



Smithsonian

National Air and Space Museum

Fairchild KS-25 High Acuity Camera System Collection

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National Air and Space Museum Archives
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Collection Overview

Repository:	National Air and Space Museum Archives
Title:	Fairchild KS-25 High Acuity Camera System Collection
Date:	1956-1967
Identifier:	NASM.1986.0028
Creator:	Fairchild Camera and Instrument Corporation
Extent:	2.57 Cubic feet (2 record center boxes)
Language:	English .
Summary:	This collection documents the development and testing of the f/4 achromatic lens system. The material includes test data, photographs, and drawings, as well as correspondence detailing Baker's successful fight to secure a patent on the lens system.

Administrative Information

Acquisition Information

Don Welzenbach, Gift, 1986, NASM.1986.0028.

Processing Information

Arranged, described, and encoded by Jessamyn Lloyd, 2019.

Preferred Citation

Fairchild KS-25 High Acuity Camera System Collection, NASM.1986.0028, National Air and Space Museum, Smithsonian Institution.

Restrictions

No restrictions on access

Conditions Governing Use

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Biographical / Historical

In the mid-1950s the Defense Department requested a system for achieving better quality photographic intelligence using smaller and lighter cameras on high-speed aircraft at high altitudes. In response Fairchild Camera and Instrument Corporation designed the KS-25 High Acuity Camera System, an integrated camera/lens system using a wide-angle 24' focal length lens capable of producing transparencies with resolutions of 140 lines/mm on a high contrast target or 90 lines/mm on a low contrast target. The lens for the KS-25 was designed by Dr. James G. Baker of Spica, Inc. and represented new optics technology to allow wide-

angle viewing at daylight illumination on high speed cameras, yet capable of producing a resolution that was effectively diffraction limited.

Scope and Contents

This collection documents the development and testing of the f/4 achromatic lens system. The material includes test data, photographs, and drawings, as well as correspondence detailing Baker's successful fight to secure a patent on the lens system.

Arrangement

Arrangement: (by type of material) 1) Contract specifications 2) Purchase orders and receipts 3) Correspondence 4) Patent applications 5) Camera operations manual 6) Performance and environmental tests final report 7) Lens drawings 8) Performance analysis printouts and calculations

Names and Subject Terms

This collection is indexed in the online catalog of the Smithsonian Institution under the following terms:

Subjects:

- Aerial photography
- Aeronautics, Military
- Fairchild KS-25 High Acuity Camera System
- Photographic reconnaissance systems

Types of Materials:

- Correspondence
- Drawings
- Photographs

Names:

- Baker, James G.
- Fairchild Camera and Instrument Corporation

Container Listing

test