



# Preston FI+Z Controls

Using them on the Quasar

\*Note: Prototype rigs shown.



## Introduction

The FI+Z system provides complete stereo lens and rig control for the Element Technica Quasar rigs both in beamsplitter and side-by-side configurations. One FI+Z Hand Unit 3 (HU3) and MDR2 controls the inter-ocular and convergence axes. The axes can be either operated independently or interlocked so that the cameras automatically converge at a distance set by the HU3 focus knob. The second HU3 controls the stereo pair of lenses. New "Lens Tweak" software\* for the HU3 corrects for scale and offset discrepancies between the lenses' focus, iris and zoom rings so that they track accurately across their entire range of adjustment.

The 3D Software package for the Hand Unit 3 (HU3) enables it to control the convergence angle and inter-ocular distance of the Quasar. The software supports rigs that are configured either with a single leadscrew for inter-ocular separation and a rotator for convergence angle or with pair of leadscrews as in the Quasar.

Rig calibration is guided by the HU3 display. Full "factory" calibration need only be done once to store the rig parameters in permanent memory. After a lens or camera body change, only the convergence angle offset needs to be checked.

The HU3 can store calibrations for up to five different rigs. Each rig is numbered and identified in the HU3 Display.

\*Lens Tweak software will be available late February 2010.

Stereo lens control is provided by a second HU3 and a pair of MDR2 motor driver units. One of the MDR2 motor driver units acts as the "master". The master unit exchanges data with the HU3 as it would in a single camera installation and follows the commands it receives from the HU3. The second MDR2 is loaded with "slave" software. The slave MDR2 drives its three motors in exact synchronism as the master MDR2, so all 6 motors move identically.

The basic FIZ components required for Lens Control (focus, iris, and zoom) are:

- (1) HU3 hand unit
  - (1) Microforce control (digital or analog)
  - (2) MDR2 motor drivers (one MDR2 loaded with slave software)
  - (6) DM1x or DM2 digital motors
- In addition: 6x motor cables, brackets, camera control cables.

For rig control:

- (1) HU3 hand unit
  - (1) MDR2 motor driver
  - (2) DM1x digital motors
- In addition: 2 x motor cables, motor brackets

