

QL-8 QUARTZ-LOCKED TURNTABLE SYSTEM

TT-81



Like the QL-10, the QL-8 from JVC is also a complete system combining a Quartz-Locked Turntable, model TT-81 in this case, with the CL-P1 Turntable Base and UA-7045 New Gimbal Support Tonearm, the latter two being custom-designed components available separately (in some areas) and described later.

The QL-8 with its TT-81 Quartz-Locked Turntable section delivers the same functional features and advanced control accuracy as the more expensive model; it lacks only the digital speed indicator. Features include the JVC Quartz-Locked Servosystem, the Positive and Negative Servocontrol, 1Hz/440Hz Pitch Control, Quick Stop facility and more. Outstanding performance features such as highly accurate speed constancy, low wow and flutter, exceptionally high signal-to-noise ratio are all retained.

Quartz-Locked Turntable

Use of the Quartz-Locked Servosystem containing a precision quartz crystal oscillator lets JVC guarantee absolute pitch accuracy, with speed deviation of less than 0.025%. This is a major factor in your assurance of The Musical Truth from JVC.

1Hz Step Pitch Control

With the 440Hz as the reference pitch, the TT-81 in the QL-8 can be adjusted higher or lower up to 6Hz in 1Hz steps. A button control is provided for this purpose. Unlike other quartz-locked servos, this one works even while the speed is being fine-adjusted, thus speed accuracy is *always* maintained.

Positive and Negative Servocontrol

The JVC servosystem works in *both* positive and negative directions, again unlike conventional systems. Any speed deviation is instantly rectified to the absolutely correct speed.

Quick Stop

When the Stop Button is pushed, an electronic brake produces a reverse current in the drive circuit that generates reverse motor torque to counteract the motor torque. The platter comes to a full stop within one second.

Integrated Frequency Generator

A *second* servo, consisting of a frequency generator for speed detection, is an integral part of the direct-drive motor in the QL-8. A disc rotor with 180 slits is coupled with a doughnut-shaped magnet. Beneath this is mounted a stator coil for detection, printed on a round-shaped circuit board. Thus, when the motor is rotating, 180 pulses are generated with each revolution as signals to be compared instantly with the quartz-generated reference signal. The integrated frequency generator, by the way, is completely free from error regardless of loads on the platter.

Oscillator-Assisted Stroboscope

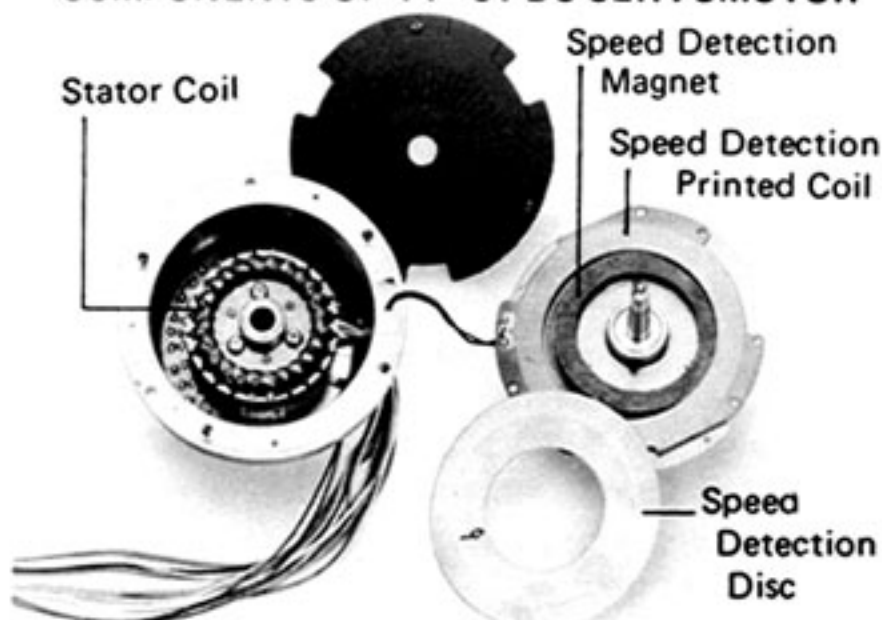
In place of the digital indicator in the QL-10, the QL-8 has a highly accurate strobe, illuminated by a neon lamp which flashes at a rate that is synchronized *not* with power-line frequency as in conventional strobes but instead with the

accurate and always-stable quartz-derived reference frequency. Only one row of stroboscopic stripes is needed, and each stripe appears sharp and clean. There is never a doubt that the platter is turning at its correct speed.

SPECIFICATIONS

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|-----------------------------------------------------------|-----------------------------------------------------------------------------|
| MOTOR | (TT 81) |
| Type: | DC servomotor |
| Drive System: | Direct drive system |
| Speeds: | 33 1/3 and 45rpm |
| Speed Detection System: | Integrated frequency generator |
| Servosystem: | Quartz-locked servosystem |
| Pitch Control Range: | ± 6 Hz (Standard: 440Hz) |
| Speed Change: | Electronic switching |
| Start-up Time: | Less than 1 second (120°) |
| Wow and Flutter: | Less than 0.025% (WRMS) Less than 0.045% (DIN) |
| Signal to Noise Ratio: | More than 63dB (IEC B) More than 73dB (DIN B) |
| Start-up Torque: | 1.3kg-cm |
| Overshoot: | Less than 2% |
| Speed Deviation: | Less than 0.002% |
| Load Characteristic: | 0% (under 100 gram cartridge loads) |
| Drift (hour): | 0.00004%/H |
| Voltage Drift (± 10 V): | 0% |
| Thermal Drift ($^{\circ}$ C): | 0.00003%/ $^{\circ}$ C |
| Quick Stop Time: | Less than 1 second |
| PLATTER: | 31.6cm aluminum die cast |
| TONEARM | |
| Type: | Statically balanced arm with New Gimbal Support on TH (Tracing Hold) System |
| Length: | 350mm |
| Effective Length: | 245mm |
| Tracking Error: | $+1^{\circ}48'$, $-1^{\circ}31'$ |
| Overhang: | 15mm |
| Applicable Tracking Force: | 0-3 grams (0.1 gram steps) |
| Applicable Cartridge Weight (including headshell weight): | 12-32 grams |
| Arm Elevation Range: | 40-60mm |
| ACCESSORIES: | Oil damped arm lifter, Low capacitance signal cable |
| DIMENSIONS (H x W x D): | 197mm x 510mm x 410mm (7-3/4" x 20-5/64" x 16-9/64") |
| WEIGHT: | 18.5kg (40.7 lbs.) |

COMPONENTS OF TT-81 DC SERVOMOTOR



WOW & FLUTTER (WRMS)

