

# ORDER

## DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

4620.5

2/14/69

SCHEDULED OVERHAUL OF LONG RANGE RADAR ANTENNA PEDESTALS IN THE  
SUBJ: NATIONAL AIRSPACE SYSTEM

1. PURPOSE. This order establishes the procedure for periodic overhaul of long range radar antenna pedestals currently scheduled and for those facilities that may be added to the system in the future. It also establishes areas of responsibilities for program accomplishment and reporting.
2. REFERENCE.
  - a. Order 4620.1, Scheduled Overhaul of Ground Facilities Equipment.
  - b. Handbook 6030.18A, Mobile Air Traffic Control, Navigational Aid, Communication & Power System.
3. DEFINITIONS.
  - a. Air Route Surveillance Radar (ARSR) - any of the various radar facilities of FAA origin which are used primarily for enroute air traffic control.
  - b. Air Route Surveillance Radar-Military (ARSRM) - any of the various radar facilities of Military origin, maintained by the FAA, which are used primarily for enroute air traffic control.
4. PROGRAM DETERMINATION. The Systems Maintenance Service (SMS) will specify the types of radar pedestals to be overhauled on a periodic basis and the frequency of the overhaul. Frequency of overhauls will be established based on pedestal types, number of facilities, years of service prior to failure and years of service between first overhaul and subsequent failure. The FAA Depot in coordination with SMS will establish a definitive schedule for the initial implementation of the overhaul program based on regional recommendations and Depot availability of replacement parts and manpower. Subsequent overhaul schedules will be developed by the FAA Depot based on pedestal histories. Regional recommendations for specific sites to be overhauled will be considered, providing complete justification is submitted to the FAA Depot for the requirement. This order applies to ARSR-1 and ARSR-2 facilities. It is also applicable to Military-type Air Route Surveillance (ARSRM) radar facilities that are or will be under FAA purview for plant maintenance.
5. PROGRAM OPERATION. The Depot crew consists of personnel with extensive technical experience in the overhaul of radar pedestals. However, each

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Distribution: WSM-2, RMAF-3, FAF-0 (1 copy), AC-400

Initiated By: SM-200

region will retain prime responsibility for their systems at all times during the overhaul. Further responsibilities of the various elements involved are as follows:

a. Region.

- (1) An initial overhaul schedule was developed by the FAA Depot based on regional recommendations and distributed to the regions in October 1967. Each region, within forty (40) working days of the effective date of this order, shall submit any changes in requirements based on present antenna conditions to AC-400. The condition of ARSR-2 and applicable ARSRM pedestals with recommendations for overhaul dates shall also be included in this report.
- (2) Each region having cognizance of the site where overhaul is to be performed shall have full responsibility for scheduling the shutdown of the radar and coordination with all elements involved in operating, maintaining and using the radar, both within the region and external to the region. Normally, shutdown time will be 96 hours, not including Flight Inspection time. Arrangements for shutdowns should be flexible to provide for extensions should unanticipated delays occur.
- (3) Each region shall provide the personnel, having the necessary skills, required to assist the Depot team in the overhaul. Specific requirements will be determined by Region/Depot negotiations prior to and during the overhaul. Generally three people per shift will be required. Two daily shifts will normally be employed.
- (4) Each region shall provide incidental hand tools and supplies. This requirement will be limited to those items authorized under FAA Handbook SM P 4360.2A and subsequent revisions. (Special tools and working equipment are to be furnished by the Depot as noted below.)
- (5) Each region shall inform the FAA Depot (AC-400) of the contact(s) for coordination of the program with the region.
- (6) When requested by the FAA Depot, each region shall provide a crane suitable for handling large antenna parts. All particulars will be specified during Region/Depot negotiations prior to overhaul. Funding will be regional responsibility.
- (7) Obtain any replacement parts not covered under paragraph 5b(4) through normal regional channels.

- (8) When a total radar shutdown is unacceptable, provide an interim radar in accordance with Handbook 6030.18A.

b. FAA Depot.

- (1) Prepare an annual overhaul schedule based on past history and regional recommendations with SMS concurrence.
- (2) Furnish a team skilled in the overhaul techniques and procedures of radar pedestals. Generally the Depot team will consist of six people plus a supervisor and the work will be performed on a continuous or multiple shift basis.
- (3) Provide special tools and equipment, except as covered in 5.a.(4) and (6) above, which have been determined to be needed for disassembly, assembly and handling of heavy components.
- (4) Furnish to each site all replacement parts and components normally required for the complete overhaul of a pedestal.
- (5) Inform each region as to the person responsible for detailed Depot control and coordination.
- (6) Prepare a detailed technical report of findings on each overhauled pedestal. Furnish one (1) copy to SMS.
- (7) Return major components that have been removed in the overhaul operation to the Depot.

c. Systems Maintenance Service.

- (1) Resolve all scheduling conflicts between regions.
- (2) Specify the types of radar pedestals to be overhauled and the frequency of overhaul.
- (3) Furnish program guidance.
- (4) Furnish engineering assistance when required.

6. FUNDING AND SPECIAL INSTRUCTIONS.

- a. Funding. The Depot and each region will be responsible for programming funds for accomplishment of their own portion of the overhaul work in accordance with the predetermined schedule.

- b. Special Instructions. The procedures contained in this order are intended to apply only to those ARSR and ARSRM Facilities which have been scheduled and authorized by Systems Maintenance Service. All other facilities, including radar not specifically scheduled, will continue to be maintained in accordance with existing procedures.
- c. Emergency Requirements.
- (1) Nonscheduled requirements for emergency repairs or overhaul, which require dismantling the antenna reflector and pedestal, shall be coordinated by the cognizant regional office with the Depot.
  - (2) The regional office shall notify the Systems Maintenance Service of the emergency requirements.
  - (3) Emergency requirements for repair/overhaul of the antenna pedestal will have priority over scheduled overhaul requirements.
  - (4) Conflicts in scheduling brought about by emergency requirements will be resolved by the FAA Depot and the Systems Maintenance Service.
- d. Flight Check. Overhaul of an antenna pedestal should not cause a significant change in the performance of a radar facility. However, in order to insure that established radar performance standards are met after overhaul, a flight inspection should be performed if deemed necessary in accordance with the requirements contained in Paragraph 9, Handbook SM P 6340.2, Maintenance of Air Route Surveillance Radar (ARSR) Facilities.



M. M. Martin, Director  
Systems Maintenance Service