

# PG&E Energy Center



▲ The lighting classroom is divided into four independently controlled rooms - this is the main classroom area.



◀ (Inset left and above right) The colour booths, although independently controlled, function together as a demonstration. Seeing different sources side-by-side provides a visual comparison of chromaticity and colour rendering. This comparison of the Chroma 75 lamp versus a 3000°K tri-phosphor lamp demonstrates the range of chromaticities available in fluorescent lamp technology and the differences in colour rendering/source efficacy associated with halophosphor versus tri-phosphor systems.

The lighting classroom is a 1000 square foot area at the PG&E Energy Center located in San Francisco, California. It is dedicated to lighting education and displaying state-of-the-art energy-efficient lighting technologies. The classroom accommodates small to medium-sized groups for project-specific discussions or for general education in lighting design. The space is also available to the architectural/engineering community to demonstrate design concepts to their clients. Jeannine Fisher and Brian Liebel, give *LIGHTS!* a tour of the system.

#### THE DESIGN

The design challenge for the lighting classroom was to take an existing classroom space and convert it from a lighting system demonstration space to a true lighting education center where all of the demonstrations firmly communicate lighting principles in a visual manner.

To accomplish this goal, we approached the design in the following way:

- Identify essential lighting principles which have a significant impact on either lighting quality or energy usage.
- Design individual systems which illustrate specific principles.
- Architecturally integrate the individual systems into an existing ceiling grid.
- Identify control channels that demonstrate systems from an instructional point of view.
- Determine a hierarchy of usage and program presets for ease of use for scripted presentations and provide access to demonstrations for

customized educational programs and higher level presentations.

The finished classroom combines existing equipment and features with many new tools and demonstrations, including:

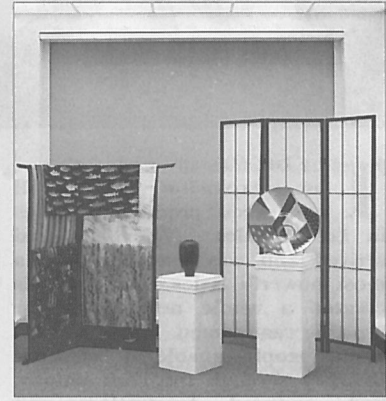
- Fundamental walls with lighted exhibits.
- Four fluorescent general lighting systems compared on an equal Watts per sq.ft. basis. Selected systems incorporate fluorescent dimming.
- Four incandescent downlight alternatives for retrofit or new construction.
- An instant-on metal halide fibre optic downlighting system.
- A focal lighting vignette space with a flexible prop arrangement to highlight the importance of understanding the interaction between light and materials.
- Two adjacent colour booth rooms to demonstrate the colour properties of sources.

#### THE LIGHTING CONTROL SYSTEM

A sophisticated lighting control system pulls all of these demonstrations together to make the lighting classroom a functional space and provide the "theater" necessary for effective visual communication of lighting principles. The existing Strand Lighting Premiere System was increased in capacity to incorporate all of the new features of the space and was enhanced by some unique features of its own.

The completed lighting control system consists of 44 dimmers, 40 non-dims, and 44 relays, controlled by a single processor for a total of 128 control points, plus 8 additional control points for DMX shutters. Fluorescent dimming is accomplished through interface equipment which allows the

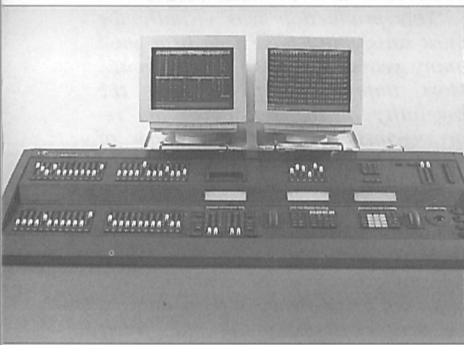
light level to be modulated down to 1%-5% of full light output. AV interface equipment integrates multi-media capability with the lighting control system to reinforce the instructional nature of the space.



#### PROGRAMMING

From a programming point of view, we identified the most frequently used demonstrations and strategically located manual stations to activate presets and provide dimming functions when applicable. We also provided a single station which can activate any channel or combination of channels for customized presentations or higher level demonstrations. Re-programming of presets or programming of special features, such as sequencing, is generally accomplished through the Premiere Windows-based software program. The software also provides information about light intensity values used for calculating actual Watts per sq. ft. for particular lighting scenes where dimming is used and programming is

# Product News Product News



#### BIG BOOST FOR CONSOLE RANGE

Strand Lighting has announced that its two new mid-range, high capability consoles, the Strand 430 and 530, are shipping in volume. Based on PC technology, both these consoles offer the advantages of a choice of software to run on common hardware platforms. The software comprises a choice of two operating systems, Lightpalette® and GeniusPlus, application software to match the required capacity of the console, and a range of optional applications which add functionality to the lighting system. Inherent in the operating system is the advanced control of moving light attributes, and Strand has created an architecture which does not deplete the control channel count of the console if scanners or scrollers are patched to DMX channels.

The Strand 430 has an Intel 486 based PC motherboard which provides control of up to 350 intensity channels plus 250 attributes. Positioned at the low/middle range, the Strand 430 replaces the mini Lightpalette 90 with a multi-functional system that may be extended as future developments in software come on line. The Strand 530 utilizes a common hardware console, but the brains are replaced by an Intel Pentium motherboard. This expands the console's ceiling to a maximum of 600 intensity channels and 400 attributes. Both consoles support dual VGA displays and provide 24 submasters and 6 'supermasters' - subs with special mastering functions, and local LCD displays. Local LCD panels are provided for function displays and to dynamically label three sets of soft keys which are provided. A tracker ball and four pageable rotary controls distinguish the consoles as multi-functional, as they provide access to control moving light attributes directly,

when the optional Tracker software is installed.

In addition to Tracker software, users of the Strand 430/530 range may choose from a suite of software from the StrandSoft™ range.

Communiqué Plus™ provides additional macro facilities, DMX input options, MIDI and MSC compatibility, and ASCII remote control features.

Networker™ enables the consoles to work across Strand's ShowNet™ Ethernet network. Using the SN100 Ethernet node, the lighting system can transmit video displays, handheld remote controls and multiple DMX lines to any remote location in the building. The SN100 node includes interfaces for DMX in and out, MIDI, remote analog signal inputs, RS232, Ethernet 10BaseT and 10Base2 conventions, a keyboard, 3.5" DOS compatible disk drive and 2 VGA monitors.

An Off-line Editor program, in either a full or demo version, is also available to emulate the full operation of the new consoles on a DOS-compatible PC.

All application software programs operate with one of the two operating system programs in the StrandSoft™ range. Lightpalette® provides the Strand Lightpalette operators with a recognisable 'command line' user interface. GeniusPlus provides an alternative direct-action operating format.



Both programs are available in channel size increments, and both provide a level of operator customisation not previously seen.

Strand Lighting has also announced one additional console to the range. The Strand 550 fitted with 48 subs, and like the Strand 530, its Pentium-boosted capacity rises to 600 channels and 400 attributes. ■

\* Available during 1996. Intel & Pentium are registered trademarks of Intel Corporation.

#### MORE STROKES OF GENIUS

Two new software products have been released - 67121 Genius Off Line Editor, which is now available in 4 language versions; English, French, German and Italian and 67131 which is a demonstration version in English only.

To run the Genius Off Line Editor or demonstration software you will need:

- An IBM PC with either an Intel386, Intel486 or Intel Pentium processor.
- A VGA or SVGA monitor.
- At least 2Mb of memory (RAM), with at least 450kb of conventional memory and 1Mb of extended memory.
- A hard disk with approximately 3Mb of free disk space.
- DOS 3.30 or higher.

Genius Software V1.2a: All registered users should by now have received a free software update of Genius, including Kaleidoscope and Communiqué.

The package includes: Read-Me-First, New Operating Software Disk and Four Application notes. Genius V1.2a adds over 30 new features to Genius, Kaleidoscope and Communiqué. It works with existing passwords so does not need to be re-registered.

All Genius Operating Software supplied from Strand's Kirkcaldy Manufacturing Centre includes support



for English, French, German, Spanish, Italian and Swedish languages. Genius, Communiqué and Kaleidoscope software packs will also contain manuals in English, French, Spanish and German languages. Current item numbers for GSX software products ending in numbers other than '1' should not be used. A complete 4 language manual set is available (85011).

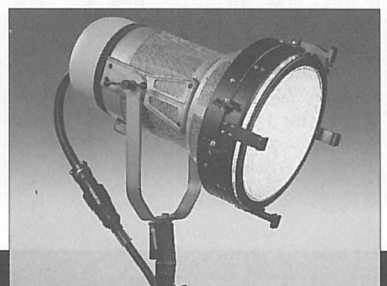
Part numbers for the new multi-language software are:

- 67011 Genius 25
- 67021 Genius 50
- 67031 Genius 75
- 67041 Genius 100
- 67051 Genius 125
- 67001 25 channel upgrade
- 67061 Kaleidoscope
- 67071 Communiqué
- 67131 Demonstration (English only)
- 67121 Off-Line Editor
- 85011 Additional Genius Manual set

#### LETTING IN THE DAYLIGHT

Following the introduction last year of the new SuperNova dual wattage HMI Fresnels, Strand Lighting announces the SuperQuasar 6000W HMI Parlight. This new fixture exploits the very latest in HMI technology - the 6000W single ended HMI lamp - to give equivalent performance to an 18kW fresnel. SuperQuasar 60 has been developed to meet the needs of the most prolific Motion Picture production centre in the world - Hollywood.

Designed by Strand's California partner - Cinemills - this 6000W parlight, at just 35lbs (16kgs), is the lightest and easiest to handle unit currently in production. ■



#### AN ADDITION TO THE FAMILY

Strand Lighting launched the new 650W fresnel at the NAB show in Las Vegas, during April. The Bambino 650 is an addition to Strand's range of Bambino compact fresnels which range from the 300W Mizar up to the 10kW Vega. Bambino 650, designed at the company's Rome factory, utilises the largest lens in its class producing unmatched performance from a rugged but lightweight pressure die cast aluminum housing. Bambino 650's compact size makes it ideally suited to location work while its superb performance will be invaluable in studios equipped with the latest CCD cameras. As a key or back light Bambino 650 will be the ideal fixture to optimise Strand's Videolux Fluorescent softlights. ■

