

Typical Uses of the FIND-R-SCOPE®

- ✓ Detection of substances not visible to the naked eye or differentiation of materials which are visually similar but of differing composition.
 - Bring out traces of coal, dust and other dark powdered materials on dark cloth.
 - Powder marks detected when left by a bullet passing through dark cloth thus determining which side the bullet entered the cloth.
 - Detection of finger-prints on charred paper and invisible stains on clothing, including blood stains.
- ✓ Document examination problems where infrared viewers can be used to speed up investigation and/or detection in the following areas.
 - Restoration of certain ink markings removed by abrasion or chemical bleaching.
 - Penetration of ink blots, hash marks, etc.
 - Deciphering of erased pencil markings.
 - Deciphering of erased typewriting.
 - Stroke sequence determination.
 - Detection of alteration or overwriting.
 - Differentiation of papers and inks.
 - Restoration of faded writing.
 - Restoration of charred or waterlogged papers.
 - Detection of signatures forged by tracery.
- ✓ Infrared viewing in biology allows for using the viewer in botany, cytology, embryology, histology, paleontology, plant pathology, entomology, and the observation of gross anatomical specimens.
 - Organic materials transparent in near infrared are chitin; egg albumin; gelatin; cellulose, including catarrhal cellulose and cellophane; resins, including shellac and synthetic resins; the plant pigments carotene and zamthophyll; and coral skeletons.
- ✓ Nocturnal observation of animals and wild life.
 - Ideal for direct observation and also for determining the best moment for photographic recording. Most, if not all, animals are unable to perceive infrared.
- ✓ Cytology, Histology, and Embryology.
 - Infrared Viewers are useful for biological and medical studies such as observation of physical and chemical analysis of tissues, cells and cellular constituents.
- ✓ Botany studies of plants with certain diseases are; made possible by using infrared viewers. Infrared is useful in the detection and differentiation of chemical changes occurring in the living plant as well for detecting small insects which may not be readily observed because of protective coloration.

- ✓ Viewer use with lasers is most common for incoherent as well as coherent emission up to 1.5 microns. The study of laser patterns and alignment can be accomplished.
- ✓ It is possible to study many mineral crystals that are opaque in visible light but exhibit transparency in the near infrared (0.8 to 1.5 microns) and measure their optical properties.
- ✓ Ophthalmology uses for infrared viewers are in many varieties including pupillary studies and examination made in 'total darkness. Infrared has also been shown to penetrate corneal opacities aiding in the determination of the advisability of corneal graft.
- ✓ Photographic Industries.
 - For the observation of film during coating and slitting; for the handling of highly sensitive color films; for splicing, cutting and other-wise working with undeveloped film. Also for supervision of employees in darkroom areas.
- ✓ Electronic Industries.
 - For the study of stress patterns in silicon crystals; the observation of light diodes; the study of gaseous masers, the observation of coherent infrared emission from lasers such as gallium arsenide and neodymium and praseodymium as host crystals.
- ✓ Textile Industries.
 - To penetrate dark dyes which may obscure irregularities or minor damage.
- ✓ To penetrate the rust film on tin plated surfaces to reveal centers of corrosion.
- ✓ To detect retouching of art work or painting under a painting.
- ✓ To study paper currency for possibilities of counterfeiting.
- ✓ For detection of various types of mold on grain.
- ✓ For use in over-flights to detect mineral deposits underground.
- ✓ Psychological studies of patients in totally dark environments.

Communications - (fiber optics) - to examine the' ends of a fiber optic bundle to check for non transmission or breakage (the fiber that is not transmitting is dark)