

1. THE MICROCOSM SYSTEM

The **MicroCosm** System is a self contained virtual world system. The complete system is composed of the all of the following components. Consult your packing list to see which you should receive.

Software components of the system:

Body Electric™ 4.0.0d2

RB2Swivel™ 2.0.4bl

Macintosh Operating System 7.0.1 with Tune Up will be shipped with
MicroCosm Systems Quadras shipping through Sept 1992 Macintosh
Operating System 7.1 will be shipped with MicroCosm Systems Quadras
shipping after release by Apple expected October 1992

Body Electric External Modules

Body Electric World and Libraries

Body Electric Tutorials

Hardware Components of the system:

- **EyePhone XVR with head-mount and Handle**
- **DataGlove (Right Medium)**
- **MicroCosm Tower Endosure**
- **Polhemus Fastrak with one source and two sensors**
- **Apple Macintosh Quadra 950 with the following installed:**
 - 2 Rendering Cards: MacdView System
 - MacADIOS 625 Jr.Data Acquisition board for Macintosh
 - AudioMedia II Card
 - 16Megabyte RAM
 - 170 Megabyte Hard disk
 - 13" Color Monitor
 - Extended Keyboard
- **MicroCosm Installation Manual**

- **Body Electric™ 4.0.0d2 Manual**
- **Swivel 3D PROFESSIONAL Manual**
- **World Builder's Manual**
- **MicroCosm Control Unit to Mac Cables J1 and J2**
- **DIN 8 to DIN 8 Serial Cable**
- **2 HD15 RGB Video Cables**
- **2 1/4 inch to RCA Jack Splitter Audio Cables**

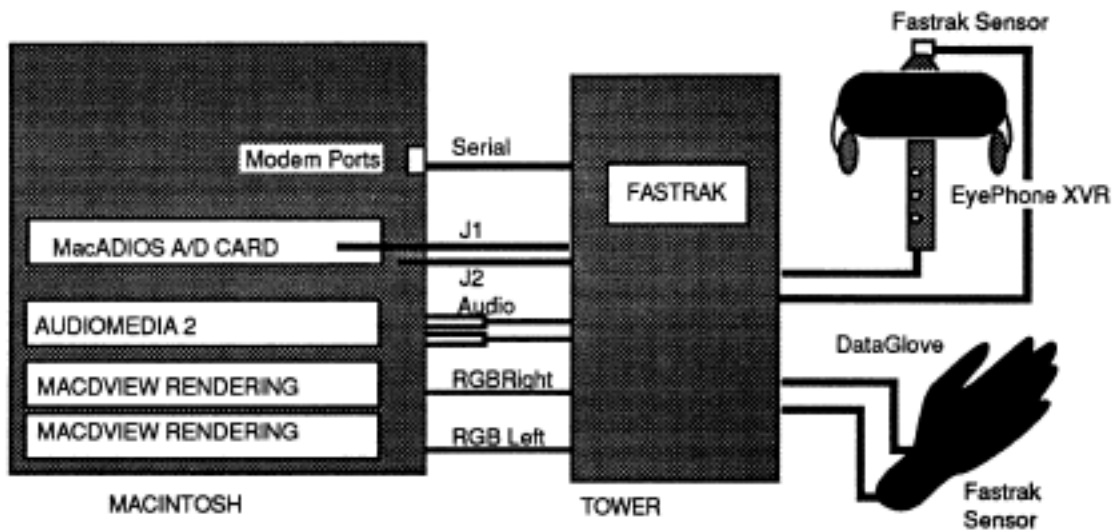


figure 1: MicroCosm System Overview

Description of System Elements:

EyePhone XVR

2 Color LCD displays mounted as a stereo pair
Resolution: 442 x 238 primary colored pixels per display
Wide angle Fresnel Optics
Convertible from Hand-held to head-mounted
3 momentary switches on the handle allow virtual navigation or other user input.

DataGlove II

The DataGlove has 10 proprietary fiber optical sensors located on the fingers of a lycra glove, measuring the bends of the first and second knuckles of each finger. A Fastrak sensor for the hand is mounted on the DataGlove.

12-bit resolution

Analog data translated to digital by the A/D card in the Quadra

MicroCosm Control Unit Tower

The Control Unit box routes data to the host computer via serial cable. It contains the circuitry for tracking, NTSC video encoding and amplification, audio amplification and fuses which protect the system from electrical overload.

- **Polhemus Fastrak Tracking system** located in the MicroCosm Tower

One Transmitter, two sensors connect to the front of the Tower

Six degrees of freedom in a 6 foot diameter hemisphere

Coordinate resolution - 0.03 inch

Angular Resolution .1 degree RMS

Data transfer 100 samples/sec

Tracker Source Stand

The Tracker Source Stand is provided to mount the magnetic source from the Polhemus Fastrak.

Macintosh Quadra 950 Design and Control Workstation

hard drive - Apple 170 Megabyte

16 Megabyte of DRAM installed

AppleColor High Resolution RGB Monitor

Extended Keyboard

- **Rendering:** Two I860 graphics rendering boards, Division Ltd. MacdView, located on the Mac NuBUS
 - 32,000 polygons per second (10x10 pixel polygons)
 - 8,000,000 Gouraud Shaded Pixels per second
- **Sound:** AudioMedia II Audio Card located on the Mac NuBUS
 - 1 to 2 channels spatialized sound using Crystal River Engineering's sound filters
 - 8 channels of Stereo Sound
- **Analog/Digital Data Acquisition:** MacADIOS Jr. A/D NuBus Card located on the Mac NuBUS