

# BARCOREALITY 909

## Ultra-High Resolution Digital Projector

The BARCOREALITY 909 is the latest and most innovative digital projector offered. Unique digital image adjustments provide superlative performance in multi-channel setups, on curved screens as well as on flat screens. The advanced digital design features make the BARCOREALITY 909 the reference in high resolution projection. The BARCOREALITY 909 is especially designed for demanding applications such as simulation, Virtual and Augmented Reality, 3D and stereoscopic projection, industrial design as well as military command & control centers (C3I).

### Unequaled Flexibility

- Mosaic geometry correction: Flat, Curved, Off axis
- Digital Image correction optimized for curved screens and multi-channel setups
- Different lenses are available, optimized for a wide range of screen sizes from 2 m (6.6 ft.) to 8.8 m (29 ft.) wide, including curved screens
- Digital AutoImage™ automatic alignment system aligns all geometry and convergence parameters
- Built-in Scheimpflug optical correction, with stepless adjustment, for optimal optical focus for off-axis projection
- 3D & Stereoscopic optimized phosphors available (upon request)

### Very High Resolution Images

The BARCOREALITY 909 renders high resolution large screen images with unprecedented visual fidelity.

- Compatibility with workstations up to 3,200 by 2,560 pixels.
- Horizontal autolock scan frequency range of 30-180 kHz
- 180 MHz RGB amplifier
- New, ultra-high definition, LC gun 9 inch electromagnetic focus CRTs with digitally controlled dynamic astigmatism guarantee razor sharp images
- Optional high quality Line Doubler (LiDo) or Line Quadrupler (LiMo) for improved Video image quality
- TSN™ 6-pole focus astigmatism correction

**New!**



**AutoImage™**

Now available with AutoImage™ digital Auto-Convergence and Auto-Geometry

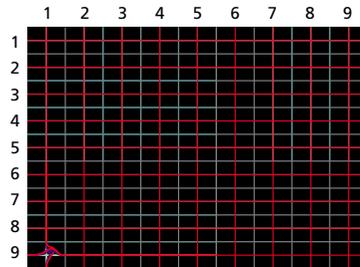


**BARCO**

# High Precision Digital Projection System

## Proprietary Digital Waveform Generation Geometry & Convergence Correction

This unique feature offers digital control over all geometry, convergence, focus and astigmatism adjustments. The (patented) morph-interpolation algorithm enhances the digital waveform by suppressing all artifacts and generating smooth transitions. Convergence is adjustable in 81 independent zones as well as 25



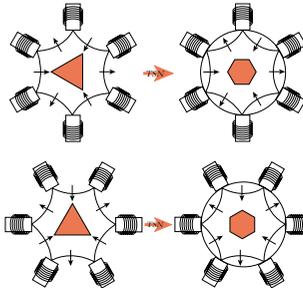
Convergence adjustment in 81 independent zones



Convergence adjustment in 25 independent zones

## Triangular Spot Nullifying™ (TSN)

Digitally controlled 6-poles offer advanced digital beam correction. BARCO's TSN beam spot uniformity enhancement guarantees superb focus quality across the entire projected image



TSN Digital 6 poles beam correction

## Digital Dynamic Astigmatism (DDA)

Digital enhancement of the overall focus quality of the projected image

## New High Resolution CRT's

The BARCOREALITY 909 is equipped with new, ultra-high definition, liquid cooled 9" CRTs with an advanced electromagnetic focus system and digitally controlled dynamic astigmatism, which guarantees razor sharp projected images, even at maximum contrast levels.

## New High Resolution Lenses

Super-high definition, fully color corrected, liquid coupled F1.15 lenses provide outstanding image contrast. Several types of lenses are available, optimized for a wide range of screen sizes for flat and curved screens.

## Flexible Installation Possibilities

BARCO offers a series of special options for other applications (multi-screen applications, non-standard projection angles,...).

- Mosaic geometry correction: Flat, Curved, Off-axis
- Field extensions
- Optional convergence on green
- SEMU Soft Edge Modulation Unit
- Digital Contrast Modulation
- And many other application specific optimizations. Please contact us for more details.

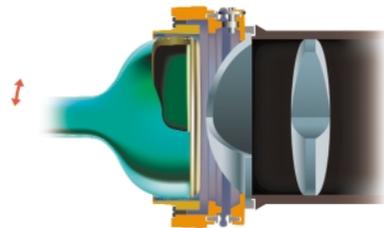


## Optional Built-in Auto-Image Digital Auto-convergence and Auto-Geometry

Advanced Digital Alignment System effortlessly aligns the geometry and convergence of the projected image with exceptional accuracy, which makes CRT technology transparent for the every-day user.

## Optical Scheimpflug Correction

The BARCOREALITY 909 features a precision Scheimpflug optical correction system with stepless adjustments for both horizontal and vertical axes. This built-in optical correction guarantees optimal optical focus from left to right and top to bottom for projection under non-standard angles.



BARCO's built-in Scheimpflug optical correction offers ultimate flexibility for projection under non-standard angles. Stepless adjustments are easily made by two convenient screws, accessible from the top.

## Secure Design

The BARCOREALITY 909 has been designed for extremely low RF/EMI emissions (FCC Rules & Regulations part 15 Class B for 120 V version) for demanding military and industrial applications where unwanted interference could compromise critical communications lines.

## Self-diagnostics

Auto-detection and history log of all essential functions. These functions are accessible through the on-screen menu or over a network.

### Light output

At 10 % peak white:1,250 lumens

Boost mode: 300 ANSI<sup>(1)</sup> lumens  
Normal mode: 250 ANSI<sup>(1)</sup> lumens  
Economy mode: 195 ANSI<sup>(1)</sup> lumens

### CRTs

New high brightness, high definition liquid cooled 9" electromagnetic CRTs with a newly designed LC gun.

### Lenses

New Super high definition, liquid coupled, and fully color corrected F1.15 lenses, optimized for particular screen sizes

Standard Lens	Screen width
HFQ 900	From 2 m / 7 ft. up to 8.8 m / 29 ft.
Optical resolution	12 lp / mm

A range of lenses optimized for curved screen setups

Optional lenses	Screen width
HRQ 904	up to 4 m / 13 ft.
HRQ 910	up to 10 m / 32 ft.

Optional Lenses	Screen radius
HRQ 904	2.5-5m / 8-16 ft.
HRQ 910	5-15m / 16-49 ft.

### Scan frequencies

Horizontal: 30-180 kHz autolock  
Vertical: 37-240 Hz autolock

### Minimal retrace time

Horizontal:  
< 1.1  $\mu$ s in range 90-180 kHz  
< 1.8  $\mu$ s in range 30-130 kHz  
(switching point adjustable between 90 and 130 kHz)  
Vertical: < 200  $\mu$ s

### Max. addressible display resolution

3,200 x 2,560 Pixels

### RGB bandwidth

180 MHz

### Horizontal linearity

<  $\pm$ 0.25 % distortion @ 1280 x 1024 with convergence on green option  
<  $\pm$ 1.5 % distortion throughout the full horizontal frequency range

### Inputs

- RGB or (Y, R-Y, B-Y) input on 5 BNC-connectors, with automatic sync detection and sync polarity, with sync on green or separate sync
- RGB analog input on D9-connector, with automatic sync detection and polarity (optional D9-BNC adapter available)
- Optional Video (PAL, SECAM, NTSC 3.58, NTSC 4.43 ), loop-through (2xBNC) with 75 Ohm termination switch ( requires LiDo or LiMo options)
- Optional S-Video input (4-pin mini-DIN), loop through with 75 Ohm termination switch ( requires LiDo or LiMo options)

### Remote control

A backlit user-friendly infrared remote control for control of:

- Source switching
  - User settings per source (brightness, contrast, color, hue, sharpness)
  - Geometry per source (password protectable)
  - Convergence per source (password prectable)
- An optional executive remote control unit is available for control of source switching and user settings per source

### Special features

- On-screen menus selectable between English, French, German and Spanish
- 48 frequency-related memory banks
- Modular construction: allows easy access to all controls and facilitates quick servicing (Typical MTTR of less than 10 minutes)

### AC power consumption

800 W max [230VAC +15%/-10%]

### Safety regulations

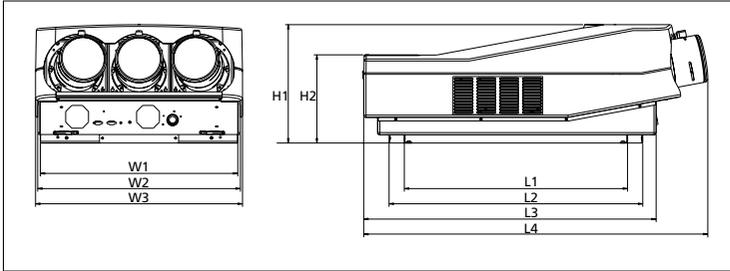
The BARCOREALITY 909 complies with UL1950 and EN60950.

### Electromagnetic interference

The BARCOREALITY 909 complies with FCC Rules & Regulations, part 15 Class B (120 V version) and CE EN55022 Class B (230 V version).

### Radiation regulations

The BARCOREALITY 909 complies with DHHS radiation emission standards 21 CFR Subchapter J.



**Order Information**

BARCOREALITY 909  
 230 V R9902340  
 120 V R9902349  
 Projector Control Software  
 Advanced Version R9828690  
 Line Doubler (LiDo) Kit R9828161  
 Line Multiplier (LiMo) kit  
 R9828630  
 Executive Remote Control  
 R9829960

For additional applications,  
 BARCO can provide unique  
 projector configurations, which  
 are custom tailored to specific  
 application requirements.

<b>Dimensions</b>	inch	mm
L1	29.0	737
L2	32.8	833
L3	37.8	961
L4	44.5	1,131
H1	15.0	390
H2	11.4	290
W1	25.6	649
W2	26.2	666
W3	26.8	680

<b>Shipping Dimensions</b>	inch	mm
L	53.1	1,350
H	23.6	600
W	35.4	950

<b>Weight</b>	lbs.	Kg
Net	187	85
Shipping	260	118

Please contact us for other  
 application specific optimizations:

**BARCO Simulation Products**

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BARCO Projection Systems  
 is an ISO 9001 registered  
 company.

The information and data given are typical for the  
 equipment described. However any individual item  
 is subject to change without any notice.