5711/18A

SAFETY SUMMARY

The following are general safety precautions that are unrelated to specific procedures and therefore do not appear elsewhere in this publication. These are recommended precautions that personnel should understand and apply during through the many phases of operation and maintenance.

ELECTROSTATIC SENSITIVE DEVICES PRECAUTIONS

Since most modules used in all models of equipment have Electrostatic Discharge (ESD) sensitive devices included in them, all modules should be considered sensitive to electrostatic discharge. Handling in the field shall be the same as in the factory. Each system is shipped with a wrist strap that must be worn while maintaining the equipment. The wrist strap shall be fastened to the equipment chassis either in the designated plug-in or attached to the equipment chassis with the alligator clip. The wrist strap must be used before any modules are removed from the equipment and at all times while handling the modules until they are placed in a protective environment such as an anti-static bag. Modules or boards must not be placed on any non-conducting surface such as wooden work benches, painted metal work benches, plastics, or technical manuals. Any work surface to be used must have a conducting mat placed on it and attached to earth ground. The mat and additional wrist straps can be obtained from SELEX Sistemi Integrati Inc.

KEEP AWAY FROM LIVE CIRCUITS

Operating personnel must at all times observe all safety regulations. Under no circumstances should any person remove any protective covers that expose lethal voltages. Do not replace components or make adjustments inside the equipment with primary power supply turned on. Under certain conditions, dangerous potentials may exist when the power is in the off position, due to charges retained by capacitors. To avoid casualties, always remove power and allow time for the capacitors to discharge before touching it.

DO NOT SERVICE OR ADJUST ALONE

Under no circumstances should any person reach into or enter the enclosure for the purpose of servicing or adjusting the equipment except in the presence of someone who is capable of rendering aid.

RESUSCITATION

Personnel working with or near high voltages should be familiar with modern methods of resuscitation.

RADIATION EXPOSURE (High Power DME)

The antenna(s) used for this transmitter must be fixed-mounted on outdoor permanent structures with a separation distance of at least 10m from all persons during normal operation. The peak conducted output power at each antenna terminal must not exceed 1000W and the peak radiated output power must not exceed 59 dBm EIRP.

RADIATION EXPOSURE (Low Power DME)

The antenna(s) used for this transmitter must be fixed-mounted on outdoor permanent structures with a separation distance of at least 1m from all persons during normal operation. The peak conducted output power at each antenna terminal must not exceed 100W and the peak radiated output power must not exceed 49 dBm EIRP.

9. INSTALLATION, INTEGRATION AND CHECKOUT

RADIATION EXPOSURE (High Power DME)

The antenna(s) used for this transmitter must be fixed-mounted on outdoor permanent structures with a separation distance of at least 10m from all persons during normal operation. The peak conducted output power at each antenna terminal must not exceed 1000W and the peak radiated output power must not exceed 59 dBm EIRP.

RADIATION EXPOSURE (Low Power DME)

The antenna(s) used for this transmitter must be fixed-mounted on outdoor permanent structures with a separation distance of at least 1m from all persons during normal operation. The peak conducted output power at each antenna terminal must not exceed 100W and the peak radiated output power must not exceed 49 dBm EIRP.

9.1 Introduction

This section contains installation information for the independently located DME. If the DME is to be collocated with VOR or ILS refer to the basic instructions in this section and to the installation instructions for the VOR or ILS equipment. With respect to general requirements, a good VOR or ILS site will satisfy the DME requirements as well. System performance must be verified by flight inspection. Figure 9-1 shows a typical DME site.

NOTE

After flight inspections and prior to use by pilots, it is mandatory that the monitor be left in control of the facility and not in bypass.

9.2 Site Information

9.2.1 Site Selection

The signal radiated from the DME is affected by obstructions and terrain in the immediate vicinity of the antenna and by obstructions and terrain within the service range of the station. An ideal site would be the highest ground in the vicinity with level terrain, cleared of all objects for a radius of at least 3000 feet (915 meters), and with no obstructions extending above the horizontal plane of the antenna within the service range of the station. In most localities, it is not possible to satisfy the ideal site requirements. Every effort must be made to obtain the best site available. Although no absolute minimum requirements can be stated, a site is normally acceptable if it meets the recommendations contained in the following paragraphs.

9.2.1.1 Terrain Features

The terrain should be level within a radius of 200 feet (61 meters). In a radius between 200 and 1000 feet (61 and 305 meters), a downward slope is acceptable if (1) the rate of descent is not more than 4 feet in 100 feet (1.22 meters in 30.5 meters) and (2) contour lines are generally circular around the site. Beyond a radius of 1000 feet (305 meters), terrain should be below the horizontal plane of the antenna.

9.2.1.2 Obstructions

There should be no structures within 750 feet (229 meters) of the antenna. Metallic structures should not subtend vertical angles greater than 1.2 degrees as measured from the antenna. Wooden structures with negligible metal content should not subtend vertical angles greater than 2.5 degrees as measured from the antenna. Structures having considerable length (such as aircraft hangers or administration buildings) should be situated lengthwise on a radial from the antenna. Single trees less than 35 feet (11 meters) high may be tolerated beyond 750 feet. No group of trees or groves may be within 1000 feet. No overhead power or control lines are permissible within 750 feet of the antenna.