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AUTHORITY

**RADC ltr, 6 Oct 1969**

DAYSTROM INSTRUMENT

DIVISION OF DAYSTROM, INCORPORATED

Archbald, Pennsylvania

File No. RD377-3



# INTERIM ENGINEERING REPORT

ON

# R. F. SWITCH FOR A WULLENWEBER ANTENNA

Period Covered by this Report:

September 19, 1955 to October 19, 1955

Date of Report:

October 25, 1955

Contract No.: AF 30(602)-1395

Project No.: 4700

Task No.: 49750

UNCLASSIFIED

# PART I

## SECTION A - PURPOSE

1. General Description

   a. The fabrication of an R. F. Switch for a Wullenweber antenna.

   b. The instrument will consist of an external power source to drive the R. F. Switch section and the capacitance matching transformer section both of which are enclosed in an aluminum casting housing.

2. Breakdown of Problem

   a. The design and fabrication of the switch was broken down into the following working components.

      (1) Motor and Magnetic Brake
      (2) Controls
      (3) R. F. Switch Section
      (4) Impedance matching of cables and resistance calibration calculati
      (5) Balancing
      (6) Potting
      (7) Conclusions

## SECTION B - DETAIL FACTUAL DATA

1. Work Performed During Period Reported

   a. The first unit has been completely assembled and tested to check continuity

   b. The motor and brake controls were thoroughly tested and necessary adjustments were made to insure reliable starting and quiet running.

   c. The unit was run continuously for a 9-hour period and found satisfactory.

   d. The unit was packed and shipped to RADC on October 19, 1955.

## SECTION C - CONCLUSIONS

### Difficulties Encountered

Late delivery of the motor necessitated some last-minute adjustments.

Considerable time was spent in trying to make the contact springs (Dwg. No. V551354317) maintain good contact after assembly. A minor change in the shape of the contact springs improved the contact reliability.

# PART II

## SECTION A - PROGRAM FOR NEXT INTERVAL

1. During the period to November 19, 1955, all parts will be manufactured for Units 2 and 3.
2. All cables will be cut and assembled for Units 2 and 3.
3. Plastic cylinders will be completely machined and ready for filling and plating.
4. Transformer section will be assembled, potted, and tested for Unit 2.
5. Assembly will be approximately 80% completed on Unit 2.
6. Test of Unit 2 should start approximately November 28, 1955.
7. Unit 2 should be ready for shipment on December 3, 1955.

Signed by: H. Jay Boyce

H. JAY BOYCE
Project Engineer

Approved by: Alexander Greenfield

ALEXANDER GREENFIELD
Director, Research and Development