# **JVC** SERVICE MANUAL

### CD MECHANISM

## TN2007-1026



Lead free solder used in the board (material : Sn-Ag-Cu, melting point : 219 Centigrade)

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#### SECTION 1 PRECAUTIONS

#### 1.1 Safety Precautions

A 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 preforming 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.



#### 1.5 Important for laser products

#### 1.CLASS 1 LASER PRODUCT

#### 2.CAUTION :

(For U.S.A.) Visible and/or invisible class II laser radiation when open. Do not stare into beam. (Others) Visible and/or invisible class 1M laser radiation when open. Do not view directly with optical instruments.

**3.CAUTION :** Visible and/or invisible laser radiation when open and inter lock failed or defeated. Avoid direct exposure to beam.

**4.CAUTION :** This laser product uses visible and/or invisible laser radiation and is equipped with safety switches which prevent emission of radiation when the drawer is open and the safety interlocks have failed or are defeated. It is dangerous to defeat the safety switches.

#### (For U.S.A.)

**CAUTION** : Visible and/or invisible class **II** laser radiation when open. Do not stare into beam. (Others)

- CAUTION : Visible and/or invisible class 1M laser radiation
- when open. Do not view directly with optical instruments **ACHTUNG:** Sichtbare und/oder unsichtbare Laserstrahlung der Klasse 1M bei offenen Abdeckungen. Nicht direkt mit optischen Instrumenten betrachten.
- **ATTENTION:** Rayonnement laser visible et/ou invisible de classe 1M une fois ouvert. Ne pas regarder directement avec des instruments optiques.
- VOORZICHTIG: Zichtbare en/of onzichtbare klasse 1M laserstralen indien geopend. Bekijk niet direct met optische instrumenten.
- ATTENZIONE: Radiazione laser in classe 1M visibile e/o invisibile quando aperto. Non osservare direttamente con strumenti ottici.
- VARNING: Synlig och/eller osynlig laserstrålning, klass 1M, när denna del är öppnad. Betrakta ej strålen med optiska instrument.
- VARO!: Avattaessa olet alttiina nakyvalle ja/tai näkymättömälle luokan 1M lasersateilylle. Älä tarkastele sitä optisen laitteen läpi.
- ADVARSEL: Synlig og/eller usynlig klasse 1M-laserstråling ved åbning. Se ikke direkte med optiske instrumenter.
- **AVISO:** Radiación láser de clase 1M visible y/o invisible cuando está abierto. No mirar directamente con instrumental óptico.
- PRECAUÇÃO: Radiação laser de classe 1M visível e/ou invisível quando aberto. Não olhe directamente com instrumentos ópticos.

- **5.CAUTION :** If safety switches malfunction, the laser is able to function.
- 6.CAUTION : Use of controls, adjustments or performance of procedures other than those specified here in may result in hazardous radiation exposure.

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

PRECAUÇÃO: Radiação laser de classe 1M visível e/ou invisível quando aberto. Não olhe diretamente com instrumentos óticos. ПРЕДУПРЕЖДЕНИЕ: В открытом состоянии происходит видимое и/или невидимое излучение лазера класса 1М. Не смотрите непосредственно в оптические инструменты. UWAGA: Otwarcie spowoduje narażenie na widzialne i/lub niewidzialne promieniowanie lasera klasy 1M. Nie patrzeć bezpośrednio w przyrządy optyczne. UPOZORNĚNÍ: Při otevření vydává viditelné popř. neviditelné laserové ozáření třídy 1M. Nedívejte se do otvoru přímo s optickými nástroji. FIGYELMEZTETÉS: Látható és/vagy láthatatlan 1M osztályú sugárzás nyitott állapotban. Ne nézze közvetlenül optikai műszerekkel. 注意:打開蓋板可能會產生可見或不可見的 1M 級鐳射。 不要使用光學儀器直接進行窺視。 注意:打开盖板可能会产生可见或不可见的 1M 级镭射。 不要使用光学仪器直接进行窥视。 **تنبيه**: يوجد إشعاع ليزري مرئي و/أو غير مرئي من الفئة 1M عندما يكون الجهاز مفتوحاً. جُنب النظر مباشرة داخل الجهاز باستخدام أدوات بصرية. ا**حتیاط**: هنگامی که باز گردد، تشعشع مرئی و یا نامرئی کلاس 1M لیزر وجود دارد. با لوازم چشمی مستقیهاً به آن نگاه نکنید. **주의:**개방하면 가시 및/또는 비가시 클래스 1M 레이저 방사선이 나옵니다. 광학 기구로

직접 들여다보지 마십시오.

#### SECTION 2 SPECIFIC SERVICE INSTRUCTIONS

This service manual does not describe SPECIFIC SERVICE INSTRUCTIONS.

### SECTION 3 DISASSEMBLY

#### 3.1 CD mechanism assembly

#### 3.1.1 Removing the top cover (See Figs.1 and 2)

- From the both side of the CD mechanism assembly, remove the four screws A attaching the top cover. (See Fig.1.)
- (2) Lift the front side of the top cover and move the top cover backward to release the two joints **a**. (See Figs.1 and 2.)







Fig.2

### 3.1.2 Removing the push switch (See Figs.3)

- (1) From the bottom side of the CD mechanism assembly, remove the screw **B** attaching the push switch.
- (2) Take out the push switch from the CD mechanism assembly.

#### **Reference:**

Remove the wires from soldered sections **b** of the push switch as required.

### 3.1.3 Removing the base board (See Figs.3 and 4)

#### Caution:

Solder the short land **c** before the flexible wire is disconnected from the connector on the pickup. If the flexible wire is disconnected without applying solder, the pickup may be destroyed by static electricity. (See Fig.3.)

- From the bottom side of the CD mechanism assembly, remove the screw C attaching the base board. (See Figs.3 and 4.)
- (2) Solder the short land c on the pickup. (See Fig.3.)
- (3) Disconnect the flexible wire from the connector on the pickup. (See Fig.3.)
- (4) Remove the base board from the joints **d** of the frame in the direction of the arrow. (See Figs.3 and 4.)

#### Reference:

Remove the wires from the soldered sections  ${\bf e}$  on the base board as required. (See Fig.3.)

#### Caution:

When reattaching the base board, be sure to remove solder from the short land c after connecting the flexible wire. (See Fig.3.)







### 3.1.4 Removing the chassis unit (See Figs.5 and 6)

- Remove the top cover and base board.
  - (1) From the top side of the CD mechanism assembly, remove the front suspension springs and rear suspension springs attaching the chassis unit to the frame. (See Fig.5.)
  - (2) Remove the chassis unit from the dampers on the frame in an upward direction. (See Fig.6.)

#### Note:

- Pay attention to misuse and loss of each spring. (See Fig.5.)
- When reassembling, make sure that the three shafts on the underside of the chassis unit are inserted to the dampers certainly. (See Fig.6.)





### 3.1.5 Removing the clamper assembly (See Figs.7 and 8)

• Remove the top cover.

Move the clamper assembly in the direction of the arrow to release the joints  $\mathbf{f}$  from the chassis unit.







### 3.1.6 Removing the loading/feed motor assembly (See Fig.9)

• Remove the top cover, base board and chassis unit.

From the bottom side of the chassis unit, remove the screw  ${\bf D}$  and take out the loading/feed motor assembly in the direction of the arrow.

#### **Reference:**

Remove the wires from the soldered sections  ${f g}$  of the loading/ feed motor assembly as required.

Loading/feed motor assembly



### 3.1.7 Removing the pickup (See Figs.10 to 12)

• Remove the top cover, base board and chassis unit.

- (1) From the bottom side of the chassis unit, remove the screw E attaching the pu. shaft holder B and pull the pu. shaft out of the pu. shaft holder A. (See Fig.10.)
- (2) Remove the screw **F** attaching the pu. shaft holder A. (See Fig.10.)
- (3) Take out the pickup with pu. shaft holder A and feed screw assembly from the chassis unit. (See Fig.11.)
- (4) Remove the section **h** of the pu. shaft holder A in the direction of the arrow. (See Fig.11.)
- (5) Remove the feed screw assembly from the section **j** of the pickup in the direction of the arrow. (See Fig.11.)
- (6) Remove the screw **G** attaching the feed screw holder to the pickup. (See Fig.12.)

#### Reference:

Remove the feed nut spring from the feed screw holder as required. (See Fig.12.)

(7) Release the claw **k** in the direction of the arrow to remove the feed sub holder. (See Fig.12.)

### 3.1.8 Reattaching the pickup (See Figs.10 to 13)

- (1) Reattach the feed sub holder to the pickup. (See Fig.12.)
- (2) Reattach the feed screw holder to the pickup using the screw **G**. (See Fig.12.)
- (3) Reattach the feed screw assembly and pu. shaft holder A to the pickup as before. (See Fig.11.)
- (4) Set the section **m** of the pickup to the rail of the chassis unit at first and attach the pickup to the chassis unit with the screw **F** as before. (See Figs.10 and 13.)
- (5) Attach the pu. shaft to the pickup as before. (See Fig.10.)
- (6) Attach the pu. shaft holder B to the chassis unit with the screw **E** as before. (See Fig.10.)



Feed sub holder

Fig.12



Fig.13



Fig.10

### 3.1.9 Removing the trigger arm (See Fig.14)

- Remove the top cover, base board, chassis unit and clamper assembly.
  - (1) From the top side of the chassis unit, remove the trigger arm spring from the sections (**n**, **p**).
  - (2) From the bottom side of the chassis unit, release the claws q of the trigger arm base in the direction of the arrow to remove them from the sections r of the chassis unit to the other side.

#### Note:

When releasing the claws **q**, take care not to break them.

- (3) From the top side of the chassis unit, move the select arm R and select lock arm in the direction of the arrow to remove the trigger arm base from the section s in the direction of the arrow.
- (4) Remove the trigger arm from the section t.



- Remove the top cover, base board, chassis unit, clamper assembly and trigger arm.
  - (1) Remove the screw **H** attaching the top plate assembly.
  - (2) Move the top plate assembly in the direction of the arrow to release the joints (**u**, **v**).

#### **Reference:**

Remove the wires from the soldered sections **w** of the top plate assembly as required.

#### Note:

When reassembling, solder the wires as before.





Fig.15

#### 3.1.11 Removing the mode switch (See Fig.16)

- Remove the top cover, base board, chassis unit, clamper assembly, trigger arm and top plate assembly.
  - (1) From the top side of the top plate assembly, remove the link gear spring from the sections x of the link gear L and link gear R.
  - (2) Remove the link gear L in an upward direction while releasing the claws y of the link gear L in the direction of the arrow.
  - (3) Move the mode switch in the direction of the arrow 1 to remove the sections **z** of the top plate assembly.
  - (4) Move the mode switch in the direction of the arrow 2 and remove the mode switch from the sections (**aa**, **ab**).

#### Note:

When reattaching the link gear L, attach it after aligning the hole ac of the link gear L to the hole ac of the link gear R.

#### Reference:

When reassembling, reverse the above removing procedure.



- 3.1.12 Removing the select arm R and select lock arm (See Figs.17 and 18)
- Remove the top cover, base board, chassis unit, clamper assembly, trigger arm and top plate assembly.
  - (1) From the top side of the top plate assembly, remove the link gear spring from the sections ad of the link gear L and link gear R. (See Fig.17.)
  - (2) Remove the link gear R in an upward direction while releasing the claws ae of the link gear R in the direction of the arrow. (See Fig.17.)
  - (3) Move the select arm R in the direction of the arrow 1 to remove the sections af of the top plate assembly. (See Fig.17.)
  - (4) Move the select arm R in the direction of the arrow 2 and remove the select arm R from the sections ag. (See Fig.17.)
  - (5) From the bottom side of the top plate assembly, remove the select lock arm spring from the section **ah**. (See Fig.18.)
  - (6) From the top side of the top plate assembly, remove the section **aj** of the select lock arm from the top plate assembly at first and remove the sections (**ak**, **am**) of the select lock arm from the top plate assembly. (See Fig.18.)

#### Note:

- When removing the select lock arm spring, be careful not to lose it. (See Fig 18.)
- When reattaching the link gear R, attach it after aligning the hole **an** of the link gear R to the hole **an** of the link gear L. (See Fig.17.)

#### **Reference:**

When reassembling, reverse the above removing procedure.



- 3.1.13 Removing the loading roller assembly (See Figs.19 to 21)
- Remove the top cover, base board, chassis unit, clamper assembly and top plate assembly.
  - (1) From the left side of the chassis unit, remove the screw J attaching the lock arm assembly. (See Fig.19.)
  - (2) Remove the projection **ap** of the lock arm assembly from the joint **aq** while opening the cam plate R in the direction of the arrow. (See Fig.19.)
  - (3) Remove the lock arm assembly from the projection **ar** of the chassis unit. (See Fig.19.)
  - (4) Remove the projection **as** of the lock arm assembly from the joint **at** of the cam plate L assembly. (See Fig.19.)
  - (5) From the right side of the lock arm assembly, remove the loading roller spring L from the section **au**. (See Fig.20.)
  - (6) From the top side of the lock arm assembly, remove the loading roller spring R in the direction of the arrow and remove the loading roller assembly. (See Fig.20.)
  - (7) Remove the roller guide R, HL washer and roller guide L from the both ends of the loading roller assembly. (See Fig.21.)





### 3.1.14 Removing the loading gear 1, loading gear 2, loading gear 3 and feed gear 1 (See Fig.22)

- Remove the top cover, base board and chassis unit.
  - (1) From the bottom side of the chassis unit, pull out the loading gear 1.
  - (2) Take out the loading gear 2.
  - (3) Pull out the loading gear 3.
  - (4) Pull out the feed gear 1.
- 3.1.15 Removing the loading gear 4, loading gear 5 and loading gear 6
  - (See Fig.22)
- Remove the top cover, base board and chassis unit.
   (1) From the bottom side of the chassis unit, remove the screw K attaching the loading gear bracket.
  - (2) Take out the loading gear bracket and remove the loading gear 5 and loading gear 6 from the loading gear bracket.
  - (3) Pull out the loading gear 4.
- 3.1.16 Removing the change gear 2, change gear 3A and change gear 3B
  - (See Figs.22 and 23)
- Remove the top cover, base board and chassis unit.
  - (1) From the bottom side of the chassis unit, pull out the loading gear 1. (See Fig.22.)
  - (2) Pull out the change gear 2. (See Fig.22.)
  - (3) Pull out the change arm. (See Fig.22.)
  - (4) Move the change gear plate rivet assembly in the direction of the arrow 2 to remove the section **av** of the change gear plate rivet assembly from the chassis unit while moving the change lock lever in the direction of the arrow 1. (See Fig.23.)
  - (5) Pull out the change gear 3A and change gear 3B from the change gear plate rivet assembly. (See Fig.23.)





Change gear plate rivet assembly



Fig.23



#### 3.1.17 Removing the cam plate L assembly (See Fig.24)

- Remove the top cover, base board, chassis unit, clamper assembly, top plate assembly and loading roller assembly.
  - (1) From the left side of the chassis unit, slide the cam plate L assembly in the direction of the arrow.
  - (2) Remove the cam plate L assembly from the slots **aw** of the chassis unit.

#### 3.1.18 Removing the cam plate R (See Fig.25)

• Remove the top cover, base board, chassis unit, clamper assembly, top plate assembly and loading roller assembly.

From the right side of the chassis unit, remove the cam plate R from the slots **ax** of the chassis unit.

#### **Reference:**

When a slide hook rivet assembly and a trigger rack spring have come off from the chassis unit, attach them before attaching the cam plate R.

### 3.1.19 Removing the trigger rack plate (See Figs.25 and 26)

- Remove the top cover, base board, chassis unit, clamper assembly, top plate assembly, loading roller assembly and cam plate R.
  - (1) Remove the slide hook rivet assembly and trigger rack spring from the chassis unit. (See Fig.25.)
  - (2) From the bottom side of the chassis unit, pull out the loading gear 1. (See Fig.26.)
  - (3) Remove the trigger control spring from the sections (**ay**, **az**). (See Fig.26.)
  - (4) Take out the trigger rack plate from the chassis unit. (See Fig.26.)

#### **Reference:**

When attaching the trigger rack plate, insert the projection **a'** of the chassis unit in the slot **b'** on the bottom side of the trigger rack plate as before. (See Fig.26.)



### 3.1.20 Removing the spindle motor assembly (See Figs.27 and 28)

- Remove the top cover, base board, chassis unit and clamper assembly.
  - From the top side of the chassis unit, turn the turn table from side to side and remove the two screws **M** attaching the spindle motor assembly through the hole of the turn table. (See Fig.27.)
  - (2) From the bottom side of the chassis unit, turn the change gear 2 in the direction of the arrow 2 while pulling the trigger arm in the direction of the arrow 1 and let the pickup move in the direction of the arrow 3. (See Fig.28.)
  - (3) Slide the spindle motor assembly in the direction of the arrow and take out it in an upward direction from the chassis unit. (See Fig.28.)

#### **Reference:**

Remove the wires from the soldered sections  $\mathbf{c}'$  on the base board and remove them from the sections  $(\mathbf{d}', \mathbf{e}')$  on the chassis unit as required.







#### SECTION 4 ADJUSTMENT

This service manual does not describe ADJUSTMENT.

### SECTION 5 TROUBLESHOOTING

This service manual does not describe TROUBLESHOOTING.



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### PARTS LIST

### TN2007-1026

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

- Contents -

### CD mechanism assembly and parts list



### CD mechanism

Block No. [M][B][M][M]

⚠	Symbol No.	Part No.	Part Name	Description	Local
	1	30350101T	FRAME		
	2	30350103T	DAMPER F	(x2)	
	3	30350104T	DAMPER R		
	4	30350107T	TOP COVER		
	10	303205131	CLAMPER SUB SPG	(-0)	
	11	303505051 20250506T		(X2)	
	12	303505001 30350508T	FEED NUIT SPP	(X2)	
	13	30350509T 30350509T	FEED SCREW HIDR		
	15	30350525T	PU SHAFT HI DR B		
	16	30350528T	LOCK LEVER		
	20	30350529T	LOCK PLATE		
	21	30350581T	CHANGE GEAR2		
	22	30350582T	CHANGE GEAR 3A		
	23	30350583T	CHANGE GEAR 3B		
	24	30350535T	FEED SUB HOLDER		
	25	303505301 20250520T			
	20	30350542T	CHANGE ARM		
	28	30350580T	FFFD GFAR 1		
	32	30350554T	LOCK LEVER SP		
	33	30350555T	PU SHAFT		
	35	64010418T	PUSH SW P389-01		
	36	69011629T	PICK UP	OPTIMA-727AD	
	42	30350801T	TOP PLATE		
	43	303508021	SELECT ARM R		
	44	303508031 20250806T			
	45 46	303508001 30350807T			
	40	30350808T	TRIGGER ARM		
	48	30350809T	TRG ARM BASE		
	49	30350810T	TRIGGER ARM SPR		
	50	30350811T	LINK GEAR L		
	51	30350812T	LINK GEAR R		
	52	30350813T	LINK GEAR SPR		
	58	19501403T	WIRE CLUMPER		
	59	303210131 20251001T			
	62	303510011 30351008T	MODE SW WIRE		
	63	30351003T	REST SW WIRE		
	64	30351004T	LD WIRE		
	71	30321137T	LDG ROLLER	(x2)	
	72	30321143T	COLLAR SCREW		
	74	30351101T			
	75 76	303511021			
	70	303511051 30351105T	ROLLER SPR L		
	78	30351106T	ROLLER GUIDE I		
	79	30351116T	CAM PLATE R (N)		
	80	30351111T	TR CONTROL SPR		
	81	30351113T	SPRING		
	86	30351122T	LOADING GEAR 1		
	87	303511231	LOADING GEAR 2		
	80	303511281 20251120T			
	90	30351140T	LOADING GEAR 5		
	91	30351131T	LOADING GEAR 6		
	92	30351133T	LD GEAR BRACKET		
	93	30351135T	PLATE		
	99	303505309T	MORTER ASSY		
	100	303505302T	SPINDLE MOTOR		
	10'l 10'2	3035053031 202505204T	CLAMPER ASSY		
	102	303505504T 303505501T	CHASSIS RIVET		
	105	303505502T	CLAMPER ARM RVT		
	106	303505503T	RIVET ASSY		
	108	303510304T	BASE BOARD ASSY		
	110	303511301T	ROLLER SHAFT		
	111	303511302T	CAM PLATE L		
	112	303511501T	SLIDE HOOK RVT	( <b>F</b> )	
	12U 121	9FU42UU371 0C0117197T		(CX)	
	121 122	9C0120207T	SCREW	(^2)	
	123	9C4517506T	SCREW		

⚠	Symbol No.	Part No.	Part Name	Description	Local
	124 125 126 127 130	9P0420047T 9P0420067T 9P0420087T 9C0420257T 9W0513060T	SCREW SCREW SCREW SCREW HL WASHER	(x2)	



Grease point 2/2			
grease			
★ TNG-87			
<ul> <li>TN-4456</li> <li>TNS-925R</li> </ul>			
■ G-322			
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#### <MEMO>