

United States Statutory Invention Registration [19]

[11] **Reg. Number:** **H1599**

Task et al.

[45] **Published:** **Oct. 1, 1996**

- [54] **SYNTHETIC-COLOR NIGHT VISION**
- [75] **Inventors:** **Harry L. Task, Dayton; Alan R. Pinkus, Fairborn, both of Ohio**
- [73] **Assignee:** **The United States of America as represented by the Secretary of the Air Force, Washington, D.C.**
- [21] **Appl. No.:** **498,449**
- [22] **Filed:** **Jul. 5, 1995**
- [51] **Int. Cl.⁶** **H04N 9/04**
- [52] **U.S. Cl.** **348/33; 348/32; 348/34; 348/42**
- [58] **Field of Search** **348/32, 33, 34, 348/42**

[57] **ABSTRACT**

A synthetic color arrangement for a night vision inclusive surveillance system and its display is disclosed. The system partitions an input scene video signal into spectrally segregated scene components which are provided with separate processing as video signals and then recombined into a composite but now multiple color inclusive output representation of the input scene. The system in effect shifts input spectral components to a different part of the electromagnetic spectrum, the visible range of the spectrum, where operator controllable new spectral wavelength values are assigned to each different input scene spectral wavelength. Use of charge coupled device video camera elements, a video signal mixer apparatus, input wavelengths within both the visible and infrared spectral regions and signal processing according to the NTSC standards are also included. Military and non military uses of the apparatus are contemplated.

[56] **References Cited**

U.S. PATENT DOCUMENTS

| | | | |
|-----------|---------|----------------|-----------|
| 4,965,448 | 10/1990 | Morse et al. | 250/252.1 |
| 5,051,821 | 9/1991 | Vittot et al. | 348/33 |
| 5,070,239 | 12/1991 | Pinkus | 250/252.1 |
| 5,182,639 | 1/1993 | Jutamulia | 348/33 |
| 5,200,622 | 4/1993 | Rouchon et al. | 250/334 |
| 5,214,503 | 5/1993 | Chiu et al. | 348/33 |
| 5,323,002 | 6/1994 | Sampsel et al. | 250/252.1 |
| 5,440,352 | 8/1995 | Deter et al. | 348/33 |

Primary Examiner—Bernarr E. Gregory
Attorney, Agent, or Firm—Gerald B. Hollins; Thomas L. Kundert

18 Claims, 2 Drawing Sheets

A statutory invention registration is not a patent. It has the defensive attributes of a patent but does not have the enforceable attributes of a patent. No article or advertisement or the like may use the term patent, or any term suggestive of a patent, when referring to a statutory invention registration. For more specific information on the rights associated with a statutory invention registration see 35 U.S.C. 157.

