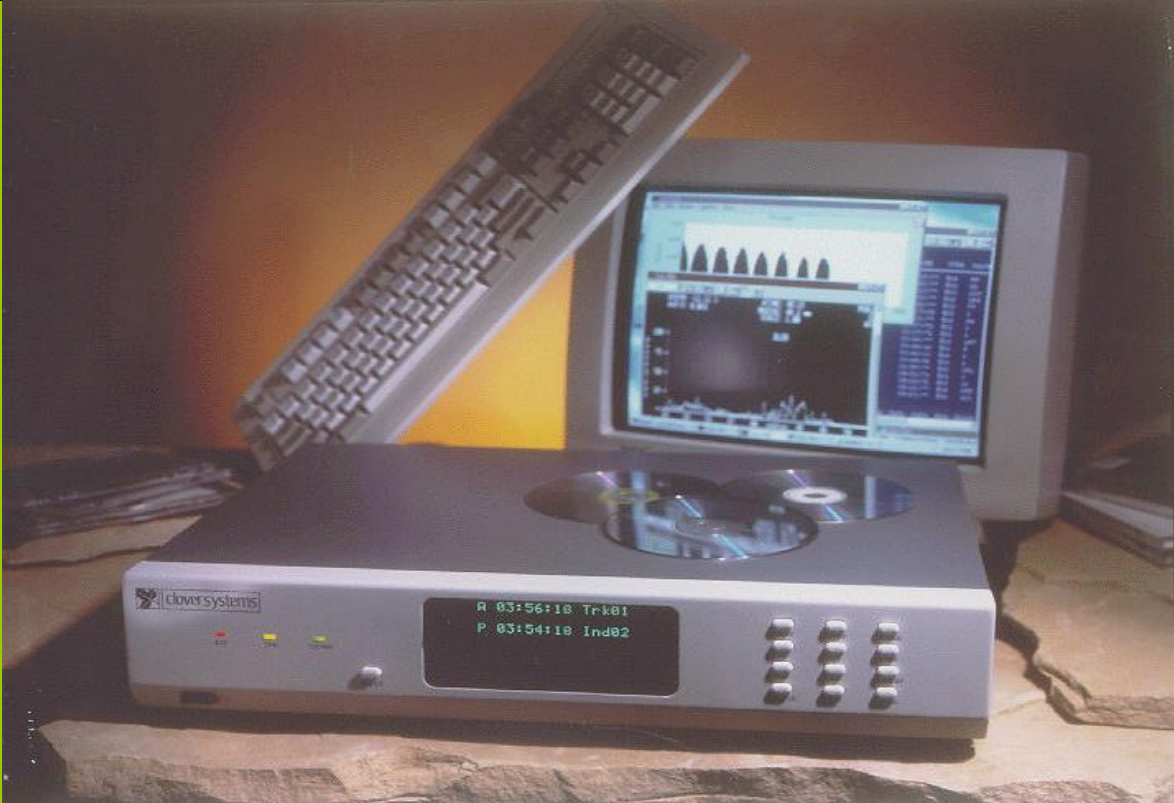


# QA-101



## DESCRIPTION

The QA-101 is a compact and easy to use means of measuring disc quality. This industrial-grade player measures and displays error rates and dropouts. It will analyze CD, CD-R, and CD-RW discs of all formats at 2X or 1X speed. It has BNC jacks on the rear with buffered HF and TRK outputs that allow you to make pit geometry measurements like I11, I3, and asymmetry using an oscilloscope. It also has a TTL EFM output to connect to optional jitter measuring equipment.

Each occurrence of E22, E32, BEGL, and Track Loss is printed with its location in real time using the built-in printer port. A summary of disc performance including all error statistics and Grade is printed at the conclusion of the test. This allows completely automatic operation without a computer.

The built-in grading system gives you an easy to use, instant evaluation of the overall disc quality based on the measured values. Five different categories provide a wide range of performance evaluation.

The serial interface allows you to store and graph the data on a PC with the included QA-Net software.

The QA-101 includes both digital (AES/EBU) and analog audio outputs.

## Price / Performance

# Breakthrough!

**new** The standard in Desktop CD Quality Control

Replicators, distributors, CD-ROM publishers, and CD-R duplicators all need to verify the quality of their product to maximize customer satisfaction and avoid problems. The Clover Systems QA-101 was the first system to make CD quality measurements affordable, opening up many new opportunities for quality control. Now, the newest generation QA-101 offers testing of all disc formats at 2X speed plus jitter measurement capability, at an incredibly low price.

- Tests all disc formats including audio at 2X speed
- Prints all results using built-in printer port
- Measures BLER, E11, E21, E31, E12, E22, E32, BERL, BEGL
- Alarm for uncorrectable errors
- Displays UPC/EAN and ISRC codes
- TTL EFM output for measuring jitter
- Philips VAE1250 three-beam pickup
- Heavy-duty 3½ " high rack-mountable steel chassis
- Completely self-contained; no computer required
- Exclusive built-in grading system
- Counts total E22, E32, BEGL and dropouts
- Tracking Loss indicator
- HF & TRK output jacks for pit geometry measurements
- AES/EBU digital audio outputs plus analog audio outputs
- Serial computer interface
- Money back Guarantee



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# Benefits

## to the user

- Pre-Mastering/Mastering - The Mastering/Replication facility will not master your disc if they encounter an E32 error on your master. Save time and money by testing your CD-R premaster discs beforehand. Printed output verifies quality.
- CD-Recordable Duplication - Don't risk your reputation on poor CD quality! Just because you can read it doesn't mean it will work in all readers, or have any tolerance for degradation. The QA-101 can also help you determine the best combination of writer and media.
- Incoming Inspection - CD-ROM publishers and record distributors use it for incoming inspection of their product from the replicators to ensure customer satisfaction, and make sure the product meets specifications. If the disc has YOUR name on it, you need a way to measure disc quality.
- Production line testing - CD Replicators can screen CDs on the production line without tying up valuable resources. The low cost allows one tester for every molding machine.

Error rates are the single most useful measurement of disc quality, since all serious disc problems will cause increased error rates. Errors measured are BLER (Block Error Rate), E11, E21, E31, E12, E22, E32 (uncorrectable errors), BERL, and BEGL. Current, average, and peak values for all errors can be displayed on the built-in Vacuum Florescent display. Total E22, E32, BEGL errors and dropouts are also displayed. A red LED warns at a glance if an uncorrectable error has occurred. This is especially important for CD-ROM and pre-mastering applications. A track loss indicator warns of excessive tracking error.

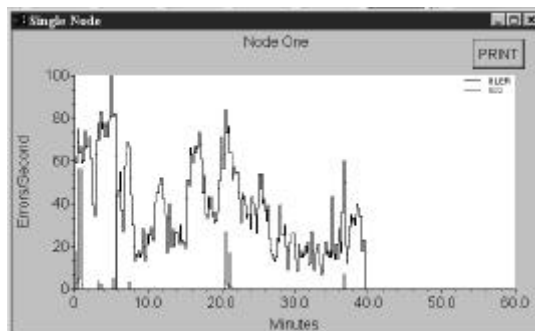
Buffered HF and TRK signal output jacks on the rear panel provide a simple means of measuring pit geometry using an oscilloscope. You can measure I11, I3, asymmetry, radial contrast, crosstalk, jitter, and reflectivity. The dropout counter also helps decide if errors are caused by local defects, or poor pit geometry.

The operator's manual fully explains how to interpret the data, and make measurements related to pit geometry. A thorough analysis of disc performance is possible.

A serial interface allows up to 8 QA-101s to be connected to a computer on one twisted pair using one COM port. Data is uploaded to the PC where it can be displayed graphically, printed, and stored.

## QA-Net

- The included QA-Net Software is a Windows program that gathers data from up to eight QA-101s in real time. You can display, save, and print graphs and a summary of test results. Requires Windows 95 or later OS plus one spare COM port.



- Power consumption: 25 watts (90-260 VAC 50/60 Hz)
- Dimensions: 17" x 12" x 3.5" - Rack mounting hardware optional
- Weight: 16 lbs.
- Outputs: AES/EBU digital audio, HF, TRK, RS-232/485 serial interface, parallel printer, analog audio outputs, TTL EFM.
- All Clover Systems products are sold with a 30-day money back guarantee, and one-year warranty against defects.
- Holographic lightpath
- NA = 0.45
- $\lambda = 780 \text{ nm} \pm 20 \text{ nm}$
- Polarization = perpendicular to track

All specifications subject to change without notice.

## Warranty

# QA-101

## Desktop CD Quality Control



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