

WATTS ANTENNA COMPANY

.....THE TOUGH SITE SOLUTION

**CATEGORY I INSTRUMENT LANDING SYSTEM
FOR THE TOUGHEST SITE OF THEM ALL!**

**MODEL 107 (UPSLOPE)
END-FIRE GLIDE SLOPE ANTENNA
(Rear Antenna Shown)**



ANOTHER TOUGH SITE SOLUTION BY:

WATTS ANTENNA COMPANY

270 SUNSET PARK DRIVE

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HAVE YOU BEEN TOLD THE “SAME OLD STORY”

Have you been told that you cannot get ILS service at your airport because the site is too difficult.....throw that old report away! We don't believe it and let us tell you why!

End-fire antennas can offer numerous benefits over conventional image systems:

Significant Cost Savings by Avoiding Expensive Ground Plane Conditioning.

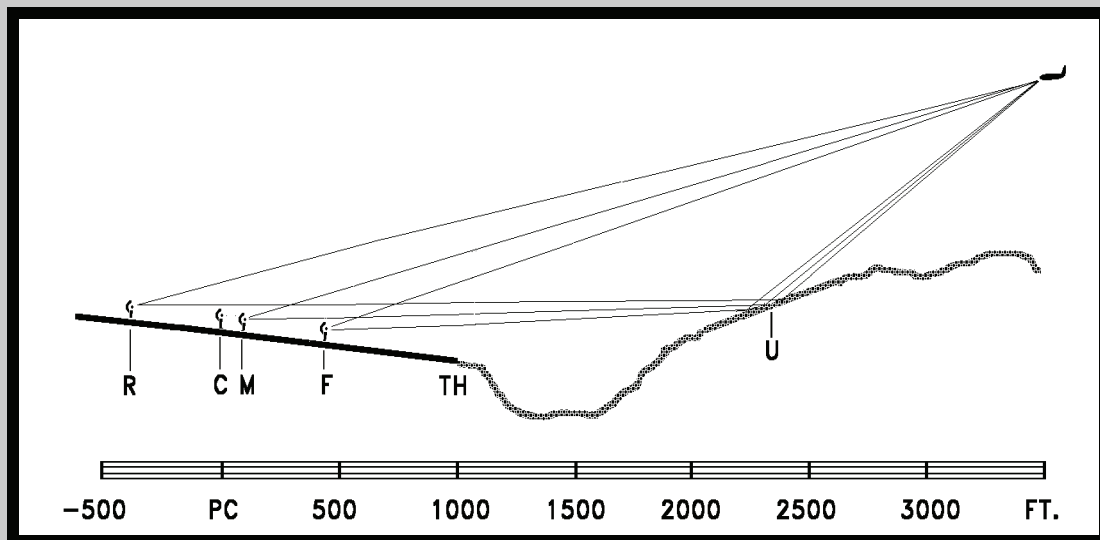
Provide ILS Service where Previously not Possible or Cost Effective due to Terrain.

Proven Frangible Low-Profile Design Permitting “Next to Runway” Installation.

Save the Wetlands or Avoid High Wetland Relocation Costs.

Waterside Installations Since the Signal is not Degraded by Tidal Variations.

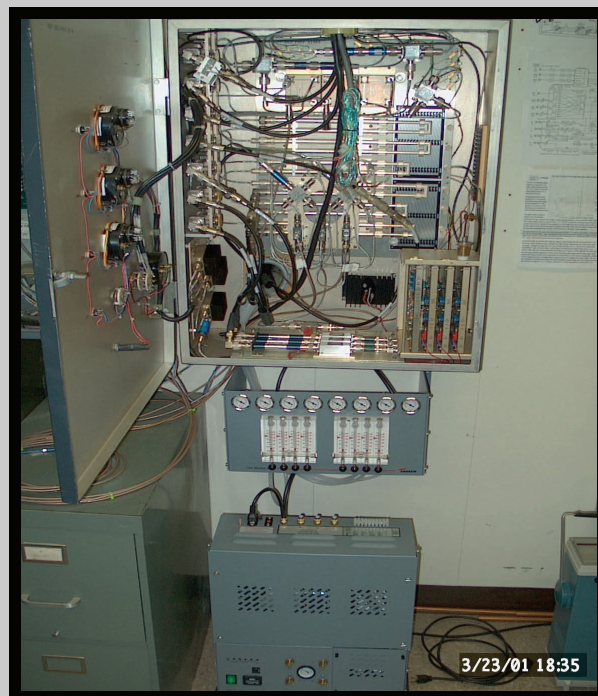
Precision Glide Path Guidance is Achieved with Narrow Lateral Radiation Patterns that Reduce Multi-path Signals from Buildings or Mountainous Terrain.



The Model 107 “Upslope” End-fire has performance improvements over conventional capture-effect (M-Array) image type systems. Sideband-only (SBO) signal cancellation is maintained to higher elevation angles to reduce multi-path at severe upslope sites.



**A PROVEN FRANGIBLE SUPPORT STRUCTURE
(Middle Antenna Shown)**



**THE EF-9 INTERFACE UNIT PROVIDES POWER DISTRIBUTION AND
MONITORING FOR THE ANTENNA SYSTEM.
(Dehydrator Unit (Bottom) and Air Pressure Line Monitor also Shown.
Designed to be Easily Adapted to any Transmitter and Monitor Electronics)**

Specifications

Frequency range	329 to 335 MHz
Excitation: CSB SBO CLR	3.0 W 150 to 500 mW 1.2 to 2.0 W, nominal
Input impedance	50 ohms
VSWR: Main antenna Clearance antenna	1.15:1 2.0:1
Pressurization	Dry air, 6 psi, nominal
Radiation pattern: Main antenna Middle antenna Clearance antenna	-3 dB beamwidth $\geq$ 5 degrees azimuth -9 dB beamwidth $\leq$ 20 degrees azimuth Front to back ratio $\geq$ 12 dB -3 dB beamwidth $\geq$ 6 degrees azimuth -9 dB beamwidth $\leq$ 14 degrees azimuth Front to back ratio $\geq$ 12 dB -3 dB beamwidth $\geq$ 20 degrees azimuth -9 dB beamwidth $\geq$ 40 degrees azimuth Front to back ratio $\geq$ 12 dB
Glide angle (electronic)	2.5 to 4.0 degrees (adjustable-relative to longitudinal slope)
Path width	0.70 degree
Power requirement	25-30 VDC; nominal 27 VDC @ 0.98 amp maximum
Duty cycle	Continuous, unattended
Outdoor equipment: Temperature Relative humidity Altitude Wind Ice loading	-50 to +70 degrees C 5 to 100 percent 0 to 10,000 feet 0 to 100 mph 1 inch radial clear ice
Indoor equipment: Temperature Relative humidity Altitude	-10 to +50 degrees C 5 to 90 percent 0 to 10,000 feet