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# Office Memorandum • UNITED STATES GOVERNMENT

TO : The Files

DATE: 28 August 1956

FROM :

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SUBJECT: (Contract RD-107, Task Order #3, VHF Ferrite Antennas)

1. On August 23, 1956 a meeting was held at the  to discuss the subject contract. Present at the meeting were:

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2. The contractor is waiting to obtain access to the screen room at  for further testing of the various configurations of Ferrite Antennas. It is felt that no further progress can be made with antenna configuration until the use of this facility is obtained.

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3. Two possible configurations of the tunable antenna were discussed. This antenna will use the broad band antenna with a simple parallel resonant filter using a disc with lead screw type capacitor. This filter has band widths at the 3D B points of from 2 megacycles at 60 megacycles to 10 megacycles at some point in the tuning range. The band width is not regular with the tuning range and will vary with antenna loading. At the lower end of the band, capacitor tuning is .003 inches per megacycle. One configuration was a veeder root counter operated from a large gear on the capacitor which would allow reading to .0002 inches. Another configuration was the use of a micrometer running the length of the box allowing readings to .0005 inches. In this configuration 15 turns of the micrometer shaft is required to tune the band. The micrometer configuration was tentatively chosen because it allows the operator's hand to be at the greatest distance from the capacitor thus avoiding possible hand capacity induced errors. This decision is subject to the possibility that the micrometer shaft running parallel to the Ferrite Antenna will distort the antenna pattern or decrease sensitivity. This can be determined only after access to the screen room is obtained. Box dimensions of the tunable antenna will be 6 1/8 by 1 3/8 by 2 1/2 inches.

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