

# Dead Rail & DCC

## Hetch Hetchy Railroad On30

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Rev 3/27/2021

- Throttles: CVP AirWire T5000 & T1300
- Components are chosen to fit in engine or tender.
  - Radio receivers:
    - AirWire CONVRTR-15 & CONVRTR-25
    - Tam Valley DSR-1 (deadrailinstalls.com)
  - Decoders: SoundtraXX Tsunami 2
  - ON/OFF switch
    - Micro mini toggle, OR
    - Pololu Mini Power Switch (Pololu #2809) with added magnetic reed switch (Digi-Key 374-1083-ND)
  - Speakers: SoundtraXX (28 & 15 mm)
  - Batteries: LiPo Dead Rail Installs
  - Connectors (engine-tender and battery): Male & female header pins (Tinkersphere item TS-247, TS 303)

### My Experience/Setup:

- Typical run time is in excess of one hour, pulling a load.
- Batteries are removed for charging. Charger : *imax* B6AC Charge time: 1-2 hrs
- Battery change out takes about 1 or 2 minutes.
- Batteries (LiPo) stay charged for months.
- Prepare for Operating session: Charge installed batteries & have spares.

### PROS:

- No track wiring or cleaning. No turntable wiring.
- No turnout short circuits or dead spots (“keep alive” capacitors not needed).
- Prototypical steam engineer concerns: How much water (battery life) do I have? When do I need to stop for water (battery change out)?

### CONS

- Not out of the box, requires some skill to install in engines.
- Periodic battery change out.
- Batteries can go dead; engine can die at unpredictable location.
- Engines do not stop when they derail, AND
- Cannot use unpowered sections of track to stop an engine at end of track.