

### Maximum Surface Coverage Head & Face Scanner

Cyberware's all new Head & Face Color 3D Scanner is designed to offer maximum coverage scanning of the human head and face. The system is designed for applications that will benefit from increased scan coverage of the top of the head and under cut areas of the chin. Projects which require high quality data from the eye and mouth area will also benefit from the fine sample pitch of the new Head & Face Color 3D Scanner. The new Head & Face Color 3D Scanner is even easier to use and will take your work to the next level.

The scan head is an advanced, implementation of Cyberware's 3D digitizing technology. The system incorporates a rugged, self-contained optical range-finding system, whose dynamic range accommodates varying lighting conditions and surface properties.

In operation, the Head & Face Color 3D Scanner shines a safe, low-intensity laser on an object to create a lighted profile. A sensor captures this profile. The system can digitize thousands of profiles in a few seconds to capture the shape of the entire object. At the same time a second sensor acquires color texture information.

#### Application Areas

- Movies, Games, Special Effects
- Custom Helmet & Mask Design
- Anthropology and Human Factors
- Burn and Facial Reconstruction Medicine
- Portrait Sculpture

The scanning process captures an array of digitized points, with each point represented by X, Y, and Z coordinates for shape and 24-bit RGB values for color. The system transfers this data via a USB interface to your computer for immediate viewing.

This system is popular with special effects professionals. This system is also useful in medical applications, such as reconstructive and/or plastic



surgery, and burn mask design. Similarly, designers of products such as helmets, which must fit the human head closely, find the motion system ideal because it scans the top of the head. This system also serves well for personal portrait sculpture, in which a person's head is digitized, then reproduced on an automated milling machine or rapid prototyping system with remarkable fidelity.

Sample data sets acquired with the Head & Face Color 3D Scanner are available on our web site. Download the sample files and test them in your application.

<http://www.cyberware.com/products/scanners/pxSamples.html>

# Scanner Specifications

## Range and Color Scanning Benefits

- Dual heads at optimum angles to capture complex contours
- Improved coverage greatly reduces post production editing
- Merging tasks are fully automated

## Scan Motion System Benefits

- Scan subject seated at floor level
- Greater system 'stand back' offers more subject comfort
- Product design life cycle is over 1,000,000 scans

## Scan Head

Light Plane ..... Vertical

Environment ..... Subject illumination must be a minimum of 200lx for RGB data collection. Room illumination to 2klx for better quality.

## Field of View

	<i>Single Head</i>	<i>Dual Head</i>
Y.....	350mm (14")	440mm (17")
Z, diameter...	440mm (17")	360mm (14")

## Sampling Pitch

Theta ..... 0.25° -1.0°

Y, typical ..... 0.4mm (0.015")

Z, typical..... 0.05mm-0.015mm (0.002"-0.006")

## Sampling Speed

30,000 points per second, digitized to X, Y, Z and R, G, and B components.

## Motion System

### Motion Range

Cylindrical (Theta) 0° -360° Servo-driven

### Power Requirements

Input Voltage ..... Automatic, 88~264VAC, 47~63Hz

Power, Maximum . 500W

### Size

Width ..... 188.2cm (74.1")

Height ..... 205.3cm (80.8")

Weight ..... 127Kg (280 lbs)

### General

Interface ..... USB

Output Format..... Cyberware PLY

The Cyberware data format is in the public domain, so it is easy to create your own special-purpose translation routines.

Additional file format support is available. Contact Cyberware with your specific requirements.

## The HEAD & FACE 3D COLOR SCANNER BUNDLE includes:

Scanner and motion system; to include USB interface, power supply, cabling, CyScan™ scan control software, online user guides, installation and training on-site, one year return-to-factory warranty, support and software updates.



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