

**37.5" ANTENNA
ADC DOPRAD FURY®
DOPPLER WEATHER RADAR SYSTEM
SPECIFICATIONS SUMMARY**

Receiver/Transmitter WRT-701C

Size	7.72" high, 10.27" wide, 15.03" deep
Weight	30 lbs. maximum
Temperature Operating	+5 to +131 F
Input Power	115V, 400 Hz, single phase 300 watts dissipated power
Cooling	Provided by Mount
Signal Processor	Pulse Pair
Ground Clutter Suppression	Based on Pulse-to-Pulse amplitude signature recognition of Doppler spectrum width
Maximum Theoretical Precip Detection Range	320 Nautical Miles (368.2 Range Statute/593 km)
Maximum Doppler Turbulence & Mean Velocity Range	50 Nautical Miles (57.5 & Mean Velocity Range Statute/93 km)
Precipitation Detection	7 Calibrated Levels: 20, 25, 30, 35, 40, 45, 50 (window of 30 dBZ from a range of 60 dBZ)
Doppler Detection	Pulse Pair Variances: turbulence 5 to 12 meters per second (m/s) in 1 m/s increments 4 bit Mean Velocity ± 20 m/s in 2.5 m/s increments (15 levels)

Transmitter

Operating Frequency	5.44 GHz (Dual Crystal Controlled)
Output Power	200 watts peak (Nominal)
Pulse Repetition Frequency	181/362 precipitation, 1448 Doppler modes
Pulse Width	2 to 20 microseconds, variable with selected ranges
Safety Rating	2 mw/cm ² = Max Measured Field Power Exposure
Power	24V DC

Receiver

Noise Figure	RF (preamp) < 3.0dB
Bandwidth	Variable with pulse width
Sensitivity	-127 dBm (minimum discernible signal @ 20 microseconds pulse width, For PD=50%, False Alarm Rate = 10 ⁻⁵)
IF Response	Linear
Power	24V DC

R/T Mount

Size	12.6 in high, 10.3 in wide, 17.5 in deep
Weight	4 lbs. maximum
Input Power	24VDC, for cooling fan (115cfm)

Antenna Pedestal

Size (Extended)	23.5 in high, 9.75 in wide, 16.75 in deep
Weight	35 lbs. maximum
Temperature Operating	-67 to +185 F
Input Power	24VDC
Scan Range Azimuth	360 degrees
Elevation	-2 to +60 degrees
Scan Rate	22.5 degrees/second (3.75 RPM), or 11.25 degrees/second (1.87 RPM)
Scan Modes	R/T controlled Automatic, Sector, & RHI

Antenna Flatplate

Size 37.5 inch diameter
 Weight 8 lbs. maximum
 Antenna Type Phased Array Flatplate
 Beam Width 4.1 degree in AZ and 5.4 in EL (Nominal)
 Gain 31.7 dB
 1st Side Lobe -25 dB, maximum referenced to main lobe

3.5' Radome

Size 47" high
 inner diameter 42"
 outer diameter 47"
 Weight 37 lbs
 Paint White Hydrophobic Coating

Storm Precipitation Levels:



Light	Light Green	20dBZ	0.03 to 0.05 inches/hour	0.65 to 1.33 mm/hour
Light to Moderate	Medium Green	25dBZ	0.05 to 0.11 in/hr	1.33 to 2.73 mm/hr
Moderate	Dark Green	30dBZ	0.11 to 0.22 in/hr	2.73 to 5.62 mm/hr
Moderate to Heavy	Yellow	35dBZ	0.22 to 0.45 in/hr	5.62 to 11.53 mm/hr
Heavy	Orange	40dBZ	0.45 to 0.93 in/hr	11.53 to 23.68 mm/hr
Intense	Red	45dBZ	0.93 to 1.91 in/hr	23.68 to 48.62 mm/hr
Severe	Magenta	50dBZ	1.91 in/hr and Greater	48.62 mm/hr and greater

$Z_e = 200R^{1.6}$
 Ref set to -21

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 Ref set to -21

Other Z/R relationships are available

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE