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Brief 71-10404

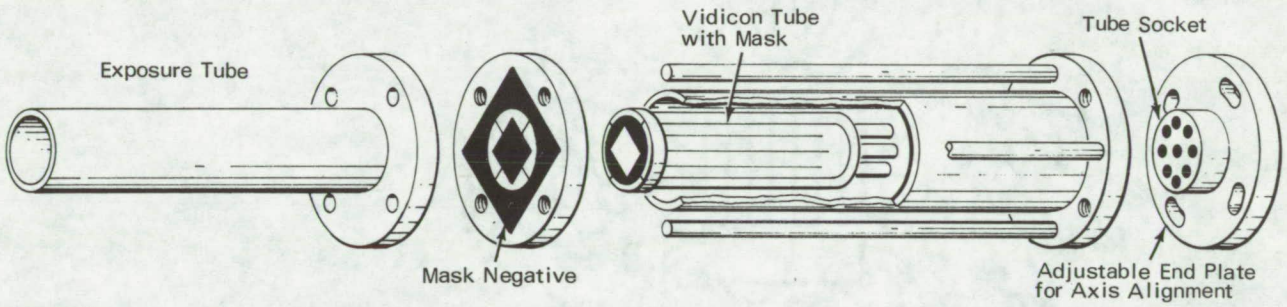
NASA TECH BRIEF

Kennedy Space Center

Application of Calibration Masks to TV Vidicon Tube

The problem:

To devise a better method of overlaying test pattern masks on TV camera vidicon tubes (see fig.). Such masks provide reference points for internal circuit-linearity adjustments and external camera alignment. The trial and error methods previously used for installing the masks were time consuming and costly.



The solution:

A new photographic application method, similar to the printed circuit (PC) board production process, which prints the mask on the vidicon tube within 0.0076 cm of the vertical and horizontal center lines of the tube face. The entire process, including the mask fabrication and alignment procedure, requires less than 10 minutes.

How it's done:

Photographic equipment for fabricating PC boards is used to apply the facemask in the following sequence: A sensitive photoresist material is coated on the tube and then cured in an oven. The tube is installed in a support fixture and placed in a photographic-printer housing. The photoresist material is then exposed to the appropriate mask pattern and developed. A dye is added to the exposed mask, and the tube face is washed and air dryed.

An important time saving feature of this new mask is that the external reference points can be quickly located because the masked portion is approximately 25% transmitting.

Note:

Requests for further information may be directed to:

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Reference: B71-10404

Patent status:

No patent action is contemplated by NASA

Source: E. L. Brawner, W. J. Jonker and J. J. Brown of Bendix Corp. under contract to Kennedy Space Center (KSC-10589)

Category 02