

WATTS ANTENNA COMPANY

.....THE TOUGH SITE SOLUTION

**CATEGORY I/II/III INSTRUMENT LANDING SYSTEM
WHEN NO OTHER SYSTEM CAN DO IT!**

**MODEL 105
END-FIRE GLIDE SLOPE ANTENNA**



ANOTHER TOUGH SITE SOLUTION BY:

WATTS ANTENNA COMPANY

270 SUNSET PARK DRIVE

HERNDON, VIRGINIA, 20175-5219

PHONE: (703) 904-0707; FAX: (703) 904-0708

WWW.WATTSANTENNA.COM

EMAIL: JOHN.JOHNSON@WATTSANTENNA.COM

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.

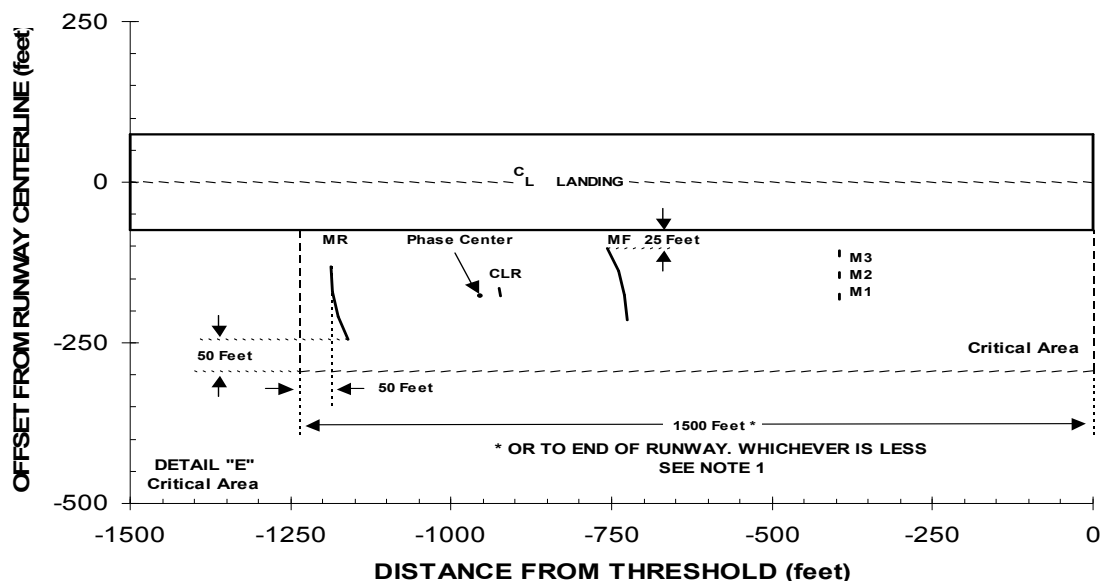
Provide ILS Service where Previously not Possible or Cost Effective due to Terrain.

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.

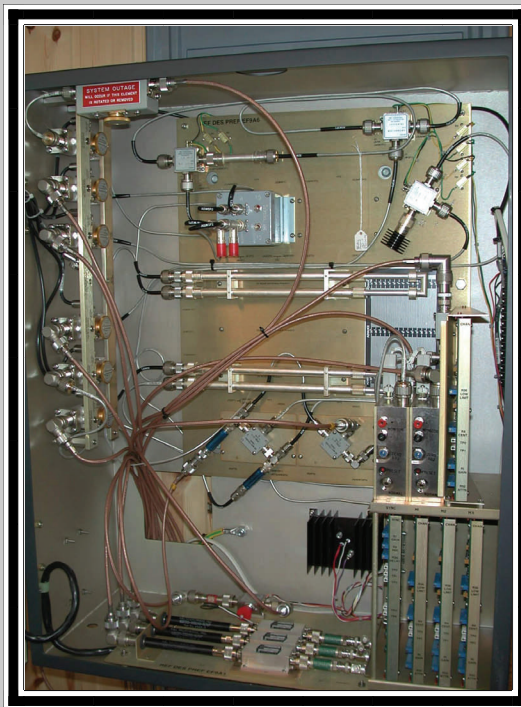


What About Improvements to Airport Efficiency?

The End-fire Critical Area Size is Substantially Smaller and can mean More Operations Per Hour!



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



**THE EF-9 INTERFACE UNIT PROVIDES POWER DISTRIBUTION AND
MONITORING FOR THE ANTENNA SYSTEM
(Designed to be Easily Adapted to any Transmitter and Monitor Electronics)**

SPECIFICATIONS

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Frequency range	329 to 335 MHz
Excitation: CSB SBO CLR	4.0 W (typical) 200 to 500 mW 400 mW to 2.5 W
Input impedance	50 ohms
VSWR: Main antenna Clearance antenna	1.25:1 2.0:1
Pressurization	Dry air, constant, 3 to 9 PSI nominal, stable pressure preferred
System Air Volume	7.70 cu. ft. (218.0 litres) (approximate) with specified dielectric coaxial cables
Dehydrator Run Time	8.7 minutes to pressurize (Andrew MT300 only) 1.5 hours in a 24-hour period (Andrew MT300 only)
Dehydrator Idle Time	2.4 hours between cycles (Andrew MT300 only) 22.5 hours in a 24-hour period (Andrew MT300 only)
Radiation pattern: Main antenna Clearance antenna	-2 dB beamwidth > 13 degrees azimuth -10 dB beamwidth < 30 degrees azimuth Front to back ratio > 12 dB Maximum lateral radiation nominally -19 degrees and 11 degrees relative to the runway centerline with a null in the region of main antenna maximum radiation. Front to back ratio > 12 dB
Glide angle	2.5 to 4.0 degrees relative to horizontal (adjustable)
Path width	0.70 degree, (nominal)
Power requirement	22-30 VDC, (nominal 28 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