MODEL: D8000
Auto Alignment System

Complete Solution for Automated Test and Alignment of Displays

Imagine a test system so versatile that covers geometry, colorimetry, purity, convergence, focus, and voltage applications. Imagine a system so intelligent that figures out 3-D perspective correction to displays under test automatically. DynaColor D8000 auto alignment and measurement system does it all. The first single camera system in the world capable of handling such a wide range of alignment and measurement functions.

D8000 integrates leading edge hardware and software to give you exceptional speed, precision and stability. Starting with a 32-bit CPU architecture and a dedicated imaging processor, the system delivers alignments and measurements at a lightning pace. Outstanding sub pixel algorithm extends resolution way beyond the limits set by the camera. We also invented a quick calibration process that made ISO9000 compliance a breeze. Image capture speed is so fast that it is immune to typical factory floor vibration.

Advanced 3-D perspective algorithm calculates and corrects for display positions with no loss in accuracy. There is no limitation on the type of displays. There is no limitation on the size of displays. There is no need for an elaborate mechanical fixture. Simple system structure and lack of shock and vibration offers superior quality and reliability unmatched by other systems.

Modular architecture allows other test capabilities to be added to the base D8000 system. DynaColor has several hardware and software options that will assist you in automating production lines. Semi-automatic station, Operator-less station, data upload and download, PLC interface, multiple-purpose station, and data collection host station have been installed at sites around the globe.

Versatile and nimble, D8000 is ideal for monitor/TV production automation, ITC and Yoke operation, on line QC inspection, off line QA audit, as well as field repair and engineering applications.
Advanced Software 3-D Perspective Correction
The End to Hardware Fixture Incarceration

Time is money. With DynaColor D8000 System, you don’t have to waste time positioning the monitor to the camera. Front or back, left or right, even tilt and rotation are perfectly acceptable to D8000. Off angles are automatically compensated for by software, to some limits of course.

System Installation Examples

3 in 1 Monitor Test Station

Geometry alignment, colorimetry alignment, and Display Data Channel programming are done in a single station, saving production time and operator overhead.

Yoke Production Station

When combined with D8200 Universal Chassis, D8000 provides the complete solution for Yoke production line.

Production Line Integration

DynaColor provides exceptional automation solutions for your production line integration.

World-wide Sales/Service Network

DynaColor sales and service network spans the globe. Sales or technical assistance is never far away.
Connection Diagram - Full automation without operator

Available Alignment and Measurement Functions

Geometry
- H width/centering
- V height/centering
- Top pincushion/barrel
- Bottom pincushion/barrel
- Left pincushion/barrel
- Right pincushion/barrel
- Corner pincushion
- Quarter width
- Rotation
- Parallelogram
- Left/Right trapezoid
- Up/Down trapezoid
- H linearity
- V linearity
- Compound correction

Colorimetry
- Color temperature
- Color tracking
- Contrast/Brightness
- RGB gain/cutoff
- G2 setting
- ABL setting

Convergence
- PCM adjustment
- Static convergence adjustment
- Dynamic convergence adjustment

Purity
- Purity ring adjustment
- Yoke position optimization

Focus
- Static focus adjustment
- Dynamic focus adjustment

Voltage
- Supply voltage adjustment
- Dynamic waveform adjustment

Hardware Options
- H01 D560 DDC Controller
- H02 Key Card
- H03 C7100 Color Analyzer
- H04 D8060 PPIO Controller
- H05 D8070 Joystick Controller
- H06 Industrial PC
- H07 Digital Volt Meter Card
- H08 Data Collection Host Station
- H09 Barcode Reader
- H10 Purity Subsystem

Software Options
- S01 Geometry alignment
- S02 Colorimetry alignment
- S03 Geometry measurement
- S04 Colorimetry measurement
- S05 DPMS inspection
- S06 OSD inspection
- S07 Convergence measurement
- S08 Convergence alignment
- S09 Yoke production S/W
- S10 Voltage (B+) alignment
- S11 High voltage alignment
- S12 Cut off manual adjustment
- S13 Data upload/download
- S14 Data collection host S/W
- S15 Focus measurement
- S16 Purity measurement
- S17 ITC production S/W

Accessory Options
- A01 Instrumentation Rack
- A02 Light Shield
- A03 Camera Fixture
- A04 Calibration Fixtures
- A05 RS-232C Level Translator
- A06 Sync on Green Adapter
- A07 Communication Cables
- A08 Auxiliary Light Controller
**SYSTEM CONFIGURATIONS**

**Geometry, Focus, and Convergence**
- DynaColor D8000 system controller
- DynaColor Vision System
- Chroma 2xxx Video Pattern Generator
- Geometry/Focus/Convergence Software

**Color Balance**
- DynaColor D8000 system controller
- Chroma 7100/Minolta CA100 Color Analyzer
- Chroma 2xxx Video Pattern Generator
- Color Alignment Software

**Purity**
- DynaColor D8000 system controller
- DynaColor Purity Subsystem
- Chroma 2xxx Video Pattern Generator
- Purity Software

**Voltage Adjustment**
- DynaColor D8000 system controller
- Digital Volt Meter
- Chroma 2xxx Video Pattern Generator
- Voltage Adjustment Software

**Data Collection Host Station**
- DynaColor D8000 system controller
- D610 Key Card
- Data Collection Host Software

**SYSTEM HARDWARE**

**DynaColor D8000 System Controller**
- Processing Unit: 80486 Microprocessor
- 4 MB memory
- 420 MB hard disk drive or higher
- 1.44 MB 3.5" floppy drive
- System Graphics: VGA compatible Card
- Input Device: 101-key keyboard
- System I/O: 6 RS-232 ports
- 1 I²C port
- 1 Centronics parallel port
- 1 Security Port
- 16-bit I/O control port
- Security: System Security Card

**DynaColor Vision System**
- Industrial Camera: 640x480 pixel
- Image Processing: 16-bit Image Processor

**Compatible Video Pattern Generators**
- Chroma 2135/2165/2200/2250 Models

**Compatible Color Analyzers**
- Chroma 7100 Color Analyzer
- Minolta CA-100 Color Analyzer

**SPECIFICATIONS**

**Applicable Monitors**
- Display Size: No limitation: direct view or projection
- H. Freq.: 15 KHz to 200 KHz
- V. Freq.: 30 Hz to 200 Hz
- Mask Type: No limitation

**Auto Alignment Communication Method**
- RS-232C
- I²C
- DDC
- PIO
*Auto alignment requires digital monitor

**Vision System Resolution**
- 0.01 mm

**Video Pattern Generator Resolution/Accuracy**
- Refer to Chroma 2xxx Specifications

**Color Analyzer Resolution/Accuracy**
- Refer to Chroma 7100 Specifications or Minolta CA-100 Specifications

**AC Input**
- System Controller: 115V/230V 50/60 Hz, switchable
- Chroma 2xxx/7100: Refer to Chroma specifications
- Minolta CA-100: Refer to Minolta specifications

**Environmental**
- Operation: 0° - 35°
- Humidity: 10% - 90% RH
- Storage: -29° - 70°

**Dimension**
- System Controller: 483(W)x178(H)x560(D)
- Chroma 2xxx: Refer to Chroma specifications
- Chroma 7100: Refer to Chroma specifications
- Minolta CA-100: Refer to Minolta specifications
- Instrumentation Rack: 667(W)x866(H)x700(D)

**Weight**
- System Controller: 24 Kg
- Chroma 2xxx: Refer to Chroma specifications
- Chroma 7100: Refer to Chroma specifications
- Minolta CA-100: Refer to Minolta specifications

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