

Summer! The days are longer, temperatures are warming up and our batteries sitting on a shelf waiting to be used or in a vehicle are discharging much faster!

TM 9-6140-200-13, page 3-3 All batteries (except dry flooded type) will self-discharge slowly when standing idle. Temperature has an important effect on the self-discharge. A warm battery will self-discharge much faster than a cold battery.

Have you ever wondered why the battery in our POV lasts so long, while some of our military equipment batteries are dead or depleted much sooner?

Answer: We drive our POVs regularly, which helps maintain the State of Charge (SOC) much better over time. On the other hand, our military gear can sit for long periods in-between uses and as a result the SOC will steadily drop over time.

Good part is we have viable, tested and performance validated things we can do at the shop level to combat the self-discharge rates for batteries sitting in shop supply or mounted on the platform. Examples:

- Test all new or reconditioned batteries before installation. If below 12.6 Vdc the battery should be charged prior to installation. TM 9-6140-200-13, page 25-3.
- Test and charge batteries on the platform during scheduled services or unscheduled maintenance as needed. TB 9-6140-252-13, page 9-1, and more.
- Use maintainers; The main systems for maintaining are solar applications (detailed on next page) for on platform and AC powered systems (below) for off platform (Pro-12) and on platform (12V AC single station and 24V AC / solar single station).



**Pro-12 12V Multi-station**  
**NSN 6130-01-535-2718**



**12V single station**  
**NSN 6130-01-521-1765**



**24V single station system**  
**NSN 6130-01-521-1387**

Website: **[WWW.PULSETECH.NET](http://WWW.PULSETECH.NET)**

Online PulseTech Military catalog: <https://read.dmtmag.com/i/1302304-2021-military-catalog>

**Solar applications are usually our #1 question generator from the field.**

**1. Do they actually work? Yes, and have passed evaluations by the Army, USMC SYSCMD, and Air Force Test and Evaluation CMD. Note: Systems must be installed properly, and minimum conditions met to ensure positive success. Example:**

- Batteries must be balanced, with no more than .3V between batteries.
- 12V systems: System battery Vdc above 12.6V. Charge if below this level.
- 24V systems: System battery Vdc above 24.5V. Charge if below this level.
- \*Correct solar application for the platform to be maintained.
  - 10-watt minimum solar application for any platform with 4 batteries.
  - 6.3-watt minimum solar application for any platform with 2 batteries.
- Solar application must be mounted for maximum sunlight.

**2. Can the solar application drain batteries? No, on all newer systems the sun must first power on the logic circuit in the Pulse Recovery Unit for the system to engage.**

**3. Can the systems handle small drops, hail, and other damages? Yes, see below example.**

**\* Your PulseTech FSR (POC INFO below) can provide solar application recommendations by equipment type for your fleet. Systems may vary by location based on average sunlight.**



**6.3 Watt with Nato.**  
**NSN 6130-01-558-5371**  
 Still works after being partially ran over.



**6.3 Watt with lugs**  
**NSN 6130-01-487-0035**



**10 Watt with lugs**  
**NSN 6130-01-688-4857**

### Other popular Solar Maintainers with NSNs:

12V 10-watt, NSN 6130-01-688-4859

24V AC powered maintainer, NSN 6130-01-521-1329

24V System: 6.3-watt solar panel and 24V AC Maintainer in hardened case: NSN 6130-01-675-7257

**Contact your supporting FSR** below with any questions about PulseTech gear, Solar recommendations / suggested application use (they have examples they can send), equipment specs, troubleshooting, example SOP or **for a FREE** (within CONUS) on-site support visit.

#### **Title / Locations / Units Supported:**

VP Military Programs, Eastern US, 2 MEF, International  
 FSR, South Western US, Pacific, I and 3 MEF  
 FSR, North Central / North Western US, Alaska

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