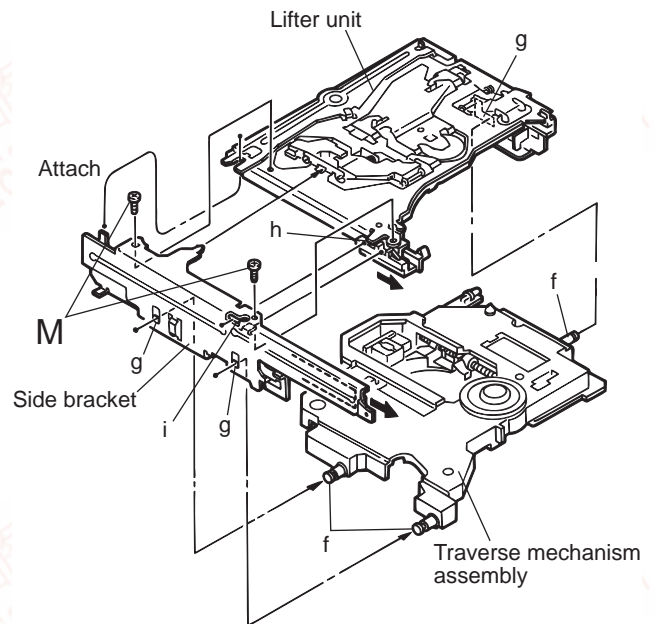


Fig.25

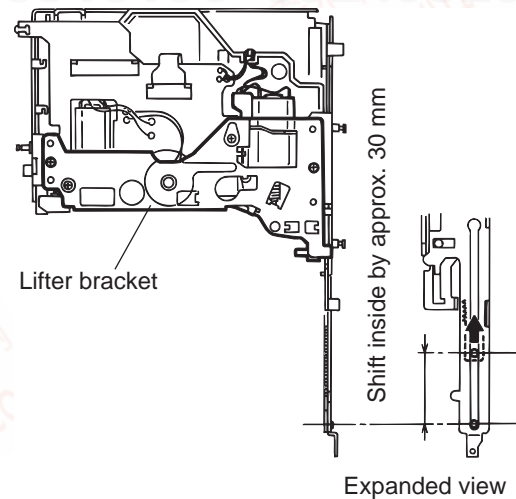


Fig.26

3.2.13.3 Connection of the chassis (L) assembly and chassis (R) assembly (See Fig.27 to 29)

- (1) Attach the lower rod to the chassis (R) assembly. While shifting the rod toward the front side, mount the rod on the lifter unit. With the rod mounted, place the lifter unit on the chassis (R) assembly.
- (2) Combine the chassis (L) and (R) assemblies so that the hook section **j** of the chassis (L) assembly is inserted into the notch of the chassis (R) assembly by sliding it from the front side.
- (3) After engaging, secure with the two screws **U**.
- (4) Attach the tension spring between the lifter unit and the chassis.

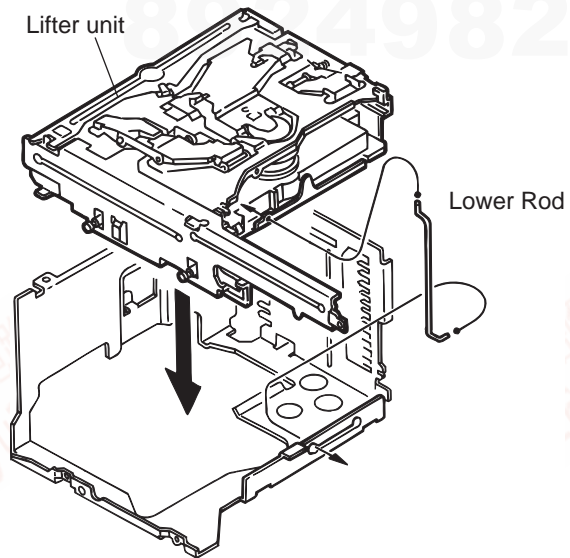


Fig.27

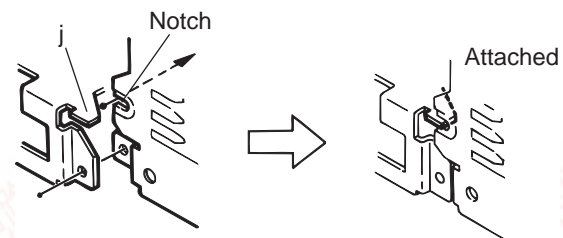


Fig.28

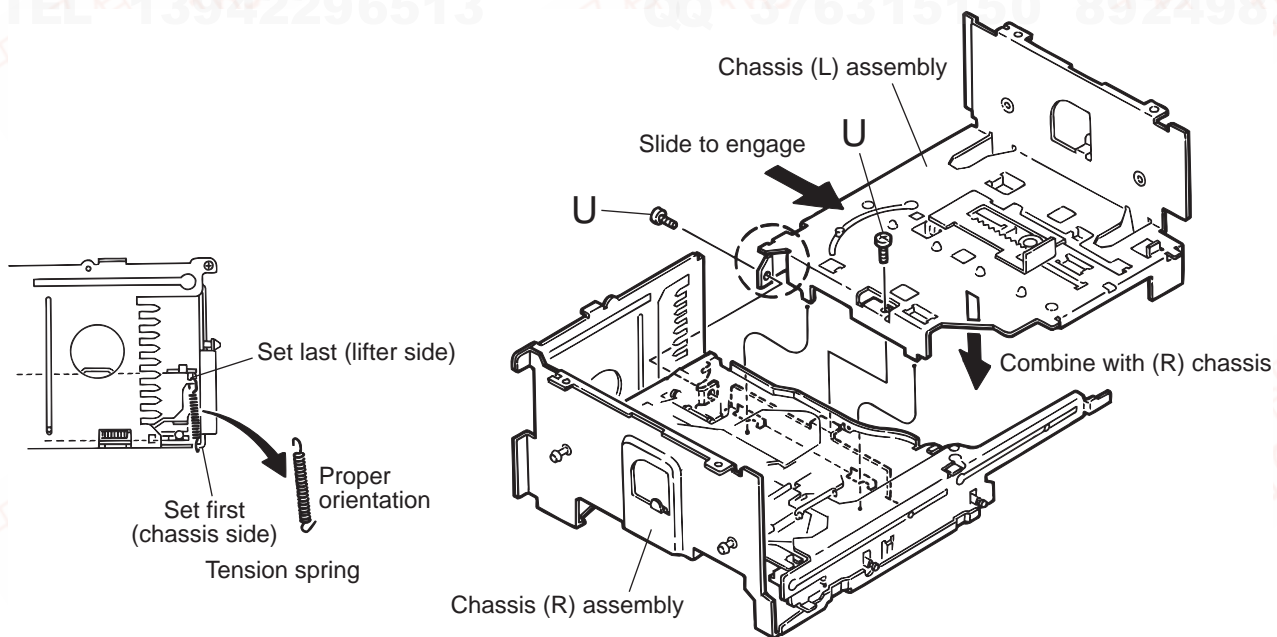


Fig.29

3.2.13.4 Mounting the top plate (See Fig.30 to 33)

- (1) Mount the upper rod on the lifter side **l** and set it on the rear of the top plate, then mount the other end of the upper rod to **m**.
- (2) Check that the five points (**n**, **o**, **p**, **s** and **r**) are correctly positioned.
When mounting section **s**, set it so that section **t** of the lifter unit is pinched by the bending section of the top plate.
- (3) Secure the top plate with six fixing screws **K**.

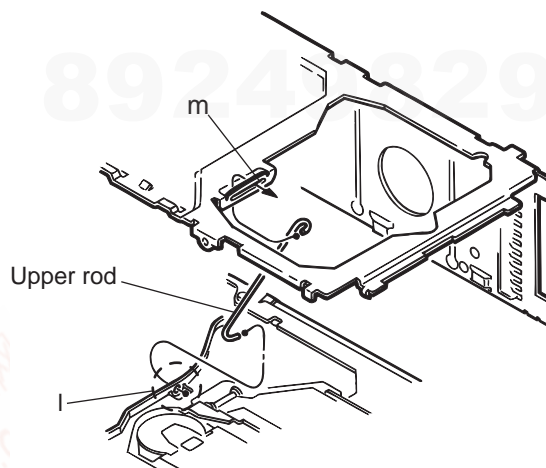


Fig.30

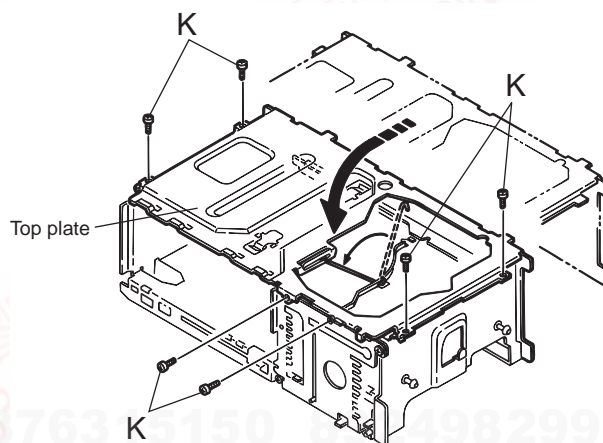


Fig.31

Expanded view of mounting s

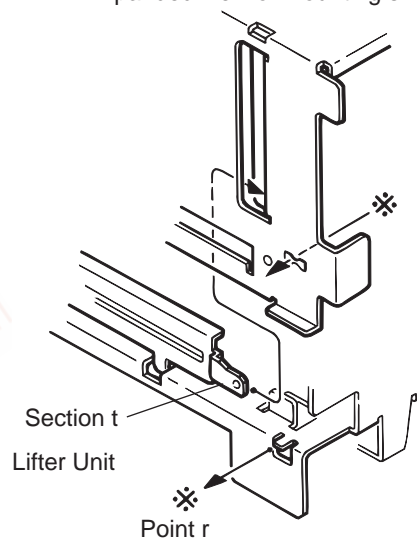


Fig.32

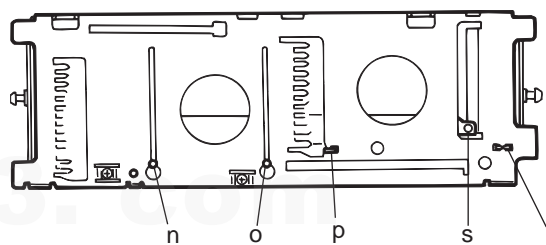
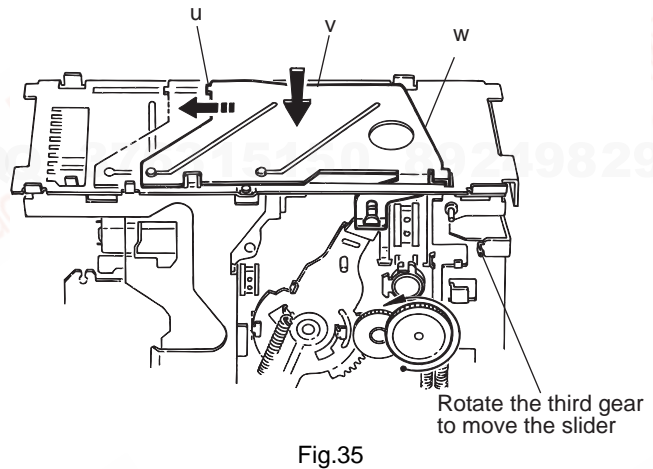
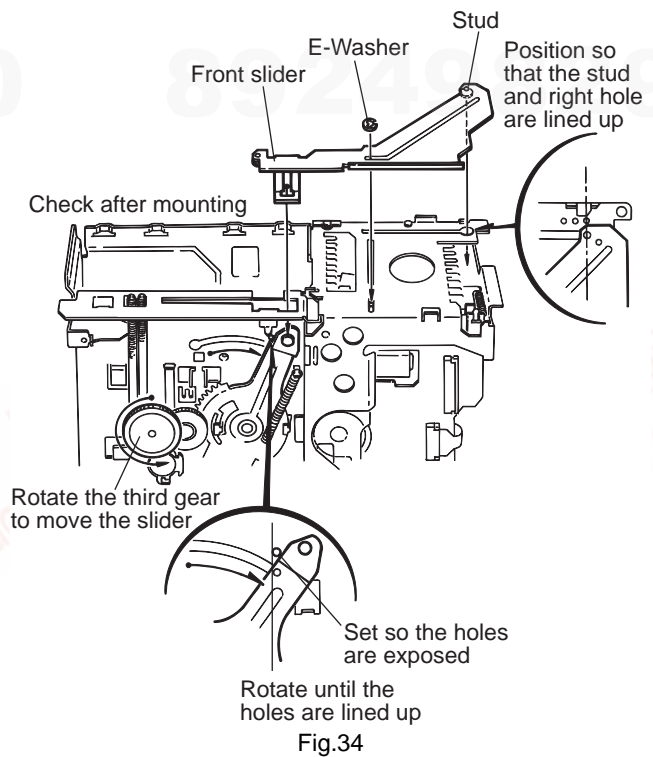


Fig.33

3.2.13.5 Mounting the front slider and rear slider (See Fig.34 and 35)

- (1) Position the unit with the rear side facing down, then rotate the third gear in the direction of the arrow (clockwise) until the lift arm comes to the position at which the holes are exposed, as shown in Fig. 34
- (2) Mount the front slider from the top. Rotate the third gear counterclockwise until the hole of the slider is lined up with the right hole of the stud, as shown in Fig. 34
- (3) Mount the E-washer on the shaft.
- (4) Position the unit with the front side facing down, then mount the rear slider. Check that the **u**, **v** and **w** positions are correctly mounted as shown in Fig. 35.
- (5) Rotate the third gear in the direction of the arrow (counterclockwise) until the lifter unit is at the top position.



3.2.13.6 Mounting the sensor board assembly (See Fig.36)

- (1) Attach the longer spring to the white resin, and attach the shorter spring temporarily to the sensor assembly bracket.
- (2) Mount the sensor assembly so that the shaft of the lift arm is inserted into the longer hole on the white resin located on the back of the sensor board assembly.
- (3) Attach the shorter spring to the hook of the lift arm.

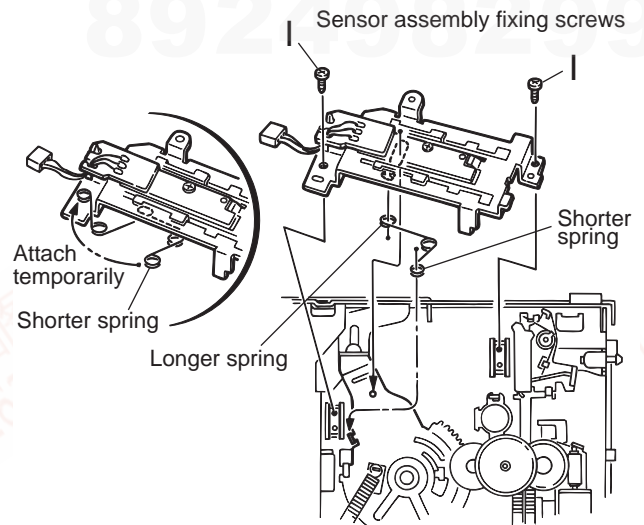


Fig.36

3.2.13.7 Mounting the main PC board assembly (See Fig.37)

- (1) Rotate the third gear clockwise until section x of the front slider and the third hole from the right are lined up. (Be sure to set properly. If incorrectly set, the switches on the board assembly may be damaged.)
- (2) After they are correctly positioned, mount the main board assembly.

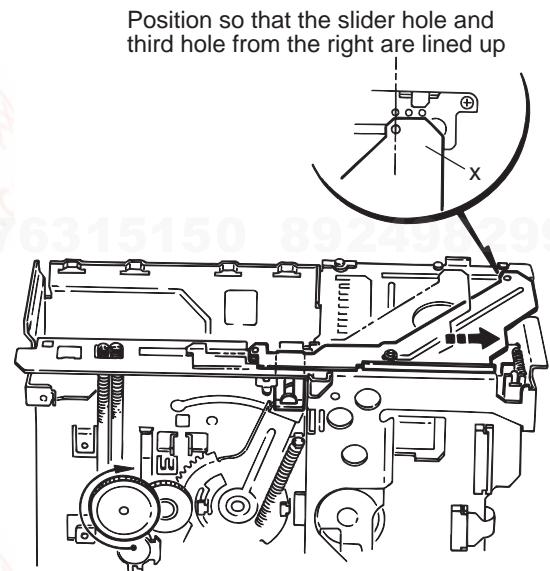


Fig.37

3.2.13.8 Pickup replacement procedure (See Fig.38 to 44)

- (1) Remove the bottom cover, front panel and top cover from the exterior section.
- (2) Unplug the flexible ribbon wire from connector [CN502](#) on the traverse mechanism PC board assembly.
- (3) Turn the rear slider and third gear in the lifter section counterclockwise until the traverse mechanism assembly is in the lowermost (bottom) position.
- (4) Unsolder the two wires (black and brown) connected to the tray motor.
- (5) Remove the two screws **M** from the round holes on the chassis (**R**) assembly to remove the lifter bracket (**L**).
- (6) Remove the lower rod.
- (7) Disconnect the two feed motor wires (blue and white), two spindle motor wires (red and black) and two tray motor wires (brown and black) that are soldered to the mechanism board.
- (8) Short-circuit the grounding point on the mechanism board. Move the mechanism board without disconnecting the wire from connector [CN501](#). Solder the short circuit round on the pickup assembly.
- (9) Disconnect the wire from connector [CN501](#) on the mechanism board.
- (10) Remove the three fixing screws **N** from the round holes on the chassis (**R**) assembly to remove the traverse mechanism board assembly.
- (11) Remove the pickup shaft holder fixing screw **P** to remove the pickup assembly.

CAUTION:

When replacing the pickup, be sure to apply countermeasures against static electricity (grounding the operation table, wrist band and soldering iron). To remove it, first short-circuit the grounding point on the mechanism board, then lift the mechanism board assembly with [CN501](#) connected. Next, short-circuit the grounding point on the pickup main unit, then unplug the pickup flexible board from connector [CN501](#).

CAUTION:

When reassembling, perform in the reverse order.

- (12) Remove the two rack arm fixing screws **Q**. Pull out the feed slide shaft. Remove the shaft holder fixing screw **R**.
- (13) When mounting the lifter bracket after replacing the pickup, shift the lifter unit lever approx. 30 mm towards the inside, then mount the lifter bracket.

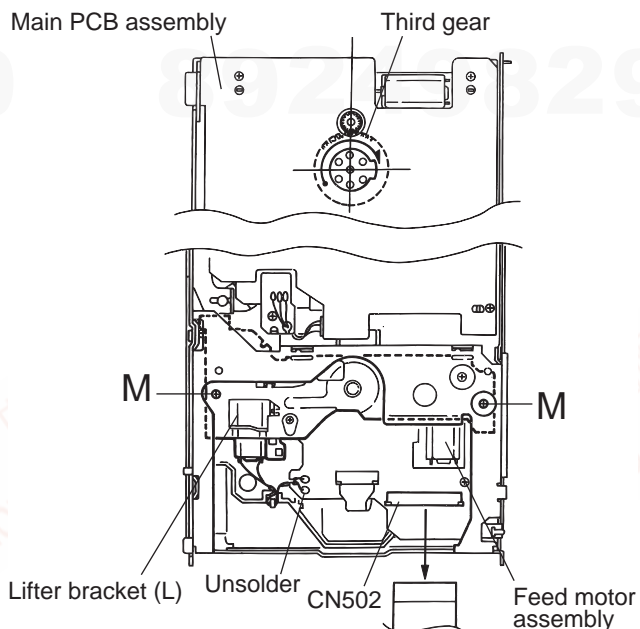


Fig.38

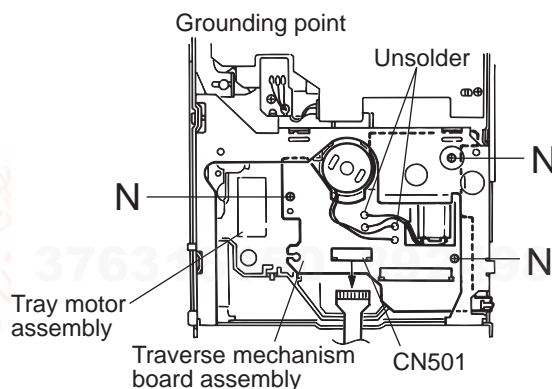


Fig.39

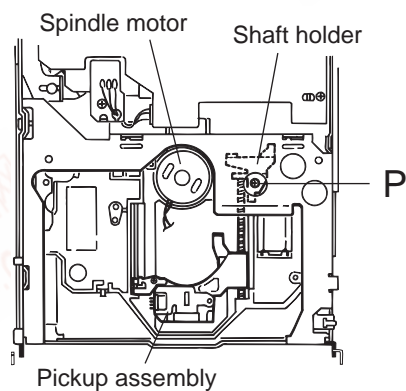


Fig.40

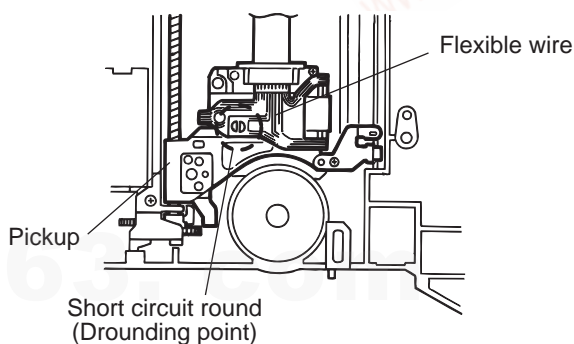


Fig.41

QQ 376315150

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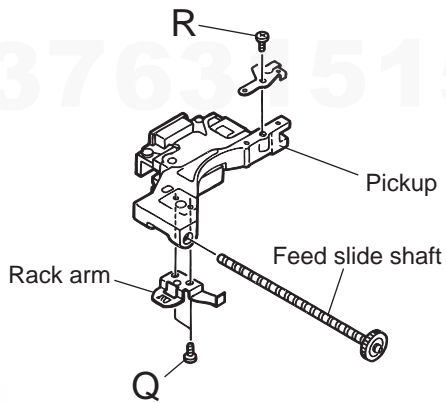


Fig.42

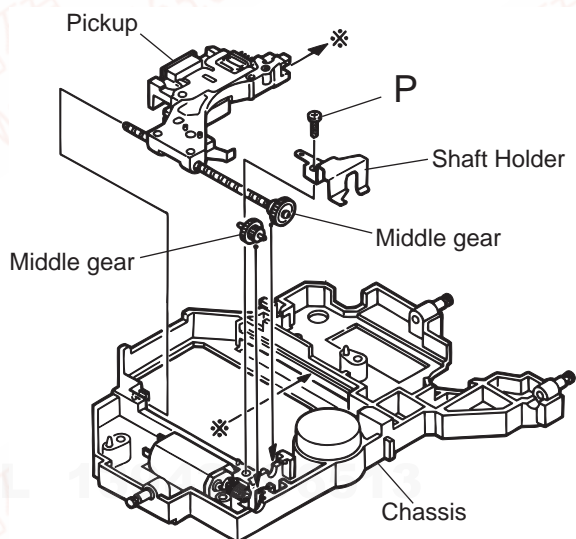


Fig.43

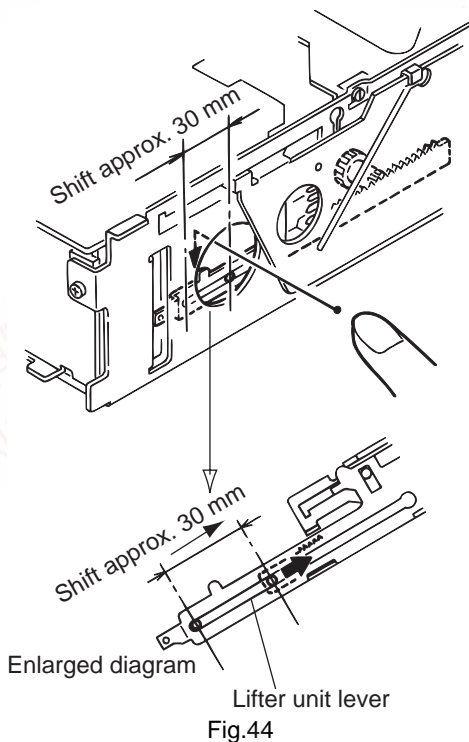


Fig.44

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SECTION 4 ADJUSTMENT

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This service manual does not describe ADJUSTMENT.

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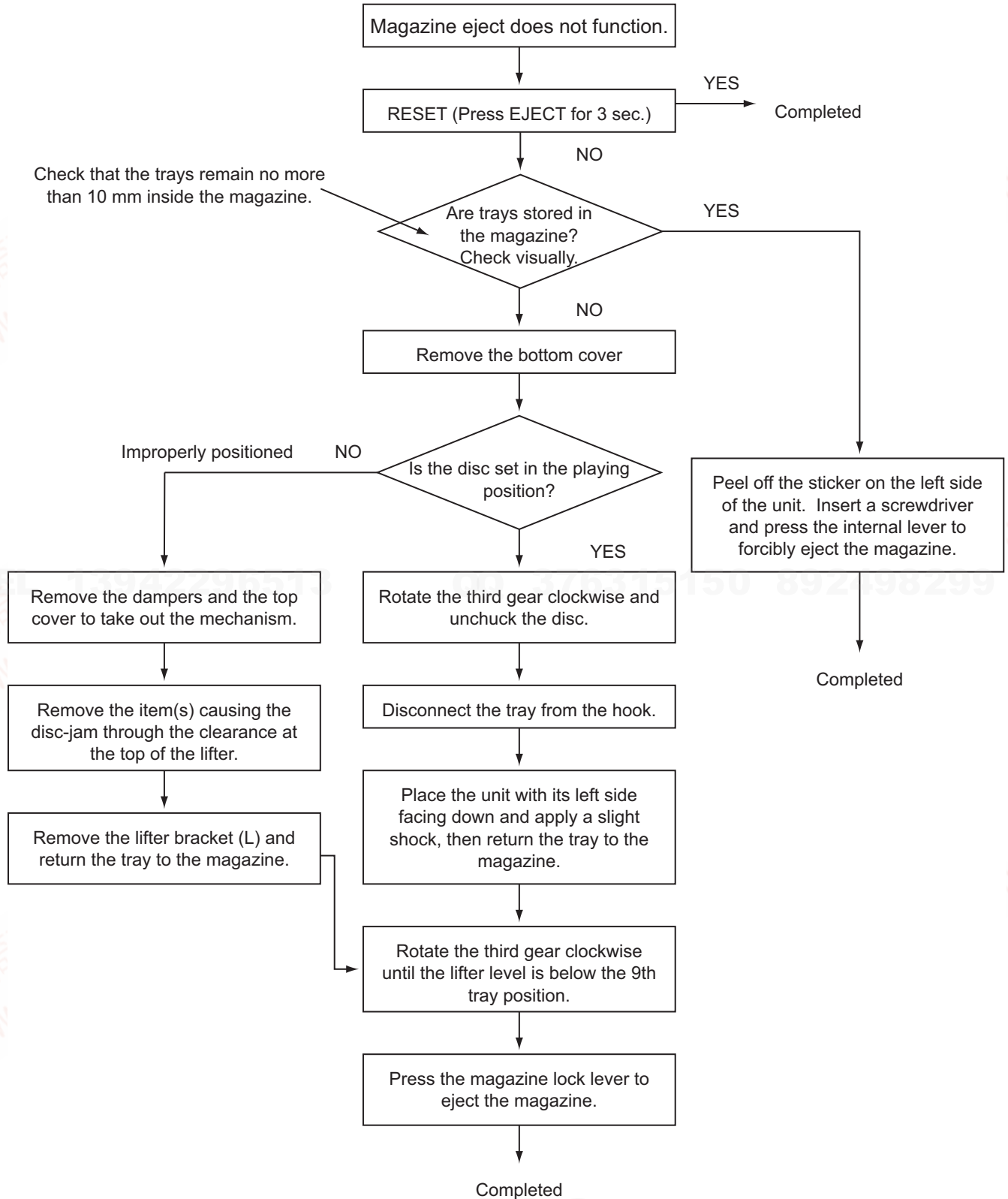
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SECTION 5 TROUBLESHOOTING

5.1 Forced eject procedures (new circuit board)



5.2 Troubleshooting (new circuit board)

5.2.1 Servicing procedures for error displays

Error display	Servicing procedure
E1: Eject error	<p>The magazine cannot be ejected until S601 (magazine switch) turns off. Can the magazine be ejected? YES→1, NO→2 1 The magazine switch (S601) does not turn off even though the magazine is completely ejected. 2 Check that the magazine is not engaged with the mechanism assembly.</p>

E2: Position motor error	<p>The lifter does not move up and down when exchanging or ejecting discs. After resetting, check whether or not the lifter moves. YES→3, NO→4 3 If the lifter exceeds the required disc position, check the lift position input. (IC601 pin 76) If the lifter does not reach the required disc position, check the mechanism (mainly the lifter elevation mechanism) 4 Check that voltage is present at the motor terminal. If voltage is present, check the lifter elevation mechanism. If voltage is not present, separate the motor from the circuit and check again whether or not voltage is present. If voltage is present, next check that the armature resistance of the position motor (resistance between motor terminals) is approx. 12 Ω . If the resistance is excessively low (1 - 2 Ω), the motor is defective.</p>
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E3: Tray motor error	<p>Trays cannot be opened or closed when exchanging or ejecting discs. Does the tray move when changing or ejecting discs? YES→5, NO→6 5 Check that TRAY OUT SW (S603) and TRAY IN SW (S602) function correctly.</p>
----------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	S603 & IC601 pin (45)	S602 & IC601 pin (46)
When closing	H	L
When opening	L	H

6 Check that the drive voltage is applied to the motor terminal.
 If the voltage is present, check the tray mechanism.
 If the voltage is not present, separate the motor from the circuit and check again whether or not the voltage is present.

E4: Pick returning	<p>Does the feed (pickup unit) return to the inner area of the disc when ejecting? YES→7, NO→8, 9 7 Check the rest switch. 8 If the feed gear is rotated, check the feed transfer mechanism 9 If the feed gear is not rotated, check the motor driver and the pattern.</p>
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Other errors occurring in the receiver or controller.

E8: Connection error	<p>When selecting the CD Changer mode using function keys, etc., the unit does not enter the CD changer mode, or the E8 error display appears. This signifies trouble relating to communications. a Check the connection cables between the CD changer and the receiver (CD changer controller). b Check the CD changer power cord and the fuse (including F901 on the PC board). c Check IC651 and its peripheral circuits.</p>
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★ The E1~E8 error displays described above may appear as E-1~E-8, 1E1~1E8, R-1~R-8, or RST1~RST8, depending on the product.

5.2.2 Error code (new circuit board)

The following error codes can be displayed and stored in up to 3 memories when the KD-SH909 or KD-LH2000 are used with the controller. Refer to the KD-SH909 or KD-LH2000 service manual regarding error code indication. 12CD changer models.

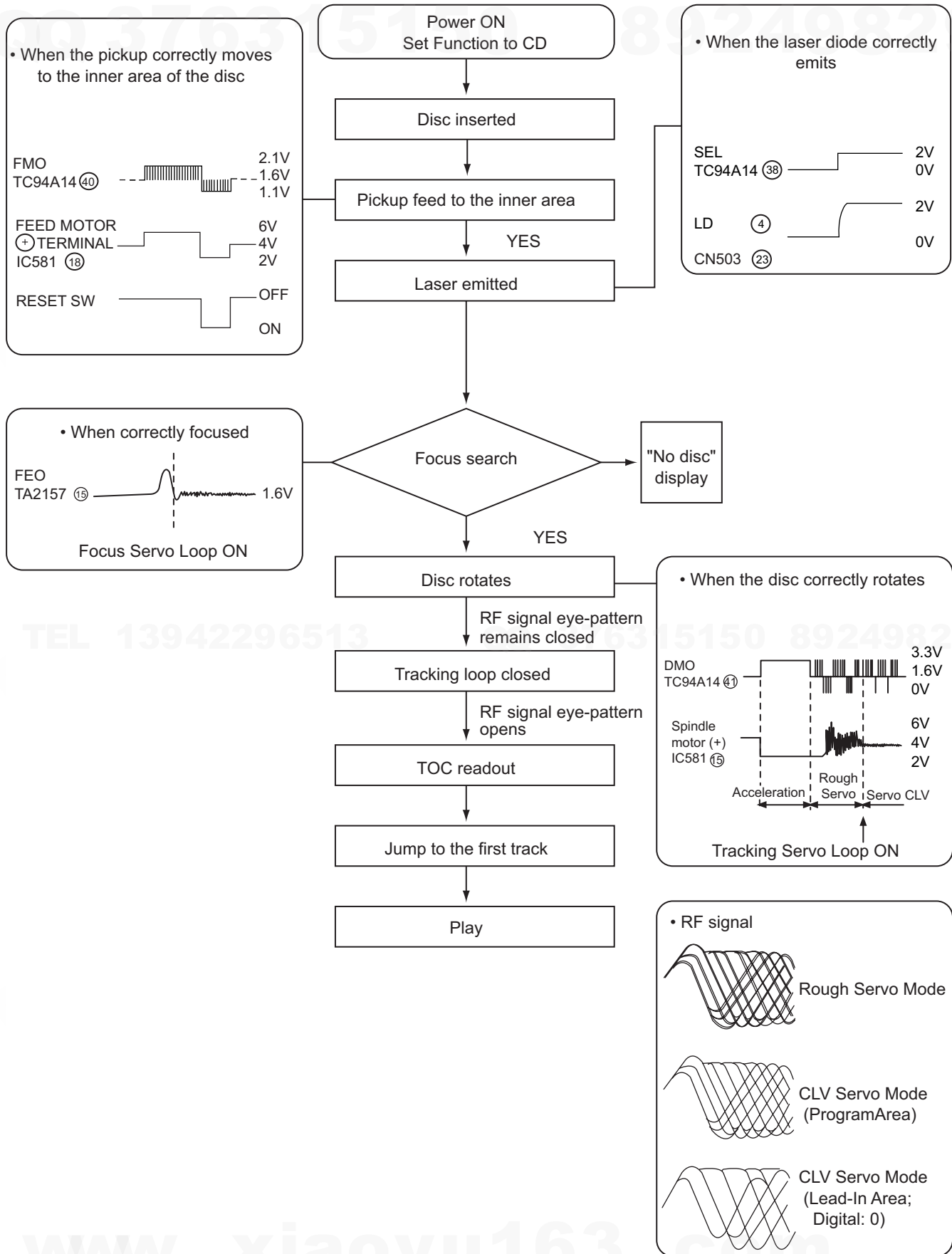
Error code table

Generating condition		Description	Error code
Tray extension error	Tray-in switch time out (Tray-in switch Low, Tray-out switch High)	Tray stops part way	E1 03 00 11
	Tray-out switch time out (Tray-in switch High, Tray-out switch High)	Tray stops part way	E1 03 00 12
	Tray-in switch time out (Tray-in switch Low, Tray-out switch Low)	Tray-in switch faulty or other defect	E1 03 00 13
	MAG-in switch Low to High	Magazine removed when tray partly extended	E1 03 00 14
Tray retraction error	Tray-in switch time out (Tray-in switch Low, Tray-out switch Low)	Tray motor inoperative	E1 03 00 16
	Tray-out switch time out (Tray-in switch High, Tray-out switch High)	Tray retraction stops part way	E1 03 00 17
	Tray-in switch time out (Tray-in switch Low, Tray-out switch Low)	Tray-in switch faulty or other defect	E1 03 00 18
	MAG-in switch Low to High	Magazine removed when tray partly retracted	E1 03 00 19
Lifter raise error	Wait position time out	Position motor inoperative	E1 02 00 21
	Wait position time out	Position not stable in fine adjust mode	E1 02 00 22
	Wait position time out	Other fault	E1 02 00 23
Lifter lower error	Wait position time out	Position motor inoperative	E1 02 00 26
	Wait position time out	Position not stable in fine adjust mode	E1 02 00 27
	Wait position time out	Other fault	E1 02 00 28
Chuck error	Play position time out	Position motor inoperative	E1 02 00 31
	Play position time out	Position not stable in fine adjust mode	E1 02 00 32
	Play position time out	Other fault	E1 02 00 33
Unchuck error	Wait position time out	Position motor inoperative	E1 02 00 36
	Wait position time out	Position not stable in fine adjust mode	E1 02 00 37
	Wait position time out	Other fault	E1 02 00 38
Eject error	Eject position time out	Position motor inoperative	E1 02 00 41
	Eject position time out	Eject position not attained	E1 02 00 42
	MAG in switch time out	Magazine not ejected	E1 02 00 43
Initialize error	Mechanism switch time out	Both Tray-in and Tray-out Low	E1 03 00 46
	Absolute position time out	Not stable at absolute position	E1 03 00 47

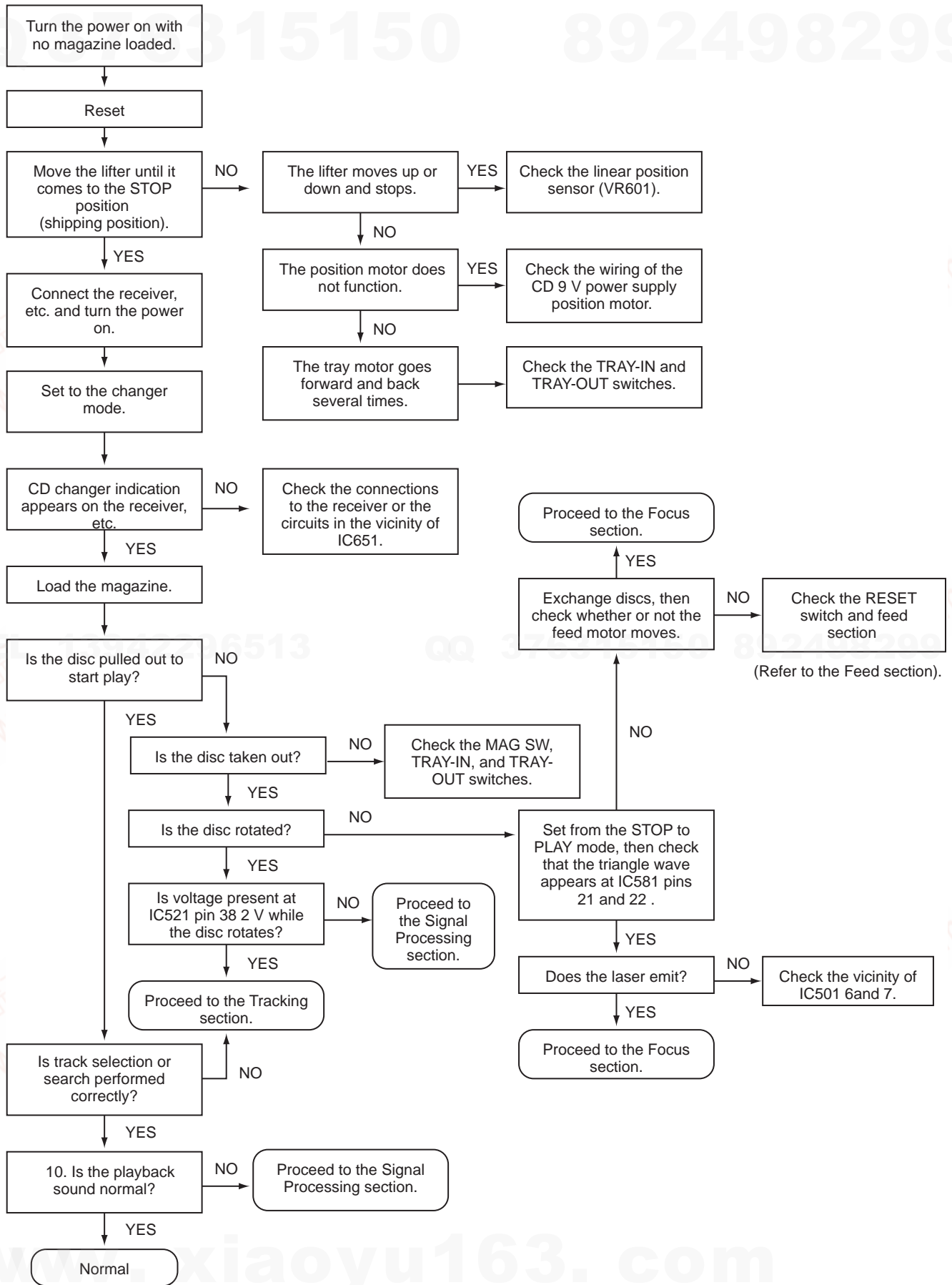
Note:

The 1st error code is indicated by E1, while the 2nd and 3rd error codes are respectively indicated by E2 and E3.

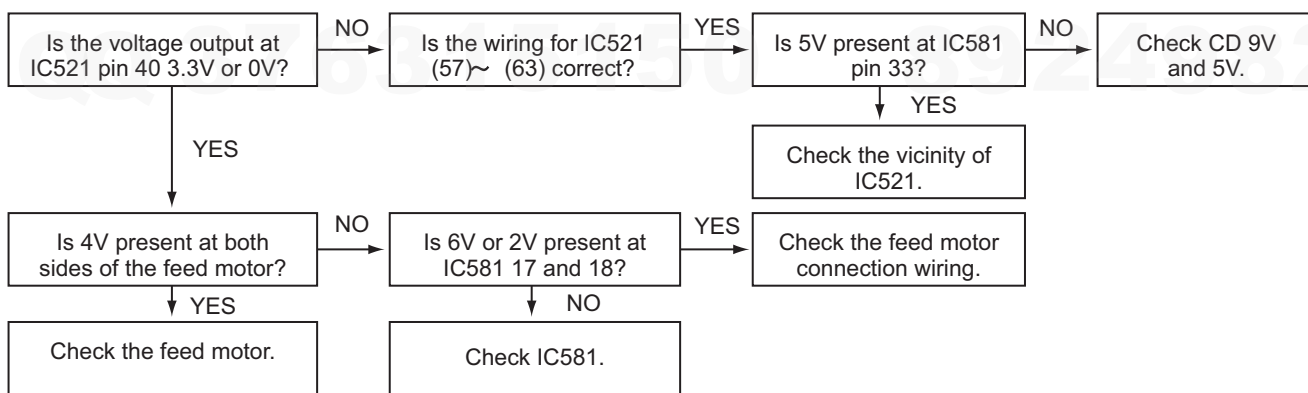
5.3 Flow of functional operation until TOC read (new circuit board)



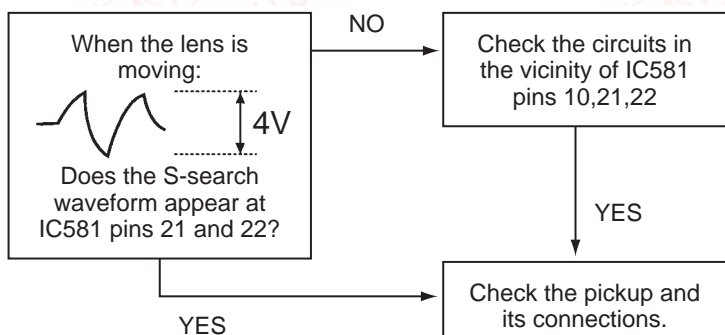
■ General section (new circuit board)



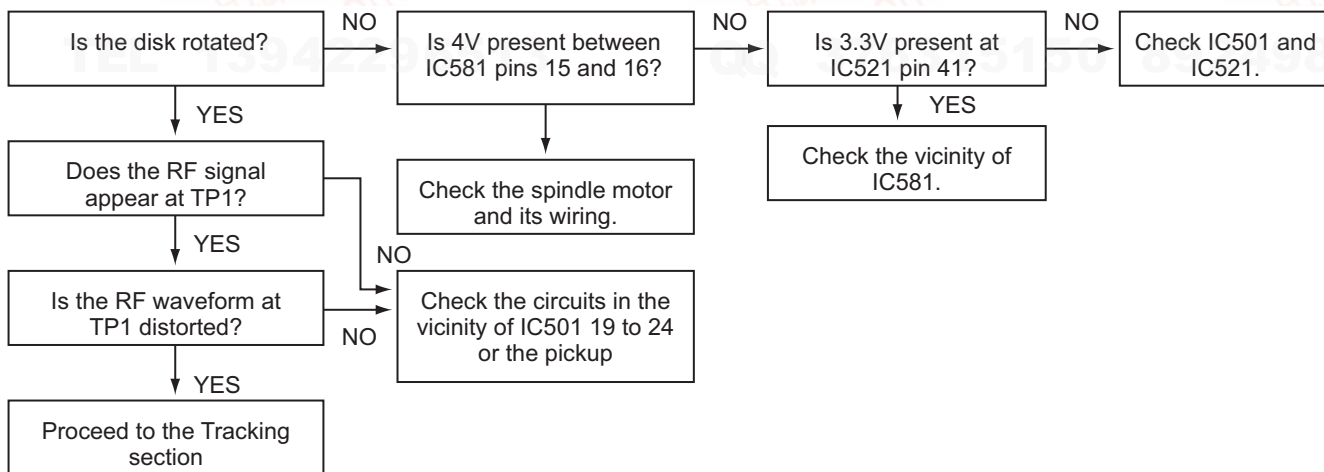
■ Feed section (new circuit board)



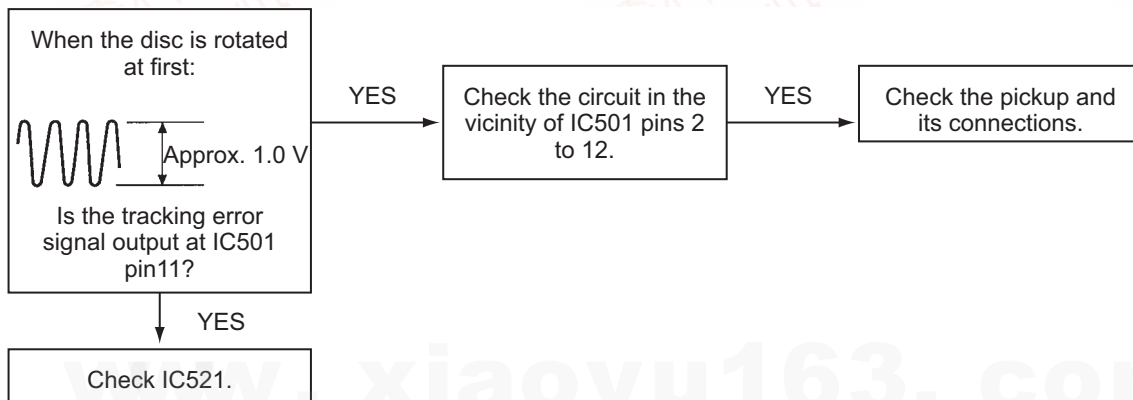
■ Focus section (new circuit board)



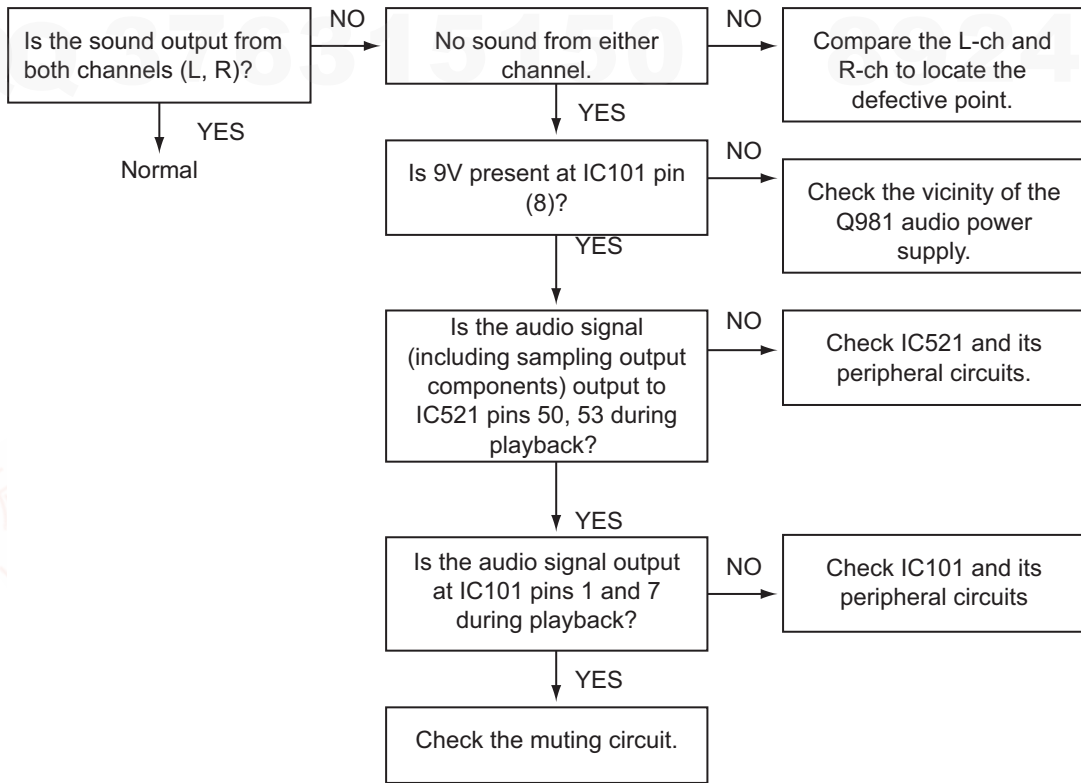
■ Spindle section (new circuit board)



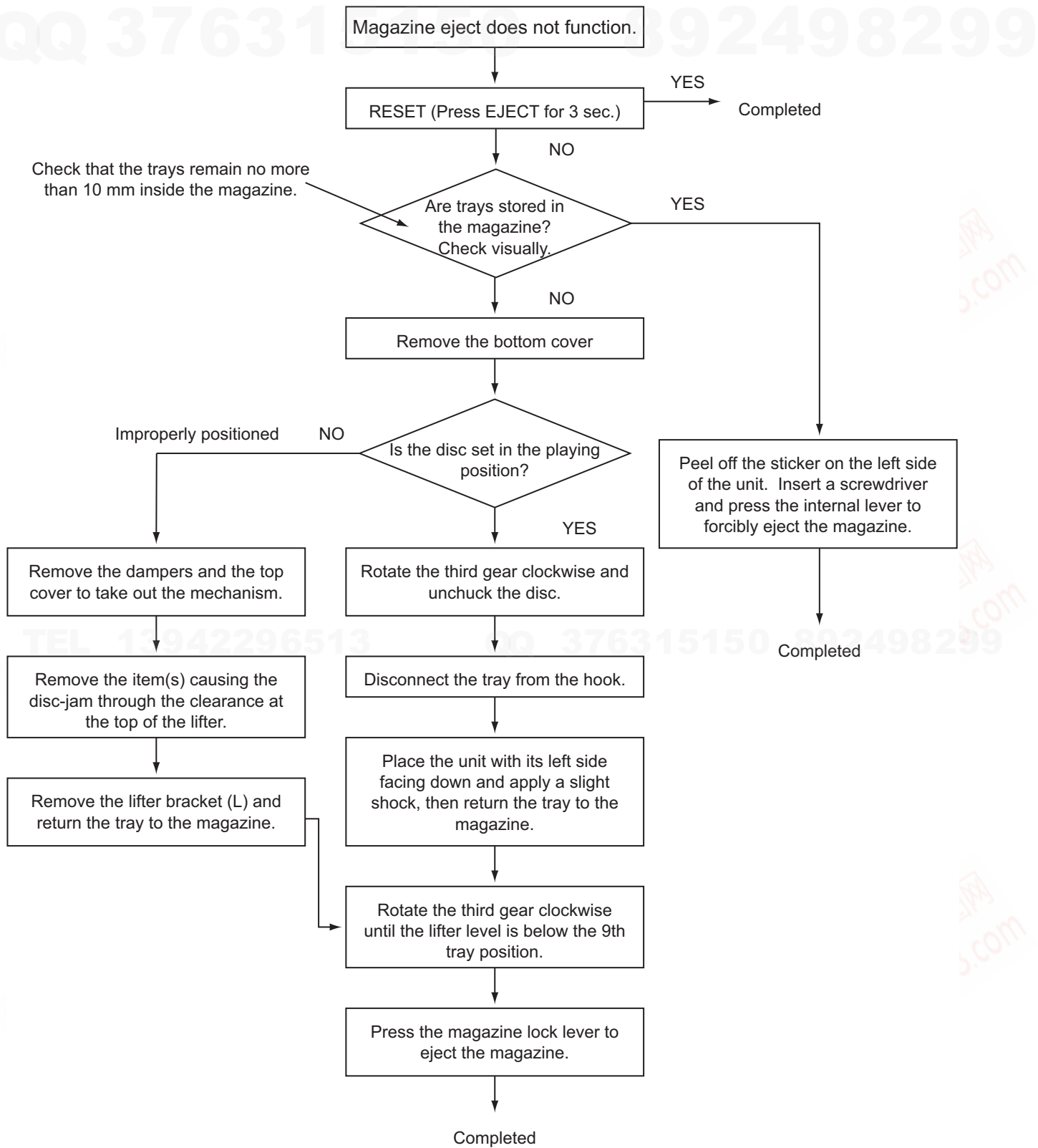
■ Tracking section (new circuit board)



■ Signal processing section (new circuit board)



5.4 Forced eject procedures



5.5 Troubleshooting

5.5.1 Servicing procedures for error displays

Error display Servicing procedure

E1: Eject error The magazine cannot be ejected until S601 (magazine switch) turns off.
 Can the magazine be ejected? YES→1, NO→2
 1 The magazine switch (S601) does not turn off even though the magazine is completely ejected.
 2 Check that the magazine is not engaged with the mechanism assembly.

E2: Position motor error The lifter does not move up and down when exchanging or ejecting discs.
 After resetting, check whether or not the lifter moves. YES→3, NO→4
 3 If the lifter exceeds the required disc position, check the lift position input. (IC601 pin 76)
 If the lifter does not reach the required disc position, check the mechanism (mainly the lifter elevation mechanism)
 4 Check that voltage is present at the motor terminal.
 If voltage is present, check the lifter elevation mechanism. If voltage is not present, separate the motor from the circuit and check again whether or not voltage is present.
 If voltage is present, next check that the armature resistance of the position motor (resistance between motor terminals) is approx. 12 Ω .
 If the resistance is excessively low (1 - 2 Ω), the motor is defective.

E3: Tray motor error Trays cannot be opened or closed when exchanging or ejecting discs.
 Does the tray move when changing or ejecting discs? YES→5, NO→6
 5 Check that TRAY OUT SW (S602) and TRAY IN SW (S603) function correctly.

	S602 & IC601 pin (46)	S603 & IC601 pin (45)
When opening	H	L
When closing	L	H

6 Check that the drive voltage is applied to the motor terminal.
 If the voltage is present, check the tray mechanism.
 If the voltage is not present, separate the motor from the circuit and check again whether or not the voltage is present.

E4: Pick returning Does the feed (pickup unit) return to the inner area of the disc when ejecting?
 YES→7, NO→8, 9
 7 Check the rest switch.
 8 If the feed gear is rotated, check the feed transfer mechanism
 9 If the feed gear is not rotated, check the motor driver and the pattern.

Other errors occurring in the receiver or controller.

E8: Connection error When selecting the CD Changer mode using function keys, etc., the unit does not enter the CD changer mode, or the E8 error display appears. This signifies trouble relating to communications.
 a Check the connection cables between the CD changer and the receiver (CD changer controller).
 b Check the CD changer power cord and the fuse (including F901 on the PC board).
 c Check IC651 and its peripheral circuits.

★ The E1~E8 error displays described above may appear as E-1~E-8, 1E1~1E8, R-1~R-8, or RST1~RST8, depending on the product.

5.5.2 Error code

The following error codes can be displayed and stored in up to 3 memories when the KD-MX3000 is used with the controller. Refer to the KD-MX3000 service manual regarding error code indication.

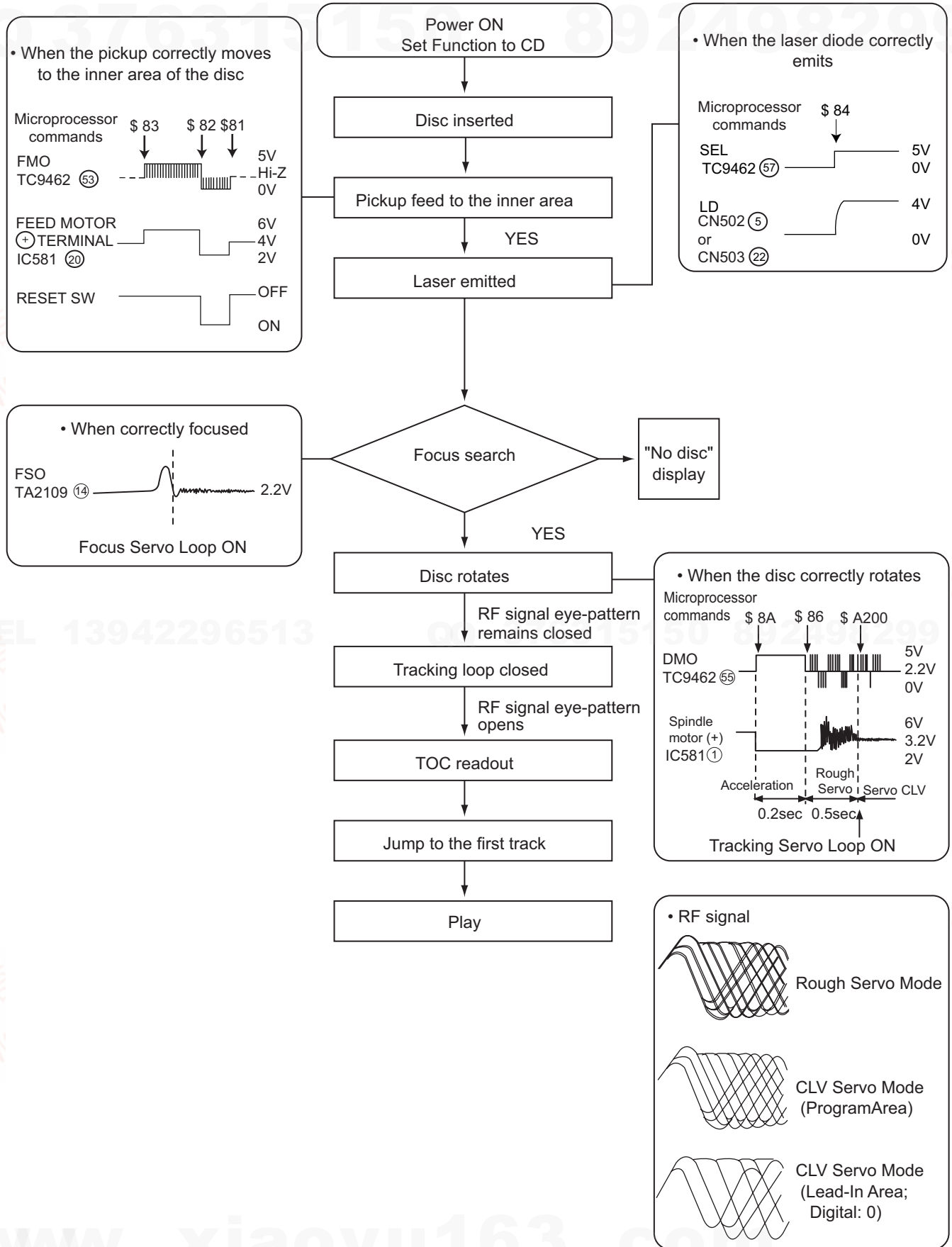
Error code table

Generating condition		Description	Error code
Tray extension error	Tray-in switch time out (Tray-in switch Low, Tray-out switch High)	Tray stops part way	E1 03 00 11
	Tray-out switch time out (Tray-in switch High, Tray-out switch High)	Tray stops part way	E1 03 00 12
	Tray-in switch time out (Tray-in switch Low, Tray-out switch Low)	Tray-in switch faulty or other defect	E1 03 00 13
	MAG-in switch Low to High	Magazine removed when tray partly extended	E1 03 00 14
Tray retraction error	Tray-in switch time out (Tray-in switch Low, Tray-out switch Low)	Tray motor inoperative	E1 03 00 16
	Tray-out switch time out (Tray-in switch High, Tray-out switch High)	Tray retraction stops part way	E1 03 00 17
	Tray-in switch time out (Tray-in switch Low, Tray-out switch Low)	Tray-in switch faulty or other defect	E1 03 00 18
	MAG-in switch Low to High	Magazine removed when tray partly retracted	E1 03 00 19
Lifter raise error	Wait position time out	Position motor inoperative	E1 02 00 21
	Wait position time out	Position not stable in fine adjust mode	E1 02 00 22
	Wait position time out	Other fault	E1 02 00 23
Lifter lower error	Wait position time out	Position motor inoperative	E1 02 00 26
	Wait position time out	Position not stable in fine adjust mode	E1 02 00 27
	Wait position time out	Other fault	E1 02 00 28
Chuck error	Play position time out	Position motor inoperative	E1 02 00 31
	Play position time out	Position not stable in fine adjust mode	E1 02 00 32
	Play position time out	Other fault	E1 02 00 33
Unchuck error	Wait position time out	Position motor inoperative	E1 02 00 36
	Wait position time out	Position not stable in fine adjust mode	E1 02 00 37
	Wait position time out	Other fault	E1 02 00 38
Eject error	Eject position time out	Position motor inoperative	E1 02 00 41
	Eject position time out	Eject position not attained	E1 02 00 42
	MAG in switch time out	Magazine not ejected	E1 02 00 43
Initialize error	Mechanism switch time out	Both Tray-in and Tray-out Low	E1 03 00 46
	Absolute position time out	Not stable at absolute position	E1 03 00 47

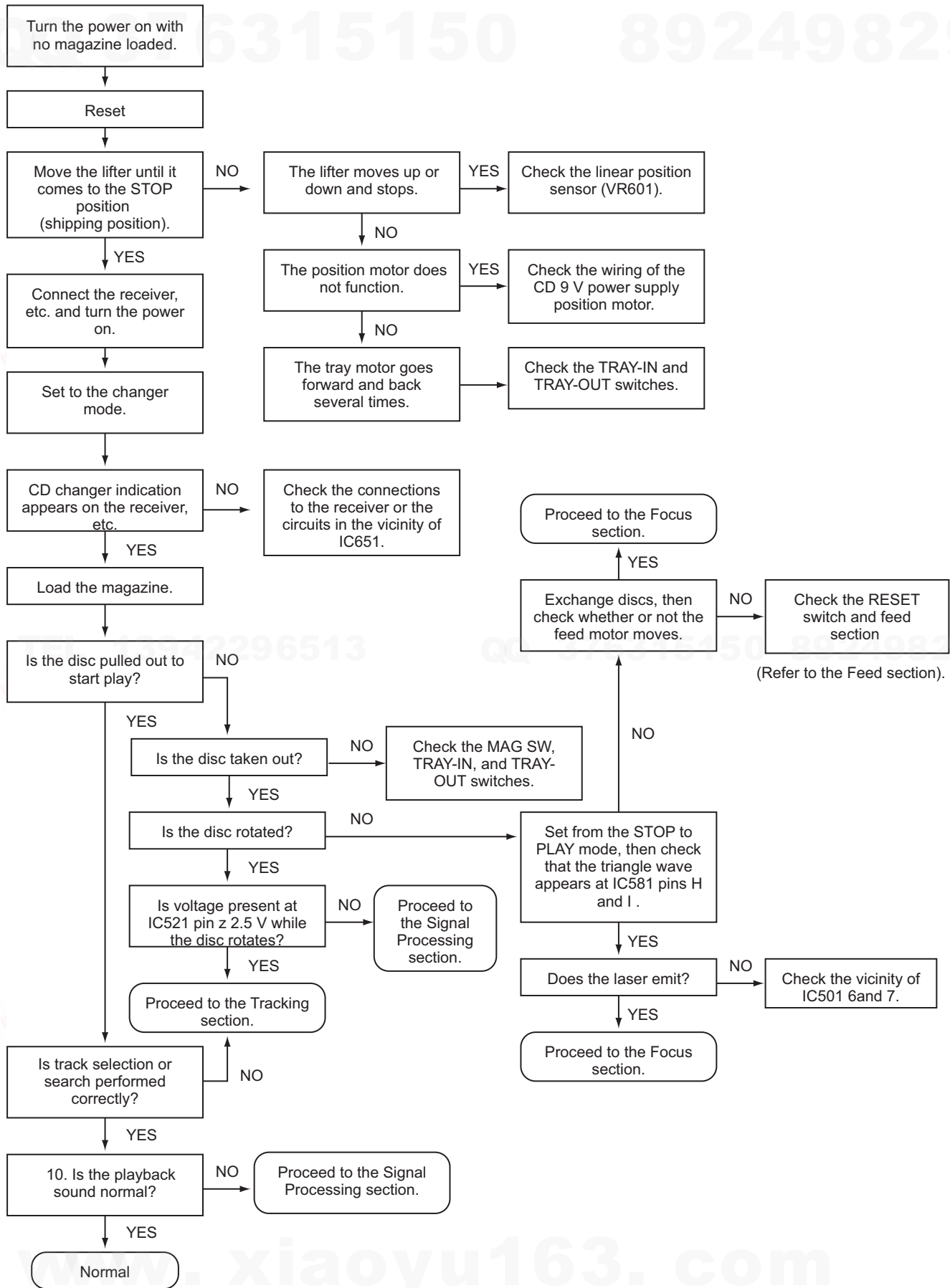
Note:

The 1st error code is indicated by E1, while the 2nd and 3rd error codes are respectively indicated by E2 and E3.

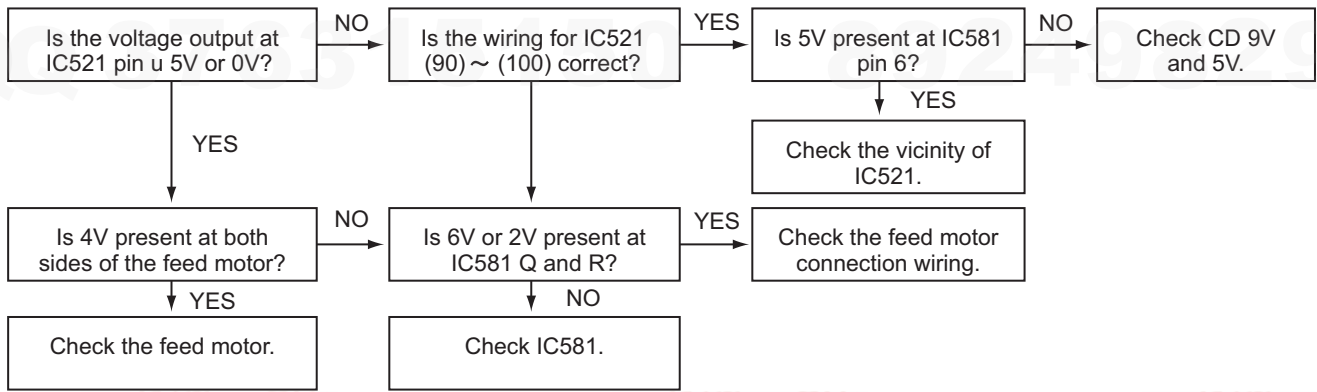
5.6 Flow of functional operation until TOC read



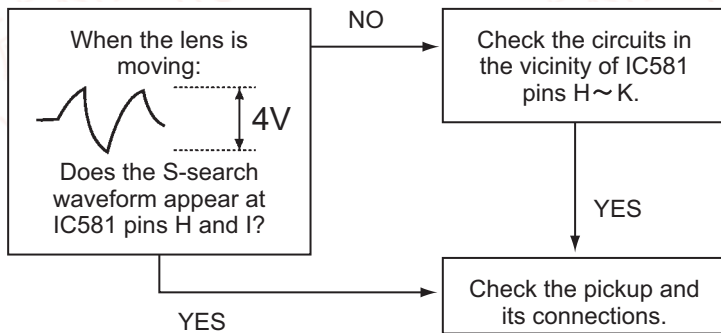
■ General section



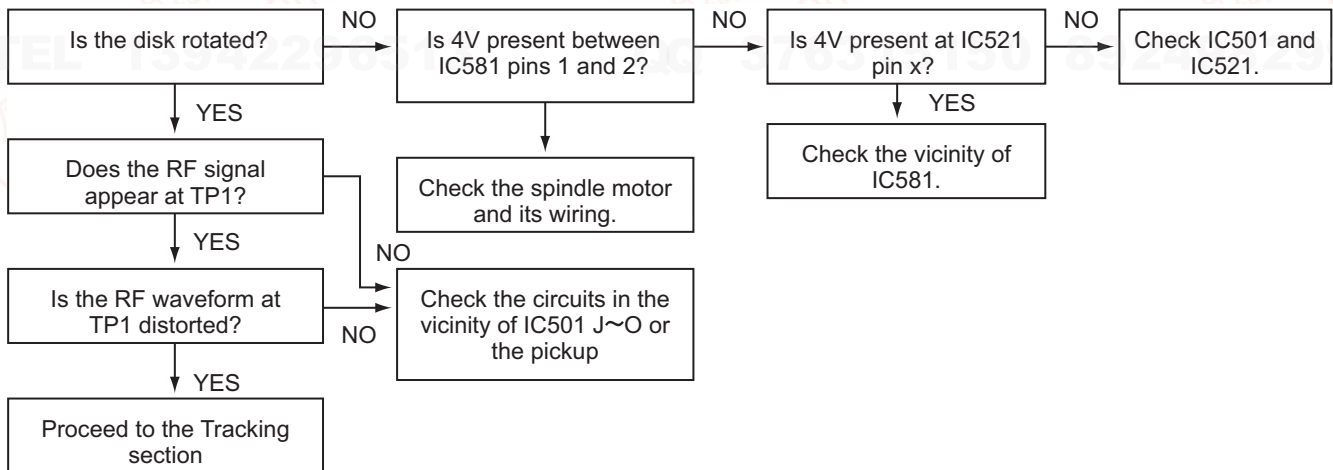
■ Feed section



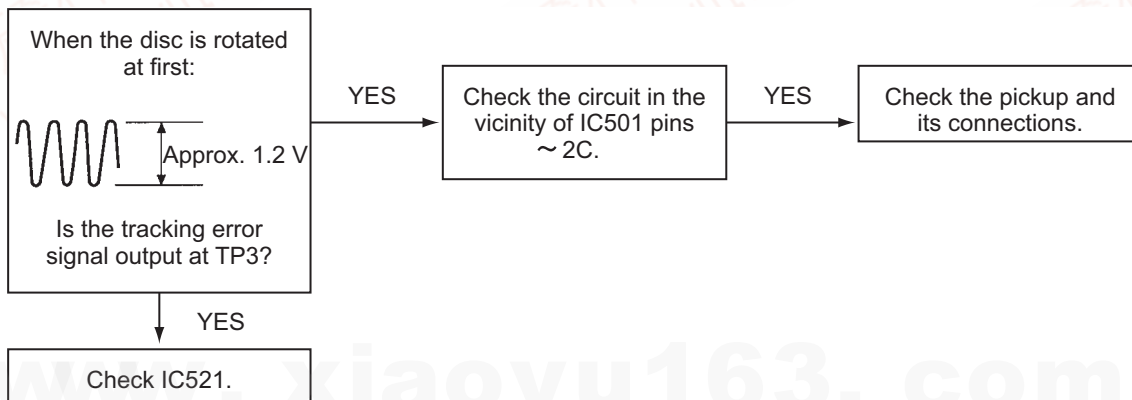
■ Focus section



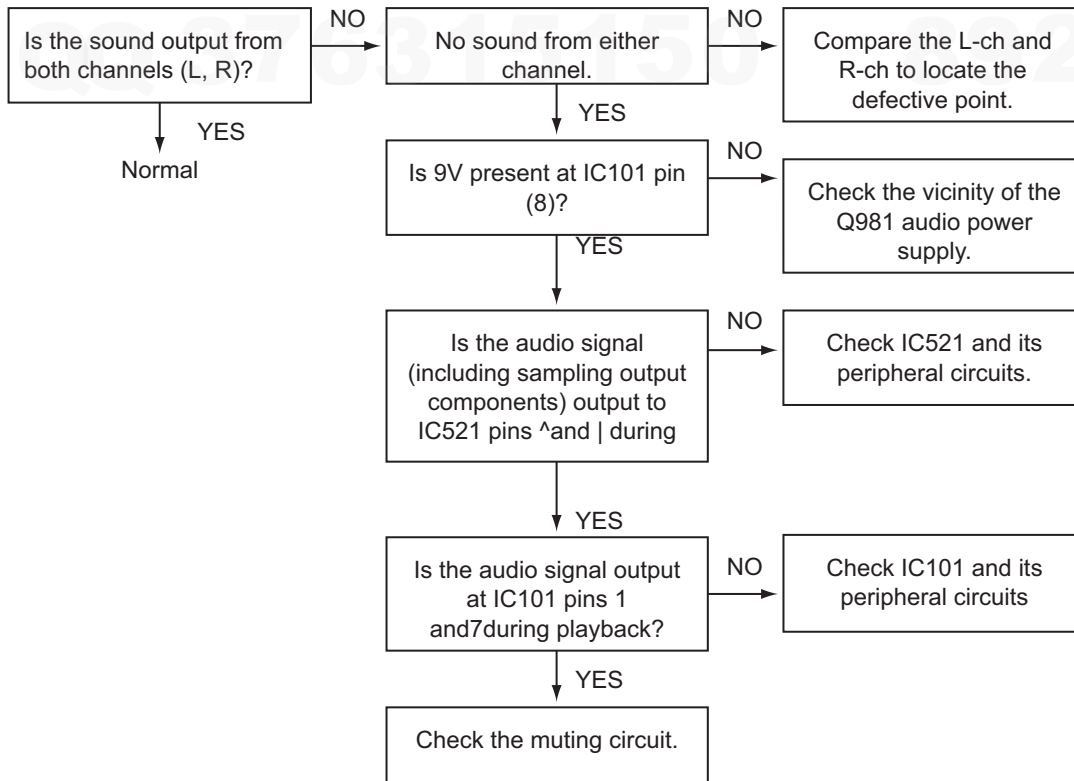
■ Spindle section



■ Tracking section



■ Signal processing section



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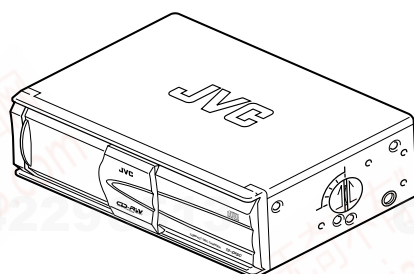
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SCHEMATIC DIAGRAMS

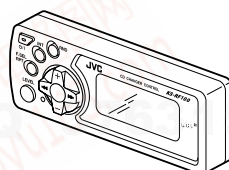
CD CHANGER

CH-X1100, CH-X1100RF CH-X470RF

CD-ROM No.SML200401



CH-X1100



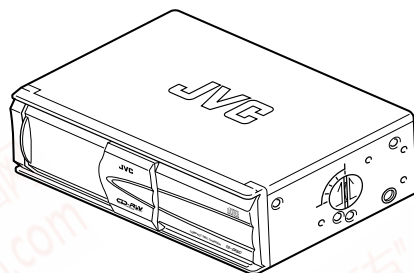
KS-RF100

- CH-X1100RF is a combination of CH-X1100 and KS-RF100.
- KS-RF100 is a combination of Remote control and the RF unit.

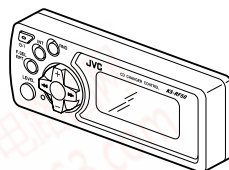
Area Suffix
J ----- Northern America

**COMPACT
disc**
DIGITAL AUDIO

CD-RW
PLAYBACK



CH-X470



KS-RF50

- CH-X470RF is a combination of CH-X470 and KS-RF50.
- KS-RF50 is a combination of Remote control and the RF unit.


**COMPACT
disc**
DIGITAL AUDIO


CD-RW
PLAYBACK

Contents

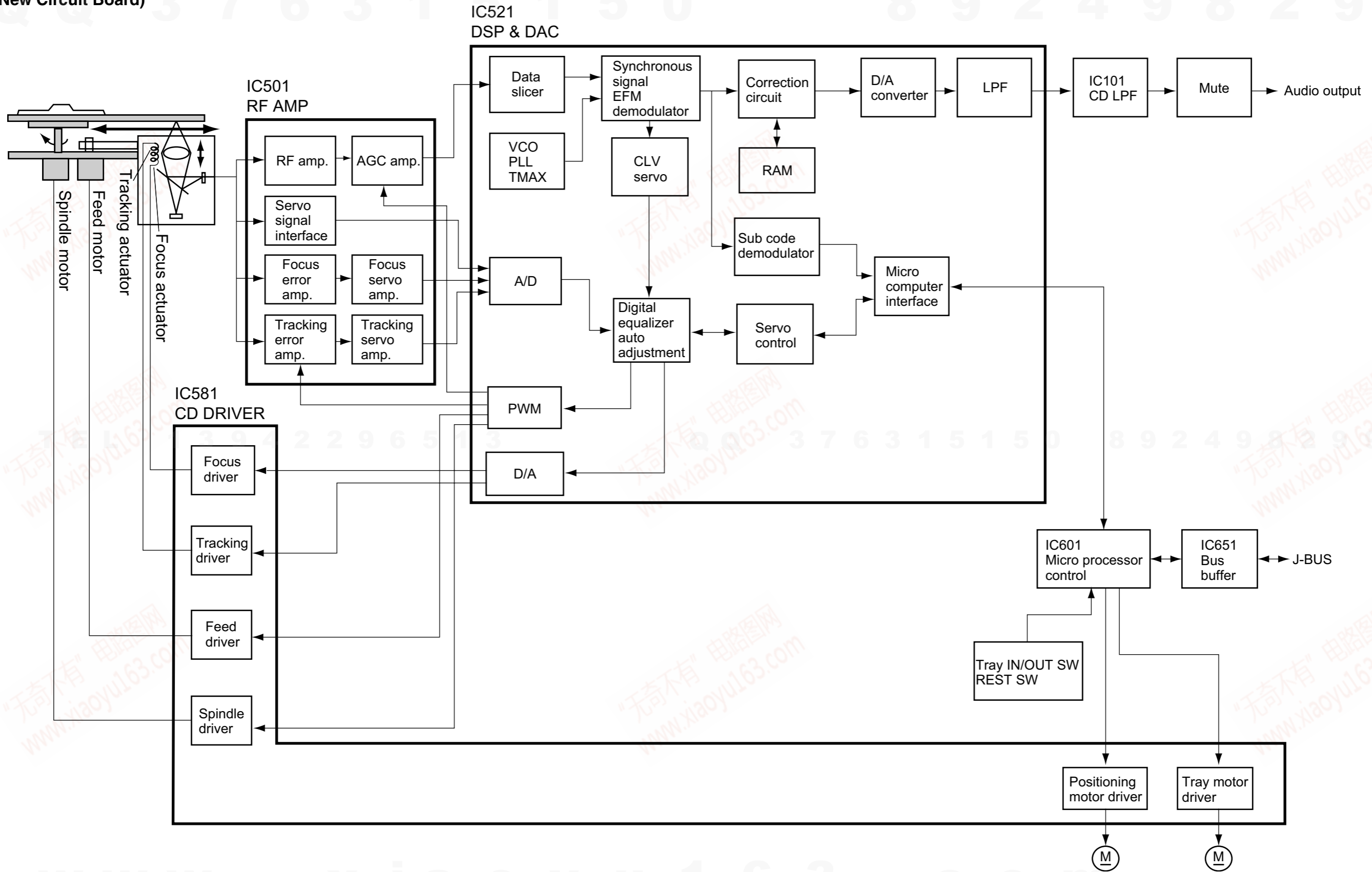
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Safety precaution

 **CAUTION** Burrs formed during molding may be left over on some parts of the chassis. Therefore, pay attention to such burrs in the case of performing repair of this system.

 **CAUTION** Please use enough caution not to see the beam directly or touch it in case of an adjustment or operation check.

Block diagram (New Circuit Board)

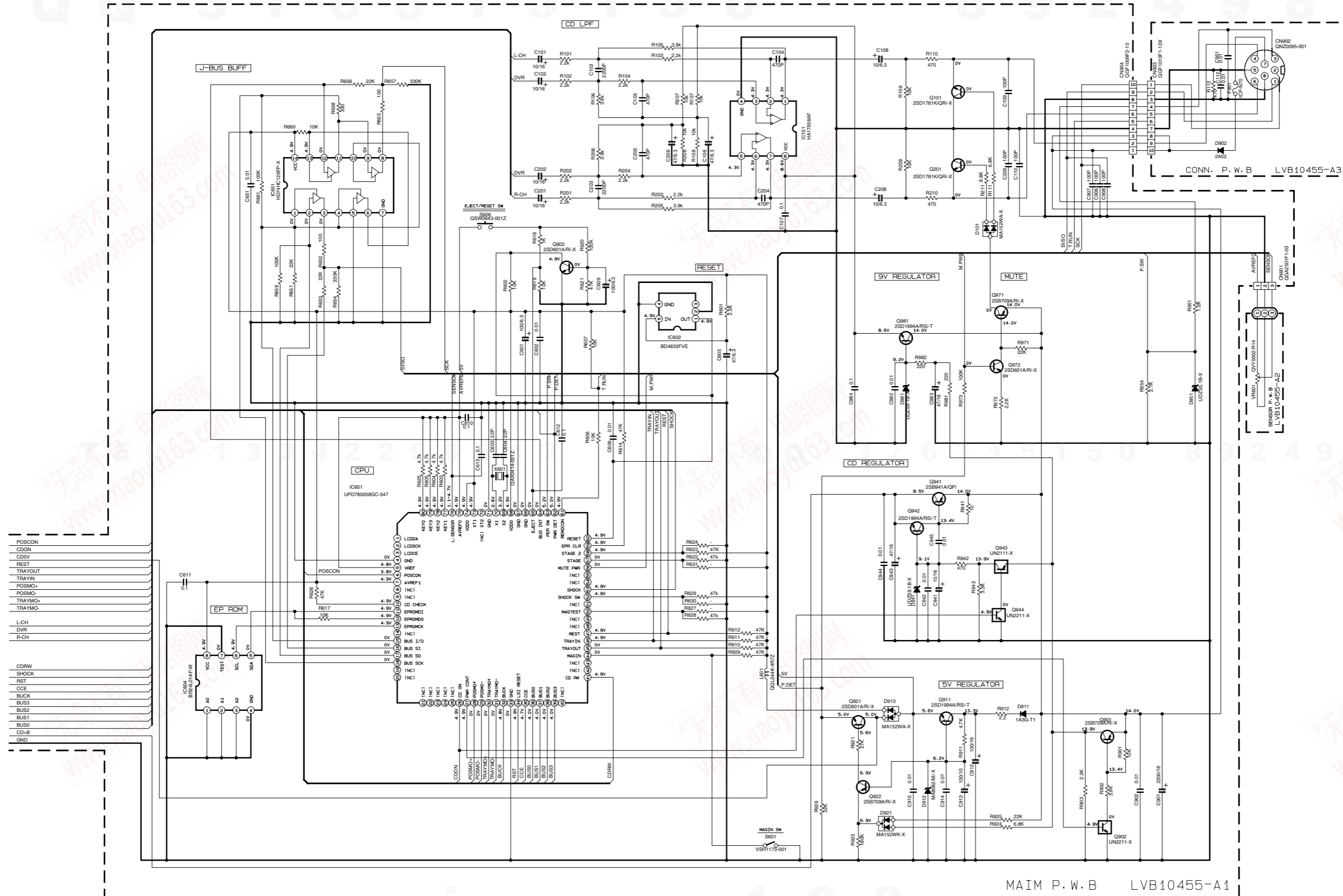


TEL: 13942296513 QQ: 376315150 892498299

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Standard schematic diagrams

System control / Audio output section (New Circuit Board)



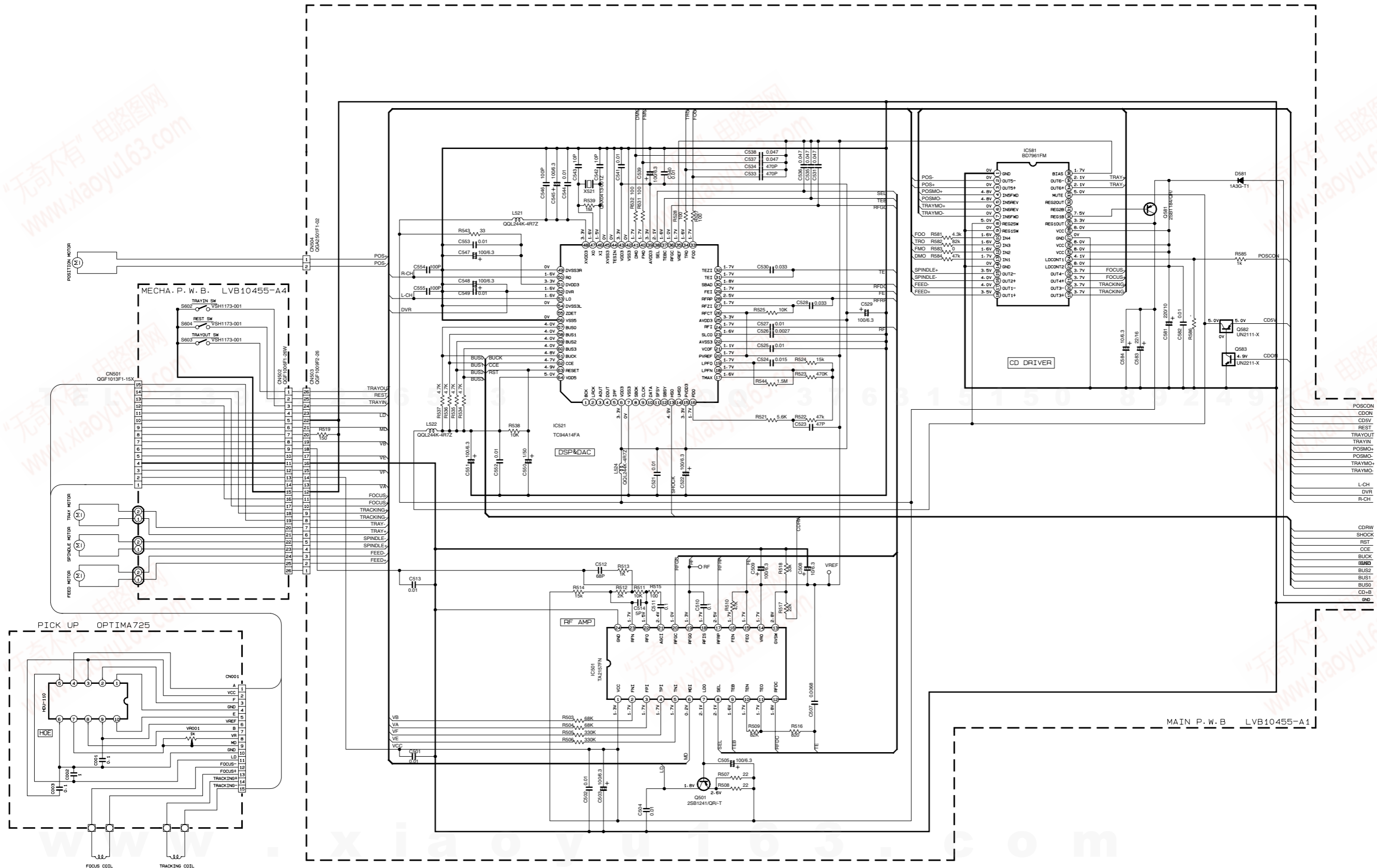
UN2111-X			
UN2211-X			

- NOTES
1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL CONDITION—CD MODE.
 2. UNLESS OTHERWISE SPECIFIED.
ALL RESISTORS ARE 1/10W OR 1/4W ±5% METAL GLAZE RESISTOR.
ALL CAPACITORS ARE 50V OR 25V CERAMIC CAPACITOR.
ALL RESISTANCE VALUES ARE IN OHM.
ALL CAPACITANCE VALUES ARE IN UF(P=PF)
ALL E-CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE(UF)/RATED VOLTAGE(V)

CD servo control section (New Circuit Board)

UN2111-X			10K
UN2211-X			10K

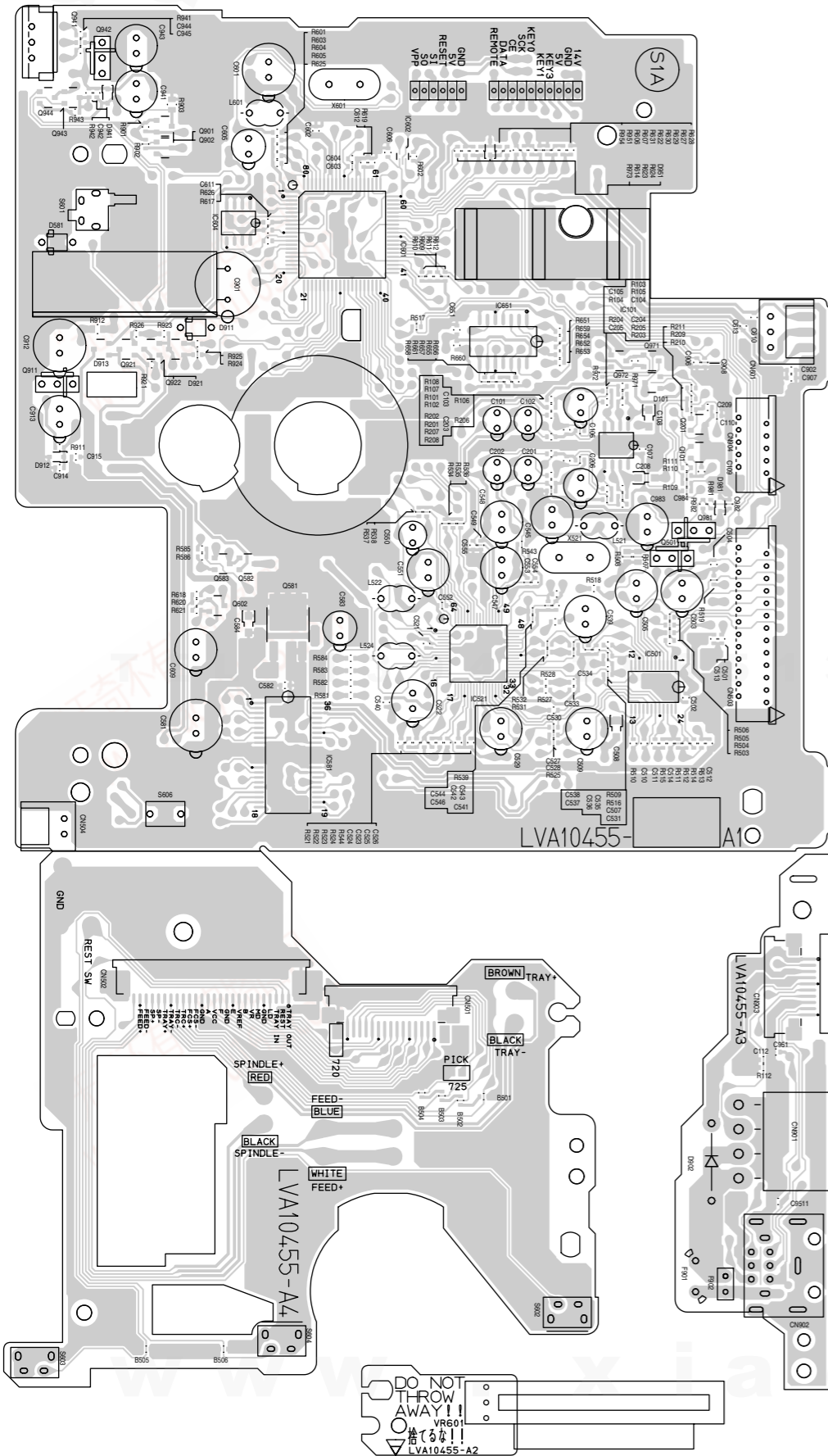
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Printed circuit boards

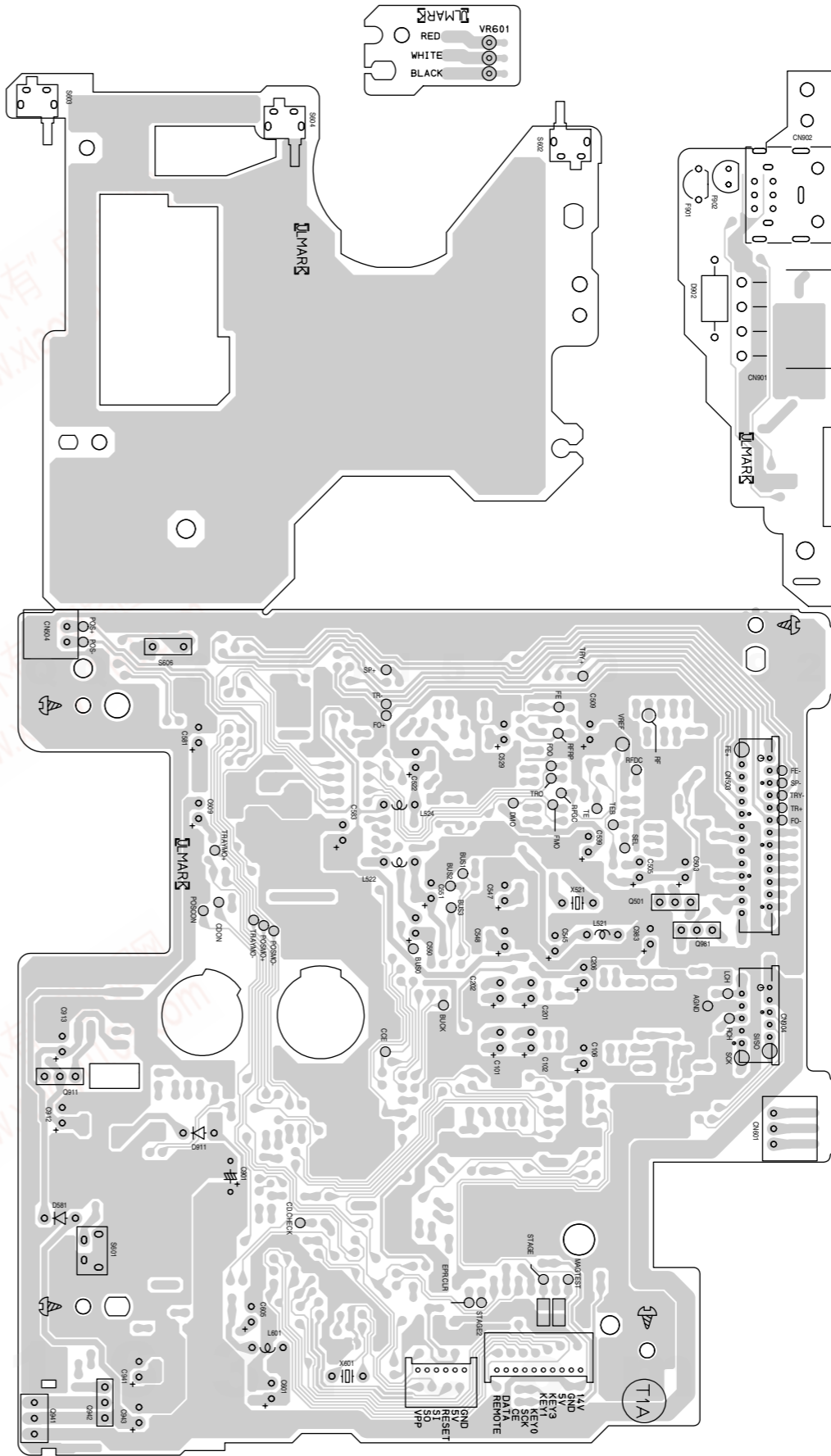
■ Main board (New Circuit Board)

Forward side

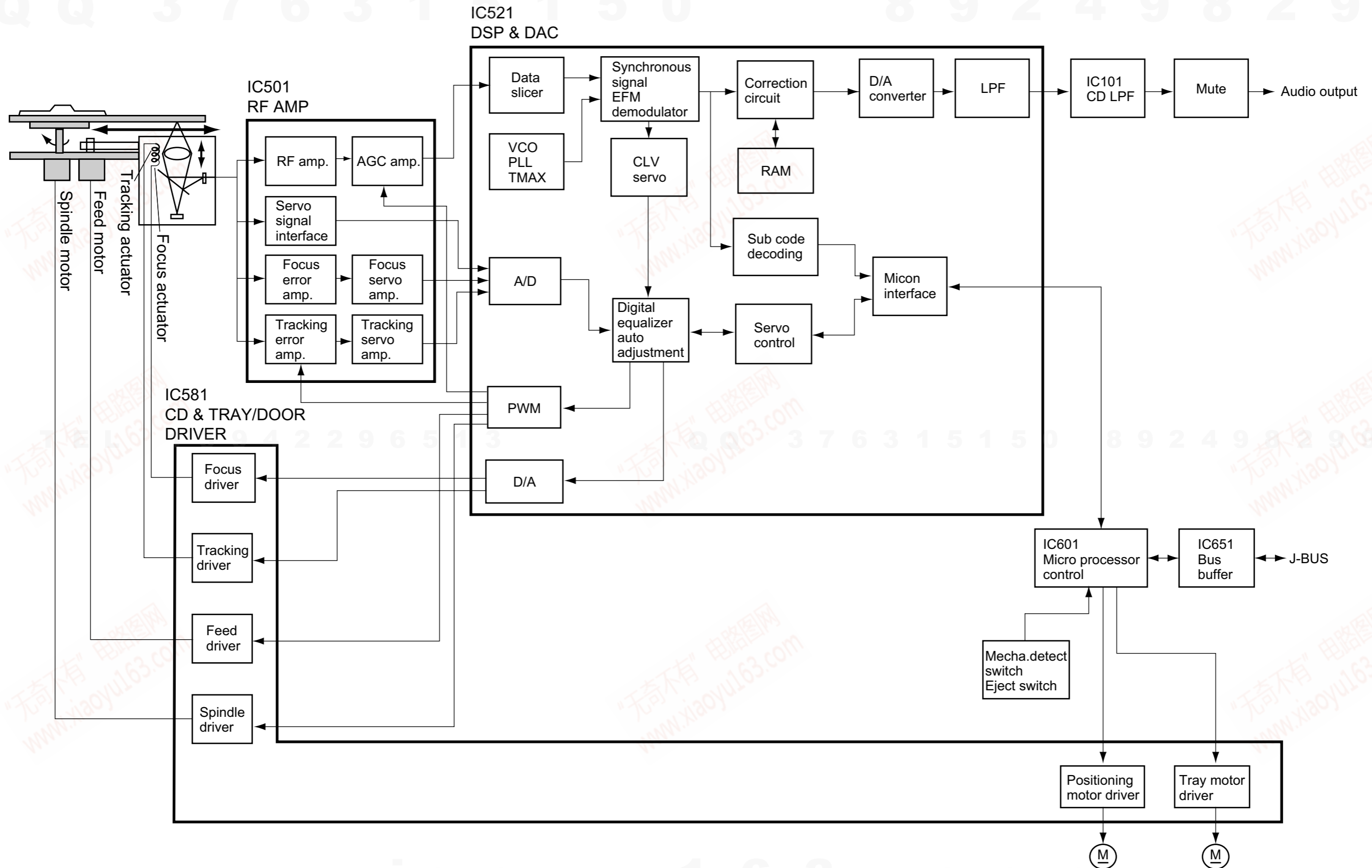


■ Main board (New Circuit Board)

Reverse side



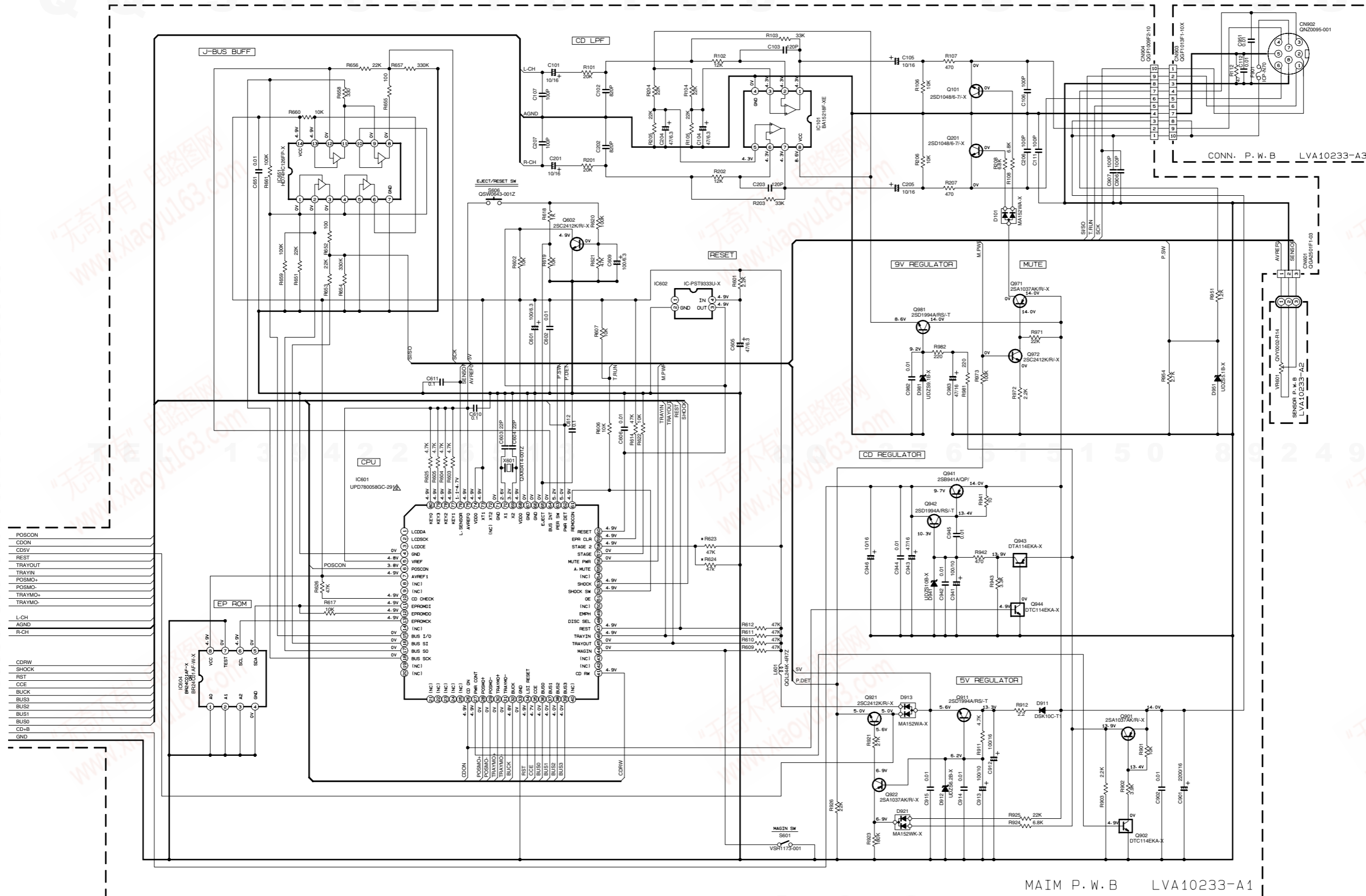
Block diagram



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Standard schematic diagrams

System control / Audio output section



	CD-RW	R623	R624
CH-X400J2/E2		X	O
CH-X450U2		O	X
Except Avode		O	X

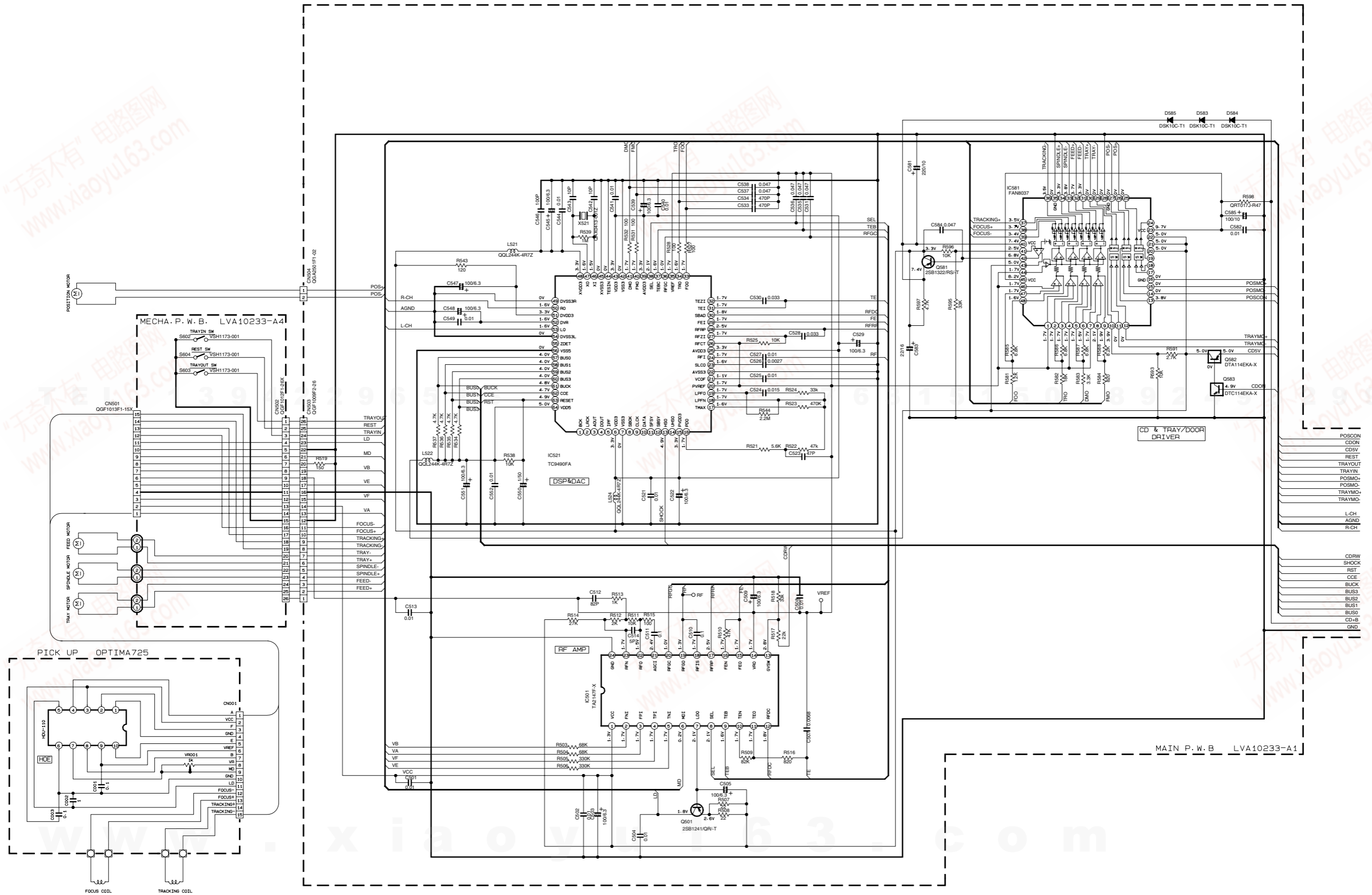
DTA114EKA		
DTC114EKA		

- NOTES
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 2. UNLESS OTHERWISE SPECIFIED.
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ALL CAPACITORS ARE 50V OR 25V CERAMIC CAPACITOR.
ALL RESISTANCE VALUES ARE IN OHM.
ALL CAPACITANCE VALUES ARE IN uF(P=pF)
ALL E-CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE(uF)/RATED VOLTAGE(V)

MAIM P. W. B LVA10233-A1

CD servo control section

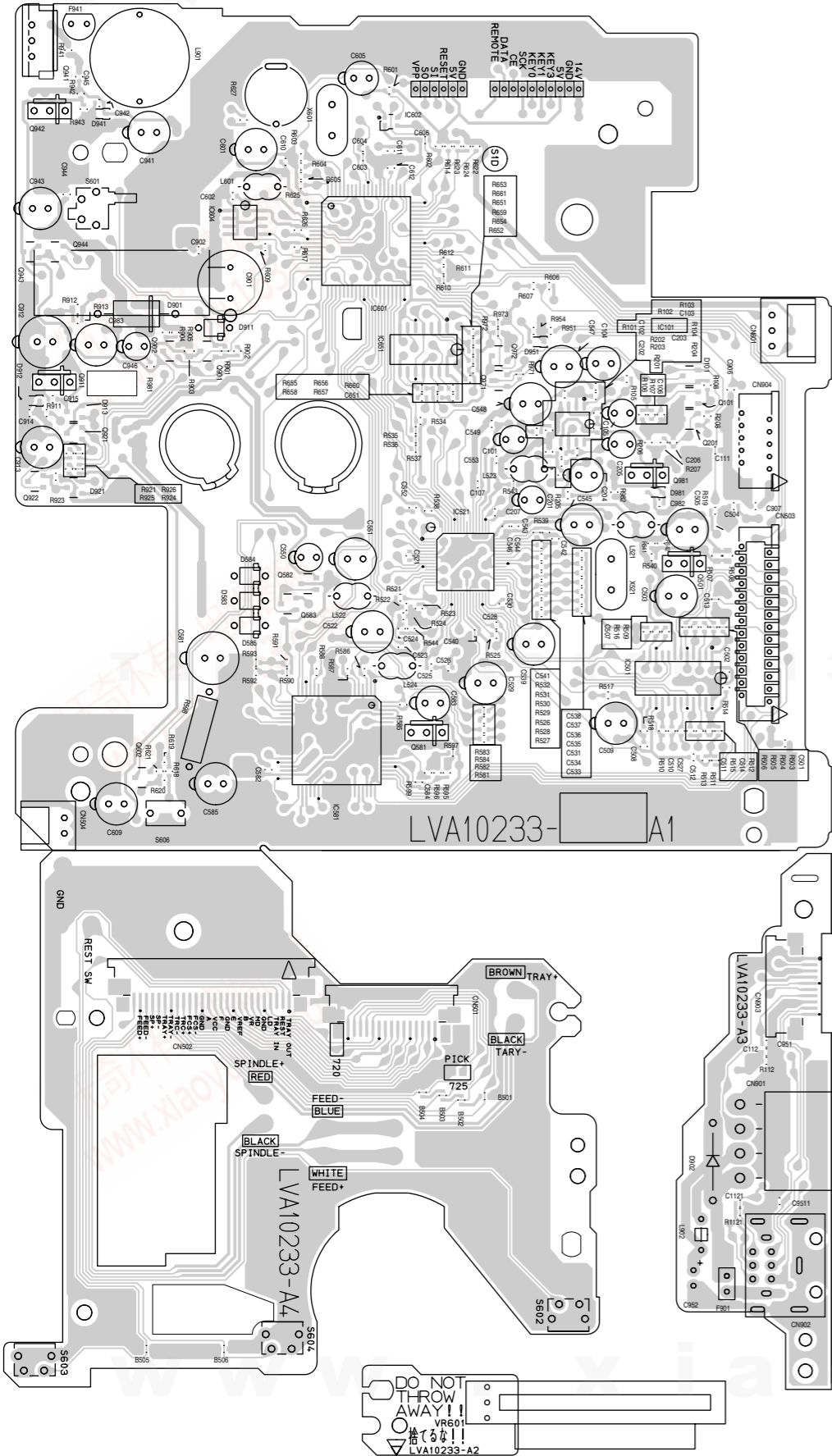
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Printed circuit boards

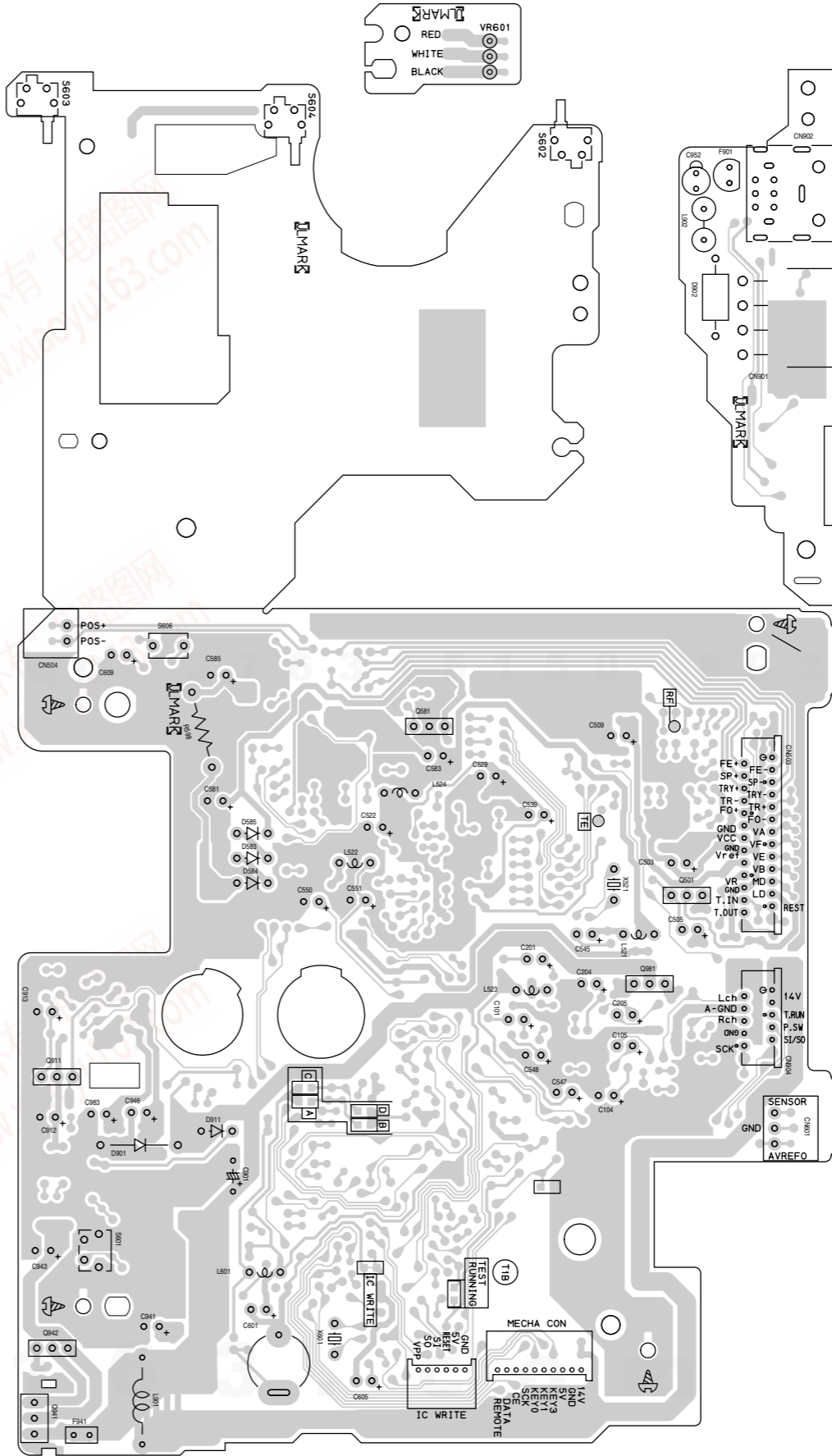
■ Main board

Forward side



■ Main board

Reverse side



< MEMO >

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JVC

VICTOR COMPANY OF JAPAN, LIMITED

AV & MULTIMEDIA COMPANY MOBILE ENTERTAINMENT CATEGORY 10-1,1chome,Ohwatari-machi,Maebashi-city,371-8543,Japan

(No.49668BSCH)



Printed in Japan
WPC

QQ 376315150

892498299

PARTS LIST

[CH-X470RF]
[CH-X1100,CH-X1100RF]

* All printed circuit boards and its assemblies are not available as service parts.

Area suffix

J ----- Northern America

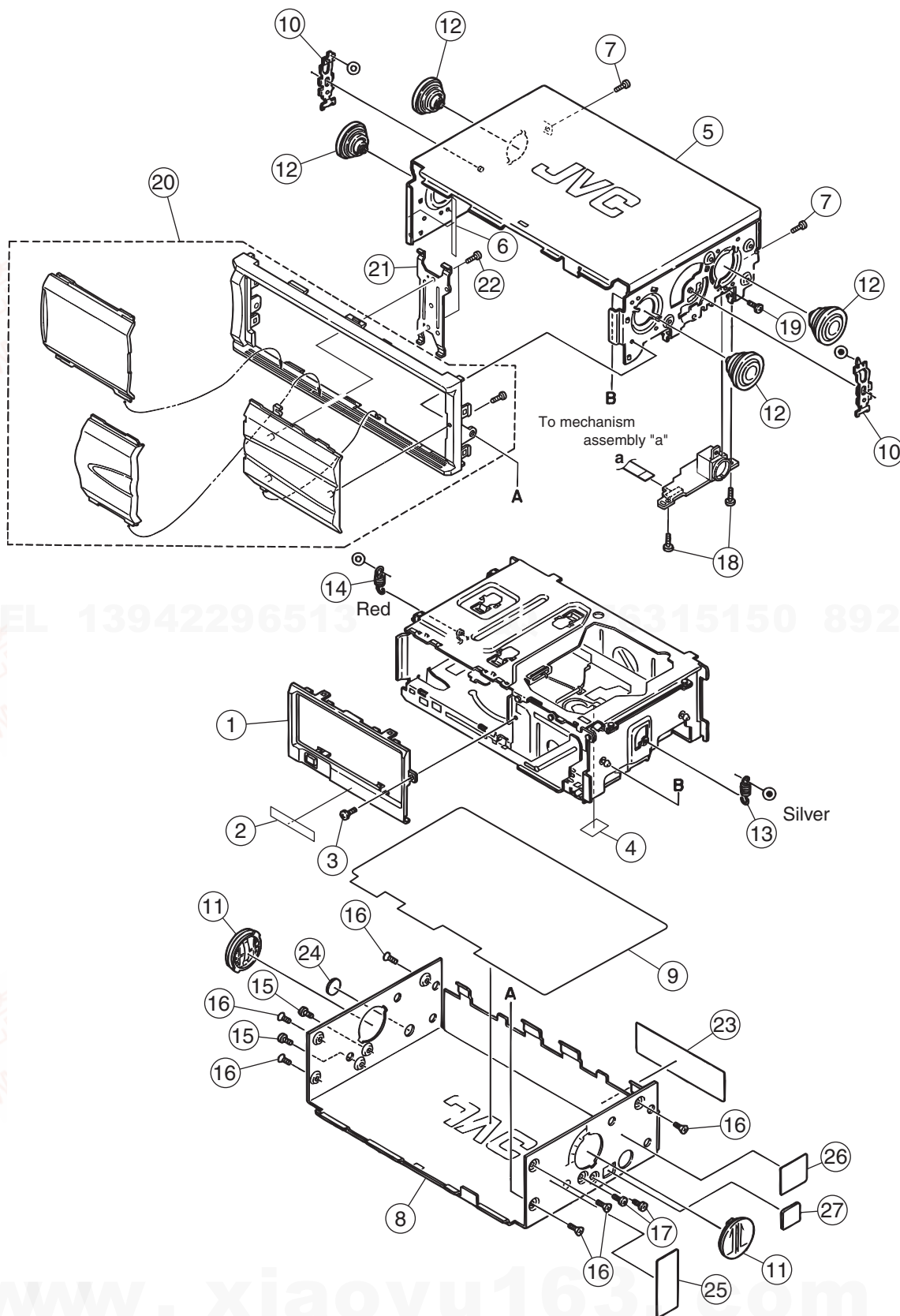
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CD changer mechanism assembly and parts list (Block No.MA)	3- 4
Electrical parts list (Block No.01~02)	3- 6
Packing materials and accessories parts list (Block No.M3)	3-10

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Exploded view of general assembly and parts list

Block No. M 1 M M



General assembly

Block No. [M][1][M][M]

892498299

△ Symbol No.	Part No.	Part Name	Description	Local
1	LV20065-004B	FITTING		
2	LV40706-003A	CAUTION LABEL		
3	QYSDST2004Z	SCREW	2mm x 4mm	
4	LV41266-001A	SPACER		
5	LV10407-009A	TOP COVER		X1100 .X110 0RF
5	LV10407-006A	TOP COVER		X470 RF
6	VYSH101-031	SPACER		
7	QYSSST2005M	SCREW	2mm x 5mm(x2)	
8	LV10408-009A	BOTTOM COVER		X1100 .X110 0RF
8	LV10408-006A	BOTTOM COVER		X470 RF
9	LV30632-001A	INSULATOR		
10	LV42152-001A	BRACKET	(x2)	
11	LV30360-004A	DIRECTION KNOB	(x2)	
12	LV30451-002A	DAMPER	(x4)	
13	LV40345-003A	DAMPER SP(R)		
14	LV40346-003A	DAMPER SP(L)		
15	QYSDST2604M	SCREW	2.6mm x 4mm(x2)	
16	QYSSST2605M	SCREW	2.6mm x 5mm(x6)	
17	QYSDST2604M	SCREW	2.6mm x 4mm(x2)	
18	QYSDST2005Z	SCREW	2mm x 5mm(x2)	
19	QYSDST2606Z	SCREW	2.6mm x 6mm	
20	LV20923-009B	F.PANEL ASSY		X1100 .X110 0RF
20	LV20923-010B	F.PANEL ASSY		X470 RF
21	LV30786-003A	HOLD BRACKET		
22	QYSDSF2005Z	SCREW	2mm x 5mm(x2)	
23	LV34519-001A	NAME PLATE		X1100 .X110 0RF
23	LV34574-001A	NAME PLATE		X470 RF
24	VYSS2R2-028	SPACER		
25	LV40762-001A	CAUTION LABEL		
26	LV40487-003A	CAUTION LABEL		
27	LV40528-007A	LABEL		X1100 .X110 0RF
27	LV40528-005A	LABEL		X470 RF

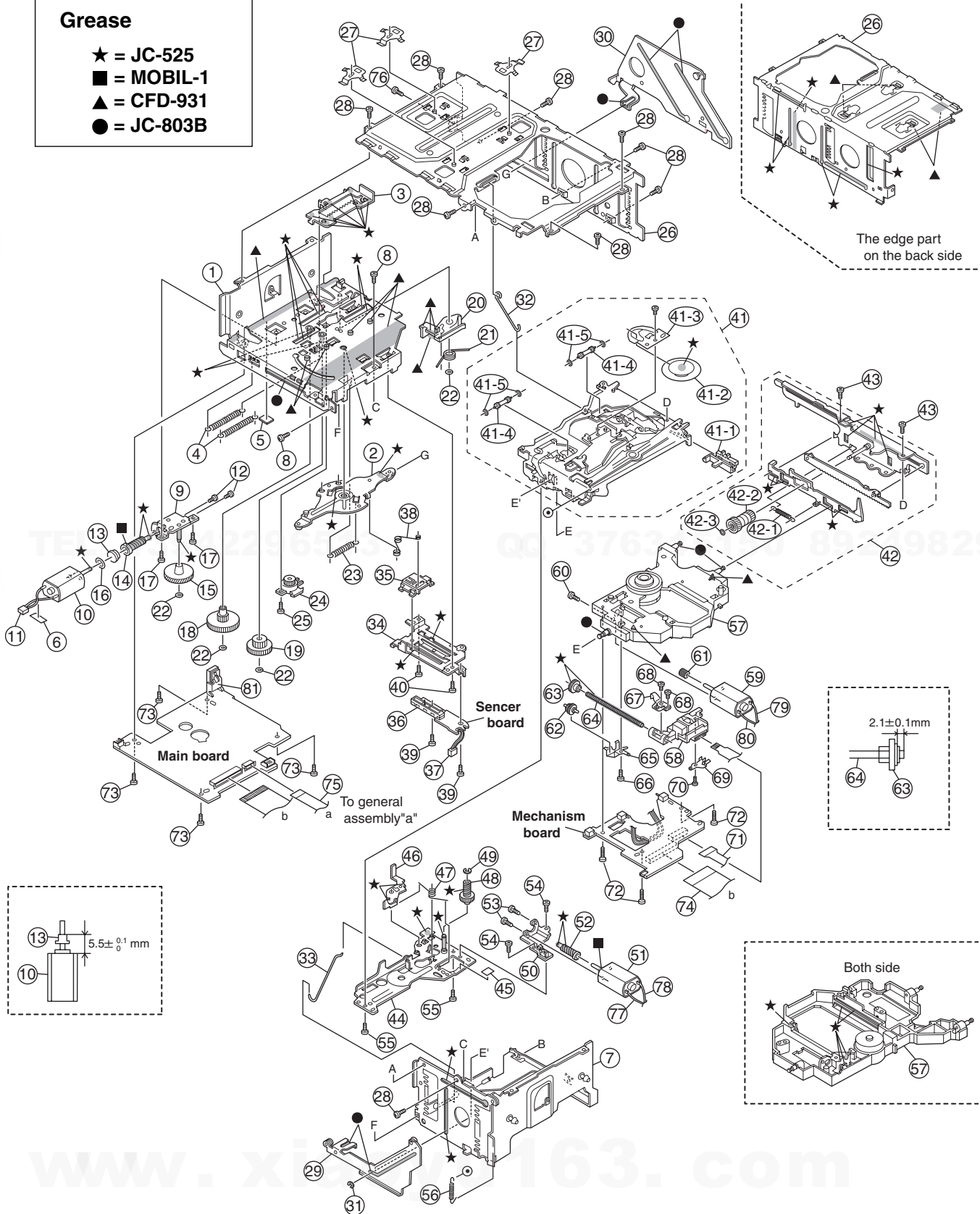
CD changer mechanism assembly and parts list

CH-X1100J2

Block No. M A M M

Grease

- ★ = JC-525
- = MOBIL-1
- ▲ = CFD-931
- = JC-803B



CD changer mechanism

Block No. [M][A][M][M]

Symbol No.	Part No.	Part Name	Description	Local
1	LV30096-005A	CHASSIS(L)ASSY		
2	LV40123-006A	LIFT ARM ASSY		
3	LV30098-003A	EJECT SLIDER		
4	LV40126-005A	EJECT SPRING	(x2)	
5	VYSH102-102	SPACER		
6	VYSA1R4-056	SPACER		
7	LV30097-002A	CHASSIS(R) ASSY		
8	QYSDST2004Z	SCREW	2mm x 4mm(x2)	
9	LV42097-001A	MOTOR BKT ASSY		
10	PPN-13KA10C	MOTOR(FEED)		
11	WJM0017-001A	E-SI C WIRE C-F		
12	QYSPSPT2025M	MINI SCREW	2mm x 2.5mm(x2)	
13	LV32442-001A	WORM DRIVE		
14	LV32440-001A	WORM GEAR		
15	LV32441-001A	WORM WHEEL(P)		
16	QYWFM164025	WASHER	6.4mm x 2mm	
17	QYSDST2004Z	SCREW	2mm x 4mm(x2)	
18	LV40132-003A	THIRD GEAR		
19	LV40133-005A	LIFTER GEAR		
20	LV30100-002A	APLOCK ARM		
21	LV40134-003A	M.LOCK SPRING		
22	QYWDL163525-6	SLIT WASHER	5.2mm x (x4)	
23	LV40142-003A	LIFTER SPRING		
24	LV40478-002A	EJECT DAMPER		
25	QYSDSR2006Z	SCREW	2mm x 6mm	
26	LV10027-003A	TOP COVER		
27	LV30101-004A	MAGAZINE SPRING	(x3)	
28	QYSDST2004Z	SCREW	2mm x 4mm(x9)	
29	LV30448-001A	FRONT SLIDER AS		
30	LV30449-001A	REAR SLIDER ASSY		
31	LV42132-001A	E RING		
32	LV40135-004A	ROD(U)		
33	LV40136-003A	ROD(L)		
34	LV30104-002A	SENSOR BRACKET		
35	LV30105-001A	SENSOR HOLDER		
36	QVY0002-B14	S V RESISTOR		
37	WJM0017-002A	E-SI C WIRE C-F		
38	LV40137-002A	SENSOR SPRING		
39	QYSDST2004Z	SCREW	2mm x 4mm(x2)	
40	QYSDST2004Z	SCREW	2mm x 4mm(x2)	
41	LV20067-002A-N	LIFTER UNIT		
41-1	LV30110-001A	HOOK		
41-2	VKR3203-001	CLAMPER		
41-3	VKL7938-001	CLAMPER GUIDE		
41-4	VKS5587-002	DETECT ROLLER	(x2)	
41-5	VKZ4563-005	O RING	(x4)	
42	LV30148-004A-N	SIDE BKT UNIT		
42-1	LV40190-002A	RETURN SP.(R)		
42-2	LV40148-003A	TRAY GEAR		
42-3	QYWDL163525-6	SLIT WASHER	5.2mm x	
43	QYSDST2004Z	SCREW	2mm x 4mm(x2)	
44	LV40149-003A	L.BKT(L) ASSY		
45	VYSA1R4-088	SPACER		
46	LV30119-003A	SWITCH LEVER		
47	LV40151-002A	SWITCH SPRING		
48	LV40152-001A	WORM WHEEL(T)		
49	REE1500X	E RING		
50	LV30120-001A	T.MOTOR HOLDER		
51	PPN-13KA10C	MOTOR(FEED)		
52	LV40130-001A	WORM GEAR		
53	QYSPSPL2004Z	SCREW	2mm x 4mm(x2)	
54	QYSDST2004Z	SCREW	2mm x 4mm(x2)	
55	QYSDST2004Z	SCREW	2mm x 4mm(x2)	
56	LV40474-003A	ELEVATOR SPRING		
57	LV32806-001A-SL	TRA MECHA UNIT		
58	OPTIMA-725B2M	CD PICK UP		
59	FF-050SK-11170	DC MOTOR		
60	QYSPSPL2004Z	SCREW	2mm x 4mm	
61	VKS5557-001	F.M. GEAR		
62	LV40155-001A	MIDDLE GEAR		
63	LV40156-001A	S.S. GEAR		
64	LV40157-001A	SCREW SHAFT		
65	LV30122-002A	SHAFT HOLDER		
66	VKZ4248-204	MINI TAP SCREW		

Symbol No.	Part No.	Part Name	Description	Local
67	LV30123-002A	RACK ARM		
68	QYSPSPT1722M	MINI SCREW	1.7mm x 2.2mm(x2)	
69	LV32438-001A	P.S.SPRING		
70	QYSPSGT1425M	TAP SCREW	1.4mm x 2.5mm	
71	LV30450-004A	PICK FPC		
72	QYSDST2006Z	SCREW	2mm x 6mm(x3)	
73	QYSDST2005Z	SCREW	2mm x 5mm(x4)	
74	QUQ710-2614BJ	FFC WIRE		
75	QUQ110-1013BJ	FFC WIRE		
76	QYSDSP2606Z	SCREW	2.6mm x 6mm	
77	QUB540-10A2A2	WIRE(T.MOTOR)		
78	QUB541-11A2A2	WIRE(T.MOTOR)		
79	QUB456-04A2A2	WIRE(F.MOTOR)		
80	QUB459-05A2A2	WIRE(F.MOTOR)		
81	VKL7059-002	TR.BRACKET		

Electrical parts list

Main board (New)

Block No. [0][1][0][0]

△ Symbol No.	Part No.	Part Name	Description	Local
IC101	NJM4565M-WE	IC		
IC501	TA2157FN-X	RF AMP IC		
IC521	TC94A14FA	CD LSI IC		
IC581	BD7961FM-X	IC		
IC601	UPD780058GC-547	IC		
IC602	BD4833FVE-W	IC		
IC604	BR24L01AF-W-X	IC		
IC651	HD74HC126FP-X	IC		
Q101	2SD1781K/QR/-X	TRANSISTOR		
Q201	2SD1781K/QR/-X	TRANSISTOR		
Q501	2SB1241/QR/-T	TRANSISTOR		
Q581	2SB1184/QR/-X	TRANSISTOR		
Q582	UN2111-X	TRANSISTOR		
Q583	UN2211-X	TRANSISTOR		
Q602	2SD601A/R/-X	TRANSISTOR		
Q901	2SB709A/R/-X	TRANSISTOR		
Q902	UN2211-X	TRANSISTOR		
Q911	2SD1994A/RS/-T	TRANSISTOR		
Q921	2SD601A/R/-X	TRANSISTOR		
Q922	2SB709A/R/-X	TRANSISTOR		
Q941	2SB941A/QP/-	TRANSISTOR		
Q942	2SD1994A/RS/-T	TRANSISTOR		
Q943	UN2111-X	TRANSISTOR		
Q944	UN2211-X	TRANSISTOR		
Q971	2SB709A/R/-X	TRANSISTOR		
Q972	2SD601A/R/-X	TRANSISTOR		
Q981	2SD1994A/RS/-T	TRANSISTOR		
D101	MA152WA-X	DIODE		
D581	1A3G-T1	SI DIODE		
D581	or DSK10C-T1	DIODE		
D902	2A02	DIODE		
D911	1A3G-T1	SI DIODE		
D911	or DSK10C-T1	DIODE		
D912	MA8062/M/-X	Z DIODE		
D913	MA152WA-X	DIODE		
D921	MA152WK-X	SI DIODE		
D941	UDZS9.1B-X	Z DIODE		
D951	UDZS5.1B-X	Z DIODE		
D981	UDZS9.1B-X	Z DIODE		
C101	QERF1CM-106Z	E CAPACITOR	10uF 16V M	
C102	QERF1CM-106Z	E CAPACITOR	10uF 16V M	
C103	NCB31HK-222X	C CAPACITOR	2200pF 50V K	
C104	NDC31HJ-471X	C CAPACITOR	470pF 50V J	
C105	NDC31HJ-471X	C CAPACITOR	470pF 50V J	
C106	QERF0JM-476Z	E CAPACITOR	47uF 6.3V M	
C107	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C108	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C109	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C110	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C112	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C201	QERF1CM-106Z	E CAPACITOR	10uF 16V M	
C202	QERF1CM-106Z	E CAPACITOR	10uF 16V M	
C203	NCB31HK-222X	C CAPACITOR	2200pF 50V K	
C204	NDC31HJ-471X	C CAPACITOR	470pF 50V J	
C205	NDC31HJ-471X	C CAPACITOR	470pF 50V J	
C206	QERF0JM-476Z	E CAPACITOR	47uF 6.3V M	
C208	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C209	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C501	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C502	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C503	QERF0JM-107Z	E CAPACITOR	100uF 6.3V M	
C504	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C505	QERF0JM-107Z	E CAPACITOR	100uF 6.3V M	
C507	NCB31HK-682X	C CAPACITOR	6800pF 50V K	
C508	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C509	QERF0JM-107Z	E CAPACITOR	100uF 6.3V M	
C510	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C511	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C512	NCS31HJ-680X	C CAPACITOR	68pF 50V J	

△ Symbol No.	Part No.	Part Name	Description	Local
C513	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C514	NDC31HJ-5R0X	C CAPACITOR	5pF 50V J	
C521	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C522	QERF0JM-107Z	E CAPACITOR	100uF 6.3V M	
C523	NDC31HJ-470X	C CAPACITOR	47pF 50V J	
C524	NCB31HK-153X	C CAPACITOR	0.015uF 50V K	
C525	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C526	NCB31HK-272X	C CAPACITOR	2700pF 50V K	
C527	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C528	NCB31EK-333X	C CAPACITOR	0.033uF 25V K	
C529	QERF0JM-107Z	E CAPACITOR	100uF 6.3V M	
C530	NCB31EK-333X	C CAPACITOR	0.033uF 25V K	
C531	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C533	NDC31HJ-471X	C CAPACITOR	470pF 50V J	
C534	NDC31HJ-471X	C CAPACITOR	470pF 50V J	
C535	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C536	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C537	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C538	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C539	QERF0JM-107Z	E CAPACITOR	100uF 6.3V M	
C540	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C541	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C542	NDC31HJ-100X	C CAPACITOR	10pF 50V J	
C543	NDC31HJ-100X	C CAPACITOR	10pF 50V J	
C544	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C545	QERF0JM-107Z	E CAPACITOR	100uF 6.3V M	
C546	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C547	QERF0JM-107Z	E CAPACITOR	100uF 6.3V M	
C548	QERF0JM-107Z	E CAPACITOR	100uF 6.3V M	
C549	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C550	QERF1HM-105Z	E CAPACITOR	1uF 50V M	
C551	QERF0JM-107Z	E CAPACITOR	100uF 6.3V M	
C552	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C553	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C554	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C555	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C581	QERF1AM-227Z	E CAPACITOR	220uF 10V M	
C582	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C583	QERF1CM-226Z	E CAPACITOR	22uF 16V M	
C584	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C601	QERF0JM-107Z	E CAPACITOR	100uF 6.3V M	
C602	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C603	NDC31HJ-220X	C CAPACITOR	22pF 50V J	
C604	NDC31HJ-220X	C CAPACITOR	22pF 50V J	
C605	QERF0JM-476Z	E CAPACITOR	47uF 6.3V M	
C606	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C609	QERF0JM-107Z	E CAPACITOR	100uF 6.3V M	
C610	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C611	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C612	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C613	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C651	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C901	QE20338-228	E CAPACITOR	2200uF	
C902	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C906	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C907	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C908	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
C912	QERF1CM-107Z	E CAPACITOR	100uF 16V M	
C913	QERF1AM-107Z	E CAPACITOR	100uF 10V M	
C914	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C915	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C941	QERF1CM-106Z	E CAPACITOR	10uF 16V M	
C942	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C943	QERF1CM-476Z	E CAPACITOR	47uF 16V M	
C944	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C945	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C951	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C982	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C983	QERF1CM-476Z	E CAPACITOR	47uF 16V M	
C984	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
R101	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R102	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R103	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R104	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R105	NRSA63J-392X	MG RESISTOR	3.9kΩ 1/16W J	

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
R106	NRSA63J-392X	MG RESISTOR	3.9kΩ 1/16W J		R628	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R107	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R629	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R108	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R651	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R109	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R652	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R110	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J		R653	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R111	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J		R654	NRSA63J-334X	MG RESISTOR	330kΩ 1/16W J	
R112	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J		R655	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R201	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R656	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R202	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R657	NRSA63J-334X	MG RESISTOR	330kΩ 1/16W J	
R203	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R658	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R204	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R659	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R205	NRSA63J-392X	MG RESISTOR	3.9kΩ 1/16W J		R660	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R206	NRSA63J-392X	MG RESISTOR	3.9kΩ 1/16W J		R661	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R207	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R901	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R208	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R902	NRSA63J-392X	MG RESISTOR	3.9kΩ 1/16W J	
R209	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R903	NRSA02J-222X	MG RESISTOR	2.2kΩ 1/10W J	
R210	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J		R911	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R211	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J		R912	NRSA02J-2R2X	MG RESISTOR	2.2Ω 1/10W J	
R503	NRSA63J-683X	MG RESISTOR	68kΩ 1/16W J		R921	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	
R504	NRSA63J-683X	MG RESISTOR	68kΩ 1/16W J		R923	NRSA63J-184X	MG RESISTOR	180kΩ 1/16W J	
R505	NRSA63J-334X	MG RESISTOR	330kΩ 1/16W J		R924	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R506	NRSA63J-334X	MG RESISTOR	330kΩ 1/16W J		R925	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R507	NRSA02J-220X	MG RESISTOR	22Ω 1/10W J		R926	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R508	NRSA02J-220X	MG RESISTOR	22Ω 1/10W J		R941	NRSA63J-100X	MG RESISTOR	10Ω 1/16W J	
R509	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J		R942	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R510	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R943	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R511	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R951	NRSA63J-122X	MG RESISTOR	1.2kΩ 1/16W J	
R512	NRSA63J-202X	MG RESISTOR	2kΩ 1/16W J		R954	NRSA63J-272X	MG RESISTOR	2.7kΩ 1/16W J	
R513	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R971	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R514	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J		R972	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R515	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R973	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R516	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J		R981	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	
R517	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J		R982	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	
R518	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J		L521	QQL244K-4R7Z	COIL	4.7uH K	
R519	NRSA63J-151X	MG RESISTOR	150Ω 1/16W J		L522	QQL244K-4R7Z	COIL	4.7uH K	
R521	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J		L524	QQL244K-4R7Z	COIL	4.7uH K	
R522	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		L601	QQL244K-4R7Z	COIL	4.7uH K	
R523	NRSA63J-474X	MG RESISTOR	470kΩ 1/16W J		CN501	QGF1013F1-15X	CONNECTOR	FFC/FPC (1-15)	
R524	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J		CN502	QGF1006F1-26W	CONNECTOR	FFC/FPC (1-26)	
R525	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		CN503	QGF1009F2-26	CONNECTOR	FFC/FPC (1-26)	
R527	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		CN504	QGA2501F1-02	CONNECTOR	W-B (1-2)	
R528	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		CN601	QGA2501F1-03	CONNECTOR	W-B (1-3)	
R531	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		CN902	QNZ0095-001	CONNECTOR		
R532	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		CN903	QGF1013F1-10X	CONNECTOR	FFC/FPC (1-10)	
R534	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		CN904	QGF1009F2-10	CONNECTOR	FFC/FPC (1-10)	
R535	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		F901	ICP-N70-T	IC PROTECTOR	2.5A	
R536	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		S601	VSH1173-001	SWITCH		
R537	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		S602	VSH1173-001	SWITCH		
R538	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		S603	VSH1173-001	SWITCH		
R539	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J		S604	VSH1173-001	SWITCH		
R543	NRSA63J-330X	MG RESISTOR	33Ω 1/16W J		S606	QSW0643-001Z	TACT SWITCH		
R544	NRSA63J-155X	MG RESISTOR	1.5MΩ 1/16W J		X521	QAX0413-001Z	CRYSTAL	16.9344MHz	
R548	NRSA63J-432X	MG RESISTOR	4.3kΩ 1/16W J		X601	QAX0414-001Z	CRYSTAL	4.19430MHz	
R582	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J						
R583	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J						
R584	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J						
R585	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J						
R601	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J						
R602	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J						
R603	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J						
R604	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J						
R605	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J						
R606	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J						
R607	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J						
R609	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J						
R610	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J						
R611	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J						
R612	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J						
R614	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J						
R617	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J						
R618	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J						
R619	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J						
R620	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J						
R621	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J						
R622	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J						
R623	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J						
R625	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J						
R626	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J						

Main board (Old)

Block No. [0][2][0][0]

△ Symbol No.	Part No.	Part Name	Description	Local
IC101	BA15218F-XE	IC		
IC501	TA2147F-X	IC		
IC521	TC9490FA	IC		
IC581	FAN8037	IC		
IC601	UPD780058GC-291	IC		
IC602	IC-PST9333U-X	IC		
IC604	BR24L01AF-W-X	IC		
IC651	HD74HC126FP-X	IC		
Q101	2SD1048/6-7/-X	TRANSISTOR		
Q501	2SB1241/QR/-T	TRANSISTOR		
Q581	2SB1322/RS/-T	TRANSISTOR		
Q582	KRA102S-X	DIGI TRANSISTOR		

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
Q583	DTC114EKA-X	TRANSISTOR			C551	QERF0JM-107Z	E CAPACITOR	100uF 6.3V M	
Q602	2SC2412K/R/-X	TRANSISTOR			C552	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
Q901	2SA1037AK/R/-X	TRANSISTOR			C581	QERF1AM-227Z	E CAPACITOR	220uF 10V M	
Q902	DTC114EKA-X	TRANSISTOR			C582	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
Q911	2SD1994A/RS/-T	TRANSISTOR			C583	QERF1CM-226Z	E CAPACITOR	22uF 16V M	
Q921	2SC2412K/R/-X	TRANSISTOR			C584	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
Q922	2SA1037AK/R/-X	TRANSISTOR			C585	QERF1AM-107Z	E CAPACITOR	100uF 10V M	
Q941	2SB941A/QP/	TRANSISTOR			C601	QERF0JM-107Z	E CAPACITOR	100uF 6.3V M	
Q942	2SD1994A/RS/-T	TRANSISTOR			C602	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
Q943	KRA102S-X	DIGI TRANSISTOR			C603	NCS31HJ-220X	C CAPACITOR	22pF 50V J	
Q944	DTC114EKA-X	TRANSISTOR			C604	NCS31HJ-220X	C CAPACITOR	22pF 50V J	
Q971	2SA1037AK/R/-X	TRANSISTOR			C605	QERF0JM-476Z	E CAPACITOR	47uF 6.3V M	
Q972	2SC2412K/R/-X	TRANSISTOR			C606	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
Q981	2SD1994A/RS/-T	TRANSISTOR			C609	QERF0JM-107Z	E CAPACITOR	100uF 6.3V M	
D101	MA152WA-X	DIODE			C610	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
D583	DSK10C-T1	DIODE			C611	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
D584	DSK10C-T1	DIODE			C612	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
D585	DSK10C-T1	DIODE			C651	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
D911	DSK10C-T1	DIODE			C901	QEZO338-228	E CAPACITOR	2200uF	
D912	UDZS6.2B-X	Z DIODE			C902	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
D913	MA152WA-X	DIODE			C906	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
D921	MA152WK-X	SI DIODE			C907	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
D941	UDZS10B-X	Z DIODE			C912	QERF1CM-107Z	E CAPACITOR	100uF 16V M	
D951	UDZS5.1B-X	Z DIODE			C913	QERF1AM-107Z	E CAPACITOR	100uF 10V M	
D981	UDZS9.1B-X	Z DIODE			C914	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C101	QERF1CM-106Z	E CAPACITOR	10uF 16V M		C915	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C102	NCS31HJ-821X	C CAPACITOR	820pF 50V J		C941	QERF1AM-107Z	E CAPACITOR	100uF 10V M	
C103	NCS31HJ-121X	C CAPACITOR	120pF 50V J		C942	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C104	QERF0JM-476Z	E CAPACITOR	47uF 6.3V M		C943	QERF1CM-476Z	E CAPACITOR	47uF 16V M	
C105	QERF1CM-106Z	E CAPACITOR	10uF 16V M		C944	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C106	NCS31HJ-101X	C CAPACITOR	100pF 50V J		C945	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C107	NCS31HJ-101X	C CAPACITOR	100pF 50V J		C946	QERF1CM-106Z	E CAPACITOR	10uF 16V M	
C111	NCS31HJ-101X	C CAPACITOR	100pF 50V J		C951	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C112	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		C982	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C501	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		C983	QERF1CM-476Z	E CAPACITOR	47uF 16V M	
C502	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R101	NRSA63J-203X	MG RESISTOR	20kΩ 1/16W J	
C503	QERF0JM-107Z	E CAPACITOR	100uF 6.3V M		R102	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J	
C504	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R103	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J	
C505	QERF0JM-107Z	E CAPACITOR	100uF 6.3V M		R104	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
C507	NCB31HK-682X	C CAPACITOR	6800pF 50V K		R105	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
C508	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R106	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C509	QERF0JM-107Z	E CAPACITOR	100uF 6.3V M		R107	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
C510	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R108	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
C511	NCB31CK-104X	C CAPACITOR	0.1uF 16V K		R112	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J	
C512	NCS31HJ-820X	C CAPACITOR	82pF 50V J		R503	NRSA63J-683X	MG RESISTOR	68kΩ 1/16W J	
C513	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R504	NRSA63J-683X	MG RESISTOR	68kΩ 1/16W J	
C514	NDC31HJ-5R0X	C CAPACITOR	5pF 50V J		R505	NRSA63J-334X	MG RESISTOR	330kΩ 1/16W J	
C521	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R506	NRSA63J-334X	MG RESISTOR	330kΩ 1/16W J	
C522	QERF0JM-107Z	E CAPACITOR	100uF 6.3V M		R507	NRSA02J-220X	MG RESISTOR	22Ω 1/10W J	
C523	NCS31HJ-470X	C CAPACITOR	47pF 50V J		R508	NRSA02J-220X	MG RESISTOR	22Ω 1/10W J	
C524	NCB31HK-153X	C CAPACITOR	0.015uF 50V K		R509	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J	
C525	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R510	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
C526	NCB31HK-272X	C CAPACITOR	2700pF 50V K		R511	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C527	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R512	NRSA63J-202X	MG RESISTOR	2kΩ 1/16W J	
C528	NCB31EK-333X	C CAPACITOR	0.033uF 25V K		R513	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C529	QERF0JM-107Z	E CAPACITOR	100uF 6.3V M		R514	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	
C530	NCB31EK-333X	C CAPACITOR	0.033uF 25V K		R515	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C531	NCB31CK-473X	C CAPACITOR	0.047uF 16V K		R516	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
C533	NCS31HJ-471X	C CAPACITOR	470pF 50V J		R517	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
C534	NCS31HJ-471X	C CAPACITOR	470pF 50V J		R518	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J	
C535	NCB31CK-473X	C CAPACITOR	0.047uF 16V K		R519	NRSA63J-151X	MG RESISTOR	150Ω 1/16W J	
C536	NCB31CK-473X	C CAPACITOR	0.047uF 16V K		R521	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J	
C537	NCB31CK-473X	C CAPACITOR	0.047uF 16V K		R522	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
C538	NCB31CK-473X	C CAPACITOR	0.047uF 16V K		R523	NRSA63J-474X	MG RESISTOR	470kΩ 1/16W J	
C539	QERF0JM-107Z	E CAPACITOR	100uF 6.3V M		R524	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J	
C540	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R525	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C541	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R527	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C542	NDC31HJ-100X	C CAPACITOR	10pF 50V J		R528	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C543	NDC31HJ-100X	C CAPACITOR	10pF 50V J		R531	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C544	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R532	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C545	QERF0JM-107Z	E CAPACITOR	100uF 6.3V M		R534	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
C546	NCS31HJ-101X	C CAPACITOR	100pF 50V J		R535	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
C547	QERF0JM-107Z	E CAPACITOR	100uF 6.3V M		R536	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
C548	QERF0JM-107Z	E CAPACITOR	100uF 6.3V M		R537	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
C549	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		R538	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C550	QERF1HM-105Z	E CAPACITOR	1uF 50V M		R539	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	
					R543	NRSA63J-121X	MG RESISTOR	120Ω 1/16W J	

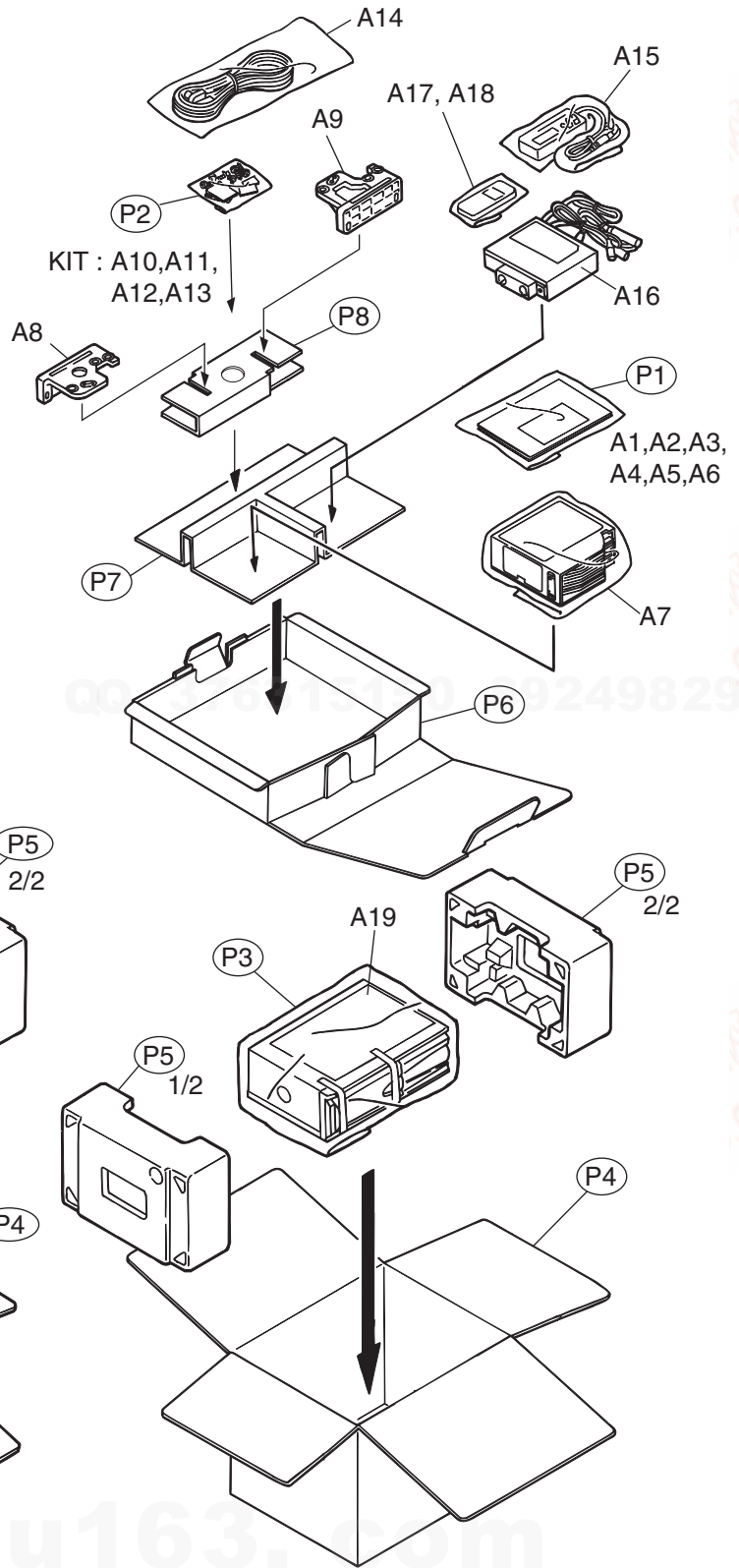
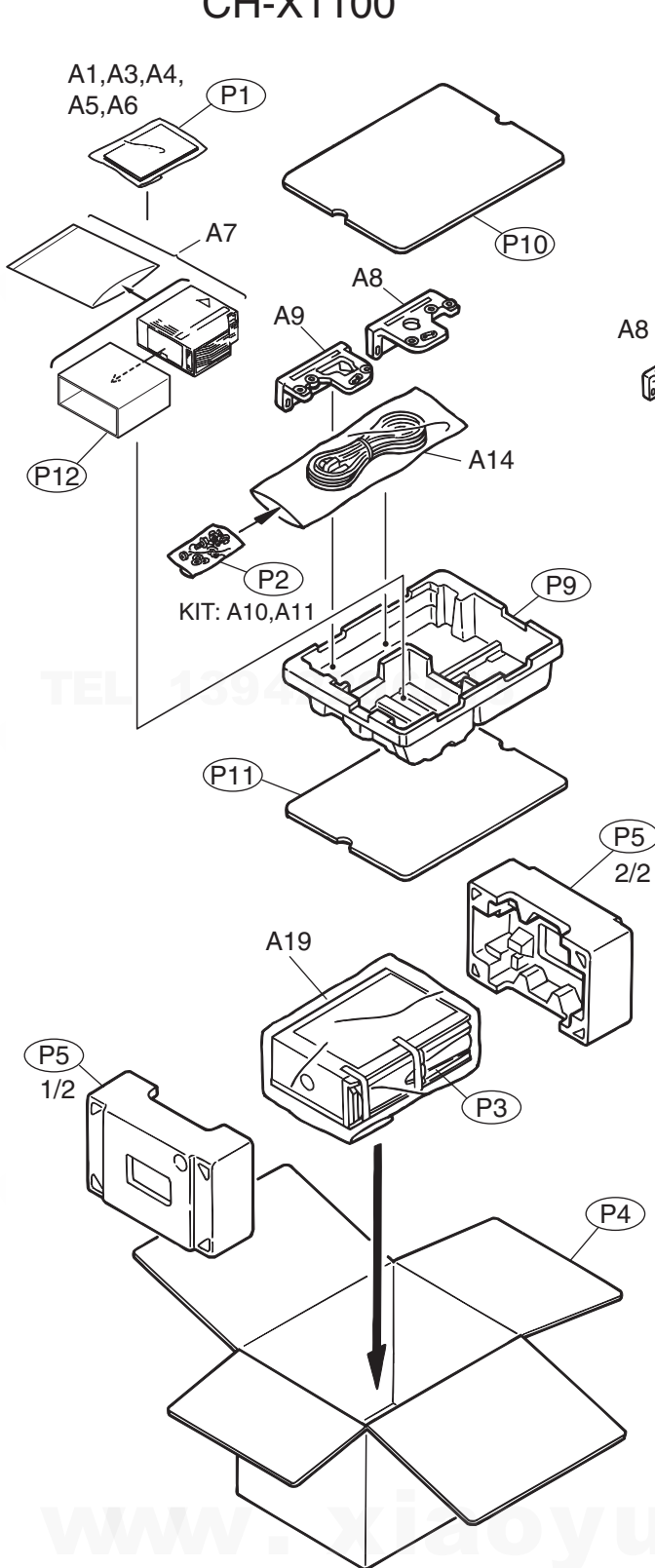
△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
R544	NRSA63J-225X	MG RESISTOR	2.2MΩ 1/16W J		CN902	QNZ0095-001	CONNECTOR		
R581	NRSA63J-122X	MG RESISTOR	1.2kΩ 1/16W J		CN903	QGF1013F1-10X	CONNECTOR	FFC/FPC (1-10)	
R582	NRSA63J-183X	MG RESISTOR	18kΩ 1/16W J		CN904	QGF1009F2-10	CONNECTOR	FFC/FPC (1-10)	
R583	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J		F901	ICP-N70	IC PROTECTOR	2.5A	
R584	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J		S601	VSH1173-001	SWITCH		
R585	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J		S602	VSH1173-001	SWITCH		
R586	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J		S603	VSH1173-001	SWITCH		
R587	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J		S604	VSH1173-001	SWITCH		
R588	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J		S606	QSW0643-001Z	TACT SWITCH		
R591	NRSA63J-272X	MG RESISTOR	2.7kΩ 1/16W J		X521	QAX0413-001Z	CRYSTAL	16.9344MHz	
R593	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		X601	QAX0414-001Z	CRYSTAL	4.19430MHz	
R595	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J						
R596	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J						
R597	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J						
R598	QRT017J-R47	MF RESISTOR	0.47Ω 1W J						
R601	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J						
R602	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J						
R603	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J						
R604	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J						
R605	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J						
R606	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J						
R607	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J						
R609	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J						
R610	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J						
R611	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J						
R612	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J						
R614	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J						
R617	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J						
R618	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J						
R619	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J						
R620	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J						
R621	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J						
R622	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J						
R623	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J						
R625	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J						
R626	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J						
R651	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J						
R652	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J						
R653	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J						
R654	NRSA63J-334X	MG RESISTOR	330kΩ 1/16W J						
R655	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J						
R656	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J						
R657	NRSA63J-334X	MG RESISTOR	330kΩ 1/16W J						
R658	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J						
R659	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J						
R660	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J						
R661	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J						
R901	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J						
R902	NRSA63J-392X	MG RESISTOR	3.9kΩ 1/16W J						
R903	NRSA02J-222X	MG RESISTOR	2.2kΩ 1/10W J						
R911	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J						
R912	NRSA02J-2R2X	MG RESISTOR	2.2Ω 1/10W J						
R921	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J						
R923	NRSA63J-184X	MG RESISTOR	180kΩ 1/16W J						
R924	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J						
R925	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J						
R926	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J						
R941	NRSA63J-100X	MG RESISTOR	10Ω 1/16W J						
R942	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J						
R943	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J						
R951	NRSA63J-122X	MG RESISTOR	1.2kΩ 1/16W J						
R954	NRSA63J-272X	MG RESISTOR	2.7kΩ 1/16W J						
R971	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J						
R972	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J						
R973	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J						
R981	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J						
R982	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J						
L521	QQL244K-4R7Z	COIL	4.7uH K						
L522	QQL244K-4R7Z	COIL	4.7uH K						
L524	QQL244K-4R7Z	COIL	4.7uH K						
L601	QQL244K-4R7Z	COIL	4.7uH K						
CN501	QGF1013F1-15X	CONNECTOR	FFC/FPC (1-15)						
CN502	QGF1012F1-26X	CONNECTOR	FFC/FPC (1-26)						
CN503	QGF1009F2-26	CONNECTOR	FFC/FPC (1-26)						
CN504	QGA2501F1-02	CONNECTOR	W-B (1-2)						
CN601	QGA2501F1-03	CONNECTOR	W-B (1-3)						

Packing materials and accessories parts list

Block No. **M 3 M M**

CH-X470RF,CH-X1100RF

CH-X1100



Packing and accessories

Block No. [M][3][M][M]

892498299

△ Symbol No.	Part No.	Part Name	Description	Local
A 1	LVT0849-001A	INST BOOK	ENG SPA FRE	X1100
A 2	LVT0844-001A	INSTRUCT.BOOK	ENG SPA FRE	RF,X4 70RF
A 3	BT-51018-3	WARRANTY CARD		
A 4	BT-51034-1	J=REGIST CARD		
A 5	BT-52006-2	WARRANTY CARD		
A 6	LVT0327-001B	TROUBLE SHOOTIN		
A 7	LV30682-205A-CL	MAGAZINE ASSY		
A 8	LV21416-001A	MOUNT HOLDER(L)		
A 9	LV21415-001A	MOUNT HOLDER(R)		
A 10	QYSDSP4008Z	SCREW	4mm x 8mm(x4)	
A 11	VKZ4029-003	SCREW	(x4)	
A 12	VYTT546-004	SHEET(B)	(x2)	X1100 RF,X4 70RF
A 13	VYTT547-004	SHEET(A)	(x2)	X1100 RF,X4 70RF
A 14	QAM0080-001	8P BUS-BUS CORD		X1100
A 14	QAM0149-001	8P BUS-BUS CORD		X1100 RF,X4 70RF
A 15	LV42723-001A	DISPLAY UNIT		X1100 RF
A 15	LV42722-002A	DISPLAY UNIT		X470 RF
A 16	LV42721-003A	RF UNIT		X1100 RF
A 16	LV42720-004A	RF UNIT		X470 RF
A 17	RM-RK33	REMOCON		X1100 RF
A 18	-----	BATTERY		X1100 RF
A 19	LV40507-001A	INST SHEET		X1100
KIT	CHX99J-SCREW1	SCREW PARTS KIT	A10 A11	X1100
KIT	CHX99RF-SCREW1	SCREW PARTS KIT	A10 A11 A12 A13	X1100 RF,X4 70RF
P 1	FSPG4002-001	POLY BAG		
P 2	QPA00801205	POLY BAG	8cm x 12cm	
P 3	QPC03005120P	POLY BAG	30cm x 51cm	
P 4	LV33409-002A	CARTON		X1100
P 4	LV33325-002A	CARTON		X1100 RF
P 4	LV33326-002A	CARTON		X470 RF
P 5	LV10504-001A	CUSHION		
P 6	LV30453-003A	ACCESSARY BOX		X1100 RF,X4 70RF
P 7	LV30575-002A	SEPALATOR		X1100 RF,X4 70RF
P 8	LV30576-002A	SPACER		X1100 RF,X4 70RF
P 9	LV10355-001A	PAPER CUSHION		X1100
P 10	LV31895-001A	CUSHION SHEET		X1100
P 11	LV31895-001A	CUSHION SHEET		X1100
P 12	LV31896-001A	CUSHION SLEEVE		X1100