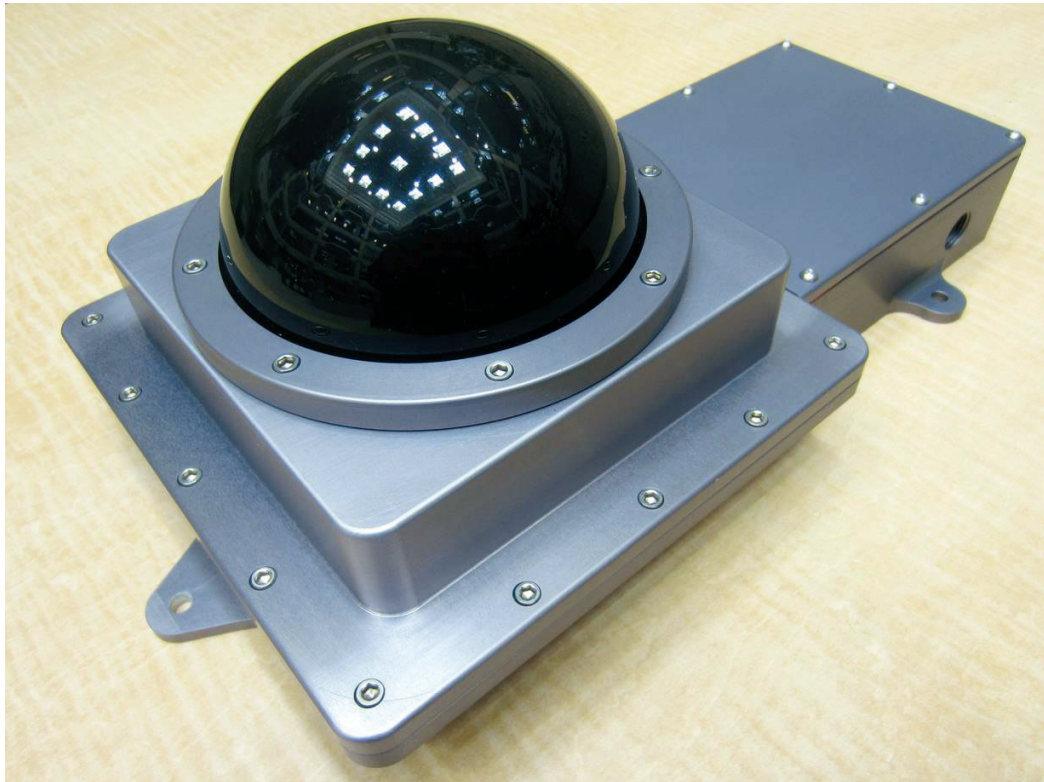




EVEN I CAN'T SEE IT. NOBODY CAN.  
UNTIL NOW.



## EMP.Alert™

Without any warning or detection, an electromagnetic pulse (EMP) can severely disrupt data centers and control centers causing damage ranging from covert data corruption, to computer outages, and destruction of electronics. **Emprimus EMP.Alert™** is a low-cost detection solution that can provide an early warning for data

and control center targets. It has the potential to detect a threat in time to take defensive action and, as part of your security system, can help locate and eliminate it. The EMP.Alert™ can determine the cause of “unexplainable” outages, alert the users to potential data corruption from an attack and provide invaluable forensic information.

emPRIMUS™

# THE BACKGROUND

Electromagnetic weapons have evolved from experimental novelties to sophisticated threats. They have now become portable, affordable items that can be effectively employed outside a building to damage all electronic circuitry in data and control centers, including support

equipment, cooling, fire and smoke detectors, security systems and back-up generators. They are readily available to terrorists, disgruntled employees, corporate protesters, or anyone intent on causing major disruptions to your business and your customers.



*RF Weapon circa 2004*



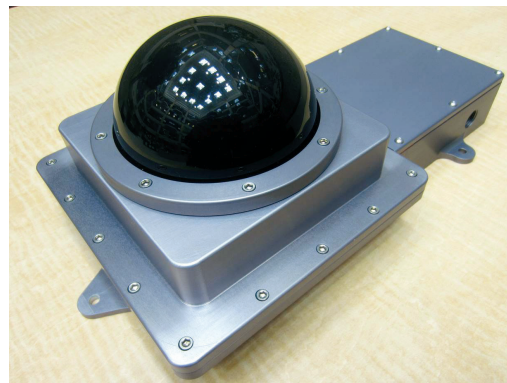
*Suitcase RF Weapon circa 2016*

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## THE BENEFITS OF EMPAAlert™

Emprimus EMPAlert™ is worth the low-cost investment – whether 1 or 20 units are needed. Reporting on one dedicated dashboard, Emprimus EMPAlert™

- Immediately identifies intentional and unintentional electromagnetic interference
- Alerts users to possible data corruption and damage to Building Control Systems
- Provides diagnostic and forensic information
- Continuously verifies EMP shielding integrity and effectiveness
- Integrates with security systems



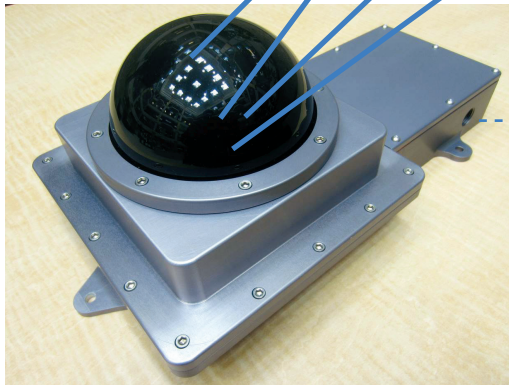
# TYPICAL SYSTEM INSTALLATION



*High Power "Suitcase" RF Weapon*



*Unshielded or Shielded  
Data or Control Center*



Emprimus EMP.Alert™

- *Fiber Optic Output to Control Center*
- *IP Addressable*

## THE VALUE

In addition to being low cost, Emprimus EMP.Alert™ can be easily installed on your building and can be integrated with most security displays. Emprimus EMP.Alert™

has been installed at various sites where it operates today. It provides the critical situational awareness you can't afford to be without.

emPRIMUS™

# DATA REPORTS

emPRIMUS™

● Emprimus
 St. Louis Park, MN.
⚙️

Site Map: Emprimus St. Louis Park, MN.



Status: Emprimus St. Louis Park, MN.

● Monitoring service is running.

● Event relay is open.
 ⚙️

Detector	Reading Time	Reading (v/m)	Status
North Wall	12:44:53.787	6.3	●
East Wall	12:44:53.817	6.3	●
West Wall	12:44:53.847	6.3	●
South Wall	12:44:53.880	6.3	●

Emprimus Detector Detail

Serial Number A3-000-111000-83 [DEMO]

Name: North Wall

COM Port COM5

Lat, Long: 45.00000, -90.00000

Hourly Max (24 hrs) [DEMO]



Daily Max (30 days) [DEMO]



Monthly Max (12 months) [DEMO]



Readings Filter [DEMO]

Last 24 hrs

Date Range

Event

Type	Started	Max v/m
●	03/18/12 18:57:20.463	96.0000
●	03/18/12 18:45:57.510	97.9000
●	03/18/12 18:41:23.883	83.0000
●	03/17/12 13:56:51.527	86.7000
●	03/16/12 19:00:42.377	99.8000
●	03/16/12 18:40:34.243	98.7000
●	03/16/12 18:25:34.760	98.7000
●	03/15/12 10:18:50.667	99.9000
●	03/15/12 10:05:19.433	99.9000
●	03/15/12 10:02:49.200	99.9000
●	03/15/12 08:55:30.647	99.9000
●	03/14/12 17:30:29.990	99.9000

Detector Readings [DEMO]



Save as event

Acknowledge

Export to Excel

Notes

Threshold value of 10.0000 was exceeded. Acknowledged 03/21/12 09:12:45.

## EMP.Alert™ SPECIFICATIONS

Frequency Response Range	10 MHz to 10+ GHz
Pulse Rise Time	<2 ns
E Field Amplitude	<100 V/m to 100,000+ V/m

Contact Emprimus at 4301 Highway 7, Suite 140 – Minneapolis, MN 55416  
 Contact info@emprimus.com [www.emprimus.com](http://www.emprimus.com)



# Model Comparison

The patented EMP.Alert™ comes in two models:

EMP.Alert™ Model:	RF-71	RF-81
Frequency Range of Detection:	100 MHz – 10 GHz	10 MHz – 150 MHz
Fast pulse detection (2 ns rise):	Yes	Yes
Severe EM environment rating:	100 kV/m	100 kV/m
EM Enviro measurement range:	100 V/m – 100 kV/m	100 V/m – 100 kV/m
Threats Covered:	EMP E1 RF Weapons IEMI	EMP E1 - -
User Interface Software:	Included	Included
User Interface Trigger Level:	User settable, 100 kV/m max	User settable, 100 kV/m max
Software Poll Rate:	1 Hz	1 Hz
Power Source:	24 VDC	24 VDC
Power Consumption:	18 W	24 W
Relay Output:	No	Yes
Relay Time Response:	N/A	< 10ms

**RF-71** is designed for continuous monitoring of equipment or spaces (e.g. **Data Centers**) to detect any intentional electromagnetic interference threats (**IEMI**) that would be of sufficient amplitude to cause upset or damage.

**RF-81** is designed specifically to detect the **EMP E1** (“early pulse”) of a high-altitude nuclear detonation with a **patented method of using the E1 pulse to:** trigger protective equipment (e.g. SolidGround™), open strategic breakers to create instant "Microgrids", isolate portions of the grid or de-energize vulnerable transformers, all prior to the arrival of the **EMP E3** pulse. [www.emprimus.com](http://www.emprimus.com)

**Meets the requirements of the 2017 National Defense Authorization Act (NDAA) SEC. 319 (3)** “rapidly isolating portions of the electric grid from the main electric grid” and **(6)** “a real-time alert system to inform operators within milliseconds of a high-altitude nuclear explosion.”

Frequency Range Comparison:

