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The Files

11 October 1956

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(Trip Report RD-79 T.O. V and T.O. VII)

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1. E/IN-4 Precision Oscillator --

- a. Precision oscillator forks will be due in the Office 22-27 October 1956. Less those covered in Task V amendment. 25X1
- b. The output configuration as submitted to the contractor under specification 56A-1049A Figure 1 has been examined and found subject to output voltage instability when plate voltage changes, within the range anticipated to be encountered when operated from 28vdc aircraft governed supply is used. The output distortion was measured and found to be in the order of at least 4.5%.
- c. With the delivery of the recorder unit to be employed with the E/CS-2 system the contractor has been able to redesign the oscillator output circuitry so as to provide a total harmonic distortion in the order of 0.56 to 0.78% and the output voltage and distortion reflect very minor changes when the plate voltage is changed between the ranged to be encountered in airborne services. Finalization has been held in abeyance pending the receipt of the actual tuning forks which will be employed.
- d. Indications are that the total power drain will be less than the maximum originally established. Output tubes (twin triodes) will be arranged on a parallel heater arrangement rather than a series string so as to permit maximum retention of the oscillator outputs in the event of a tube failure.
- e. Oscillator power to be obtained from the 28 volt regulated power distribution point. Oscillator oven power to be from non-regulated power. The decision to supply these two portions from separate power sources is based upon current inability to predict potential noise to be encountered in the oscillator oven contacts.
- f. The physical size of the fork unit and the power supply have increased the chassis size from $\frac{1}{2}$ ATR to ATR size. Rack mounts and cabinets are on hand at the contractors. Front panels are now being painted.

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2. Detector Units —

- a. An original desire was to optimize the RF-bypass capacitance for each of the bands. The 1N358 crystals specified by the user incorporates a 7 mmfd bypass as a function of the crystal design. [] investigation revealed that additional modifications could not be accomplished without the establishment of an R&D research project and that such modifications could not be accomplished during the delivery terms of the Task.
- b. Action has therefore been taken to cancel the nomenclature previously assigned to the anticipated detector units. Catalog stock number has been assigned to this basic unit and this the detector assembly to be issued for all of the bands this system is the E/VD-2 (Sage Laboratories Model SL-101-BNC).

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3. Filter Units —

Not on hand but should be scheduled for shipment to contractor.
[] checking sub-contractor.

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4. Wire and other materials —

Deliveries have been coming in covering the sockets, connectors, wire, hardware, switches etc. It is estimated that another two weeks will be required before actual assemblies can be initiated.

5. Specification 57-A-1052-A

- a. Cable terminations for installation cable 1 & 2 combined run were called out in subject specification as based upon Figure 4-1 as furnished by the equipment manufacture. It has now been determined, based upon the units (GFE) on hand with the contractor that plugs have been installed where sockets were specified in the referenced figure. In addition the vibration clamp used with P-702 is a modified unit of undetermined origin.
- b. The recorder manufacturer is being contacted through Chief, SPD to determine whether the equipment on hand or the drawing on hand is to be the finalized version. Cable connector inserts will be adjusted accordingly.
- c. The vibration clamp RW Item No. 505 indicates that the unit is a Winchester MRE-21H Modified per RW dwg 50401374-1. A determination must be made as to whether this unit was modified by RW or for RW by Winchester. 160 units are required by J & B.

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6. Mount Assemblies --

- a. The recorder shock mounts have been designed so as to permit use in either the single or dual recorder rack assemblies.
- b. The mounting plate for the dual unit filter/power supply unit has been designed so as to permit one filter and power supply unit being removed and when replaced by an information amplifier this mounting plate can be re-installed in a single recorder mount assembly.

7. Cable Coding --

Cable markers have been co-ordinated and contractor has noted that cost of markers may over run original estimate by an amount of \$700.00. However, it is not possible at this time to make a final determination.

8. Contract Completion --

Contracting Officer has extended Task V as amended to provide a termination date of 22 January 1957.

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