

Red River Valley Amateur Radio Club WB5RDD (RRVARC)

HEMP – What is it other than a cousin
of marijuana?

High-Altitude Electromagnetic Pulse
(HEMP)

Recent Balloon Events

- U.S. releases photo of Chinese balloon captured by U-2 spy plane
- Here's your first look at that Chinese spy balloon
- US tracked Chinese balloon from launch, may have accidentally drifted: Official
- 'Large white balloon' spotted northeast of Hawaii

If we don't know what they are or who they belong to, can they be a threat?

<https://www.washingtonexaminer.com/news/washington-secrets/balloons-called-top-delivery-platform-for-nuclear-emp-attack>



Dry run: Balloons called top 'delivery platform' for nuclear EMP attack

by Paul Bedard, Washington Secrets Columnist | February 03, 2023 10:37 AM

High-altitude balloons, such as the one China has floated over mountain state military bases this week, are considered a key "delivery platform" for secret nuclear strikes on America's electric grid, according to intelligence officials.

Spy balloons, used by Japan to drop bombs during World War II, are now far more sophisticated, can fly at up to 200,000 feet, evade detection, and can carry a small nuclear bomb that, if exploded in the atmosphere, would shut down the grid and wipe out electronics in a many-state-wide area.

The threat of balloon-launched electromagnetic pulse attacks was warned about by a congressional EMP commission and inside the military several years ago.

In a 2015 report for the American Leadership & Policy Foundation, Air Force Maj. David Stuckenberg, one of the nation's leading EMP experts, wrote extensively about the threat balloons carrying bombs pose to national security.

"Using a balloon as a WMD/WME platform could provide adversaries with a pallet of altitudes and payload options with which to maximize offensive effects against the U.S.," he wrote in the report.

"A high altitude balloon could be designed, created, and launched in a matter of months. There is nothing to prevent several hundred pounds of weapons material from being delivered to altitude," he added.

On Friday, he told Secrets, "China's recent balloon flyover of the United States is clearly a provocative and aggressive act. It was most likely a type of dry run meant to send a strategic message to the USA. We must not take this for granted."

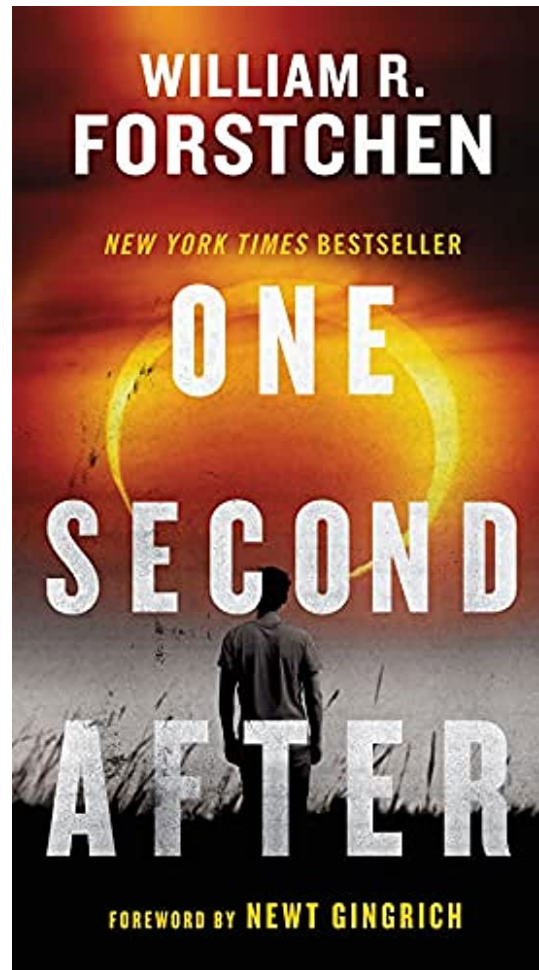
Now in the private sector, Stuckenberg, a national security expert and scientist who led the Defense Department's EMP Task Force and chairman of the American Leadership & Policy Foundation, pointed to Japan's World War II "Project Fugo" that targeted the U.S. with balloon bombs as an example of the threat. "Not since WWII has North America faced a threat of this nature. Project FuGo in Japan used balloons to float bombs on the trade-winds across the Pacific to the U.S. and Canada," he told Secrets.

EMP experts have warned that China, North Korea, Russia, and Iran have programs to hit the U.S. grid with electromagnetic pulse weapons that would cut the cord for a year or longer. A congressional report has warned that a blackout that long could result in millions of deaths.

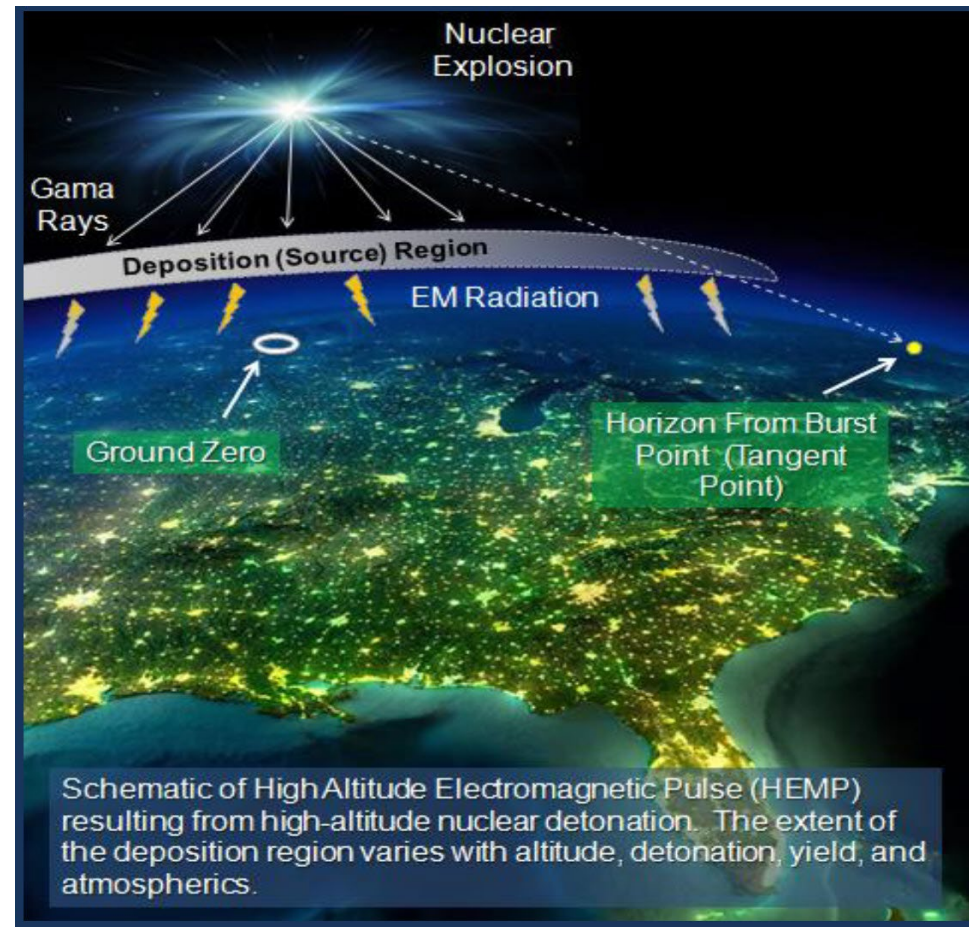
Stuckenberg cited the research of the late Peter Pry, who headed a congressional commission on EMP and reported on the potential of a balloon-launched attack.

He wrote in the report, "Peter Pry, a former CIA analyst and member of the Congressional Commission to Assess the Threat to the United States from EMP Attack, stated, 'Imagine the consequences of a balloon EMP attack that damages and destroys electronic systems at the speed of light within an EMP field with a radius of hundreds of kilometers. The

Article cites “blue paper” done by USAF Officer



Take Away From Blue Paper?



What Can A Person Do?

- We have a country of 300 million plus people.
- If a relatively sophisticated HEMP is used on us much of the population would probably be dead within a year.
 - Food
 - Medications
 - Potable Water
- How many people in this room depend on life-sustaining medications?
- How many people in this room depend on electricity to run a CPAP, keep the environment temperature and humidity controlled 24/7?

Prepare

- Ham radio is largely about preparation for disasters of all types, natural or man made.
- There are many resources available to help a person to make lists, lay in extra supplies, etc.
- How do you address your own part of critical infrastructure?
 - Keep some gear in a Faraday cage
 - Keep some gear in a Faraday bag

Prepare

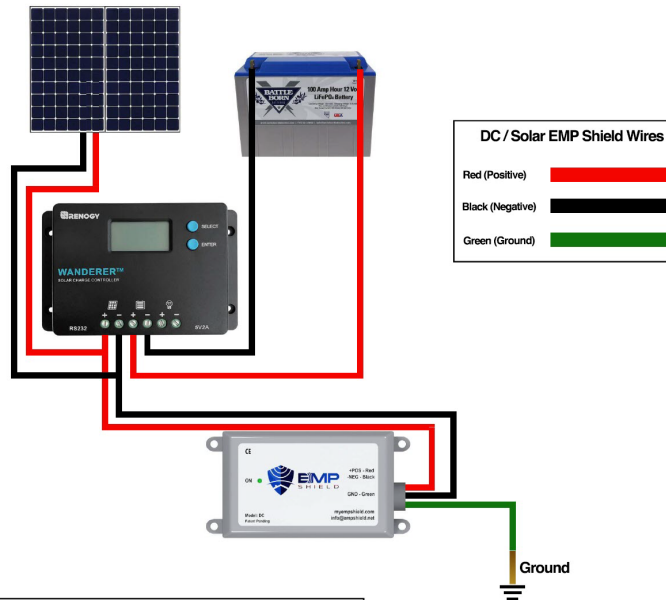
- What else?
- Protect circuits and items that cannot be placed in a Faraday cage or bag
 - Home
 - Generator
 - Vehicle

EMP Shield

- EMP Shield is the only product that I am aware of on the market that promises to provide that type of protection.
- I am not endorsing, selling or collecting any remuneration for this presentation.
- EMP Shield offers a line of, for lack of a better way of saying it, lightening/EMP arrestor/suppression, devices which they claim will handle all these things.

EMP Shield

Single Solar System Installation



EMP Shield Selection:

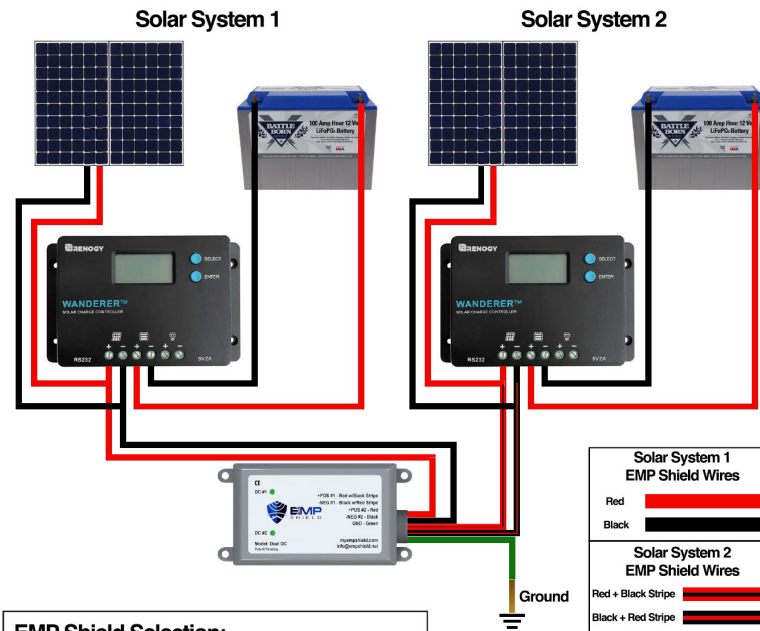
Always select your EMP Shield based on the maximum input voltage of the first device after the PV array. This device will most commonly be a charge controller for off grid systems or an inverter for grid tied systems.

For EMP Shield selection questions call: 620-412-9978



EMP Shield

Dual DC Solar Installation



EMP Shield Selection:

Always select your EMP Shield based on the maximum input voltage of the first device after the PV array. This device will most commonly be a charge controller for off grid systems or an inverter for grid tied systems.

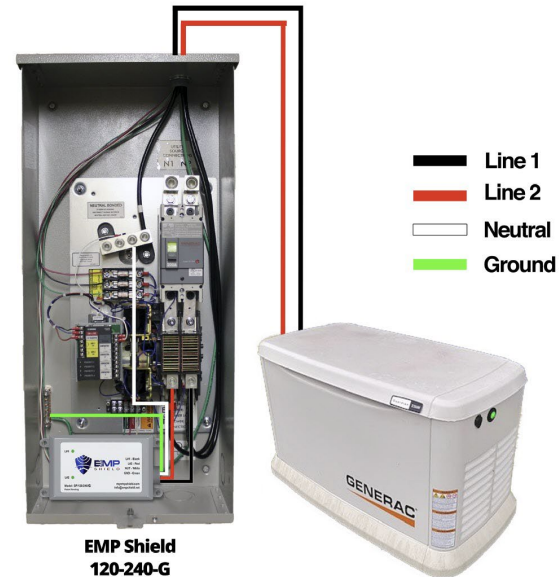
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EMP Shield



Generator Installation

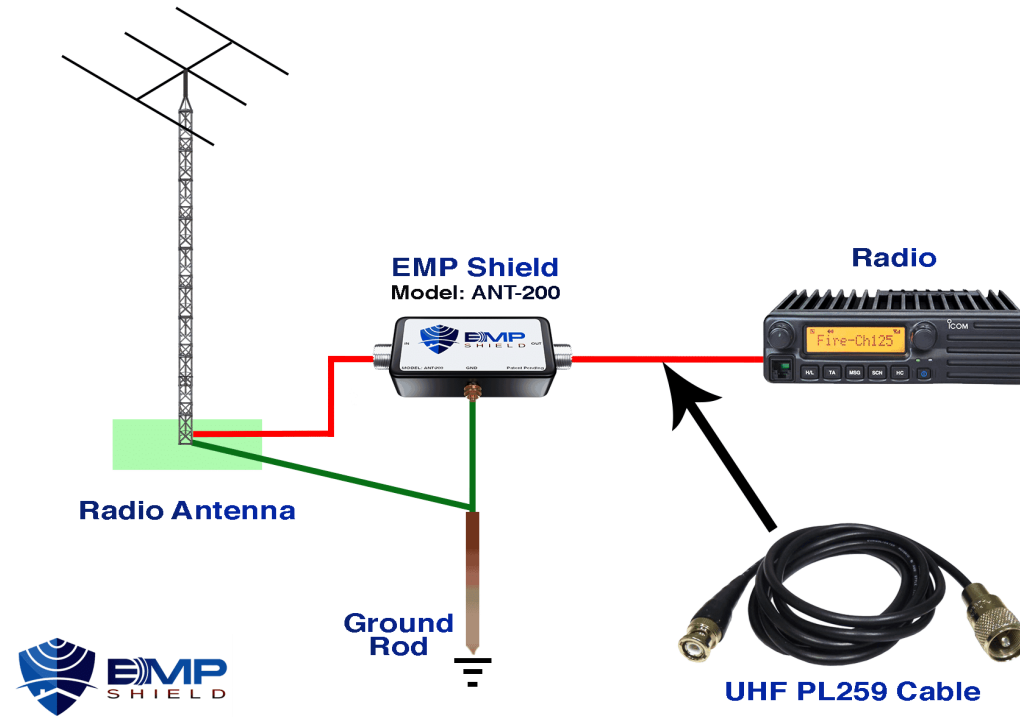


WARNING

TO BE INSTALLED BY A LICENSED ELECTRICIAN AND/OR USED IN ACCORDANCE WITH ELECTRICAL CODES AND REGULATIONS. ELECTRICITY IS DANGEROUS AND MAY CAUSE FIRE, SHOCK, OR DEATH.

EMP Shield

EMP Shield Ham Radio Installation Instructions



EMP Shield

If Installing in a Vehicle

EMP Shield (12 Volt Vehicle Model / DC-12V-W)



Page 1 of 2 (Written Instructions)

Instructions:

1. Assemble all tools listed below and identify the three wires attached to the EMP Shield.

TOOLS NEEDED

- Wrench (socket wrench may work best)

What are the Wires For? (Image 1)

Red Wire = Positive Wire (+)

Black Wire = Negative Wire (-)

Green Wire = Ground Wire (G)

2. Find a suitable place for the EMP Shield to be installed. In this 2013 Hyundai Tucson, the EMP Shield was placed on the driver side of the vehicle, in the engine compartment above the wheel well (Image 2). When finding a place for the EMP shield be sure to clean the area thoroughly so that the provided industrial fastener bonds correctly to the location it is applied. Peel the plastic strips off the fasteners and press the adhesive side to the location you would like to secure the device. Press and hold firmly for 15 seconds.
3. After you have placed the EMP Shield in its installation location, measure how much wire will be needed to reach the positive and negative sides of the

vehicles battery. You will also need to identify a location to attached the EMP Shield to the chassis (Image 3).

4. After all locations have been identified, secure each wire to its designated location. The green wire will connect to the chassis (Image 4). The black wire will connect to the negative side of the battery (Image 5). The red wire will connect to the positive side of the battery (Image 6 & 7). Installation point for the ground wire must be no less than 4 linear feet (of conductor material) from the battery negative.
5. Clean up all wires so that they are neatly contained. We recommend all wires are zip tied together as much as possible and secured out of the way.

WARNING

Electricity can cause severe injury and may be fatal. We recommend only certified electricians or mechanics install the EMP Shield. Do not touch the exposed positive side of the battery and the negative side of the battery simultaneously (or any piece of metal connected to the chassis as this could cause a spark or shock)

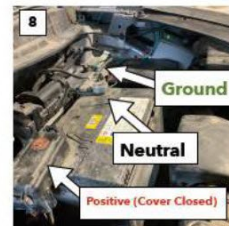
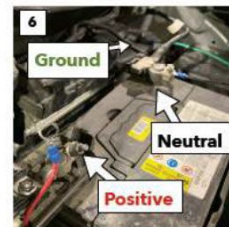
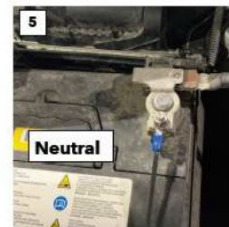
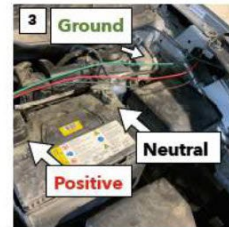
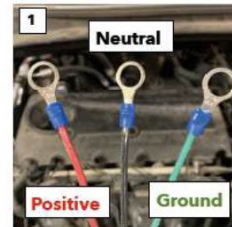
EMP Shield

If Installing in a Vehicle

EMP Shield (12 Volt Vehicle Model / DC-12V-W)



Page 2 of 2 (Step by Step Images)



EMP Shield – Stiff Old White Guys

LEADERSHIP

We are blessed to have some of the most talented leaders in this industry!



Pete Keegan

President



Tim Carty

Founder & Lead Engineer



Rowdy Meyer

Vice President



Andrew Buccin

Director of Sales &
Marketing



Plamen Doynov

Chief Technology Officer

EMP Shield

- Buyer beware.
- Big promises.
- Lots of marketing hype.
- Nobody other than sales can be coaxed onto the phone.
- Better than nothing?
- Some testing detail IS provided on the site. MIL-SPEC certification being one.
- Should we have it on any of the Club gear?
- Should we personally invest in it for our own homes?

Red River Valley Amateur Radio Club

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- Questions?
- Comments?
- Criticism?
- Objective analysis?