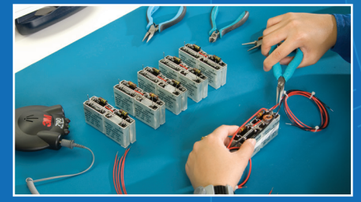
## About dB Control

Established in 1990, dB Control Corp., a subsidiary of the Electronic Technologies Group (ETG) of HEICO Corp., supplies mission-critical, often sole-source, products worldwide to military organizations, as well as to major defense contractors and commercial manufacturers. dB Control designs and manufactures reliable high-power TWT Amplifiers (TWTAs), microwave power modules (MPMs), transmitters and power supplies with modulators for radar, electronic countermeasures (ECM), and data link applications. The company's high-power amplifiers use solid state, as well as vacuum electron devices and cover the 1 to 50 GHz frequency range. The modularity of dB Control's designs enables rapid configuration of custom products for a variety of platforms, including ground-based and high-altitude military manned and unmanned aircraft. dB Control has an outstanding record of successfully repairing, refurbishing and replacing tightly packaged


high-voltage transformers, assemblies and power supplies. The company offers specialized contract manufacturing, transformer winding and testing, full vacuum encapsulation, pressure cure, conformal coating and repair depot services from its modern 52,100-square-foot facilities in Fremont, California. **www.dBControl.com**

# Specialized Contract Manufacturing for High-Voltage, High-Power Products.



## dB Control delivers.

MKT-0552 Rev A

dB Control
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Reliability by Design®

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- Mechanical & Electromechanical Assembly
- Full Vacuum Encapsulation
- Conformal Coating
- High- & Low-Voltage Transformer Winding & Testing
- Custom Cabling & Harnesses
- Environmental Stress Screening (ESS)

## Assembly and Test of Complex, High-Voltage Products is our Specialty

No matter how stringent your specifications, we know how to solve your assembly and test challenges and improve manufacturability for your high-voltage, high-power products. That's because for 20 years we've designed and manufactured mission-critical (often sole source) products for the US Army, Navy and Air Force, as well as for major defense contractors, commercial manufacturers and military organizations worldwide. And we do it with one of the best on-time delivery rates in the industry.

## Potting, Encapsulation, Conformal Coating Reduces size, Increases Reliability

Potting, encapsulation and conformal coating are critical processes which enable high-voltage components to be located in close proximity to each other. These processes increase efficiency by significantly reducing the size of a power supply. For example, every ten kilovolts requires approximately an inch of air space between components to prevent arcing. Without this space, unprotected components can cause system failures. Potting reduces this isolation space down to approximately one-tenth of an inch, enabling a 20 kV power supply with approximately 30 isolated components to fit in a shoe box instead of a 10x10x10-foot packing crate.

Additionally, potting and conformal coating helps protect components from exposure to elements such as dust, moisture and extreme temperatures.

| High Complexity Products | Specialized Service |
|---|---|
| High-voltage transformers for military and commercial TWT Amplifiers | Winding, encapsulation, hi-potting and test |
| High-voltage power supplies for military and commercial TWT Amplifiers | Assembly, value-added assembly, encapsulation, conformal coating and test |
| High- and low-voltage power supplies for industrial X-ray equipment and various medical equipment | Assembly, encapsulation and test |
| High-voltage connectors and cables | Assembly, encapsulation, hi-potting and test |

Another benefit is defense against shock, vibration and corrosive substances. Our proprietary conformal coating process uses silicone instead of polyurethane because higher glass transition temperature (Tg) potting compounds can fracture solder bonds as they harden and shrink at decreased temperatures.

Our ability to consistently encapsulate hundreds of high-voltage components to the exact same specifications is unmatched in the industry. In addition, our services have helped other companies improve low-yield issues and increase the reliability of their products.

## Assembling Tightly Packaged High-Voltage Circuitry

A typical high-power product can have more than 30 components tightly packed into a very small space. Add high-voltage circuitry, and assembly requires surgical precision. Our assemblers are high-voltage specialists and part of a highly trained team of more than 120 employees. Most have been with us for at least five years and many for more than a decade.

All assembly services are performed onsite in our 52,100-square-foot facility, conveniently located at the north end of Silicon Valley in Fremont, California – just minutes from the San Jose International Airport.

## Extensive Customized Testing Ensures Reliability

When it comes to systems used for applications where lives are at stake, reliability is non-negotiable. That's why we developed extensive test capabilities that give us complete control over the processes – and also offer automated 24-hour test cycling to reduce processing time and labor costs. Not only are we highly meticulous when testing your assemblies, we can also customize test services to meet your needs.

For instance, if your assembly has temperature and altitude specifications, we can program our environmental test chambers for your specific requirements, and accommodate enclosures from small airborne to large rack-mount assemblies.


## Assembly Services

- Mechanical and electromechanical assembly
- Full vacuum encapsulation
- Conformal coating
- High- and low-voltage transformer winding and testing
- Custom cabling and harnesses
- High-voltage ball soldering
- Quick turnaround
- Low-volume thru-hole, SMT and mixed technology PCBs
- Blanket orders with JIT (Just-In-Time) delivery
- Turnkey assembly from BOM

## Assembly Equipment

- Vapor degreasers for efficient product cleaning
- Pressure-cure ovens for thorough epoxy curing

## Test Services and Equipment

- Complete life cycle support
- Environmental Stress Screening (ESS)
- Temperature/altitude chambers
- Vibration test capability for testing at high G-force levels
- Highly Accelerated Life Test (HALT) chamber
- Highly Accelerated Stress Screening (HASS) chamber
- Augmentation of existing shock/vibration equipment
- Modern network and signal analysis instrumentation

## Certifications

- IPC-A-610 Class 3 Acceptability of Electronics Assemblies Certified
- IPC/EIA J-STD-001 Class 3 Certified for Soldered Electrical and Electronic Assemblies
- First article inspection in accordance with AS 9102
- ISO 9001:2008 certified
- IPC-7711/7721 Class 3 Certified
- IPC-A-600 Class 3 Certified

ISO 9001:2008
FM 562492

***Reliability by Design®***