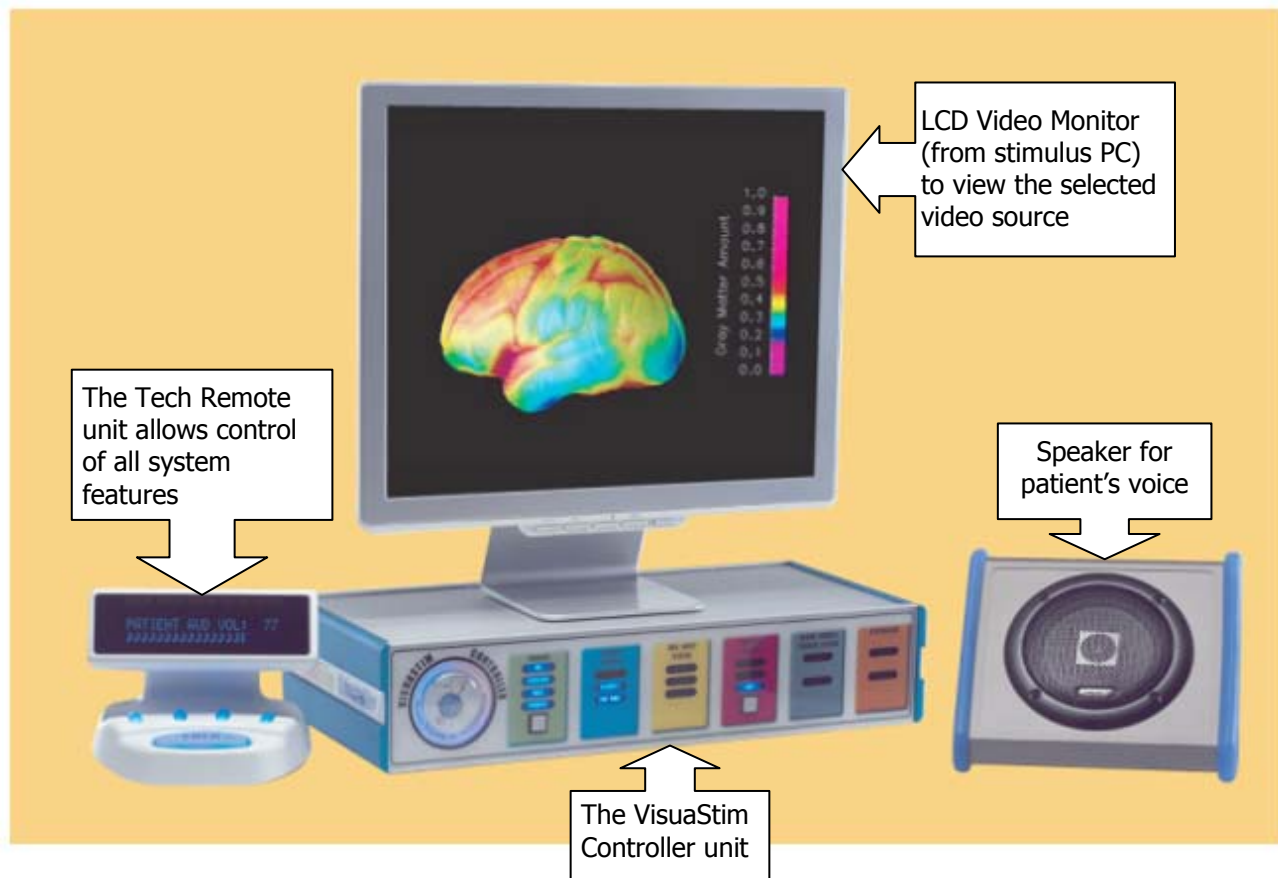


6. Operation

Below is a description of the VisuaStim control room components. The Controller converts the selected audio and video source signals into optical signals that the MR Laser Link cables route to the Transducer unit inside the magnet room. The Transducer unit recreates the signals and routes the audio and video signals to the audio headset and video goggles.



6.1. VisuaStim System Features

- Fiber optic link cable for audio, video, and data/voice communication between VisuaStim Controller in the control room and Transducer in the magnet room
- Dual DVI and VGA video inputs to connect two PC video sources (one dual-head graphics card or two separate PC's)
- Speaker system with subwoofer to hear the selected PC audio source
- Technologist Remote Control with a highly visible display to select all system features
- Built-in patient intercom consisting of built-in microphone in Technologist Remote Control, and speaker to hear patient's voice
- Patient stereo headset with communication microphone and patient-controlled alert button
- Digital video goggles for patient to view video images. Image presented to patient is the equivalent to viewing a 62-inch screen at a distance of 5 feet, giving the impression of being in a private movie theater.
- Ability to control individual video routing of the two video inputs to each eye of the video goggles. When used with stereoscopic video sources, video goggle can show 3D images.
- Simple patient setup to prevent downtime.

7.4. VisuaStim Transducer

7.4.1. Physical Characteristics

Dimensions: 11.5" x 13.0" x 1.9" [293mm x 330mm x 48mm]
 Weight: 7.0 lbs. [3.2kg]

7.4.2. Electrical Characteristics

Power Input: Proprietary 5-pin DC power connector
 Pin-out:
 Pin 1 = +17.5 Volts nominal
 Pin 2 = -17.5 Volts nominal
 Pin 3 = DC ground
 Pin 4 = +8.0 Volts nominal
 Pin 5 = +6.5 Volts nominal

Headset connection: Proprietary 4X LaneLink or DB-9 connector (not user-serviceable)
 Goggle connection: Proprietary 12X LaneLink connector (not user-serviceable)

7.5. Video Goggle

7.5.1. Physical Characteristics

Dimensions: 4.7" x 2.4" x 1.3" [118mm x 60mm x 32mm]

7.5.2. Display Characteristics

Resolution: 800x600 (SVGA)
 Refresh Rate: 60Hz, 75Hz, or 85Hz selectable
 Field of View: 30° Horizontal x 24° Vertical
 White Luminance: 70cd/m² max. @ 60Hz
 White Chromacity: x = 0.30±0.03, y = 0.34±0.03
 Gray Levels: Up to 256 per primary color
 Contrast Ratio: 100:1 intrinsic (measured per VESA FPDM Standard)
 Uniformity: >85% (as per VESA FPDM Standard)
 Operating Temperature: -40° to +85°C
 Storage Temperature: -51° to +90°C

7.6. Audio Headset

7.6.1. Acoustical Characteristics

SPL: 104dB (nominal)
 Frequency Response: 100Hz – 15kHz
 Outside Noise Attenuation: 30dB passive (nominal)