MICROWAVE ANTENNAS

RETURN LOSS MEASUREMENTS

PERIODIC TEST INTERVALS

1. GENERAL

1.01 This section outlines suggested return loss testing intervals for TD and TH antenna systems. For testing procedures, refer to the maintenance section of this practice for the particular microwave system involved.

1.02 This section is reissued to delete certain periodic testing intervals for TD and TH antenna systems return loss.

1.03 This reissue affects Equipment Test Lists.

2. MAINTENANCE ROUTINES

2.01 The following paragraphs list the special reasons for performing antenna return loss tests.

A. New Routes

2.02 Measure the return loss of the transmitting and receiving antenna system on each installed channel at each station after completion of antenna and waveguide orientation procedures.

B. Existing Routes

2.03 Measure the return loss of each transmitting and receiving antenna system:

(a) Once on each installed channel.

(b) ♦When loss of antenna system air pressure or apparent damage indicates possible transmission impairment.

(c) After any repair work on antenna system that could affect return loss.

(d) Whenever a source of excessive envelope delay distortion has been isolated to a given repeater section (hop). Measurements should be made on the affected channel.♦

2.04 When an antenna is replaced, measure the return loss of the new antenna and the associated waveguide system on one channel.

2.05 When the cross-polarization discrimination of a particular antenna-waveguide system does not meet prescribed limits and defective components are suspected, this test may help in locating the trouble.

2.06 ♦It is often helpful to have previous return loss measurement data available when attempting to analyze antenna system problems.♦