

**8 FOOT HIGH GAIN ANTENNA
COLLINS GROUND BASED
DOPPLER WEATHER RADAR SYSTEM**

RECEIVER/TRANSMITTER

WRT-701CG

Signal Processor

Pulse Pair

Ground Clutter Suppression

Based on Pulse-to-Pulse amplitude signature recognition of Doppler spectrum width

Maximum Precipitation Detection

320 Nautical miles

Maximum Doppler Turbulence and Mean Velocity Detection

50 Nautical miles

Doppler Detection

Pulse pair variances:
turbulence 5 to 12 meters per second (m/s) in 1 m/s increments
4 bit Mean Velocity \pm 20 m/s in 2.5 m/s increments

Operating Frequency Range

5350 - 5460 MHz

Output Power

200 Watts peak (nominal)

Pulse Repetition Frequency

181/362 precipitation
1448 Doppler turbulence

Pulse Width

2 to 20 microseconds, variable

Measured Field Power

<1.5 mw/cm²

Doppler Mode Pulse Width

6.8 microseconds

RF Power, Peak

170-250 Watts (peak)

ANTENNA

Antenna Type

8 foot parabolic dish with horizontally polarized feed

Beam Width

1.75 degrees maximum

Gain

38 dB minimum

1st Side Lobe

-25dB maximum referenced to main lobe

Effective Radiated Power

985 kw