MICROWAVE ANTENNAS
KS-16320 PASSIVE REFLECTORS
INSTALLATION
CURVATURE ADJUSTMENT FOR LIST 2

1. GENERAL

1.01 This section presents the curvature adjustment procedure for KS-16320, List 2 passive reflectors.

1.02 Curvature adjustment may or may not be required. It will be performed only at the direction of local supervision. Adjustment may be performed before the reflector is raised or after it has been installed on the supporting structure.

1.03 An open-end wrench of 1-1/8 inch jaw opening, and one of 5/8 inch jaw opening and jaw thickness less than 3/4 inch are required to perform the work described in this section.

2. DESCRIPTION

2.01 Refer to Fig. 4 in Section 402-423-400. Note that the three struts at the center of the reflector face, Items 22, 23, and 25, each contain an adjustment screw, Item 2, in enlarged view D-D of the figure. The screws thread into plugs in the tube ends so that the strut can be shortened or lengthened by rotation of the screw.

2.02 A scale graduated to 1/16 inch over a 2 inch length is hinged at each screw. An index mark on the tube registers with the free end of the scale to measure change in strut length. Zero scale reading corresponds to the flat position of the reflector face. The scale is locked by a clamp and wing nut when not in use.

2.03 Locknuts, Items 5 and 6 of enlarged view D-D, fix the screw after adjustment has been made.

2.04 The adjustable struts provide means of producing concave deflection of the reflector face.

Cautions

1. ***Do not deflect the reflector face outward from the flat position, i.e., to convex positions.***
2. ***Do not exceed 1-1/4 inches concave deflection from the flat position at the center of the reflector face.***

3. PROCEDURE

3.01 Before any adjustment is made, note the initial scale reading.

Caution: Do not step on the back of the reflector face when making curvature adjustment.

3.02 Release the scale and swing it clear of the adjusting screw.

Note: Tie the scale back temporarily with tape or cord or hold it to prevent bending from wind, etc.

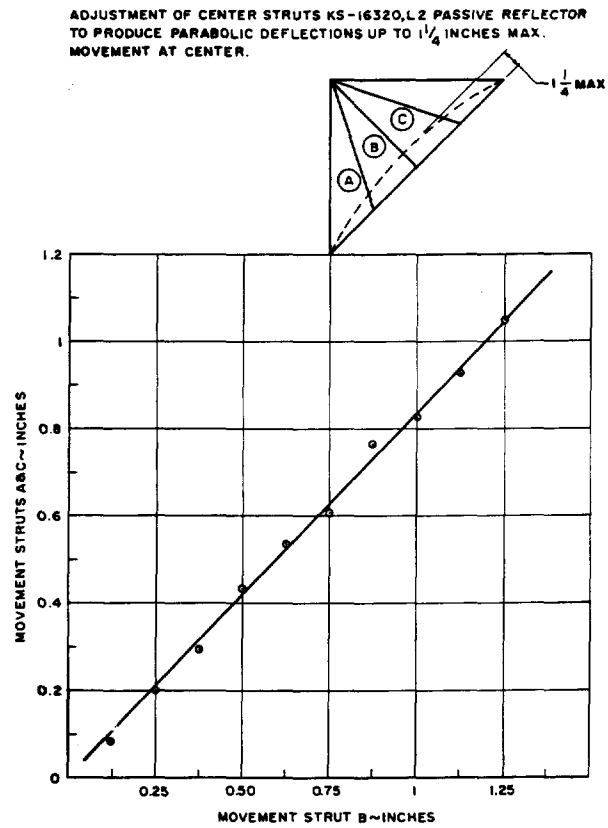

Fig. 1 — Strut Deflections

3.03 Loosen the locknuts and turn the screws as required to effect the necessary adjustment. Measure movement as the difference between the final and initial scale readings. The curvature of the reflector face at members 11 and 34 should approximate a parabola at all times. It is essential, therefore, that the adjustment of all three screws be coordinated so that bend is carefully controlled throughout the operation. Note that struts 23 and 25, in general, are not shortened as much as strut 22. Fig. 1 of this section shows the deflections which should exist simultaneously at the three struts.

3.04 When the proper curvature has been achieved, tighten the locknuts on each screw and clamp the scales in place.