accuracy of one part in a thousand over a wide range of speeds. An appropriate choice of gearing coupled the standard motor to anything from a PARcan to a television 5kw luminaire. The servo, basically digital with analogue potentiometer position measurement for economy, received coded digital position information from an IBM PC and stored last, current, and next cue data in on-board

Essentially out of the moving light business, Paton's inventor instinct recently took him back to the drawing board.

memory. Go signals were transmitted separately. Data transmission was at 9600 baud via screened twisted pair parallel distribution using a form of RS 485 from the PC. The system was flexible, robust and its specially designed software was user friendly. "The MRL covered the whole industry," says Paton, "and moved everything from PAR 56 beam lights for discos, PAR 64 rock 'n' roll lights, 1kw and 2kw theatre lights and 5kw for television.

"During the 1987 ABTT show," Paton reports, "Marvin Altman of Strand Lighting had been to see me and expressed some interest in the system." Strand had already bought other moving lights, but then-Strand employees David Brooks and Andy Collier felt that Paton's system was right for the market. For Paton, who had developed the system and demonstrated it on various lanterns from Strand and Colortran at ABTT, the question still remained how to make money from the idea.

In late 1987, Strand bought the marketing and manufacturing rights for the MRL system from Charlie Paton's Light Works. Paton continued to serve as consultant, fine-tuning the system and providing extra features such as iris, focus, and colour changers. Shortly therafter, Strand took on full responsibility for the further development of the rechristened Precision Automated Luminaire System, or PALS for short.

The first major installation for PALS was arranged by Strand's German office for a Hannover television station, completed in March 1988, which Paton terms

"a very successful marriage of Italian lights (Ianiro's Quartzcolor) and English-built electronics and mechanics." Strand also enhanced their Galaxy control system to include control of PALS. An up-to-date version of PALS is in use in Andrew Lloyd Webber's *Aspects of Love*, incorporating 65 colour changers and 26 moving lights in a design by Andrew Bridge.

Although Paton has agreed not to compete with Strand in developing other moving light systems, Light Works owns one PALS rig with pinspots, profiles, PC's, punchlights and Pollox 5kw, which is available for hire through Cyberdescence Lighting. Essentially out of the moving light business, Paton's inventor instinct took him back to the drawing board where he developed a series of new products unveiled by Light Works at the ABTT show in May 1989.
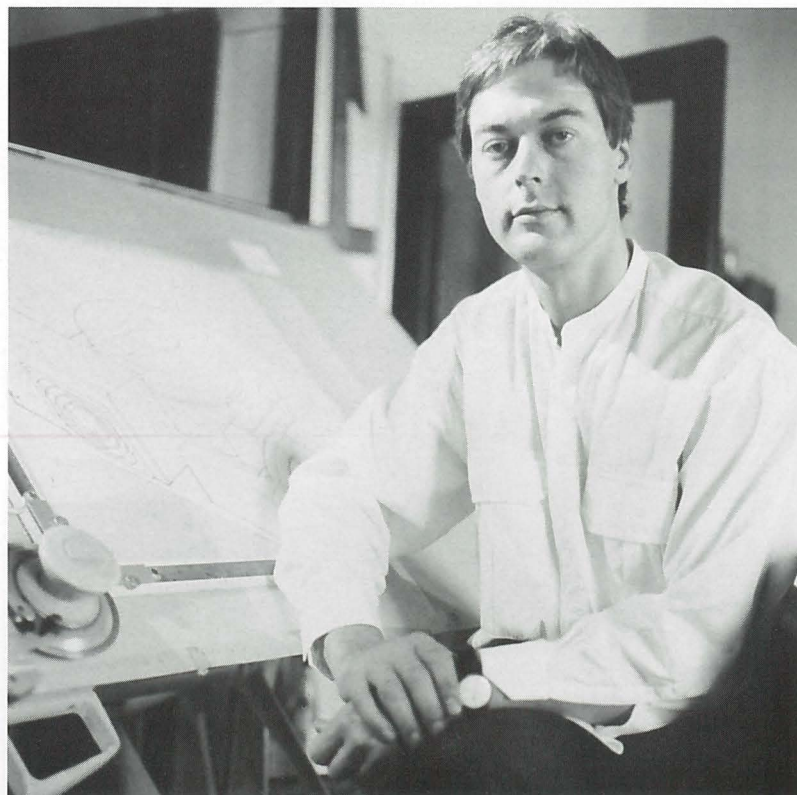
These reflect Paton's interest in new light sources, such as the Philips MSR lamp, which he has built into a Kodak carousel slide projector in order to double the light intensity and offer true daylight colours. Originally invented for film and television lighting, Paton had the idea to put it into a slide projector to match the daylight colours of transparency film. "People in the audiovisual business are always looking for sharper brighter light,"

says Paton, whose Daylight Carousel uses a 400w MSR lamp. This lamp has a life ten times that of a standard 250w tungsten lamp.

Also introduced at ABTT 89 was Paton's 6 x 6 Format Effects Projector, which offers a choice of tungsten halogen or MSR light sources from 650-1200w and lenses from 90-400mm focal length to control brilliance and colour reproduction.

The third new development from Light Works is a Data Projector which allows high resolution computer-generated images to be projected on a screen. Using the MSR lamp and high density liquid crystal displays make it possible to project VGA standard (640 x 480 pixels) images straight from a personal computer, with a clear, sharp image even in conditions with high ambient light.

There seems to be no end to Charlie Paton's good ideas, and his ability to realize the equipment needed to turn fantasy into fact. Yet, Paton still works on a drawing board at home, and builds his prototypes in a workshop around the corner, where he works with technician Merlin Milner, and software expert Kevin Neville, on his new inventions. Where Paton is concerned, the technology is ready, only the wider applications remain to be recognized.

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KATIE VANDYCK