HIGH INTENSITY LIGHTS

During the Apollo program, NASA found a need to develop special high intensity lights to simulate the effect of sunlight on the spacecraft and its occupants. Johnson Space Center developed xenon arc lamps for use as solar simulators in the Center's environmental test chamber; the light spectrum of the xenon beam is as close to sunlight as any substitute yet devised. This technology served as the basis for a family of commercial lights developed by Streamlight, Inc., Norristown, Pennsylvania.

Shown above is the company's Streamlite™ SL-15 flashlight and its wall-mounted plug-in recharger. The SL-15 is one of four types of rechargeable flashlights featuring computer-focused quartz-halogen lamps with light intensities ranging from 15,000 to 35,000 candlepower. Streamlight also produces several other types of flashlights and emergency handlights for home and professional use.

Top of the line (left) is the Streamlite 1 Million, which uses a xenon arc lamp to project one million candlepower, the brightest portable light made. Used primarily by law enforcement agencies and the military services, Streamlite 1 Million throws a light some 50 times brighter than the high beam headlights of an automobile. It can project a narrow beam of pure white light more than a mile; as a signal, its light can be seen for more than 30 miles. Its high intensity beam is especially useful in penetrating fog and smoke, because it returns less back-scatter light. The

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Streamlite 1 Million operates either on a 12-volt rechargeable portable power pack or on any 12-volt auto or boat battery.

There is also an infrared model of the 1 Million, called Streamlite Plus, which produces totally invisible light for certain military or law enforcement covert surveillance applications; the light output becomes visible to the user by means of infrared decoders. At left the Streamlite Plus—coupled to a camera with a telephoto lens—is projecting long range infrared light for police photography; the result—a simulated drug sale—is shown below.