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Approved For Release 1999/09/07 : CIA-RDP71B00263R000200030019-5



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~~TOP SECRET~~

25X1A2d2

~~TOP SECRET~~-0020-67  
ATTACHMENT II

U-2R

AIRCRAFT BASE-LINE CONFIGURATION

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~~TOP SECRET~~

HANDLE VIA ~~TOP SECRET~~

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~~TOP SECRET~~

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25X1A2d2

██████████-0020-67  
ATTACHMENT II  
Page 2

INTRODUCTION

In arriving at a base-line configuration for the U-2R aircraft, the following considerations were uppermost:

- Establish an aircraft configuration fitted to ready operational employment by either the CIA or the DOD.
- Apply wealth of long-time U-2 fleet experience by operating commands and contractor associates to design, construction and support of the U-2R.
- Effect maximum utilization of on-shelf assets and that hardware common to the U-2C and U-2R models.
- Leave the door open for subsystems showing growth potential in technology.

25X1A2g

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~~TOP SECRET~~

HANDLE VIA ██████████  
CONTROL SYSTEM

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~~TOP SECRET~~

25X1A2d2

-0020-67  
ATTACHMENT II  
Page 3

I. SCOPE AND CLASSIFICATION:

|          |                           |  |
|----------|---------------------------|--|
| 25X1A5a1 | Service Model Designation | Reconnaissance                         |
|          | Designer                  | [REDACTED]                             |
|          | Model Designation         | U-2R                                   |
|          | Number/Places for Crew    | One Pilot - Flight Station             |
| 25X1A5a1 | Number/Type Engine        | One Axial-Flow Turbo Jet<br>[REDACTED] |

II. BASIC REFERENCES:

- 25X1A5a1 a. "Manufacturer's Model Specification, High Altitude Reconnaissance Airplane" Model U-2R, Report No. SP-1125, 28 November 1966, [REDACTED]
- b. Minutes of Configuration Control Board (CCB) and Review Panel Meetings for the U-2R aircraft (as noted).

25X1A2g

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~~TOP SECRET~~

HANDLE VIA [REDACTED]  
CONTROL SYSTEM

25X1A2d2

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~~TOP SECRET~~

0020-67  
ATTACHMENT II  
Page 4

III. GENERAL DESCRIPTION AND COMPONENTS:

PROPULSION:

25X1A5a1

[REDACTED]

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(Ref: [REDACTED] Report No. SP-1125, 28 November 1966)

COMMUNICATIONS:

- AN/ARC-51 - UHF Communication
- VHF-101 - VHF Communication
- 718T-6 - HF Communication
- 9 14 X 1 - IFF
- AN/AIC-10 (-18) - Interphone Amplifier

25X1D0b

[REDACTED]

25X1A5a1

[REDACTED] Recorder (provisions to accept)

(Ref: Minutes, U-2R Mock-Up Review, 29-30 November 1966  
and Minutes, Comm/Nav Working Group, 10 November 1966).

25X1A2g

~~TOP SECRET~~

HANDLE VIA [REDACTED]  
CONTROL SYSTEM

25X1A2d2

25X1A2g

~~TOP SECRET~~

25X1A2d2

-0020-67  
ATTACHMENT II  
Page 5

III. GENERAL DESCRIPTION AND COMPONENTS: (cont'd)

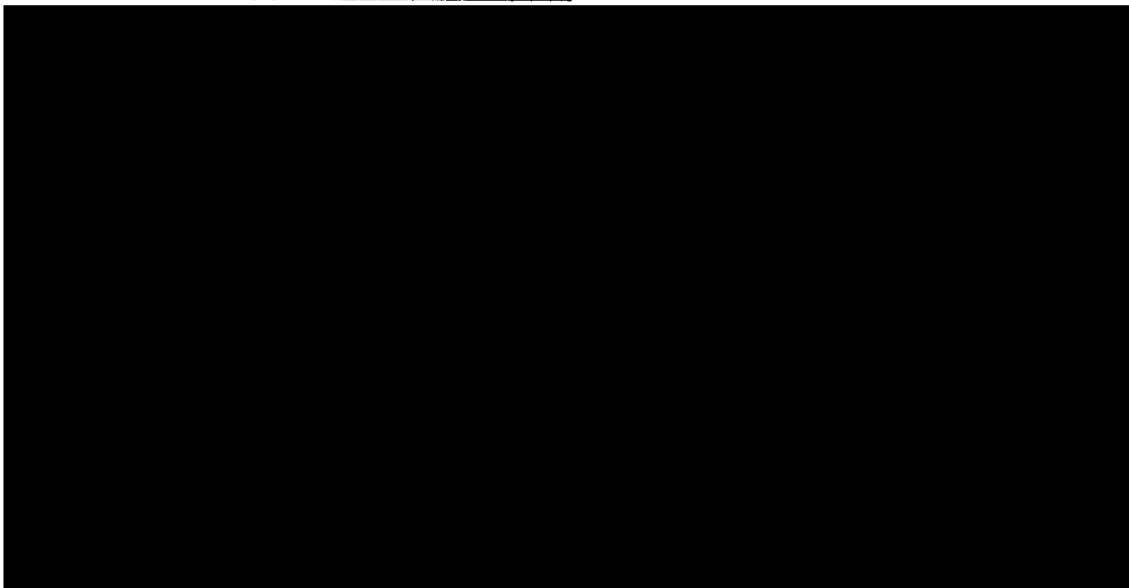
NAVIGATION:

- ARN-59 - ADF
- ARN-52 - TACAN and ILS
- APN-153/ASN-66 - Navigation System with provisions for pilot readout of drift and ground speed.

Provisions to accept present flight reference system plus self-contained standby attitude indicator.

(Ref: Minutes, U-2R Mock-Up Review, 29-30 November 1966 and Minutes, Comm/Nav Working Group, 10 November 1966)

ELECTRONIC WARFARE SYSTEMS (EWS):



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~~TOP SECRET~~

HANDLE VIA  
CONTROL SYSTEM

~~TOP SECRET~~

25X1A2g

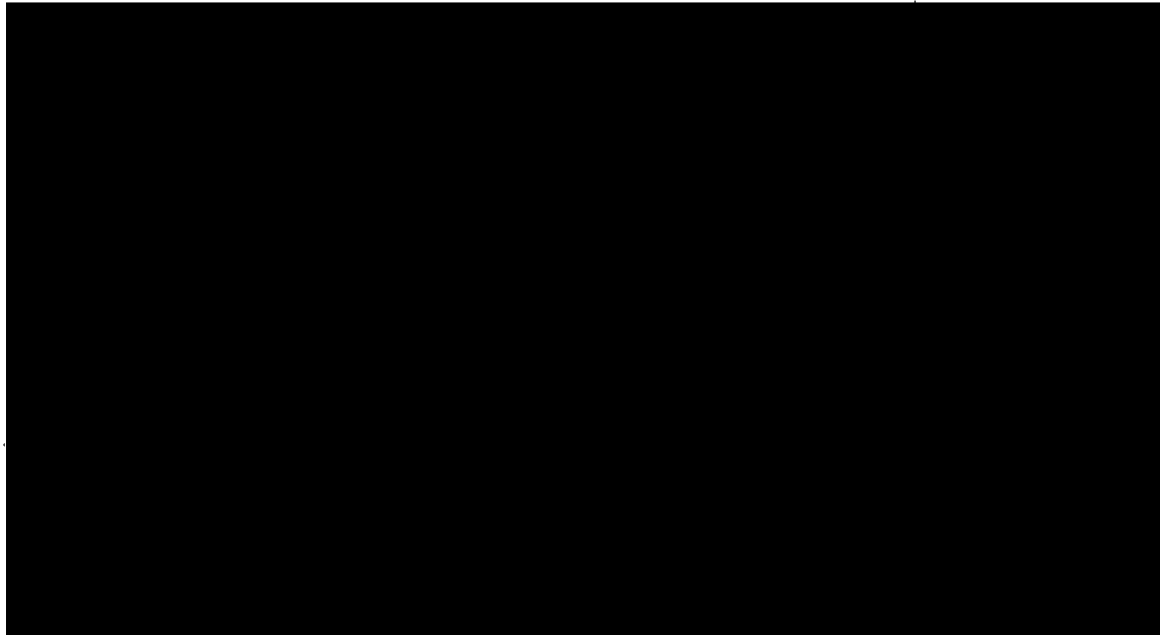
0020-67  
ATTACHMENT II  
Page 6

III. GENERAL DESCRIPTION AND COMPONENTS: (cont'd)

ELECTRONIC WARFARE SYSTEMS (EWS): (cont'd)

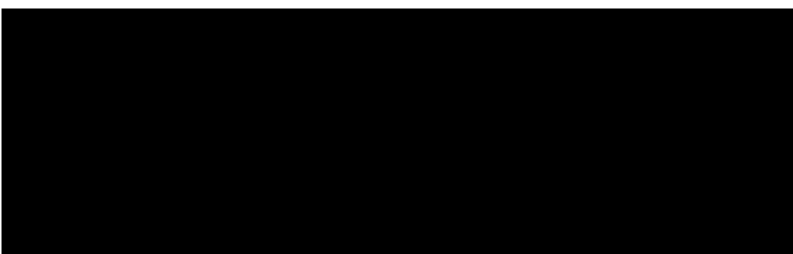
(Ref: Minutes, U-2R Mock-Up Review, 29-30 November 1966  
and Minutes, EWS Working Group Meeting, 21 October 1966)

SENSOR EQUIPMENT:



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Future Considerations:



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(Ref: Minutes, U-2R Mock-Up Review, 29-30 November 1966  
and Minutes, U-2R Requirements Review Board Meeting,  
20 October 1966)

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HANDLE VIA  
CONTROL SYSTEM

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25X1A2g

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ATTACHMENT II  
Page 7

III. GENERAL DESCRIPTION AND COMPONENTS: (cont'd)

COCKPIT CONFIGURATION:

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On 29 and 30 November 1966, six U-2 pilots [REDACTED] and [REDACTED] (Assignees) performed individual evaluation of the U-2R cockpit mock-up.

Each pilot, after donning the full pressure suit, was permitted 30 to 45 minutes (including approximately 10 minutes with the suit pressurized) in the cockpit. Each individual evaluated readability of instruments, ready access to controls, mobility within the cockpit (with the pressure suit inflated or deflated) and ejection sequence clearance with suit inflated. These evaluations were followed by group discussion and critique.

25X1A5a1

Deficiencies found in the cockpit arrangement were presented to [REDACTED] U-2R engineers for corrective actions.

Subsequent cockpit review by these same pilots were performed on individual placement and location of switches, controls and instruments. Their recommendations permitted a design "freeze" of the cockpit and will be reflected in the basic aircraft configuration.

(Ref: Minutes, U-2R Cockpit Configuration Panel Meeting, 29-30 November 1966)

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~~TOP SECRET~~

HANDLE VIA [REDACTED]  
CONTROL SYSTEM

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~~TOP SECRET~~

25X1A2g

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0020-67  
ATTACHMENT II  
Page 8

III. GENERAL DESCRIPTION AND COMPONENTS: (cont'd)

LIFE SUPPORT:

Discussions on Pilot's Protective Assemblies (PPA's) led to selection of a full pressure suit for pilot employment in the U-2R aircraft. The full pressure suit being considered is a modification of the suit developed for [REDACTED].

The modifications being made will configure this system to satisfy the crew member protection and comfort requirements imposed by the specific performance envelope of the U-2R. Because the hardware items on this proposed system are standard USAF equipment, the required AGE for supporting this system will require no developmental efforts. The proposed pressure suit system is also compatible with the ejection seat to be provided in the U-2R, since it is the same seat used in the [REDACTED]. The ejection seat provides for safe recovery from ground level and zero airspeed through the entire altitude and speed envelope of the U-2R. The personal parachute and seat kit required to complete this system should also be the same as those used in the [REDACTED] although the manufacturer's model specification (Attachment III) does not include these two items. Consideration for funding for these later two items must be made if they are not contained in the basic aircraft contract.

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(Ref: Minutes, U-2R Mock-Up Review, 29-30 November 1966)

25X1A2g

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HANDLE VIA [REDACTED]  
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