



Radtec Engineering Inc.

Doppler Weather Radar Systems Company Profile



➤ **The Only Company In The Industry With Complete Radar Design And Manufacturing Capabilities**

Benefits:

1. Assures product integrity and reliability throughout the product's life
2. Easily facilitates performance upgrades and enhancements
3. Assures affordable technical support throughout the product's life

➤ Doppler Radar Design Expertise

Radtec has innovated a highly modular design philosophy with a series of modules (antenna, pedestal, transmitter, receiver, etc.) with compatible interfaces such that virtually any weather radar requirement can be met with proven, advanced technology with minimal special engineering effort.

Benefits:

1. Design control optimizes advanced innovative technology
2. Assures optimal Doppler radar performance
3. Based on industry standards, “open system” philosophy, avoids “proprietary system” problem
4. Assures system reliability
5. Reduced cost of ownership
6. Easier, faster maintenance, more operational uptime



4.3m Offset Feed Antenna/Pedestal

Offset Feed Antennas/Pedestals

- Superior clutter rejection
- The only technology effective at rejecting moving clutter (taxiing aircraft, sea clutter, etc.)
- Available in 2m, 3m and 4.3m sizes
- 25+ units successfully installed and operating on 3 continents



Transmitter Lab & DC Switch Modulator



1 MW S-band Transmitter Module Including Solid State IGBT Modulator



Design Lab & Center Feed Pedestal



K-band system for military application

Solid State Modulators

- DC Switch modulator -An industry exclusive- The only technology that can take full advantage of Klystron high average power capabilities
- High average power = improved sensitivity
- Installed and operating successfully on 3 continents for since 1995.

Solid State Modulators

- Solid State IGBT Modulator- Developed by REI nearly 10 years ago, brings solid state reliability to radar systems
- Provides pulse accuracy and consistency required for accurate Doppler velocity data
- Over 80 systems installed and operating successfully worldwide

Center Feed Antennas/Pedestals

- Proven technology, designed for reliable operation
- Available in antenna sizes from 1.2m to 6m. Larger sizes on special order
- Installed and successfully operating worldwide

Custom Built Systems

- Standard modules form the base for unique systems
- Meet special requirements with proven subsystems without expensive development effort

➤ **Doppler Radar Manufacturing Expertise**

Radtec has full control over manufacturing quality

- Established Quality Assurance procedures
- Fully coordinated integration of system components
- Customer proven Factory Acceptance Test (FAT) and Site Acceptance Test (SAT) procedures

Benefits:

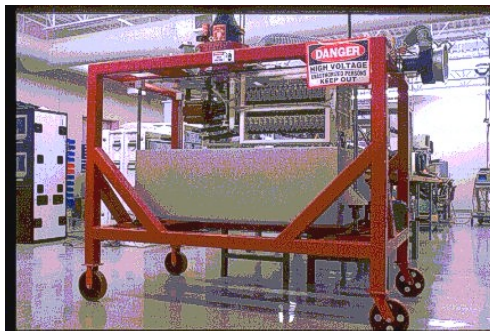
1. Improved reliability
2. Reduced cost of ownership



TDR 43-250 Klystron Radar



RDR-250GC Radar



Manufacturing Test Fixture For Solid State DC Switch Modulator



Pedestal For 4.3m Offset Feed Antenna



Military Radar Transmitters From Radtec's Transmitter Division

➤ **Broadest Product Line In The Industry**

- S, C and X-Band Coaxial Magnetron Weather Radar Systems
- C-Band Fully Coherent Klystron Weather Radar Systems
- S, C, X and K-Band Military Systems
- Mobile Systems
- Turnkey Systems
- Upgrades/Enhancements For Existing Systems

Benefits:

1. Broad selection of investment levels
2. Tailored to both budget and technical requirements
3. Technology to match your weather and climatology



TDR 43-250 250 kW C-Band Klystron Radar



RDR-250GC 250 kW C-Band Coaxial Magnetron Radar



Military 1 MW C-Band Transmitter
(Currently being FCC Type Certified for commercial sale in the U.S.)



RDR-50GX 50 kW X-band Radar for a military project requirement

➤ **Mobile And Transportable Systems**

- Data quality comparable to permanently installed radars
- Can be permanently mounted on transport vehicle, trailer, or in a transportable package separate from transport vehicle
- Easy, fast set up, can be only minutes from stopping to operating



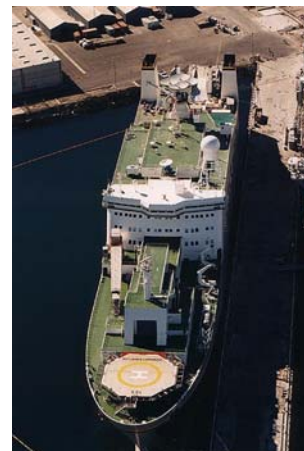
Tactical weather radar system- Complete fully coherent C-band system, including antenna and tower, packaged on one standard air freight pallet, fits in C130 type aircraft. Setup by 2 person crew with no additional equipment. Only shelter and electrical power required.



High performance self erecting tower, setup by 1 person in minutes. Can be truck, trailer or pallet mounted.



Shelter mounted radar for weather modification project



Boeing Sea Launch Commander weather radar system

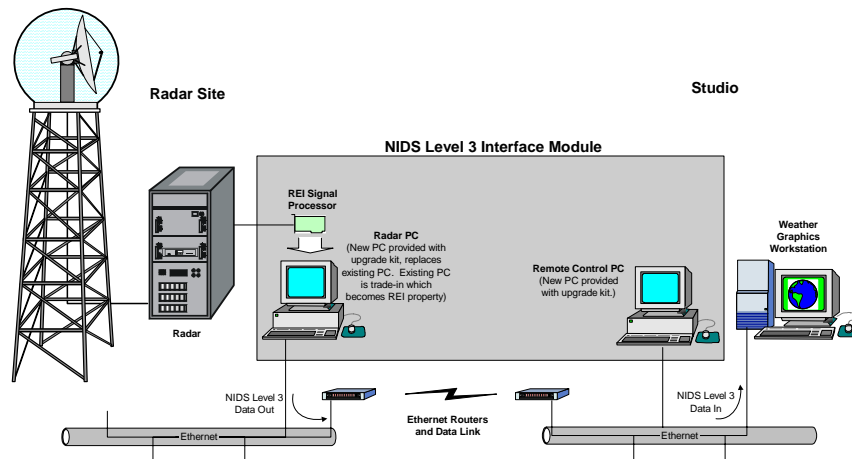
➤ Upgrades And Enhancements For Existing Weather Radar Systems

- Cost effective way to modernize radar capability
- Install modern technology in critical areas of existing radar system – improve flexibility/accuracy/reliability/maintainability

Available Upgrades:

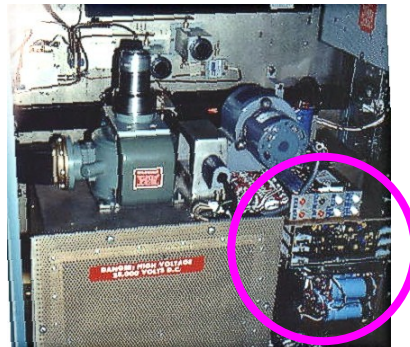
1. “Universal” Data Format For Flexibility In Choice Of TV Weather Graphics Software

- Upgrade packages available for ADC, Baron, EEC and Kavouras Radars, others upon request
- Output in NIDS 3 Radial format to WSI, Weather Central, WDI, AccuWeather and other weather graphics software packages



2. Upgrade Existing Thyatron Modulator To IGBT Solid State Modulator

- No more expensive thyatron replacements
- Improved reliability
- Improved data accuracy
- Reduced cost of ownership



Radtec Solid State IGBT Modulator
installed in EEC radar system

➤ **Proven Installations Worldwide**

- *Broadcast TV* - Over 80 systems
- *National Meteorological Service applications* - 11 systems
- *Airport wind shear detection* - 6 systems
- *Weather modification applications* - 5 systems
- *Military applications* - 6+ systems
- *Hydrology/water management applications* - 4 systems
- *Scientific/academic applications* - 2 systems
- *Shipboard weather applications* - 2 systems
- *Special purpose Transmitter Division Products*



**Brussels Int'l Airport
Belgium**



U S Air Force



**Beijing Capital Airport
China**



**Sanya Phoenix Airport
China**



Numerous TV Stations



**U S NOAA "Ron Brown"
Research Vessel**