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UNITED STATES GOVERNMENT

Memorandum

25X1A5a1

EP 66-231

DATE: 2 November 1966

TO : The Files: Contract [REDACTED]

25X1A9a

FROM : Mr. [REDACTED]

SUBJECT: Inspection Report No. 4 - DF-4 [REDACTED]

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1. Project Description:

[REDACTED]

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2. Contractual Information:

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- a. Initial Cost: [REDACTED]
- b. Request for Procurement Action: 16 November 1965
- c. Initiation Date: 10 January 1966
- d. Completion Date: November 1966 Extension: December 1966
- e. Deliverable Items: Two prototype DF-4's; engineering drawings; final report

3. Date of Meeting: 18 - 19 October 1966

4. Place of Meeting: [REDACTED]

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GROUP 1
Excluded from automatic
downgrading and
declassification

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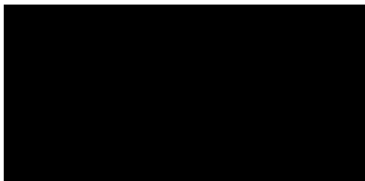
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5. Persons Attending:

Agency

Non-Agency

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Mr.
Mr.



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6. Contractor's Performance:

- a. On schedule and expected to remain so: No
- b. Within obligated funds and expected to remain so: No
- c. Satisfactory technical progress: Yes

7. Project Status:

Two DF-4's were available for field tests. The units performed acceptably when used against AM Broadcast stations but did not operate in a useable manner against CW type signals. This was caused by the use of AGC circuits involving attack/decay times not designed to handle the CW transmission. The AGC in one unit was disabled and an outboard manual gain control installed. Results were encouraging except that now the ratio meter operated erratically and was not able to "follow the signal." [Redacted] was requested to investigate and evaluate a manual gain vs AGC. The AGC is obviously the most desirable but a compromise combination of manual gain and AGC or a lone, manual, gain control may have to be effected.

Several operational/function requirements of the DF-4 were changed. Among these were:

- 1. Replace the miniature earphone jack on the equipment with one designed to accept a PL-55.
- 2. Replace the European wall plug on the battery charger line cord with an American style plug.
- 3. Change the screw thread on the cap cover of the battery compartment and the battery charger line cord compartment to one having a coarser thread to facilitate more rapid replacement.

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4. Provide guide pins to properly align the ferrite antenna section built into the case bottom when replacing it to the case proper.

5. Use regular Nicad batteries instead of passive adhydrode Nicads to power the DF-4's and thus provide a 14 to 16 hour charge cycle. In addition, eliminate the requirement to operate the DF-4 from Mercury batteries.

6. Improve the crystal calibrator circuits to provide an obvious calibration point.

7. Provide a fiber glass carrying case containing a canvas strap (for shoulder transport), earphones, sense antenna, extra Nicad battery and Allen wrenches.

8. The waterproof requirement is relaxed to the lesser requirement of rainproof.

9. Provide a complete, final form, technical manual including photos, parts lists, etc., rather than just furnishing a brief operational guide type book.

Because of the AGC problem, about 4 to 6 weeks of additional work will be involved. Funding under the contract is now under close review and a small overrun is virtually certain. Another field test will be scheduled near the conclusion of the program to evaluate the above changes and the operational capabilities of the DF-4.

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