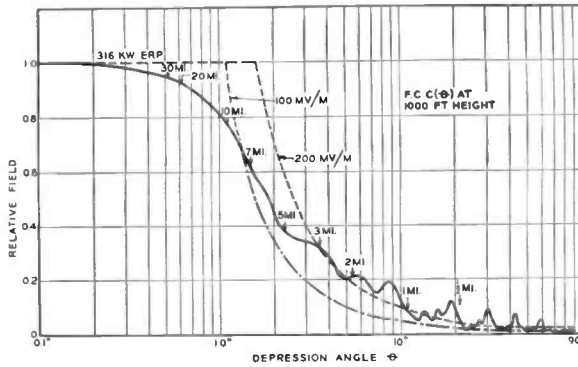
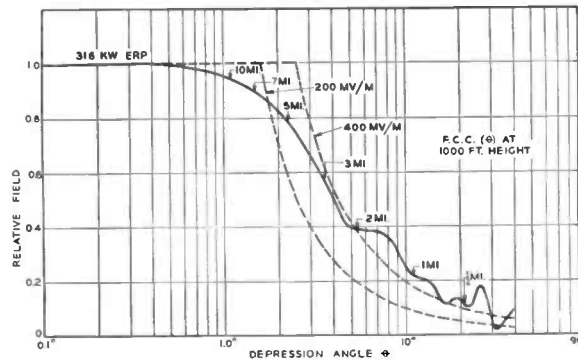


New "Traveling



CHANNEL 10

GAIN OF 18 ANTENNA PATTERN
(CALCULATED)



CHANNEL 7

GAIN OF 8 ANTENNA PATTERN
(MEASURED)

FOR HIGH-BAND
VHF OMNIDIRECTIONAL
SERVICE



CLOSE-UP OF ANTENNA SHOWING
UNIQUE SLOT RADIATOR DESIGN



Tmk(s) ®

RADIO



Wave" Antenna

**Combines Improved Electrical Characteristics
with Mechanical Simplicity and Economy . . .
for High Power TV Applications**

Here is a VHF high-band antenna that has an inherently low VSWR and produces better patterns. A new design, based on slot radiators, results in improved circularity. This new antenna also features low wind resistance and better weather protection.

INHERENTLY LOW VSWR

The traveling-wave nature of the feed results in a low VSWR along the antenna. This characteristic inherently gives the antenna a good input VSWR without any compensating or matching devices. The input tee has been broad-banded to provide a smooth transition from the transmission line to the antenna.

ALMOST IDEAL VERTICAL PATTERN

A vertical pattern is obtained which is an extremely smooth null-less pattern—see accompanying patterns. This provides the service area at most locations with a uniformly high field strength. Gains from approx. 6 to 20 at VHF high band can be obtained.

IMPROVED CIRCULARITY

The individual patterns produced by slot radiators when added in phase quadrature result in an over-all pattern with improved circularity. In addition, there are no external elements in the field. This design combines radiating elements, feed system and antenna structure in one unit, giving excellent horizontal circularity.

LOW WIND RESISTANCE

AND WEATHER PROTECTION

The smooth cylindrical shape of the antenna is ideal for reducing wind load and has high structural strength. It is designed to withstand a wind pressure of 50 psf on flats, or $33\frac{1}{3}$ on cylindrical surfaces. In addition, the absence of protruding elements minimizes the danger of ice damage. The steel outer conductor is hot-dip galvanized for better conductivity and protection. The inner conductor of the antenna is rigidly supported at the bottom end without having to rely on any insulator type of support to carry the dead weight. The pole is designed for tower mounting with a buried section extending into the tower. The pole socket carries the dead weight of the antenna. Polyethylene slot covers are fastened to the pole over every slot.

SIMPLIFIED FEED SYSTEM

The feed system is completely inside the antenna, hence any effects on the pattern have been eliminated. The feed system is a simplified one consisting of a large coax line and coupling probes.

The RCA "Traveling Wave" Antenna can provide you with the answer to your need for a VHF High Band Antenna which combines mechanical simplicity and economy, especially in high-gain, high-power applications. Your RCA Broadcast Representative will gladly help with TV antenna planning. See him for details on this new antenna. In Canada: RCA VICTOR Company Limited, Montreal.

C O R P O R A T I O N o f A M E R I C A

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