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Simplified Field Viewer for Panoramic Transparencies

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A new field stereoviewing apparatus for high altitude optical bar panoramic photography has been designed in an effort to overcome problems of weight and bulk associated with earlier devices. The new system employs commercially available stereoscopic eyeglasses in place of a conventional stereoscope.

The viewing system has two components: the eyeglasses, and a photo holder which holds the two transparencies of a stereopair in proper alignment, illuminating them by transmitted light.

The glasses employed in testing the viewer were manufactured by Ogden Vision Center, 3475 Harrison Blvd., Ogden, Utah. An eyebase (interpupillary distance) of 75 millimeters and a working distance of 4 inches (from the photographs) were specified; this combination gave good magnification (about 3.5x) and easy stereo-image fusion for most users. The lenses of these glasses swing up out of the wearer's line of sight when not in use. Prescription lenses may be fitted behind the stereo lenses; without prescription lenses, the stereo glasses cost $60-70 per pair.

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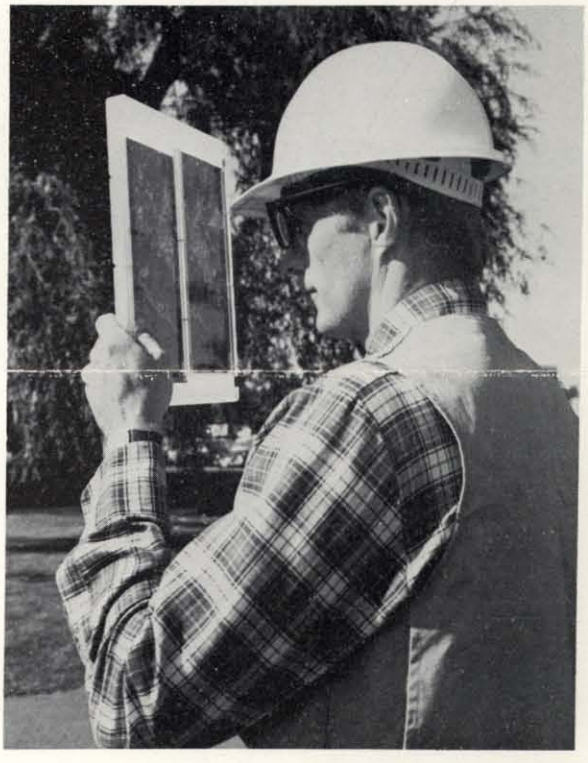


In use, the viewer is held so that skylight diffuses through the opal acrylic back of the holder. Users should be warned to avoid looking directly toward the sun. The viewer may be used inside a vehicle. Indoors, a light table of correct color temperature should be employed.

When not in use, the photo holder fits into the rear pocket of a conventional timber cruising vest. Stereo eyeglass lenses flip up out of the way. A visored cap or hard hat should be worn to eliminate sun glare through the lenses.

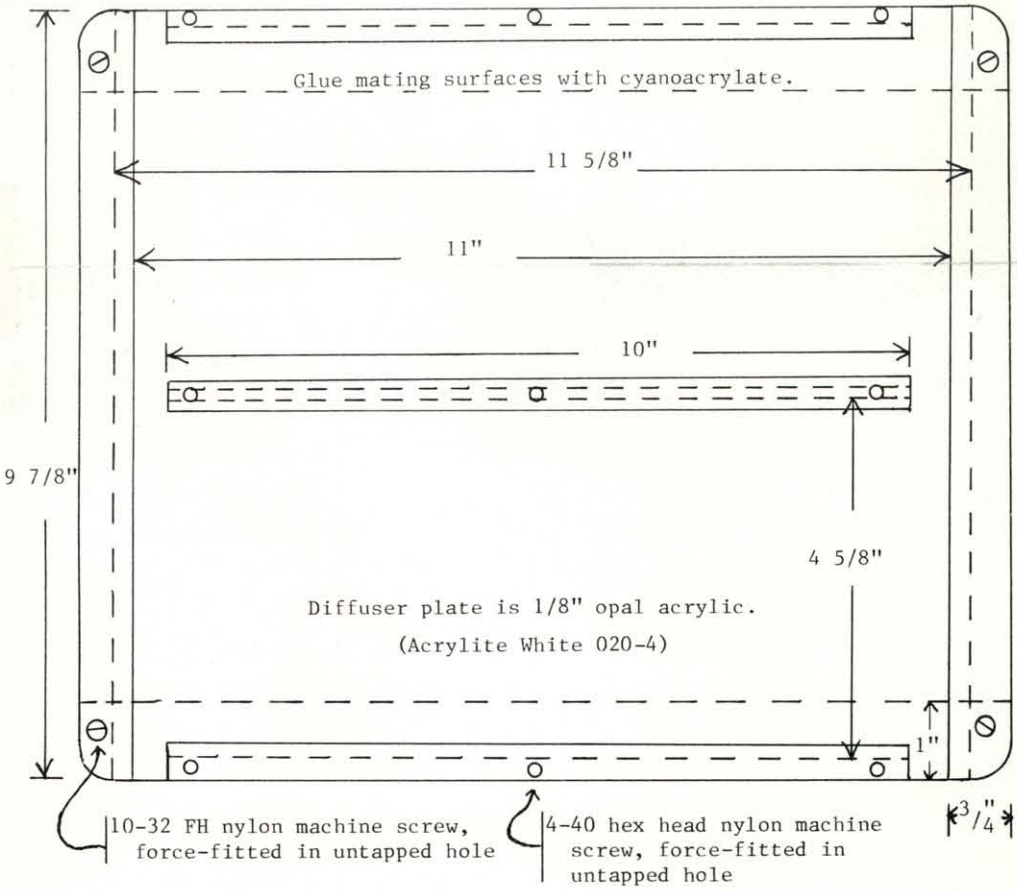
The photo holder is constructed from 1/2", 3/8", 1/4" and 1/8" acrylic sheet plastic, held together by cyanoacrylate ("super") glue and nylon screws (Appendix A). The holder weighs 1 lb. 6 oz.; materials cost about $10. A table saw and drill are the only power tools needed. Nylon screws are available from Small Parts Inc., 6901 NE 3rd Ave., Miami, Fla.

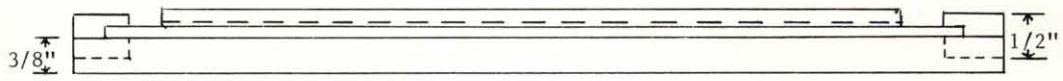
Like earlier viewing devices (Befort et al. 1980), the new apparatus is designed for use with plastic-laminated 10-inch segments of panoramic transparencies, rather than full 50-inch frames. To fit the new holder, segments must be reduced to 4.6 inches in width by trimming off both margins. Appendix B gives procedures for preparing the photographs. More than 100 photo segments may be carried conveniently in an expanding envelope which fits in a jacket pocket.

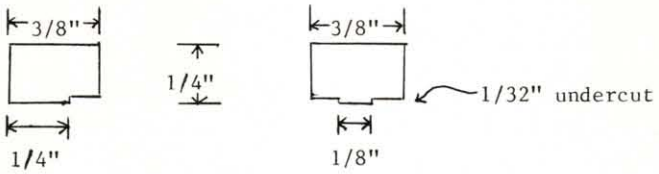
LITERATURE CITED

Befort, W.A., R.C. Heller, and J.J. Ulliman. 1980. Viewing and handling panoramic aerial photographs. Forest, Wildl. and Range Exp. Sta. Tech. Rep. 7, Univ. of Idaho, Moscow. 16 pp.

APPENDIX A







Side ribs

Center rib

APPENDIX B

PREPARING PANORAMIC TRANSPARENCIES FOR USE

1. Wear white photo-handling gloves when working with unlaminated photographs.

2. Determine whether the imagery reads correctly with emulsion up or with emulsion down.

3. If a light table with roller brackets is available, inspect the entire roll of film for general geographic orientation.

4. Prepare 1/6" wide labeling stickers with flight number, frame number, and frame segment letter.

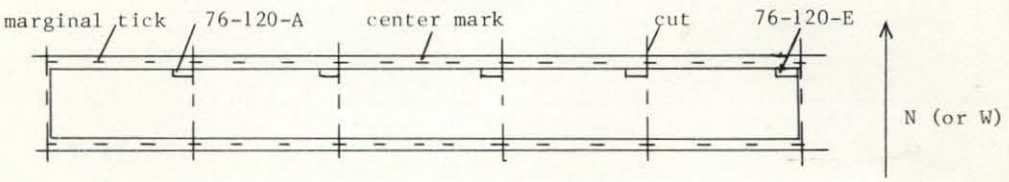
5. Load the laminator with .0015" clear laminating flim. Adjust supply roll tension so that the laminated imagery will lie flat or curl slightly toward the right-reading side. Test with leftover film before starting.

6. Cut successive frames from the roll and laminate the photographs, two parallel frames at a time, emulsion side down. Laminate an index map sheet.

7. Separate the photographs, trim to edge with scissors, and stack in numerical order, orienting each frame with north or west edge away from you.

8. On the laminated index map, locate and number the center of every fifth frame. Label the map with flight number and date. Color-code if necessary.

9. Using a light table, place five labeling stickers in each frame near the north or west margin, with the labels immediately to the left of the proper 8° marginal tick marks, as shown. Labels should read, e.g., "76-120-A" through "76-120-E" from left to right on a given frame.



10. Prepare file index cards for every tenth photo frame.

11. Using a paper cutter and a light table, cut each frame into fifths at the tick marks to the right of the labels.

12. Trim off both black margins of each frame segment, to a width of 4.6". File in cabinet, and label cabinet with flight number, date, and film type.