Pre-recorded CD
Master, Stamper and Disc Analysis

- Disc, stamper and master analysis in one module
- Double and single speed analysis
- According to Philips specifications
- Checks stampers with very low reflectivity (NiVa)
- Checks different types of stamper and master on request*
- Individual calibration and servo setup for each media type
- Automatic media detection
- Reference tests and auto recheck in 1X speed
- Checks HF, jitter, E-flags, servo and mechanical parameters
- Patented adapter to protect stamper surface
- Upgrade and service friendly by passive backplane concept
  (HW) and flash-memory/download (SW)

* Depending on the mastering and electroforming installation

The CD Analyzer SM 2X is currently the only tester available that can check stampers, masters, and replicas in
one module, at double speed and at reference speed, and also over a very wide range of reflectivity (from gold
discs to NiVa Stampers).

Stampers are protected by the patented Stamper Adapter. Calibration settings and servo/amplifier parameters are
changed automatically by coded adapters. The Analyzer is designed to fit into any CS-4/WIN Main System.
Multi-Function: The multi format Analyzer supports a wide range of variation in reflectivity and mechanical mass. If used as a Stamper Analyzer only, the CD Analyzer Stamper Master 1X 2X has many unique features, such as double speed measurement, automated calibration for both speeds, the unique patented Stamper Holder, which protects the nickel substrate, and more. With the new adapter design, the CD Analyzer SM 2X changes into a Master Analyzer for small diameter masters or even into a high-precision replica Analyzer. A barcode identifies the adapter and downloads the related calibration data and settings for amplifiers, filters and servos.

Flexibility: The CD Analyzer SM 2X has to be connected to a CS-4/WIN Main System. It can be combined with any other DaTARIUS Analyzer, including up to a total of 8 CD Replica Analyzers, Stamper, Master or Optical Modules and/or the DVD Analyzers.


Measured Parameters

Digital Error Flags & Subcode
- E11, E12, E21, E22, E31, E32 Errors
- T32 - Total E32 Errors
- BLE - Bler - Block Error Rate
- ABE average block error rate
- FBL/CLE - Frame/CL Burst Errors
- FR1/FR2 - Frame Burst Rate 1 & 2
- TBR/PBR - Subcode Error Rate
- PQ Format and Time code Errors
- Track & Index Subcode Errors
- ISRC & UPC/EAN Code Errors

Analogue & Servo Parameters
- RNS - Radial Noise (Red Book)
- FC1 - Focus Noise
- PP - Push Pull, Linear
- PPC - Push Pull, Circular

HF (Amplitude) Parameters
- ITP - Itop (related to REF)
- I1T - High Frequency I11/Itop
- I3T - High Frequency I3/Itop
- HF Snapshot and Eye pattern
- ASY - Asymmetry
- XT - Cross Talk
- I1U/I3U - Un-normalised I11 / I3
- ITN - I top noise
- IBN - I bottom noise
- HFV - HF variation
- ITV - I top variation within one revolution
- IBV - I bottom variation within one revolution

Mechanical Parameters
- BLI - Beginning of Lead In
- BPL - Begin of Program Area
- BLO - Beginning of Lead Out
- SVY - Local Scanning Velocity
- TRP - Local Track Pitch
- ATP - Average Track Pitch
- ASV - Average Scanning Velocity

Option: TBE - Jitter & Deviation
- Event Length Histogram Pit/Land
- Jitter for each T3-T11 Pit/Land
- Deviation for each T3-T11 Pit/Land
- Unique Time Base Error Analysis

Adapter
In order to play CD stampers, a compensation glass is required to simulate the replica’s polycarbonate substrate. With the DaTARIUS CD Analyzer SM 2X dual adapter, there are two options for playing stampers. The first option places a glass compensation layer over the whole stamper. With this option, regular replicas can also be played (using an appropriate mount). The second option utilizes a small compensation glass mounted directly onto the pick-up optic. Stampers can then be played without any covering, but the glass will need to be removed before replicas can be played. (This second option is not available on the standard CD Analyzer SM 2X.)

Electrical and Mechanical Specifications

Interfaces, Control, Connectors
Front:
- Power Switch, 3 Test-Status LED
- LCD Display 16 Lines x 40 Char.
Back:
- RS-232 PC Interface (to Main System)
- Cinch L/R for Audio (controlled)
- DC Power Connector, 5 Status LED

Power supply unit
DVD power supply unit for up to 8 DaTARIUS analyzers, 19” rack, 2 HU height, from 100 to 240 Volt.

Recommended Operating Environment
20°-24°C; 1°C Variance for good reproducibility, 40% - 60% relative humidity, not condensing

Size (W x H x L), Weight: 11.7 kg 48.3 x 13.2 x 65.5 cm; (19’’ frame size),

Optical Pickup Head (PUH) & Drive
1-spot: Philips CDM-4 based