



# GAMEWELL-FCI BDA ERADICATES RADIO SIGNAL INTERFERENCE FROM GLASS PERFUME BOTTLES

Bi-Directional Amplifiers from Gamewell-FCI

**In 2018, Elegance Perfumes Inc. built its new mixed-space office and warehouse facility in Sunrise, Florida. The 45,000 SF building offers multiple tenant spaces, including shipping bays, second floor offices, and ample warehouse racking systems. The building was built entirely out of concrete to safeguard against hurricanes and thunderstorms. Eco-glass was installed throughout the office areas.**

**Fire Controls Inc., an “Elite” Engineered Systems Distributor (ESD), was on board to design and install a Gamewell-FCI fire and life safety system, enhanced with Bi-Directional Amplifiers (BDA), to ensure comprehensive first responder radio coverage. This would prove to be the first Honeywell/Gamewell-FCI BDA installation in Broward County.**

## Needs

- Combined fire and life safety system to fit the unique structure needs
- Seamless integration between BDA and Life Safety system for code-compliance supervision
- Must achieve 99% radio wave coverage in a radio hostile environment
- Fast and efficient installation to meet tight deadlines

## Challenge

The structure needed a comprehensive fire and life safety system that would comply with Broward County’s recently amended building and fire safety codes. The County stipulates that “two-way radio communication enhancement public safety signal booster systems” must be installed to achieve 99% floor public safety radio coverage in critical areas. Reliable two-way radio coverage is vital for first responders to help protect lives and property.

To achieve the approved radio coverage was a challenge with the building itself consisting solely of concrete and eco-glass. The warehouse featured a large 30 ft racking system that housed thousands of glass perfume bottles. This environment initially caused significant radio signal dead spots for first responder radios. In order to secure permits from Broward



County, Fire Controls Inc. and the design team had to present a comprehensive fire and life safety solution that would boost radio signals enough to meet the code required 99% radio coverage for first responder radios.

Anticipating a long permitting process, Fire Controls Inc. also needed a comprehensive all-in-one fire and life safety system that could be installed quickly and efficiently to meet target deadlines, be easy to maintain and intuitive to operate.

## Solution

Fire Controls Inc. and the project's design team opted for the Honeywell® Gamewell-FCI S3 Series® fire alarm and life safety system coupled with 700/800MHz dual band addressable Bi-Directional Amplifier (BDA) technology.

The S3 Series is an easy-to-use, intelligent fire alarm solution designed for small to mid-size buildings. Its FACP features an intuitive color touch-screen menu with concise system operations, making it easy to navigate during a fire emergency. Using true Boolean logic, unique to Gamewell-FCI, the S3 system can be customized to suit any project's needs. It is easy to use, simple to install and budget friendly.

To ensure reliable radio coverage throughout the building, Fire Controls Inc. and the design team installed a Bi-Directional Amplifier system. Gamewell-FCI BDAs are high gain, high power band-selective signal boosters that can be customized to meet all public safety frequency band ranges. Honeywell has the only NFPA 72/1221 compliant and UL 2524 listed BDA technology on the market to date, and provide 99%+ reliable two-way radio signal coverage inside buildings, tunnels and other structures.

To determine locations of potential radio signal failure, Honeywell's design experts mapped the building into 20x20ft grid sections, then overlaid an IBWave heat map. Any areas testing at negative 95dB loss were deemed as signature failure points. Referencing the heat map, Fire Controls Inc. installed 18 Distributed Antenna System (DAS) antennae throughout the dead spot zones. The main BDA module was installed next to the S3 FACP, while the donor antenna was placed across the property, closest to the city radio tower.

"Having FCC licensed staff is a MAJOR benefit to BDA installations. It is life safety equipment for first responders. BDA systems need to be installed and maintained by experts. Emergency Radio Commutation Enhancement System (ERCES) is a vital component to protecting our First Responders," states Brian Feero, President of Fire Controls Inc.

By designing and expertly installing a comprehensive Gamewell-FCI S3 fire safety system coupled with BDA signal boosters, Fire Controls Inc. established 99% radio coverage for Elegance Perfumes. The success of this installation cemented Gamewell-FCI BDA as the best-in-class signal enhancement solution for Broward County.

"Once the fire department approved the permits, the installation went very smooth. Gamewell-FCI BDA is well designed for easy installation, and its short lead time was excellent, which really helped expedite the project," concludes Brian Feero, Fire Controls Inc.

## Benefits

- Life-saving, reliable two-way radio coverage for first responders and public safety
- Expertly placed signal boosters to achieve the strict 99% coverage
- Easy to use and overall low cost of ownership
- Expert installation and maintenance by local Gamewell-FCI authorized factory distributor

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