

~~SPECIAL HANDLING~~

HANDLE VIA **BYEMAN**
CONTROL SYSTEM

~~SECRET~~

- Copy #1 - Mr. W. Herrington
- 2 - Mr. J. M. Sewell
- 3 - Dr. H. F. Hicks, Jr.
- 4 - Project File

[Redacted Box]

28 July 1967
Sheets 2

original

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To: Mr. W. Herrington

Subject: Roll of Astronaut with respect to Dorian Focus Subsystem

In accordance with your request in the referenced telecon the following information is supplied.

A preferred statement for the way in which it is planned to use the astronaut with respect to the Focus Subsystem is:

It is planned that the astronaut will be used as follows:

- A. To determine and/or verify the plane of best focus for the photo-optical system. This determination is accomplished by:
 - a) Commanding the camera to expose a number of frames on the film where each frame represents one of a series of sequential platen positions.
 - b) Requiring the astronaut to remove the exposed film from the camera and place in the processor.
 - c) Requiring the astronaut to operate the processor.
 - d) Requiring the astronaut to visually evaluate each of the exposed and processed frames of the focus series.
 - e) Requiring the astronaut to make a judgement as to which frame is of the highest quality. The platen position used for obtaining that frame of highest quality is the plane of best focus.

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To Mr. W. Herrington --2

(b)(1)
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- B. The astronaut may monitor focus system output meters and ground commanded focus adjustments and may override focus control commands in accordance with his findings.

Item B above may well be covered in another section of your complete list and possibly is redundant since the monitoring and override capability of the crew is not unique to the focus subsystem.

As you requested the following is a brief explanation of why visual focus of the lens is not part of the base line.

Visual focussing of the lens system through the main optics (by modifying the camera to provide an auxilliary focussing back) has been considered in crew utilization studies. As recently as last August these studies showed that observing the image on a ground glass could provide coarse adjustments (approximately $\pm 0.008''$ as compared to $\pm 0.001''$ as required). The coarseness of these adjustments results from an inability of the astronaut to evaluate, retain, and compare the focus data from a ground glass.

I hope the above will assist you in preparing the write-up. If you feel it is too verbose please let me know and I'll be happy to help you do some additional editing.

HFHicks:sw

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