

LB100A Series

OPTICAL PICKUP TESTER



General

The LB100A is an automatic and manual test system for testing CD, DVD, Combo, Super Combo, Rambo and other types of optical pickups. It system is configured of a measuring unit, a drive unit for devices being tested, options for devices being tested, a controller, and other components. When an optical pickup is mounted and the test is started, the test automatically follows a pre-programmed regimen, and results with GO/NG judgments for each category under test are automatically displayed.

Features

- Ideal for inspecting playback and recording characteristics of all types of pickups including CD, DVD, Combo, Super Combo, and Rambo.
- Since CD and DVD recording is possible in a single system, CD recording can be tested at the optimum DVD tilt angle.
- Software used for testing can be customized to provide optimum environment for optical pickups being tested.
- Controls laser drivers installed in optical pickups.
- Sampling servo system during recording is selectable.
- Easy operation and GO/NG judgments is possible via remote switches.
- Supports networked systems.

Specifications

- Basic unit configuration Measuring unit, drive unit for devices being tested, controller, software, and peripherals.
- Measuring unit(LB101A) Signal matrix circuit, measuring circuit for various signals, digital servo circuit, and when recording characteristics are supported: disc address circuit, preamplifier including recording control circuit, and remote box for performing operations.
- Drive unit for devices being tested (LB102A) Radial tilt and tangential tilt mechanism with motor control, disc feed mechanism, optical pickup objective lens output measurement function, location adjustment function for calibrating the mechanism, tilt angle calibration value memory function, replaceable optical pickup mounting unit, standard fittings for adjusting the mechanism.
- Controller (LN16B) Main controller unit, CRT display, keyboard.
- Software Tester software (source code provided)
Note: Since software is dedicated for specified optical pickups, please advise on measurement categories required.
- Peripherals (options)
 - Jitter meter (advice required.)
 - Arbitrary waveform generator (AWG) (advice required.)
 - : Depends on specifications of laser driver installed in optical pickup.
 - Time interval analyzer (advice required.)
 - Oscilloscope (advice required.)

• Items supplied by customer

Optical pickups to be tested, flexible cables for connecting pickups, specification sheets for pickups being tested.

• Optical pickups that can be measured

CD, DVD, Combo, Super Combo, Rambo, etc.

• Focus servo system

Astigmatic method (AC-BD), knife edge method (A-B); Supports hologram lasers; Servo uses sampling during recording operations.

• Track servo system

DPD method (DVD): for playback

DPP method: for recording

3-beam method: for CD playback

Note: Supports hologram lasers; Servo uses sampling during recording operations.

• Others

Optical pickups with recording function and laser driver installed.

Optical pickups with CD-R/RW and DVD-R/RW recording Functions.

Optical pickups with DVD-RAM playback function (playback test only)

● Measurement items

Please inquire about supportable measurement categories or categories not mentioned.

LD output (during playback)

Iop LD operating current (during playback)

Monitor PD Defocus (jitter best point)

S curve balance S curve level

TE balance TE level

DPD balance DPD level

DPP level DPP balance

Jitter Main Sub light volume comparison

Push-pull balance Push-pull level

RaSkew (jitter best point)

Ta Skew (jitter best point)

RF level Itop (mirror level)

I 11 modulation I 11 / I top

I 3 modulation I 3 / I 11

I 14 modulation I 14 / I top

I 3 / I 14 I 3 / I top

RF crosstalk PD balance (X,Y)

Sub-beam phase difference

Optimum power setting

Symmetry β value

Lens shift characteristics (jitter, TE, RF)

Specifications

● General specifications

Power supply	AC 90 to 120, 200 to 250 V, $\pm 10\%$, 50/60 Hz Excludes CRT display (AC 100 V), etc.
Operating temperature range	10°C to 30°C Relative humidity 40% to 70% RH (non-dewing)

Dimensions

Measuring unit (main unit)	426 (W) x 150 (H) x 505 (D) mm
Drive unit for tester	360 (W) x 290 (H) x 500 (D) mm
Controller (main Unit)	483 (W) x 88 (H) x 473 (D) mm (excl. keyboard)
Display	367 (W) x 375 (H) x 384 (D) mm
Weight	Approx. 70 kg
Accessories	Test disc x 1 Measuring unit connection cable (for signal, control, jitter meter) x 1 set System cable x 2 GP-IB cable x 1 RS-232C cable x 1 User's manual x 1 Software license (Vx-Works) x 1 Fittings for mechanism adjustment x 1 set