



PROTECTING PEOPLE AND ASSETS™

WHEN YOU ENGAGE WITH EEC, YOU GET MORE  
THAN PREDICTION. YOU GET PROTECTION.

## EEC - A HISTORY OF INNOVATION



Original installation July, 1984  
Zirbitzkogel, Austria



2010, Complete installation  
of Austrian network



In 1971, a group of radar engineers formed a company in south Alabama. Their dream was to develop and manufacture affordable, high quality meteorological radar systems and market them to the world. With corporate headquarters based in Enterprise, Alabama, they called their new company Enterprise Electronics Corporation now known as EEC.

By 1974, EEC was fully operational and producing magnetron-based C-Band and S-Band weather radars. In that same year EEC introduced its first major innovation – the Digital Video Integrator Processor (DVIP). As the first digital hybrid display, DVIP visually presented (in glorious black and white) six different intensities of rainfall, making it easier to accurately determine the level of rainfall in a given area. After the US National Weather Service selected EEC's DVIP-equipped radars to replace 160 older models across the country, DVIP became the standard for radar displays. In the early 1980's, EEC added the Digital Colorizer to the DVIP display, once again becoming the new standard around the world.

of RADSYS, the first PC-based weather display. And the first totally computer controlled radar and motion control system was based on EEC's Radar Control Processor (RCP). In the late 1980's and into the 1990's, broadcasters demanded more showmanship in their radar displays. EEC developed WeatherWindows, based on advanced display capabilities that leveraged modern graphics hardware from the Silicon Graphics Company. At the same time, traditional users expected a more sophisticated research-based application. EEC's response, EDGE, was specifically designed for advanced radar research, and remains very popular in the international market.

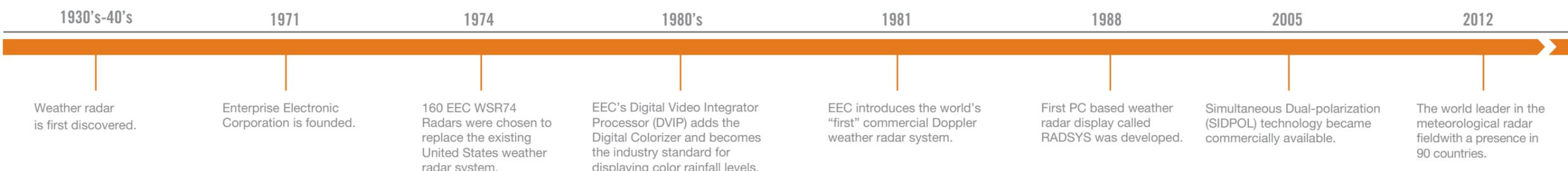
The next bold innovation from EEC hit the market in 1981. This development changed the very function of weather radar. Working with a group of engineers at the prestigious Massachusetts Institute of Technology (MIT), EEC developed the PP-01 digital signal processor. Using this processor, EEC designed a new weather radar for an Oklahoma TV station located in "Tornado Alley". It was the first commercial weather radar capable of measuring the speed and direction of an approaching weather event. They called it "Color Doppler" weather radar.

Even as Doppler radar became accepted around the world, EEC set the pace with more innovations. The ESP-7 signal processor was at the heart

In 2005, EEC again shook up the weather radar market with the unveiling of Simultaneous Dual-Polarization – giving EEC the first commercially available dual-polarity radar system. Then in 2008, the DWD (Germany) selected EEC to design and build its national system of weather radars. Other nations soon followed including Austria, South Korea and Sweden. At the same time, EEC introduced new technical and product innovations including the IQ2 signal processor; and new radar architectures incorporating fiber-optics, advanced motion control systems, and new antenna designs. EEC is currently collaborating with the University of Oklahoma on research and technology for dual-polarity applications and development of the low-power, portable, solid-state Ranger X-Band system.

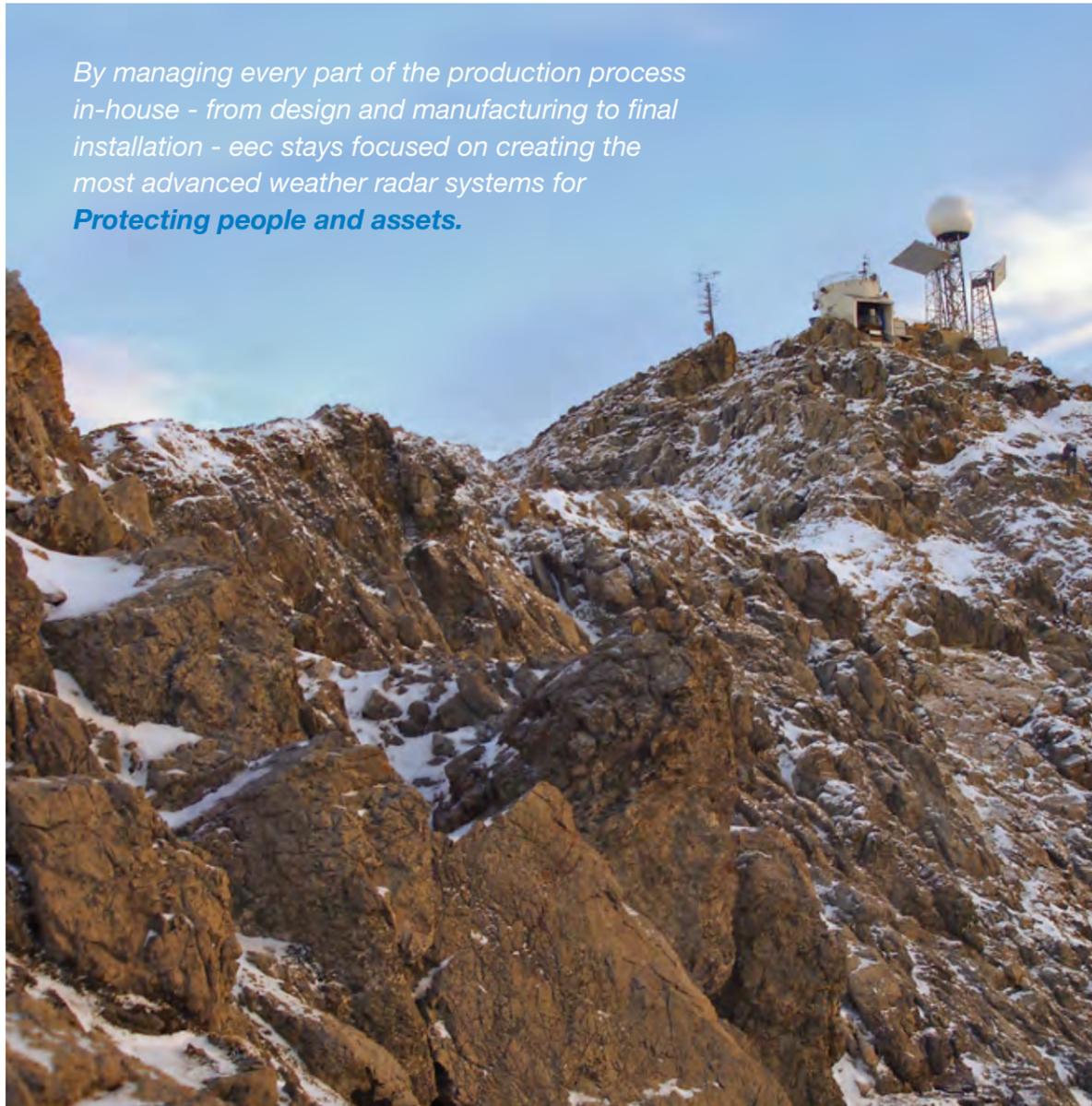


**IQ2 Digital Receiver Signal Processor**  
The latest design available in the weather radar market today employs cutting-edge hardware and software technology to achieve the highest data resolution in the industry.



## TURNKEY SOLUTIONS

By managing every part of the production process in-house - from design and manufacturing to final installation - eec stays focused on creating the most advanced weather radar systems for **Protecting people and assets.**



### End-to-End Solutions

For over 40 years, creating turnkey weather detection systems has been an important EEC advantage. Even today, your EEC weather radar is designed by EEC, manufactured by EEC, and installed by EEC. Plus your key personnel are trained by EEC.

### Engineering and Design

From designing mammoth Klystron S-Band radar systems to pioneering a fiber-optic link for transporting huge amounts of dual-polarization data, our own EEC engineering staff develops the hardware that keeps EEC at the leading edge of technology. At the same time, EEC's in-house software engineers make our systems highly accurate yet practical, by creating the analytical and display tools that quickly turn raw data into dynamic displays.

### Manufacturing

To ensure our products perform up to the most stringent engineering specifications, we make our own components – from tiny printed circuit boards to huge antennae. In-house manufacturing also gives us the flexibility to vary a configuration to meet your exact specifications.

### Installation

No matter the quality of the system, a poorly-located installation can ruin everything. We help you determine the most optimal site location, and then we install your system to maximize performance whether it's located in a river valley near a major city or on a mountain top overlooking the deserts of North Africa.

### Weather Radar Upgrades

One often-overlooked benefit of selecting EEC is our commitment to provide comprehensive software and hardware upgrades for older EEC radars or for radars from other manufacturers. Because of our turnkey, in-house expertise in weather radar engineering, manufacturing, software, and implementation, we can take on the most challenging radar upgrades. Example: EEC recently received the contract to upgrade Sweden's aging national radar network to dual polarization technology while also retaining much of the existing infrastructure and mechanical hardware.

Providing you with practical upgrade solutions solidifies your EEC radar system's value for years to come.



#### Fiber Optic Rotary Joint

An exclusive EEC design innovation that enables an ultra low loss, high stability receiver/signal processor architecture.

## PRODUCTS



**C-BAND** DWSR-2501C, DWSR-2501C/K,  
DWSR-3501C, DWSR-5001C, DWSR-10001C

### The global choice for protection

For geographic areas with diverse and dynamic weather conditions, nothing offers greater value for the money than EEC's line-up of popular C-Band weather radars. The choice of weather services, national governments, broadcasters, and businesses around the world, EEC can custom configure a C-Band solution for almost every need.



**S-BAND** DWSR-8501S, DWSR-8501S/K

### The power to predict

With the ultimate long-range view, the EEC S-Band radar gives you the ability to plan, predict, and protect – before severe weather strikes. This massive power makes our S-Band systems ideal for covering huge expanses of land and water, analyzing multiple fronts of heavy precipitation.



**X-BAND** DWSR-2001X

### The perfect, practical, precise solution

EEC's DWSR-2001X X-Band weather radar system is ideal for short and medium applications that require any combination of accuracy, mobility, and of course, reliability.



**RANGER™** X1 & X5 MODELS

### This is the future of X-Band

The new era of X-Band is here! EEC's new Ranger weather radar systems feature dual-polarity accuracy, solid-state transmitters, low power consumption - everything you want in an X-Band in one affordable and portable unit.

### EEC C-Band radar-the benchmark standard around the world

For most areas of the world, nothing offers a better value than the proven line-up of C-Band radar systems from EEC. Even in challenging environments, our C-Band systems provide powerful and accurate information. Perhaps most importantly, the specifications of our C-Band radars can be customized to meet a wide range of demands and uses.

#### C-BAND SYSTEM ADVANTAGES

- Systems are available in magnetron, klystron and solid-state transmitter configurations
- Algorithms developed and specifically tuned for performance at C-Band
- Designed for high-resolution medium to long range weather detection
- Innovative architecture provides the highest receiver sensitivity
- Advanced radar motion control system provides better spatial resolution resulting in more accurate data
- Industry leading clutter suppression technology
- Patented fiber-optic technology provides noise free, ultra-high speed data throughput
- Adaptive spectrum-based clutter mitigation algorithms
- Improved data quality achieved through advanced continuous calibration techniques
- Advanced Polarimetric rainfall estimation and attenuation correction techniques

### Big weather needs a big radar

Monsoons. Hurricanes. Cyclones. Blizzards. To make the best long-range predictions of the biggest weather makers, you need to have the biggest radar with the lowest attenuation. Both the Magnetron-powered DWSR-8501S and the Klystron-powered DWSR-8501S/K are designed and engineered with an output of 850kW - more radiated power than any other commercially available S-Band weather radar!

#### S-BAND SYSTEM ADVANTAGES

- Systems are available in magnetron, klystron and solid-state transmitter configurations
- Algorithms developed and specifically tuned for performance at S-Band
- Superior performance designed for long range weather detection
- Innovative architecture provides highest receiver sensitivity
- Advanced radar motion control system provides better spatial resolution resulting in more accurate data
- Industry leading clutter suppression technology
- Patented fiber-optic technology provides noise free, ultra-high speed data throughput
- Adaptive spectrum-based clutter mitigation algorithms
- Improved data quality achieved through advanced continuous calibration techniques
- Advanced Polarimetric rainfall estimation and attenuation correction techniques

### For short to mid-range accuracy, X marks the spot

EEC's shorter wavelength X-Band weather radar can detect even tiny particles such as high altitude water droplets or light snow. The compact size of this complete X-Band system makes it the perfect choice for portable applications and "filling-in" geographical areas that S-Band and C-Band skip over. Dual-polarity capabilities are standard features for this system.

#### X-BAND SYSTEM ADVANTAGES

- Algorithms developed and specifically tuned for performance at X-Band
- Designed for fixed-site and transportable configurations
- High resolution data optimized for short and medium range weather detection
- Innovative architecture provides the highest receiver sensitivity
- Advanced radar motion control system provides better spatial resolution resulting in more accurate data
- Industry leading clutter suppression technology
- Patented fiber-optic technology provides noise free, ultra-high speed data throughput
- Adaptive spectrum-based clutter mitigation algorithms
- Improved data quality achieved through advanced continuous calibration techniques
- Advanced Polarimetric rainfall estimation and attenuation correction techniques
- Super-high resolution IQ2 16-bit digital signal-processor

### Put the accuracy of dual-polarity to work anywhere

This is what X-Band should be! Developed by EEC in collaboration with the prestigious Atmospheric Radar Research Center at the University of Oklahoma, the affordable Ranger is a compact system weighing less than 400 lbs/180kg yet featuring a 100 watt or 500 watt dual-polarity, advanced solid-state transmitter and very low power consumption.

#### RANGER SYSTEM ADVANTAGES

- Algorithms developed and specifically tuned for performance at X-Band
- Advanced technologies in a compact and light-weight design
- Ultra high resolution data for short and medium range weather detection
- Designed for fixed installations or rapid mobile deployment
- Dual transmitter design:
  - Allows for simultaneous or alternating dual-polarization modes
  - High availability
- Low maintenance and Life-cycle costs
  - Simplified design removes complex wave guide and switches
  - Decreased system power consumption
  - Patent-pending revolutionary sealed bearing design
- The most efficient pulse compression techniques available
- Innovative architecture provides the highest receiver sensitivity
- Patented fiber-optic technology provides noise free, ultra-high speed data throughput

## PRODUCTS

### RADAR ANALYSIS SOFTWARE

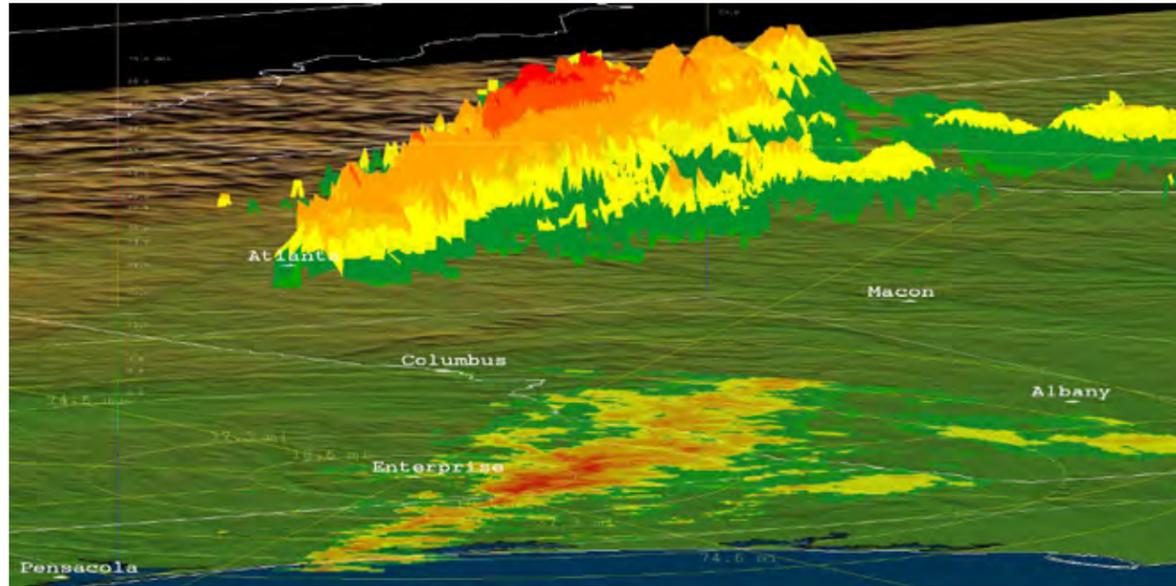
#### Our software puts you in control

Making it easy to extract, display, and interpret useful weather information in ways that you never thought possible - that's the whole idea behind our powerful suite of weather radar control and data display software.



#### Powerful tools give you new ways to look at the weather

When you take control of EEC's display software, you have the power to easily do what you have always wanted to do: observe and interpret phenomena previously hidden within the data. Set alerts to automatically warn when certain conditions are detected. Animate and manipulate data to compare different "what if" scenarios. Organize and retrieve all of your information through a built-in database management system. Plus many more sophisticated meteorological products. Our software is both powerful and easy to use because, like all of our other products, it is designed and created by EEC's own engineers. Since it interfaces seamlessly with our processors and displays, our engineers can build in the most powerful and comprehensive set of features for weather analysis possible - even include custom algorithms tuned for each radar band we manufacture. With unmatched flexibility and ease of use, an entire suite of specialized products, and seamless integration into all EEC systems, our display software puts you in control.



*An EEC weather radar system is a powerful and precise instrument. To achieve its maximum potential, it needs to be sited and installed correctly and staffed with well-trained personnel. EEC will guide you through the process, providing comprehensive site surveys and full installation services anywhere in the world. We will also train your key personnel to make the most of your system's capabilities with customized training either on-site or at our facility. EEC will be with you throughout the entire process*

## IMPLEMENTATION & TRAINING

### Site for Success

Somewhere in Brazil's immense Amazon Rain Forest, an EEC S-Band radar scans the horizon for signs of threatening weather heading toward the cities. On a mountaintop in Bavaria, the data from an EEC C-Band radar system is merged with the data from Germany's 17 other EEC radars to create a complete picture of that country's current weather. At a regional airport in the USA's western Rocky Mountains, an EEC X-Band radar monitors a developing storm that could interfere with air traffic over three states. All around the world, wherever there are people and assets that need warning and protection from weather, there is an EEC radar on the job scanning the skies. How do you achieve that level of protection? It begins with selecting the correct EEC weather radar system - S-Band, C-Band, or X-Band - to fit the terrain, climate, and your individual specifications. Then, based on our 40-plus years of experience installing over 1000 radar systems, we will help you determine the best site for maximum coverage and performance.

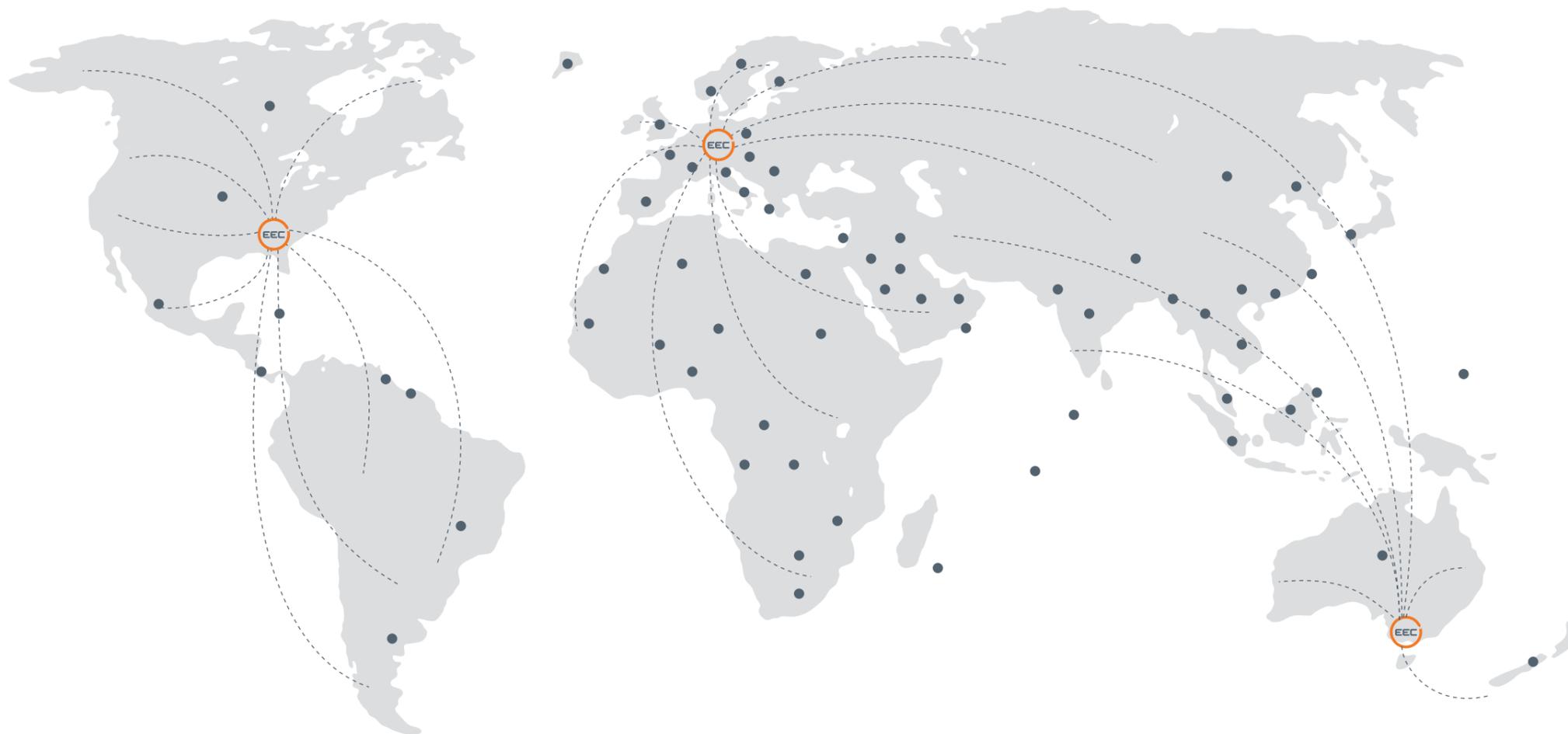
### Installation

When we execute a detailed site survey, the final location is based on where the radar will get the best results - no matter how remote and inaccessible it may be. Then it's up to us to get the entire system to that site and properly installed. And that includes supplying power to the site, connecting all the equipment together, and testing everything to make sure it all operates up to specification.

### Training

Every new EEC weather radar system contains the technology to generate very sophisticated information. Taking full advantage of that potential requires a commitment to learning how the system works, how to interpret its output, and how to keep it properly maintained.. But to be truly effective, it must all be learned in the context of your geography, climate, and specific weather challenges. To help you unlock the potential of your EEC system, our meteorologists will train your personnel either at our facility in Alabama or on-site. All of the training plans will be customized for your system, your weather, and the knowledge level of your personnel - anything from the basics up to very advanced, multi-week courses offered in partnership with the University of Oklahoma. With EEC's customized training, you will be able to maximize the value of your system, and protect your people and assets.

# GLOBAL SUPPORT



To help you maximize your radar system, EEC has made strategic improvements to our ongoing support services. Along with on-site maintenance and advanced training programs, we have recently upgraded our worldwide technical support network, and added three global support centers for faster responses.

### Global Support Contact Information

Email: [support@eecradar.com](mailto:support@eecradar.com)  
Telephone: 334.347.3478, Ext.233  
Facsimile: 334.308.0124

Customer Support (after hours):  
Telephone: 334.347.3478, Ext. 555

### Worldwide Technical Support

Your EEC radar system represents a significant investment by you in time, people, and money. That is why we have upgraded our technical support centers to give you 24/7 live telephone support. No matter what time of day or from where you are calling, you can talk to a trained, courteous EEC representative to help you solve the issue.

### On-site Maintenance

Our customized training programs teach your personnel how to perform routine care and calibration of your systems. To augment existing maintenance programs, many customers also take advantage of our annual support and preventive maintenance plans. If the radar system has internet connectivity, we can monitor the health of the system via our remote diagnostic software. And finally, should you encounter a bigger issue, we can send a factory trained technician directly to the site to diagnose and correct the problem.

### Advanced Training

The forward-thinking technology available in an EEC radar system is capable of producing advanced information which exceeds the current needs of most users. Should your requirements specify this level of information, or your installation utilizes some of our most sophisticated equipment, we offer optional enhanced training in the use and maintenance of these features.

### Three Support Centers

EEC has radar system installations in over 90 countries on every continent except Antarctica. To fully support all of these sites, we have opened fast response service centers in Bonn, Germany; Melbourne, Australia; and at our headquarters in Enterprise, Alabama. By placing these service centers in strategic positions around the globe, we can respond to you quickly and efficiently.





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EEC is an ISO 9001: 2008 company.

This publication is issued to provide limited information regarding the product or model number specified and is supplied without liability for errors or omissions. We reserve the right to modify OR revise all or part of this document without notice. For detailed information regarding the radar model mentioned in this publication, write or e-mail EEC at the address provided.

SIDPOL™ Radar is patented technology, covered by U.S Patent No. 6,859,163 B2, U.S. Patent No. 7,049,997, U.S. Patent No. 7,439,899, U.S. Patent No. 7,551,123, U.S. Patent No. 7,683,828, U.S. Patent No. 7,750,573, U.S. Patent No. 7,760,129, U.S. Patent No. 7,880,665, U.S. Patent No. 7,450,693, U.S. Patent No. 7,369,082, 13041 (OAPI Region), 009250 (Eurasia) and 009249 (Eurasia).

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