



Phoenix Technologies Incorporated

High Performance Real-Time

3D Motion Capture Systems For Professionals

www.ptiphoenix.com

ACCESSORIES

Standard LED Markers

Special wide-angle high-power near-infrared LEDs are used as markers by a Visualeyze™ system. These are packaged in several ways for different purposes. The rubberized packages with Velcro bases are good for use with the VZSuit™ for multimedia motion capture applications. The flat-based packages are good for various scientific applications which often require them to be directly attached to the skin. Two major types of the LEDs are used. The 6-chip LEDs are good for general purpose large motion capture applications such as gait, walk, sports analysis and animation. The single-chip LEDs are good for closer fine motion capture applications such as fingers and/or facial expression captures and applications which demand the highest accuracy.



Target Control Module (TCM)

A target control module is required to control the firing of a standard LED marker. Three models of TCMs, namely TCM8 (also called 'MiniTCM'), TCM16 and TCM32, are now available for application conveniences. They can control up to 8, 16 and 32 markers respectively. If more markers are required, more TCMs can be applied in parallel. A TCM is programmed and controlled by the master tracker of the system. This is done via either a tether cable ('wired mode') or remotely by a radio transmitter-receiver pair ('wireless mode') depending on the user's choice.



MiniTCM and Multi-Rate Sampling

This small TCM can control up to eight markers (also called a 'TCM8'). It is good for applications such as tracking a small animal or prop, or operating a calibration wand for manually calibrating a multi-tracker system (see also VZAutoCal™ for fully automatic calibration). In addition, it possesses the unique Multi-Rate Sampling capability which allows a marker to be sampled at up to eight integer-multiple number of times of a marker controlled by either a TCM32 or TCM16. This means you can capture motions of very different speeds (such as in a golf swing) with nearly equal spatial details to facilitate motion analysis. No system or human resources need to be wasted collecting and processing massive useless data for the slow motions.



Wireless SIMarker™ & SI3Marker™

SIMarker™ is a completely wireless marker. SI3Marker™ is a modified version of the SIMarker™ with very short wires for controlling up to three LED markers with essentially the same set of electronics. These intelligent radio-controlled LED markers are each powered by a tiny rechargeable battery, and each 'marker' comes with a permanent distinct ID number for identification. They do not need to be controlled by a TCM. Each is small, lightweight and can be simply attached on a motion capture subject, yet the ID for each marker can be flawlessly tracked like a standard LED marker, allowing them to claim the best features of all optical motion capture system markers.





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Semi-Wireless SWMarker™

This latest small intelligent LED marker comes with a built-in ID for flawless marker identification too (similar to a SIMarker™). It is powered by a terminated wire-pair. The marker can be re-positioned along the wire-pair to facilitate attachment on a capture subject. One wire-pair can power up to ten SWMarkers™, and three wire-pairs can be powered by a single battery pack. This makes the SWMarker™ system almost wireless yet up to thirty can be powered by a single battery pack.



VZSuit™ For Capture Convenience

This two-piece stretchable motion capture suit is completely Velcro-compatible (except for the armpit areas). It allows for free unrestricted actor motions. The actor/ performer simply slips into the suit and is ready to begin motion capture. The top piece is zippered on the front for easy wearing. The suit may come complete with TCM(s) and standard LED markers (or SWMarkers™) strategically placed for optimal full-body motion capture if ordered. For applications which require unique marker placements, custom-designed suit may be ordered. The VZSuit™ is designed for wearing convenience, quick and easy arrangement of the LED markers for optimal capture performance and easy suit cleaning. Any wiring required can be covered with removable Velcro strips.



VZProbe™ Contact Digitizer

This is a stick-like device with 3 LEDs placed in a triangular pattern. By properly calibrating the device first, the Visualeyaz™ motion trackers can capture the device's tip position. VZProbe™ can be used to establish a coordinate reference frame or to digitize the shape and sizes of large objects by contact. By outfitting it with an appropriate tip, a VZProbe™ can even be used to digitize surfaces not in the line-of-sight of the trackers; e.g., the underside of a car or the inside of a cup.



Finger Motion Capture Gloves

Intricate fingers and hand motions can be captured with this advanced glove pair. Made with stretchable Velcro-compatible fabric on the back side and mesh material on the palm side for sensitive touch, this glove set allows tiny Velcro based markers to be easily attached to nearly anywhere required to minimize occlusion and allow the highly complex finger motions to be captured.



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