MICROWAVE ANTENNAS
KS-19570 PASSIVE REFLECTOR
DESCRIPTION

1. GENERAL

1.01 The KS-19570 Passive Reflector Antenna consists basically of a flat reflecting surface attached to supporting structural members. The structural members provide a means for mounting the reflector on a tower or other suitable structure. A means for making elevation and azimuth adjustments is provided.

1.02 The KS-19570 reflector is designated L2 or L3. The L2 reflector has an 8 by 12 foot reflecting surface. The L3 reflector has a 10 by 15 foot reflecting surface and is correspondingly larger than the L2 in other over-all dimensions.

1.03 The reflectors are shipped disassembled for assembly in the field. All parts for the L2 reflector are packed in one wooden crate. The parts for the L3 reflector are packed in three wooden crates with the A-frame assembly shipped uncrated.

1.04 When properly installed, the reflector will function while under wind loads of up to 20 pounds per square foot (70 mph) without signal distortion, and will withstand wind loads of up to 40 pounds per square foot (100 mph) without being damaged.

2. DESCRIPTION

2.01 The KS-19570 Passive Reflector is designed to reflect vertically and horizontally polarized microwave radio signals simultaneously. It will reflect microwave signals of frequencies up to 11 GHz and is used principally as a component of periscopic antenna systems in the TL-2 and TM-1 Radio Relay Systems. The KS-19570 Passive Reflector may also be used with other radio relay systems operating in the same frequency range.

2.02 The passive reflector consists of a flat, aluminum, reflecting surface welded to a corrugated aluminum sheet. Attached to the corrugated side of the reflector face is a rigid truss of aluminum members and a galvanized steel A-frame. The face assembly of the L3 reflector is fabricated in two sections which are to be bolted together at the time of assembly.

2.03 The assembled reflector is mounted on a vertical member of the tower or other supporting structure with U-bolts which are provided with the reflector assembly. Elevation and azimuth adjustments are accomplished by an azimuth screw assembly and an elevation adjustment assembly which are a part of the reflector assembly.

2.04 To increase the stability of the reflector after it has been mounted and orientation adjustments have been made, two backstays and an azimuth stabilizer rod are attached between the reflector and the tower to hold the reflector rigidly in position.

2.05 The KS-19570 L3 reflector is illustrated in Fig. 1.

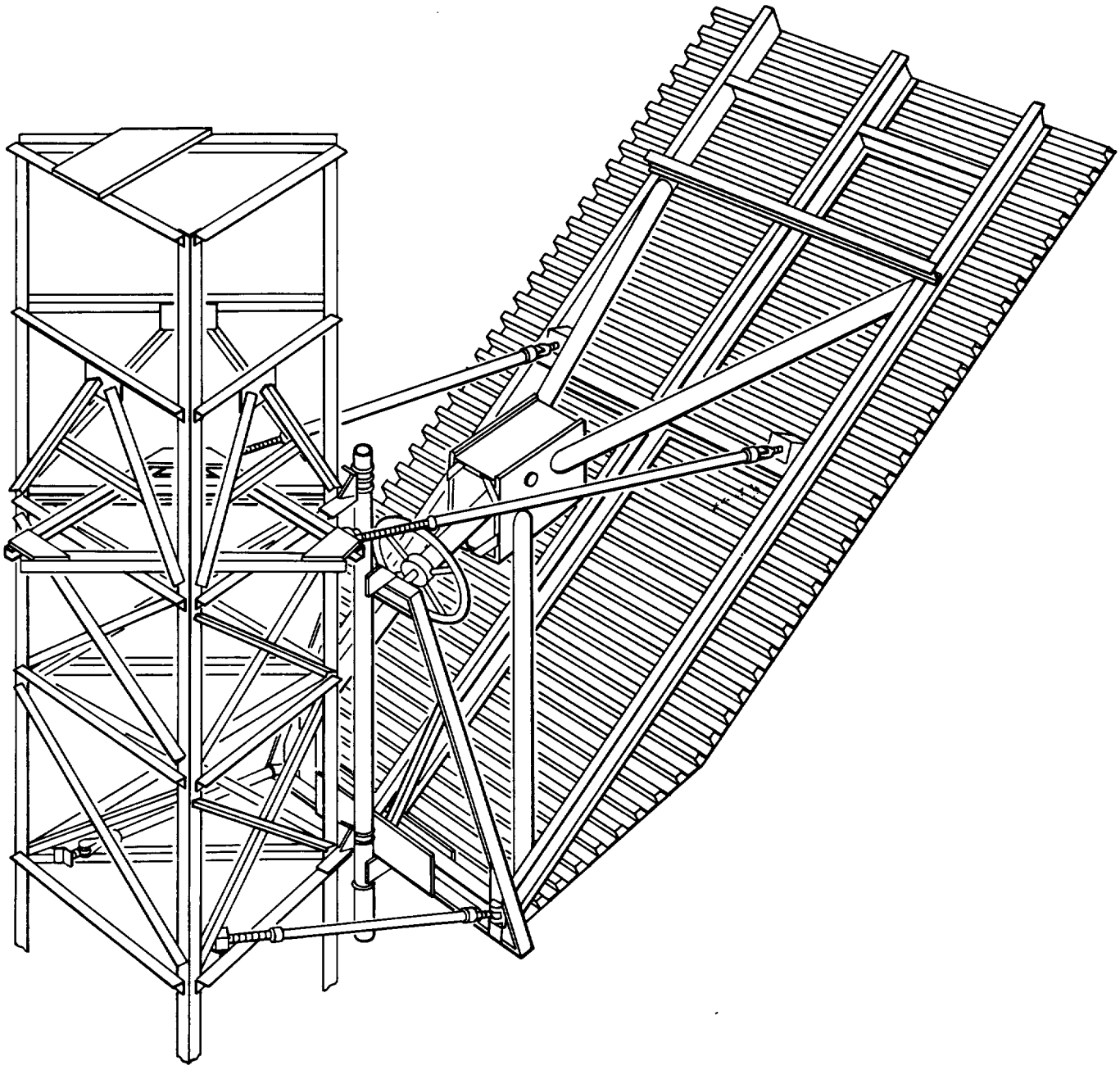

Fig. 1—KS-19570 L3 Passive Reflector—Typical Installation