

AT SEA, MOTHER NATURE TAKES NO PRISONERS!

Offshore occurrences of severe weather seem more frequent and unpredictable than ever. Your people and assets at sea are often vulnerable to fast-moving and damaging weather including severe squall lines, tropical storms and even hurricanes. When it's more important than ever to protect your offshore operations, turn to Advanced Designs Corporation. We can equip your ships, drilling vessels, tankers and rigs with an effective Rockwell Collins Doppler weather radar and DOPRAD® 32 Storm Path Analyzer. Use the Storm Path Analyzer to show where storms are going and their estimated times of arrival.



Below: Deepwater Horizon
Left: 30" System mounted inside radome aboard the Ocean Confidence
Below Left: Detail of 30" radome



DOPRAD® 32 Display with Storm Path Analyzer



DOPRAD® 32 Display System

- Provides highly detailed images of severe weather including rainfall, turbulence, and 15 levels of doppler velocities (optional)
- Distinguish threatening storms from normal weather to reduce false alarms and save money
- Extremely supportable and easy to maintain with 100% solid state receiver/transmitter
- Occupies very little space and uses very little power
- Minimal microwave radiation hazard and interference potential
- Environmentally friendly
- Easy to install and operate



30" Flat Plate Phased Array, Pedestal, Mounting Bracket, and Receiver/Transmitter

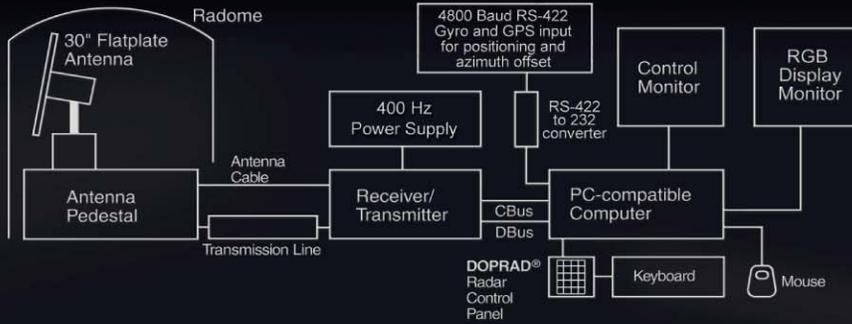
Some ADC/Rockwell Collins Users:

Diamond Offshore Drilling
R&B Falcon Drilling
Hyundai
Lockheed Martin
U.S. Air Force
U.S. Navy
NASA
NATO
Raytheon

adc
advanced
designs
corporation

**Rockwell
Collins**

DOPRAD®/Collins 30" System Diagram



Antenna	30" System
Size	30" diameter
Support Weight	N/A
Feed Weight	N/A
Dish Weight	N/A
Total Weight	6 lbs maximum
Antenna Type	Phased Array Flat plate
Beam Width	5.4 degrees (nominal)
Gain	30.5 dB
1 st Side Lobe	-25 dB maximum, referenced to main lobe

Antenna Pedestal	30" System
Size (extended)	23.5" high, 9.75" wide, 16.75" deep
Weight	35 lbs maximum
Operating Temperature	-67 to +185 degrees F
Input Power	115 V, 60 Hz
Azimuth Scan Range	360 degrees
Elevation Scan Range	-2 to +60 degrees
Scan Rate	1.87, 3.75 RPM
Scan Modes	Automatic, Sector, RHI

Receiver/Transmitter WRT-701C	
Size	7.72" high, 10.27" wide, 15.03" deep
Weight	30 lbs maximum
Storage Temperature	-67 to +185 degrees F
Operating Temperature	+5 to +131 degrees 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
Max. Theoretical Precip. Detection	320 Nautical Miles (368.2 Statute / 593 km)
Max. Doppler Turbulence	50 Nautical Miles (57.5 Statute / 93 km)
Mean Velocity Range	50 Nautical Miles (57.5 Statute / 93 km)
Precipitation Detection	5 Calibrated Levels: 20, 30, 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) (Optional w/ -405 R/T)
Operating Frequency	5.44 GHz (Dual Crystal Control)
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 (maximum exposure)	2 mw/cm ²
Noise Figure	5.0 dB
Bandwidth	Variable with pulse width
Sensitivity	-125 dBm (minimum discernible signal at 20 microseconds pulse width)
IF Response	Linear

Radome	3.5' Radome
Size	41.25" high Inner Diameter: 38.5" Outer Diameter: 39.5" Radius: 19.75"
Weight	Approximately 30 lbs
Riser	N/A
Opening	N/A
Door	N/A
Paint	Linear White High Gloss Gelcoat

Precipitation Levels	
Level 1 (20 dBZ) Light	0.026 to 0.24 inches/hour
Level 2 (30 dBZ) Moderate	0.24 to 1.02 inches/hour
Level 3 (40 dBZ) Heavy	1.02 to 2.09 inches/hour
Level 4 (45 dBZ) Intense	2.09 to 4.29 inches/hour
Level 5 (50 dBZ) Severe	4.29 inches/hour and greater
Turbulence Level 1	Adjustable levels of 5 to 12 meters/second

R / T Mount	
Size	12.6" high, 10.3" wide, 17.5" deep
Weight	4 lbs maximum
Input Power	115V, 400 Hz for cooling fan 110 CFM

Master PC	
Processor	Pentium III, 500 MHz Minimum

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