

JVC Instruction Book

QUARTZ FULLY AUTOMATIC TURNTABLE QL-F6



**WARNING: TO PREVENT FIRE
OR SHOCK HAZARD, DO NOT
EXPOSE THIS APPLIANCE TO
RAIN OR MOISTURE.**

For Customer Use:

Enter below the Model No. and Serial No. which is located either on the rear or bottom of the cabinet. Retain this information for future reference.

Model No.

Serial No.

E30580-717A

INTRODUCTION

IMPORTANT (In the United Kingdom) Mains Supply (AC 240 V~, 50 Hz only)

IMPORTANT

Do not make any connection to the Larger Terminal coded E or Green. The wires in the mains lead are coloured in accordance with following code:



Blue to N (Neutral) or Black
Brown to L (Live) or Red

If these colours do not correspond with the terminal identifications of your plug, connect as follows:

Blue wire to terminal coded N (Neutral) or coloured Black.

Brown wire to terminal coded L (Live) or coloured Red.

If in doubt – consult a competent electrician.

Note

We recommend that you should disconnect the AC cord from the outlet.

WARNING

Dangerous voltage inside

CAUTION

To prevent electric shock, do not remove screws, covers or cabinet.

No user-serviceable parts inside. Refer servicing to qualified service personnel.

Thank you for purchasing JVC's QL-F6 Quartz Fully Automatic turntable. Many advanced features of this turntable can be correctly and efficiently utilized only when you have read this instruction book, and understood it for operating the turntable correctly. Wishing you successful and enjoyable listening.

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PRECAUTIONS

Installation

- Select place which is level, dry and neither too hot nor too cold (between -5°C and 40°C/23°F and 104°F).
 - Keep the turntable from direct sunlight.
 - Do not put it too close to a heater.
- To decrease noise
 - Keep it as far from your TV as possible.
 - Do not place it where it is dusty.
 - Do not place the turntable just on top of an amplifier as hum noises may be induced from the power transformer.
- To prevent stylus tripping
 - Do not place it in a place subject to vibrations.
 - Place the turntable as far away from speakers to prevent howling as possible.

Power

- Do not handle the power cord with wet hands!
- Do not bend the power cord sharply.
- When unplugging from the wall outlet, always pull the plug, not the power cord.

Malfunctions, etc.

- There are no user-serviceable parts inside. If anything goes wrong, unplug the power cord and consult your dealer.
- Do not insert any metallic object inside the turntable.
- Do not allow water to get inside the turntable.
- Tracking force will affect the reproduced sound quality. It should be properly adjusted.
Refer to the "Tracking force adjustment".

PREPARATIONS

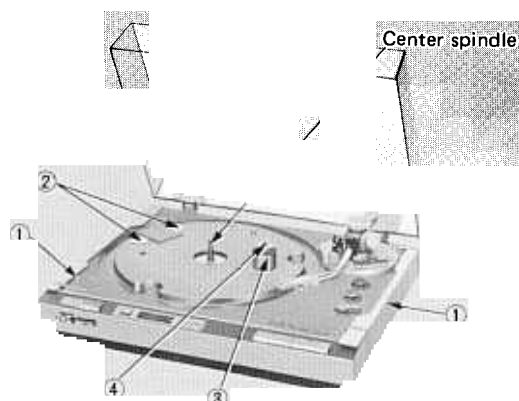


Fig. 1

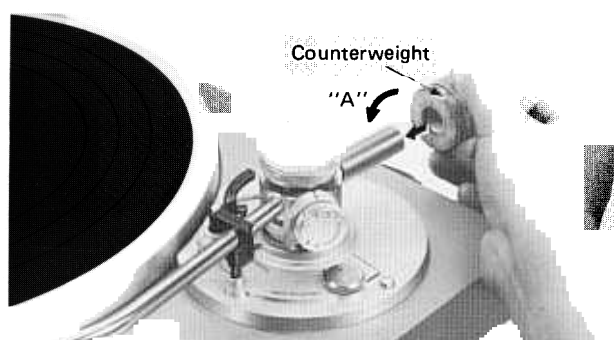


Fig. 2

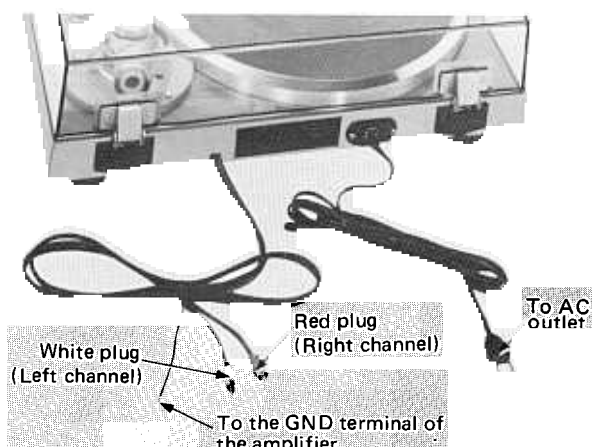


Fig. 3

Note:

Do not connect the power cord to the outlet until all preparations have been properly completed.

●Unpacking and setting up

1. Remove the protective corners for shipping (1). (See Fig. 1)
2. Remove the 2 shipping screws (2) (red) securing the transformer. (See Fig. 1)
3. Remove the shipping screw (red) (4) securing the counterweight (3).

4. Mount the counterweight onto the weight shaft while turning in the direction A and slide it as close to the tonearm base as possible. (See Fig. 2)
5. Gently position the platter onto the motor shaft, exercising care not to damage the motor shaft. Then, position the platter mat.

Caution:

An EP adaptor and sub-counterweight are provided as accessories in the polyethylene bag. Be careful not to lose them. Usage of the sub-counterweight is described in the section "Tracking force adjustment" on page 5.

Necessary procedures prior to record playing

1. Tracking force adjustment
2. Anti-skating adjustment
3. Oil-damped tonearm adjustment
4. Connection to a stereo amplifier (See Fig. 3)
Firmly connect the white plug of the QL-F6 output cord to the PHONO L (left) terminal of the stereo amplifier and the red plug to the R (right) terminal. Connect the grounding cord from the QL-F6 to the grounding terminal of the amplifier.
5. Connect the power cord to the outlet.

Note:

The tonearm may be automatically activated when the power cord is connected to the outlet. In such a case, depress the REJECT button once and the tonearm will return to the rest allowing the REPEAT knob indication to be set from 0 to 1. This does not mean a malfunction exists with the unit.

NAMES OF PARTS AND THEIR FUNCTIONS

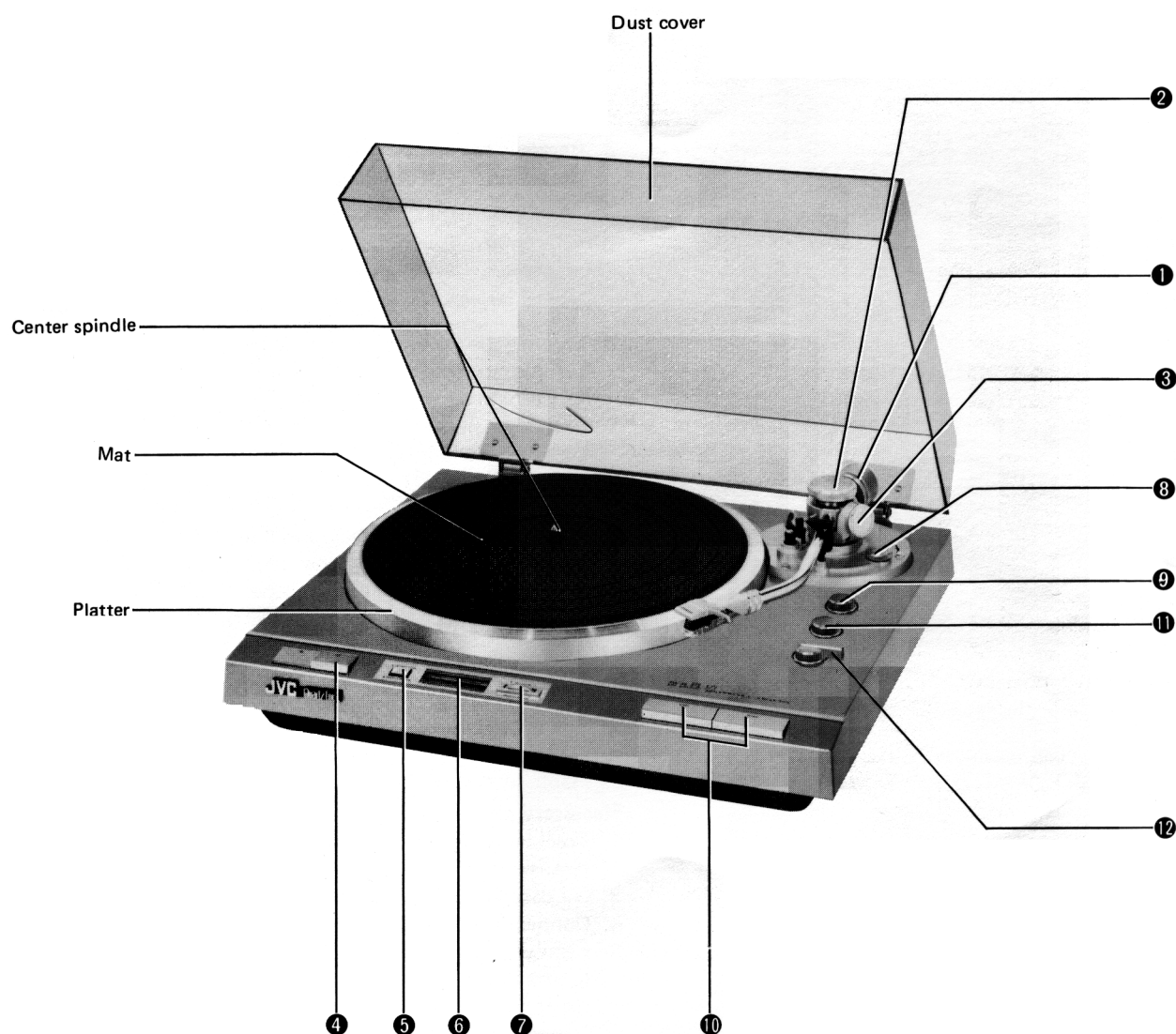


Fig. 4

OIL DAMPED TONEARM

Ordinarily tonearms have a resonance frequency of between 5 to 10 Hz. If the peak of the range of a tonearm is too high, accurate tracking of the tonearm with the record groove cannot be obtained because the tonearm resonates at a frequency generated by ambient vibrations or sound pressure, or the tonearm can be influenced by adverse conditions of the record such as warps, etc.

The OIL DAMPED TONEARM is designed to suppress the range of resonance by maintaining a low resonant point of the tonearm to prevent howling. With this OIL DAMPED TONEARM, accurate tracking of the record groove as well as a good resistant characteristic to howling is possible, thus resulting in an improved S/N ratio. In order to improve the sound quality, the OIL DAMPED TONEARM plays an important role.

2. HQ DAMPING knob

This controls the horizontal movement of the tonearm while aiding to keep the tonearm's resonating point low. Set the knob to the same indication number as the optimum tracking force of this unit.

3. VQ DAMPING knob

This controls the vertical movement of the tonearm while aiding to keep the tonearm's resonating point low. Set the knob to the same indication number as the optimum tracking force of this unit.

4. Speed select knob

Select a proper position of the speed select knob in accordance with the rpm of the record.

33-1/3 rpm record (LP) "33"

45 rpm record (EP) "45"

5. QUARTZ LOCK/PITCH CONTROL select button QUARTZ LOCK:

Depress the button to the QUARTZ LOCK position (■) for playing a record at an accurate rotation speed in the quartz lock mode. In this case, the meter lights green.

PITCH CONTROL:

Depress the button a second time to obtain the PITCH CONTROL position (■) in order to perform fine pitch adjustment for the sound meeting your preference. In this case, the meter lights orange.

6. PITCH CONTROL meter

When the QUARTZ LOCK/PITCH CONTROL select button is set to the QUARTZ LOCK position, the meter is green-lit and the indicator displays "0".

When the QUARTZ LOCK/PITCH CONTROL select button is set to the PITCH CONTROL position, pitch control can be performed by turning the PITCH CONTROL knob and the meter is orange-lit.

#6 % means +6 %

b6 % means -6 %

7. PITCH CONTROL knob

Fine pitch control can be performed with the QUARTZ LOCK/ PITCH CONTROL select button set to the PITCH CONTROL position. Pitch adjustment range is $\pm 6\%$. The indicator in the meter deflecting to the left (#) from the center(0) indicates an increase to the accurate 33-1/3 or 45 rpm and the deflection to the right (b) means a decrease.

8. ANTI-SKATING knob

This device cancels out the centripetal force that pulls the tonearm to the center of the platter. This prevents the stylus tip from skating toward the center of the platter and at the same time eliminates any excessive stylus tip force on the inner wall of the record groove. Use the ● marked dial when employing a spherical stylus. Use the ● marked dial when employing an elliptical stylus or a SHIBATA stylus.

Turn the dial to the same number as on the tracking force dial.

9. REPEAT knob

Decide how many times you want to re-listen to the record by using this knob. When you set the knob to "R", the record will continue to play repeatedly.

Note: This knob cannot be turned to indicate from 1 — 0 or 0 — 1 if the START button is depressed with the power cord disconnected from the outlet. For this, refer to the note in the section "Necessary procedures prior to record playing" on page 5.

10. START/REJECT buttons

When you start playing a record, depress the START button. The tonearm moves automatically to the position of the first groove of the record pre-selected and gently lowers itself onto the surface of the record to play it. When you stop playing the record, depress the REJECT button. The tonearm lifts, returns automatically to its rest and the platter stops rotating.

If, however, the REPEAT knob has been set for a number of repeats, the tonearm performs the corresponding number of repeats before the platter stops rotating.

Note: When the dial of the repeat knob has been set to numbers other than "0", the platter continues to rotate and the power will not be turned off even though you depress the REJECT button or even if the playing record has finished. When you want the power to be turned off after the record has played once, be sure to set the repeat knob to the "0" mark.

11. RECORD SIZE select knob

Set the knob to the corresponding position to the size of the record before you play it.

30 cm diameter record "30" (12")

25 cm diameter record "25" (10")

17 cm diameter record "17" (7")

12. Arm lifter lever

This is used when you want to raise the tonearm gently or gently lower it. When you push it to the "UP" position, the tonearm will be lifted up, and when you pull it to the "DOWN" position, it will be lowered down gently onto the record surface.

NECESSARY PROCEDURES PRIOR TO RECORD PLAYING

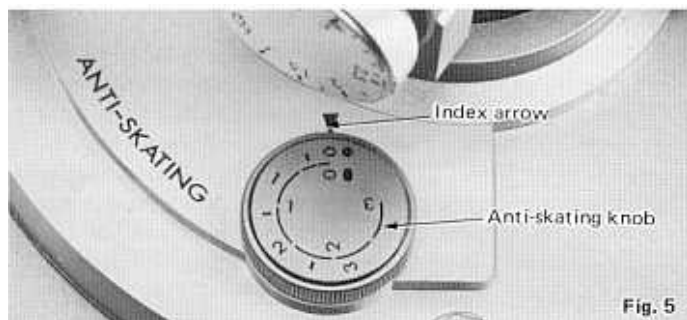


Fig. 5

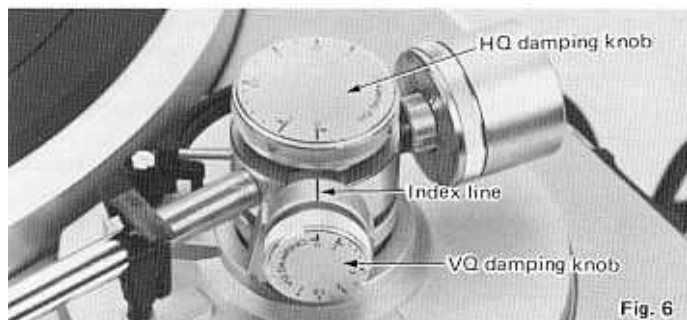


Fig. 6

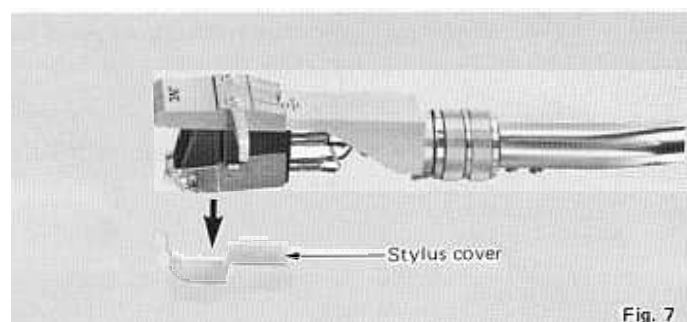


Fig. 7

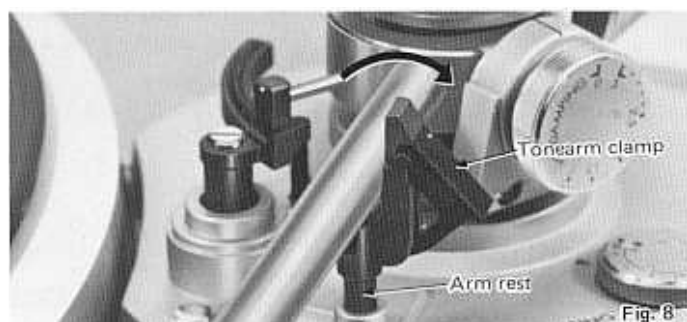


Fig. 8



Fig. 9

1. Tracking force adjustment

1. Turn the anti-skating knob until the "0" mark is aligned with the index arrow. (See Fig. 5)

2. Turn the HQ damping knob until the "0" mark is aligned with the index line. (See Fig. 6)
3. Turn the VQ damping knob until the "0" mark is aligned with the index line. (See Fig. 6)
4. Place a disc on the platter.

5. Remove the stylus cover from the stylus. (See Fig. 7)

6. Release the tonearm clamp. (See Fig. 8)

7. Zero balance adjustment (See Fig. 9)

Turn the counterweight until the tonearm is balanced. Stop turning the counterweight when the stylus tip is almost touching the disc surface.

8. Return the tonearm to the rest and clamp it.

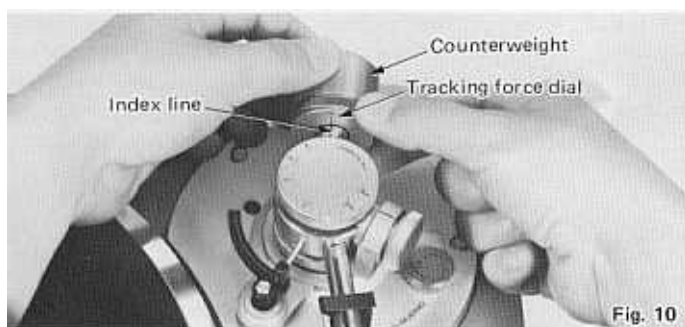


Fig. 10

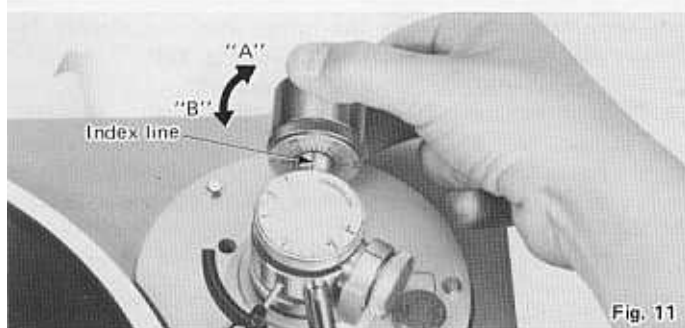


Fig. 11

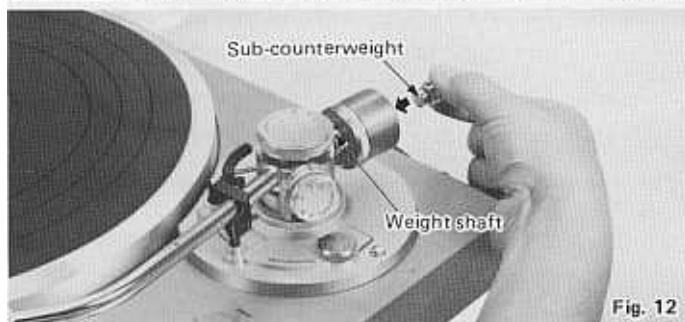


Fig. 12



Fig. 13

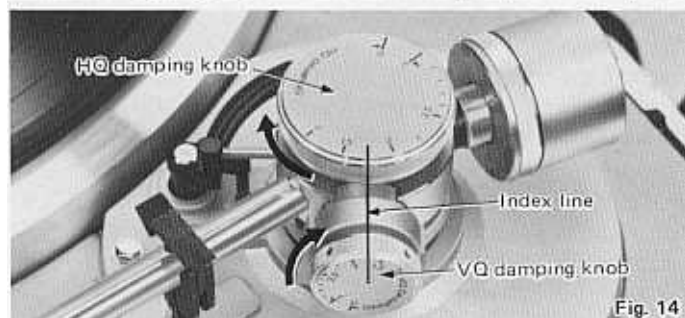


Fig. 14

9. Hold the counterweight at the adjusted position and turn the tracking force dial until the "0" mark is aligned with the index line on the tonearm weight shaft. (See Fig. 10)

10. Turn the counterweight in the B direction until the "1.75" mark on the dial is aligned with the index line. The "1.75" mark means an optimum tracking force of 1.75 g is being applied. (See Fig. 11)

Note:

Turning the counterweight in the direction A decreases the tracking force and increase it in the direction B. Turning the dial only, has no effect on the tracking force.

How to use the sub-counterweight (See Fig. 12)

If you employ a heavier headshell or cartridge that makes it impossible to obtain the zero balance with the counterweight, mount the provided sub-counterweight onto the shaft and slide it as close to the counterweight as possible.

Note: The sub-counterweight is suitable for cartridge/headshell assemblies weighing 20 to 24 g. There is no need to use it for the cartridge/headshell provided with this unit.

2. Anti-skating adjustment

Adjust the anti-skating force according to the cartridge being used. Turn the anti-skating knob dial to the same number on the tracking force dial. Use the ● marked dial when employing a spherical stylus. Use the ● marked dial for an elliptical or a Shibata stylus. Set the "1.75" of the ● marked dial to the index line since the QL-F6 is provided with an elliptical stylus and the tracking force has been adjusted to 1.75 g. (See Fig. 13)

3. Oil-damped tonearm adjustment

Turn the HQ damping control and the VQ damping control knobs until the "1.75" marks on the dial are aligned with the index line, since the optimum tracking force for this unit is 1.75 g. When not using the oil-damped function, turn the knobs until the "0" mark is aligned with the index line. (See Fig. 14)

Caution: 1) Turning the HQ and VQ damping control knobs while playing a record may cause damage to the disc or to the stylus tip. Do not touch them while playing a disc.

2) Align the "1" marks of both the HQ and VQ damping control knobs with the index line when using a cartridge requiring a tracking force of 1 g.

Release the tonearm clamp and start playing the record.

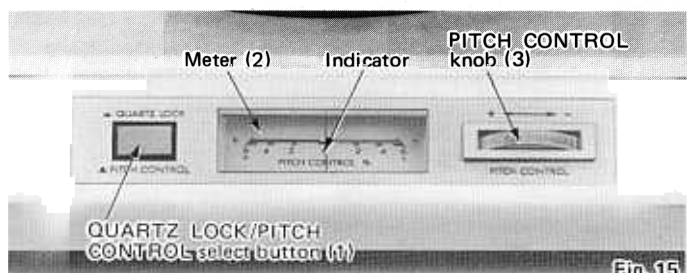


Fig. 15

4. How to use the QUARTZ LOCK/PITCH CONTROL meter (See Fig. 15)

QUARTZ LOCK (■):

When the QUARTZ LOCK/PITCH CONTROL select button (1) is depressed to the QUARTZ LOCK position, the meter (2) becomes green-lit. In this mode the rotation speed is accurately controlled by phase-locking to the quartz oscillator frequency. This means that correct 33-1/3 or 45 rpm is obtained. The indicator (2) of the meter displays "0".

PITCH CONTROL (■):

When performing fine pitch adjustment, depress the QUARTZ LOCK/PITCH CONTROL select button (1) to the PITCH CONTROL position and the meter becomes orange-lit. In this mode, fine pitch adjustment can be performed by turning the PITCH CONTROL knob (3) within a range of $\pm 6\%$. Turning the knob in the (+) direction (counterclockwise) increases the rpm. Turning it in the (-) direction (clockwise) decreases the rpm. The meter indication of +6% (#) shows the reproduced sound raised by approximately a half tone.

The -6%(b) indication shows the reproduced sound is lowered by approximately a half tone.

By making these adjustments, record sound reproduction meeting your preference can be obtained.

Note: The indicator of the meter may make excessive deflections (from right to left) when starting the turntable or changing the rotation speed, or when the PITCH CONTROL knob is quickly turned. However, this does not mean a malfunction exists with the unit.

How to make adjustments if the pitch control meter should indicate incorrectly (when the meter does not display "0" in the QUARTZ LOCK operation). (See Fig. 16)

1. Disconnect the power cord from the outlet.
2. Remove the platter from the motor shaft.
3. Turning the "0" position adjusting screw clockwise moves the indication to the right.

Turning this screw counterclockwise moves the indication to the left.

Generally, there is no need for adjustment since proper adjustment has been performed at the factory. Should the indication of the meter be incorrect, adjust it in the manner above.

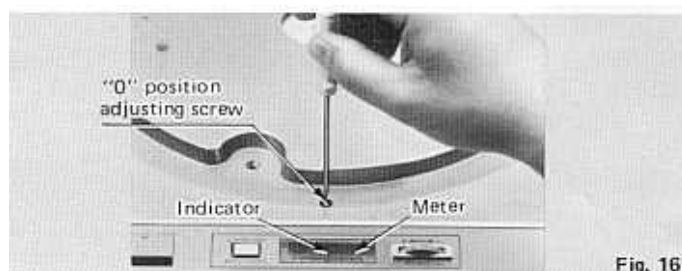


Fig. 16

STYLUS REPLACEMENT

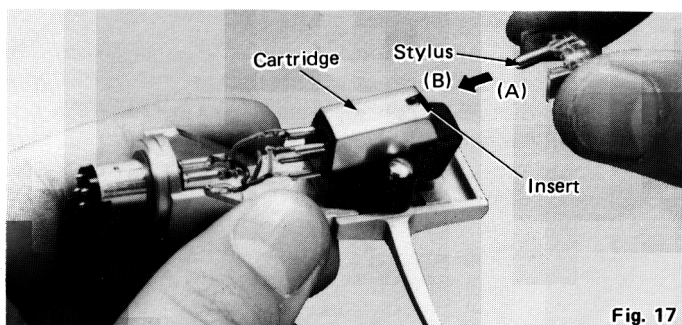


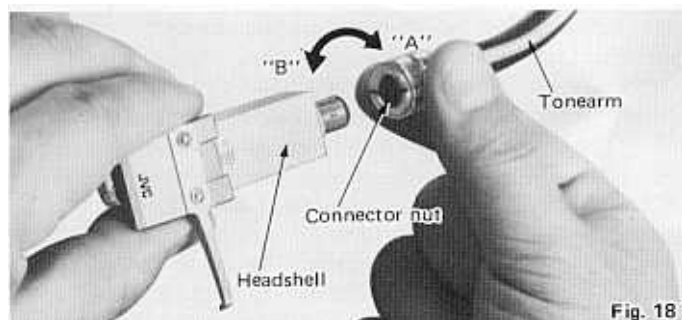
Fig. 17

● Stylus replacement (See Fig. 17)

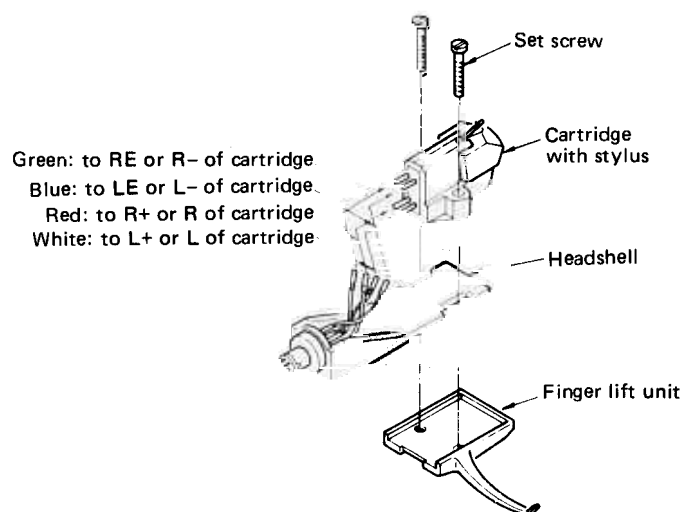
Replacement of the stylus can be easily made by simply inserting the stylus plug (A) into the jack (B) of the cartridge. Service life of the stylus employed for this unit (DT-ZIEB) is generally as follows; varying, depending on the record condition (dirty record groove etc.):

Stereo LP record (30 cm) Approx. 300 – 500 hours
Stylus are disposable items. Therefore, it is recommended to buy a supply of styli when you buy the unit. When purchasing them, specify the DT-ZIEB (JVC standard).

CARTRIDGE REPLACEMENT



- **Removal and mounting of the headshell (See Fig. 18)**
Turn the connector nut in the direction of "A" to remove the headshell from the tonearm. Turn it in the direction of "B" for mounting the headshell.



The cartridge shown in the illustration is the JVC Z-1EB model.

Fig. 19

Mounting the cartridge (See Fig. 19)

1. Remove the 2 screws securing the cartridge onto the headshell.
2. Install your cartridge onto the headshell provided or onto a headshell of your selection.
3. The headshell lead wires are color-coded as follows, connect them correctly.
White (+) L Red (+) R
Blue (-) LE Green (-) RE
4. Mount the cartridge properly onto the headshell and leave the set screws slightly loosened, then, after completing the "Overhang adjustment" (See page 9) tighten them firmly. After this adjustment, be sure that the conditions concerning the 3 adjustments on pages 5 and 6 are satisfactorily met.
5. After each cartridge replacement, be sure to perform the 4 adjustments described on page 9.

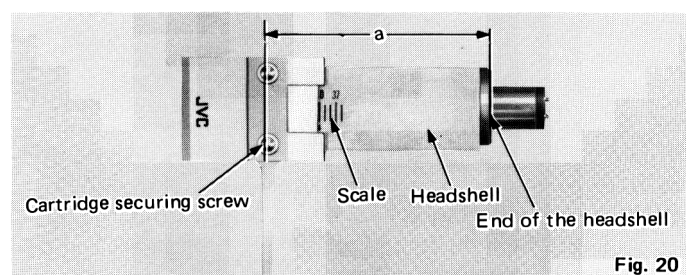


Fig. 20

How to use the scale on top of the headshell

- The scale indicates the distance (a) from the end of the headshell to the cartridge securing screw in mm. (See Fig. 20)
- The optimum distance from the end of the headshell to the cartridge securing screw of this unit is 48 mm (refer to "Overhang adjustment" on page 9).
- Secure the cartridge on the "40" indication of the scale, as the distance from the cartridge securing screw to the stylus tip of the provided cartridge is 8 mm. The 48 mm distance is thereby obtained. (See Fig. 21)
- When employing a cartridge of your selection, if you know the distance from the cartridge securing screw to the stylus tip, the overhang adjustment can be performed using the scale on top of the headshell without using a template.

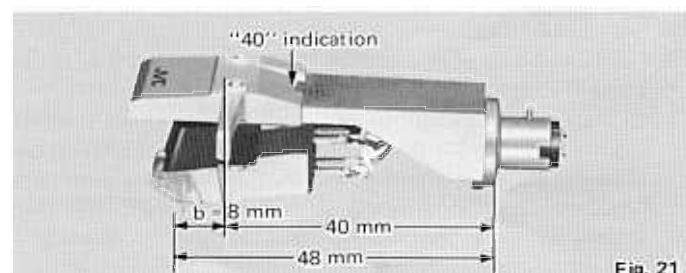


Fig. 21

ADJUSTMENT

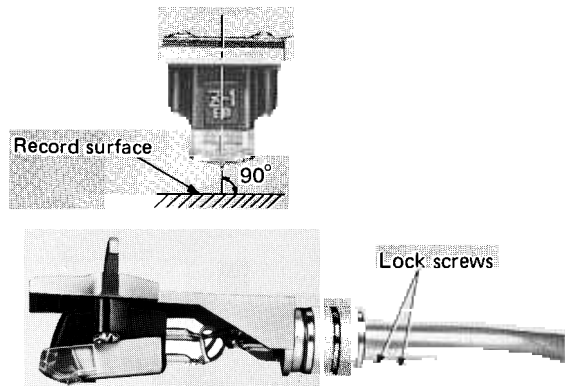


Fig. 22

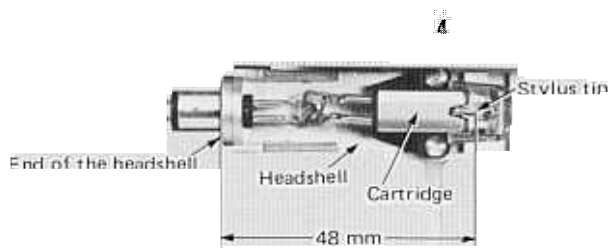
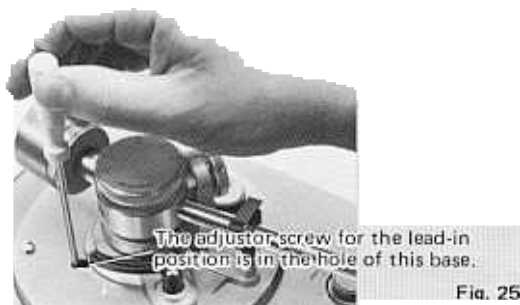


Fig. 24



The following four adjustments are recommended only in the event that you have replaced a cartridge or a headshell. Otherwise, no adjustments are required.

Note: If you change the cartridge, it is recommended to use the headshell provided on this unit.

● Headshell mounting angle adjustment (See Fig. 22)

If the headshell is not horizontal and the stylus tip is not perpendicular to the record surface, loosen the lock screws as shown in the illustration and move the headshell to adjust the stylus to be at right angles (90°) with the platter. Eye-measurement is sufficient.

Be sure to retighten the screws after the adjustment is completed.

● Tonearm elevator height adjustment (See Fig. 23)

The optimum clearance between the stylus tip and the record surface is about 6 mm when the tonearm is supported by the tonearm elevator. Turning the adjusting screws clockwise lowers the height of the tonearm elevator and counterclockwise increases it.

● Overhang adjustment (See Fig. 24)

To obtain optimum overhang, when mounting the cartridge, first align the cartridge's longitudinal axis to that of the headshell and position the cartridge so that the distance between the headshell's end face and the stylus tip equals 48 mm.

Be sure to tighten the set screw after the adjustment. Errors within 1 mm are negligible from a practical point of view.

● Stylus lead-in position adjustment (See Fig. 25)

Your QL-F6 was shipped from the JVC factory with its stylus lead-in position adjustment made properly. However, if the stylus lead-in position is changed due to cartridge changes, etc., adjust it as in the following:

1. Place a 30 cm record on the platter.
2. Set the record size select knob to "30" (12") and operate the turntable in automatic play.
3. Confirm if the stylus lead-in position is about 3 to 4 mm inward from the outermost edge of the record disc.
4. If the lead-in position is not in the proper range, turn the adjuster screw with a screwdriver clockwise to increase the distance between the lead-in position and the outermost edge, and counterclockwise to decrease the distance. Thus determine the proper lead-in position point to be about 3. to 4 mm inward from the disc edge.

TROUBLESHOOTING

What seems to be trouble is not always real trouble.

Make sure first.

No sound at all . . .

1. Are the cables connected properly?
(Cables should be connected firmly and properly.)
2. Is the amplifier tape monitor switch turned on?
(The tape monitor switch should be turned off.)
3. Is the amplifier source select switch set to the "TUNER" or "AUX" position?
(The select switch should be set to "PHONO".)
4. Is the connection to the amplifier proper?
(Connect properly.)
5. Is the amplifier volume control set to "MIN"?
(The volume knob should be turned clockwise to the desired level.)
6. Is the tonearm connector nut loose?
(The connector nut should be tightened firmly.)
7. Are cartridge wires disconnected or loosely connected?
(The cartridge wires should be firmly connected.)

Noise when playing record . . .

1. Is the record worn?
(Replace with a new one.)
2. Is the stylus tip worn?
(Replace with a new one.)
3. Is dust on the stylus tip?
(Clean with a stylus cleaner.)
4. Is the record dusty?
(Clean the record grooves with a record cleaner.)
5. Are the red and white plugs from the turntable properly connected to the "PHONO" terminals of the amplifier?
(Connect them properly.)
6. Is the grounding cord (black) connected to the grounding terminal of the amplifier?
(Connect it properly.)

The platter does not turn . . .

1. Is the power cord connected to the AC outlet?
(Connect it firmly.)

Loud howling . . .

1. Is the turntable too near the speaker?
(Position at least 40 cm from the speaker.)
2. Is the turntable located on the speaker box?
(Move to a place as far from the speakers as possible.)
3. Is the volume or bass tone control emphasized to distort the sound?
(Decrease the volume or bass tone control to a level providing undistorted sound.)

SPECIFICATIONS

MOTOR SECTION

(These specifications apply only to the quartz lock mode.)

Motor	: Coreless, DC type, FG servomotor
Servo system	: Phase-locking to the quartz oscillator
Drive system	: Direct drive
Speeds	: 33-1/3, 45
Fine pitch adjustable range	: $\pm 6\%$ (in the pitch control mode)
Wow and flutter	: 0.025 % (WRMS)
Signal-to-noise ratio	: More than 78 dB (DIN-B)
Speed detection	: Frequency generator
Starting torque	: More than 1.2 kg-cm
Speed deviation	: Within 0.002 %
Load characteristics	: 0 % (with 170 g total tracking force)
Drift	: 0.0001 %/H
Power characteristics	: 0 % (± 10 V)
Temperature characteristics	: 0.00005 %/ $^{\circ}$ C
Platter	: 32.7 cm

TONEARM SECTION

Type	: Statically-balanced oil-damped tonearm
Effective arm length	233 mm
Overhang	15 mm
Weight range including headshell	: 13 — 20 g 24 g (when using the provided sub-counterweight)

CARTRIDGE SECTION (Except for U.S.A., Canada & U.K.)

Type	: Moving magnet (MD-1025EB)
Frequency response	: 10 Hz — 25,000 Hz
Output	: 3 mV (1 kHz)
Channel separation	: 25 dB (1 kHz) (using the test record TRS-1)
Load resistance	: 47 — 100 k-ohms
Compliance	: 10×10^{-6} cm/dyne (dynamic) 30×10^{-6} cm/dyne (static)
Stylus	: DT-ZIEB, 0.3 x 0.7 mil. (diamond, elliptical)

Optimum tracking force: 1.75 g \pm 0.25 g

GENERAL

Power consumption	: See back page
Dimensions	: Height 14.2 cm (with closed cover) Width 45.6 cm Depth 40.0 cm (Since the dimensions show only the design measurements, consideration is required when installing the unit in a limited space such as a rack, etc.)
Weight	11 kg (without the packaging)
Accessories	
EP adapter	

Place the adapter on the center spindle when playing a record having a bigger diameter center hole such as a doughnut record.

Sub-counterweight 1

Design and specifications subject to change without notice.



POWER SPECIFICATIONS

* Power consumption in the stop mode.

	Line Voltage & Frequency	Power Consumption*
U.S.A. & Canada	AC 120 V, 60 Hz	15 watts
Continental Europe	AC 220 V~, 50 Hz	"
U.K. & Australia	AC 240 V~, 50 Hz	"
U.S. Military Market	AC 110/120/220/240 V Selectable, 50/60 Hz	"
Other Areas	AC 110/120/220/240 V Selectable, 50/60 Hz	"