

SAPC 6298
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17 May 1956

MEMORANDUM FOR: Project Officer

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ATTENTION : [REDACTED]

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SUBJECT : System One Tests

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REFERENCES : (a) Memorandum for [REDACTED] from [REDACTED]
dated 16 March 1956. Subject: Evaluation Tests
for System One

(b) S-Band and X-Band Antenna Patterns for System One
(Graphic Publication)

(c) SAPC 6135/A, Antenna Patterns

1. The bench tests requested in Reference (a) above have been completed and forwarded in References (b) and (c) above. The tests have been satisfactorily completed.

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2. The mock-up tests of Reference (a) have been discussed in detail with [REDACTED] of Ramo-Wooldridge and seem to be progressing satisfactorily.

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3. No planned System One flight tests results have come to [REDACTED]

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The System One results of the flight tests run to date are not satisfactory to establish the capability of the System One. It is requested that the flight tests of Reference (a) described in detail in Paragraph 4 below be conducted as soon as practical.

4. An S-Band radar of known location, antenna pattern and power output (its antenna pattern and power output as specified by its manufacturer will fulfill this need) should be used as a target. The plane should fly at normal operating altitude with S-Band antennas installed at 14° to the horizon and after a normal pre-flight check. The path should start at a point at least 100 miles from the target radar and the first leg will pass directly over the target proceeding at least 100 miles beyond the target. The plane should return on a path parallel to the above path at a distance of 25 miles from the first path. Successive paths parallel to the first path and at distances of 75, 125, 225, 275, 325 and 375 miles should be covered (see attached sketch).

5. This test should be repeated with all factors identical except (a) X-Band antennas to be used on System One and (b) an X-Band target radar.

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