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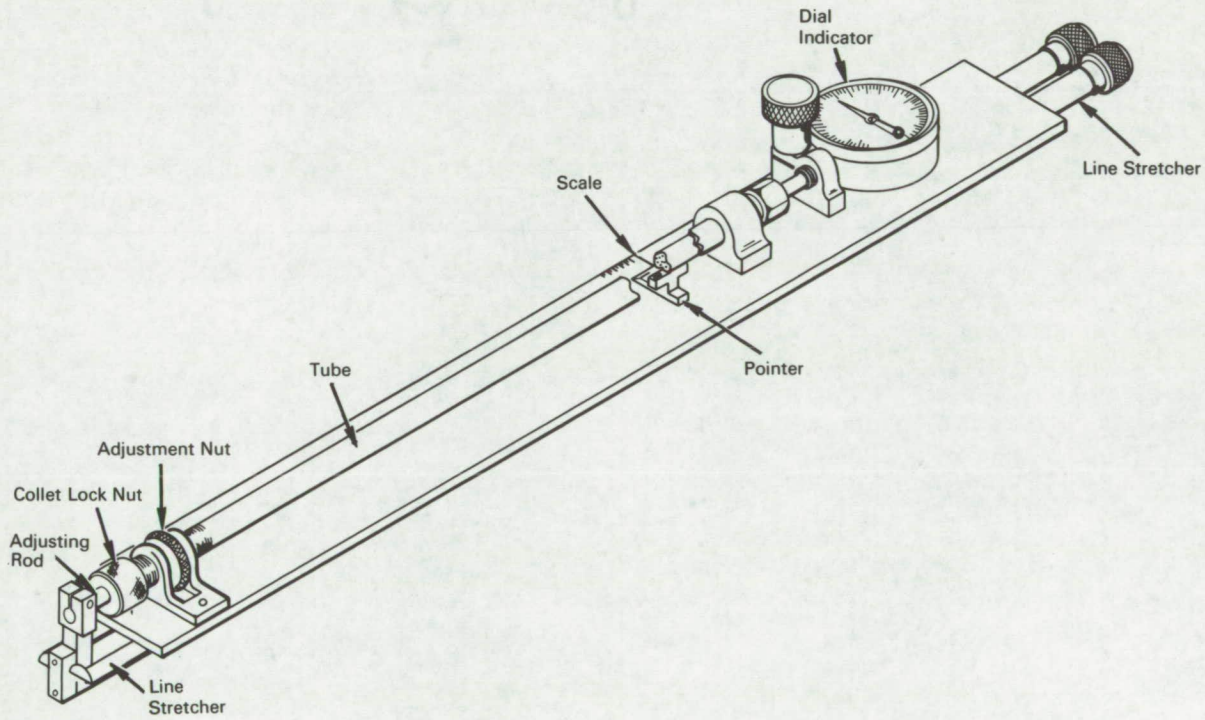
Brief 66-10694

NASA TECH BRIEF

Mechanical Device Accurately Measures RF Phase Differences in VHF or UHF Ranges



The problem:

To provide a single mechanical device that can aid in accurately measuring rf phase differences in either vhf or uhf ranges.

The solution:

A dual range linear measurement device with a capability consisting of a coarse range extending to 30 cm (readable to 1 mm), and any fine range portion of 2.5 cm readable to .01 mm.

How it's done:

With collet lock nut released, the rf (radio frequency) line stretcher can be adjusted to different lengths by sliding the coarse adjusting rod with attached pointer within the tube and then reading the change in adjustment in millimeters (mm) on the scale. With collet lock nut tightened, the line stretcher and rod are made integral with the tube which impinges against the dial indicator. By turning the fine adjustment nut, the line stretcher can be adjusted in

(continued overleaf)

length within the limits of the dial indicator with the change in adjustment readable to .01 mm on the dial indicator.

Notes:

1. This precision phase shifter is a dual range instrument which may have commercial use in accurately measuring the phase differences of radio frequency outputs of power dividers or hybrid junctions.
2. Inquiries concerning this invention may be directed to:

   Technology Utilization Officer
   Marshall Space Flight Center
   Huntsville, Alabama 35812
   Reference: B66-10694

Patent status:

Inquiries about obtaining rights for the commercial use of this invention may be made to NASA, Code GP, Washington, D.C. 20546.

Source: L. A. Hopp
of North American Aviation, Inc.
under contract to
Marshall Space Flight Center
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