

bility of heavy smoke within the cabin during an other-than-normal landing, it is felt that consideration should also be given to a low-level mounted dual or multidirectional type of light, one that is both self-actuating upon failure of the main power supply and one that can be manually controlled from either the cockpit or flight attendant area. The light might also be operated from a self-sustaining rechargeable power unit or battery of a type similar to the present-day rechargeable-type flashlight. This low-level location of light could come from under the seats and could be either of the type mentioned above or it might be the new much higher light level radioactive type of light that will be visible at all times. The location of the light under the seat would definitely aid passengers who would be either bending over or crawling along the aisles toward an exit area through dense smoke. These lights, if they are to serve any useful purpose, must survive impact and operate during emergency.

These lights should be armed to an "on" position prior to each take-off and landing regardless of time of day. They should be so designed that they will operate in spite of cabin breakup. The light available from this source might or might not be used as part of the general overall cabin lighting. However, because of the necessity of light during an emergency, it should be available.

Because of the importance of being able to locate exits in an emergency, it is suggested that action be taken to provide additional light in the exit areas so that the exit will be visible during an emergency in which smoke is present in the cabin. This would mean that there be sufficient light so that the directions for operation of the doors and slides will be readable and that the handles on the doors and the activation levers on the slides would be visible. In addition to the regular light, it is suggested that a chemical light stripping be installed as an outline around each exit.

Additionally, as a further means of identification of the exit area, the strobe or flashing light should be used in conjunction with a constant light located at the exit and focused outside the plane when the door is open. It is believed that the passenger, once within visual range of the light, would be drawn in that direction. The function of these lights is not only to guide the passenger once outside, away from the plane, but to serve as a beacon for would-be rescuers.

Because of its intended dual function, the light placement should be such that it would not be submerged in a water landing and such that it would be above the general mud and dirt spatter level during a ground emergency. Because of the second aspect of serving as a guide to rescue teams, the light should have a life expectancy of no less than 36 hours in order to cover two nighttime periods. These lights could be armed on a block-to-block basis so that if any landing or takeoff were other than normal, the light would be actuated simply by the cabin attendant opening the door or exit. If the plane is carrying an automatic radio direction finder, then perhaps a 36-hour light life is not necessary.

Further, it is possible, upon requirement, that the strobe light can be equipped with a sonar sounding device that will operate if the plane is completely submerged during a water emergency.

The ground area at the bottom of the slide should be well lighted to prevent passengers from stumbling on rough terrain and to enable