

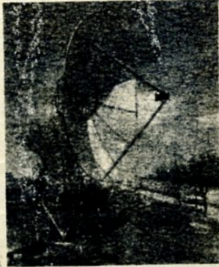


SITE SELECTOR

MOBILE ANTENNA WITH 28' REFLECTOR

Especially Designed for Tropo-Wave Experimentation

Type 749
Model 1091
MOBILE ANTENNA
Spec #610



DESCRIPTION

The twelve tip sections of the Site Selector reflector, when dismantled, store inside the tower, which then becomes a trailer. The antenna in this mode may be towed over any type highway or over rough terrain to remote locations. A crew of four may erect the antenna without unusual tools in less than six hours, or dismantle it in less than four hours. The Site Selector is a versatile antenna for experimental work and for temporary or semi-permanent installations where a large paraboloidal reflector is required. The reflector used is the standard Kennedy Type 692. Details on this portion of the Site Selector are found in Kennedy Specification Sheet 610.

SPECIFICATIONS

REFLECTOR: 28-foot diameter paraboloid . . . focal length 12' . . . f/d ratio .43 . . . constructed of welded frame tubular 6061-T6 aluminum alloy . . . surface SQUAREX mesh . . . height from radiation center to ground 24'.

FEED SYSTEM: 3 fiberglass reinforced plastic spars with steel horn ring . . . primary feed system consists of feed horns with transitions for coax feed line . . . feed horns described on page 2.

TRAILER-TOWER: length 385"; width 96"; height (ground to top) 90" . . . wheel track 75" . . . gross weight 4300 lbs . . . axle load 3100 lbs . . . towing ring load 1200 lbs . . . tire size 7 x 16 . . . electric brakes . . . tower construction of welded 6061-T6 aluminum alloy tubing.

ELECTRICAL: typical antenna gain over isotropic source 35.5 db at 900 mc . . . typical half-power beam-width 2.6° at 900 mc . . . first side lobe 23 db down . . . typical VSWR 1.05 for 1% of band and 1.2 for

20% of band . . . power up to 15 kw.

OPERATION: temperature range -60° to +130° F . . . wind loading 85 mph without ice or 60 mph with 1/4" of ice . . . tolerances — worst combination of temperature, wind and ice does not cause beam to deflect more than 1/4" nor to defocus more than enough to cause 1 db reduction in gain at 2000 mc, and beam returns to normal when loading is removed.

ERECTION AND ADJUSTMENT: time — erection and adjustment by four men in 6 hours max; dismantling and stowing in 4 hours max . . . assembly by furnished bolts without welding or rivets; repeated assembly does not damage structure or lessen tolerances . . . minimum amount of tools required other than those furnished . . . beam axis adjustment of ±3° in elevation and azimuth by moving tower.

FINISH: aluminum parts require no finish . . . steel parts of axle painted . . . all hardware of stainless steel.

