Evolution of a Rover

John D'Ausilio W1RT

- Licenced originally in 1970 as WN1PIH
- Relicensed in 1979 as KA1TB (Advanced)
- Upgraded to Extra in 1984
- Purchased W1RT in 2003
- Member DVMS/Grid Pirates since 1998
- Computer Scientist IRL

The Intergalactic Roving Battle Jitney

Bill Seabreeze, W3IY (SK)

Creator of the original Intergalactic Roving Battle Jitney, which was named after a (sort of) similar vehicle in the movie Mystery Men .. the Herkimer Battle Jitney was “a heavily armored, windowless, soundproof, personnel carrier designed by the Pentagon in the fifties to take congressmen on battlefield fact finding tours”

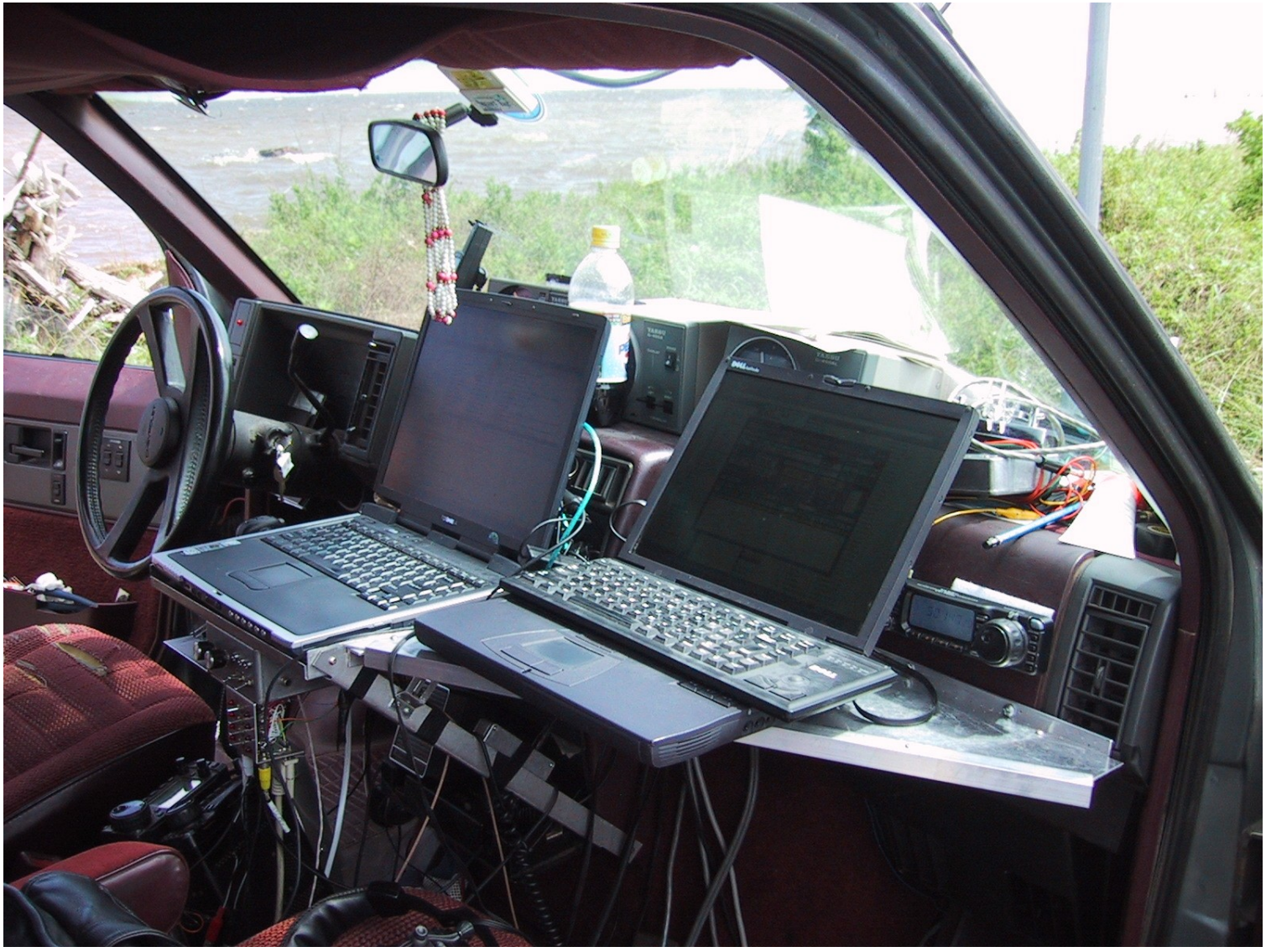
Accquisiton

- Bill's cancer returns with a vengance
- Terry K8ISK goads me into action
- Operational briefing
- First contact with the Belgian!
-

Inaugural Rove

What do I do now?

Phase 1 – Deconstruction

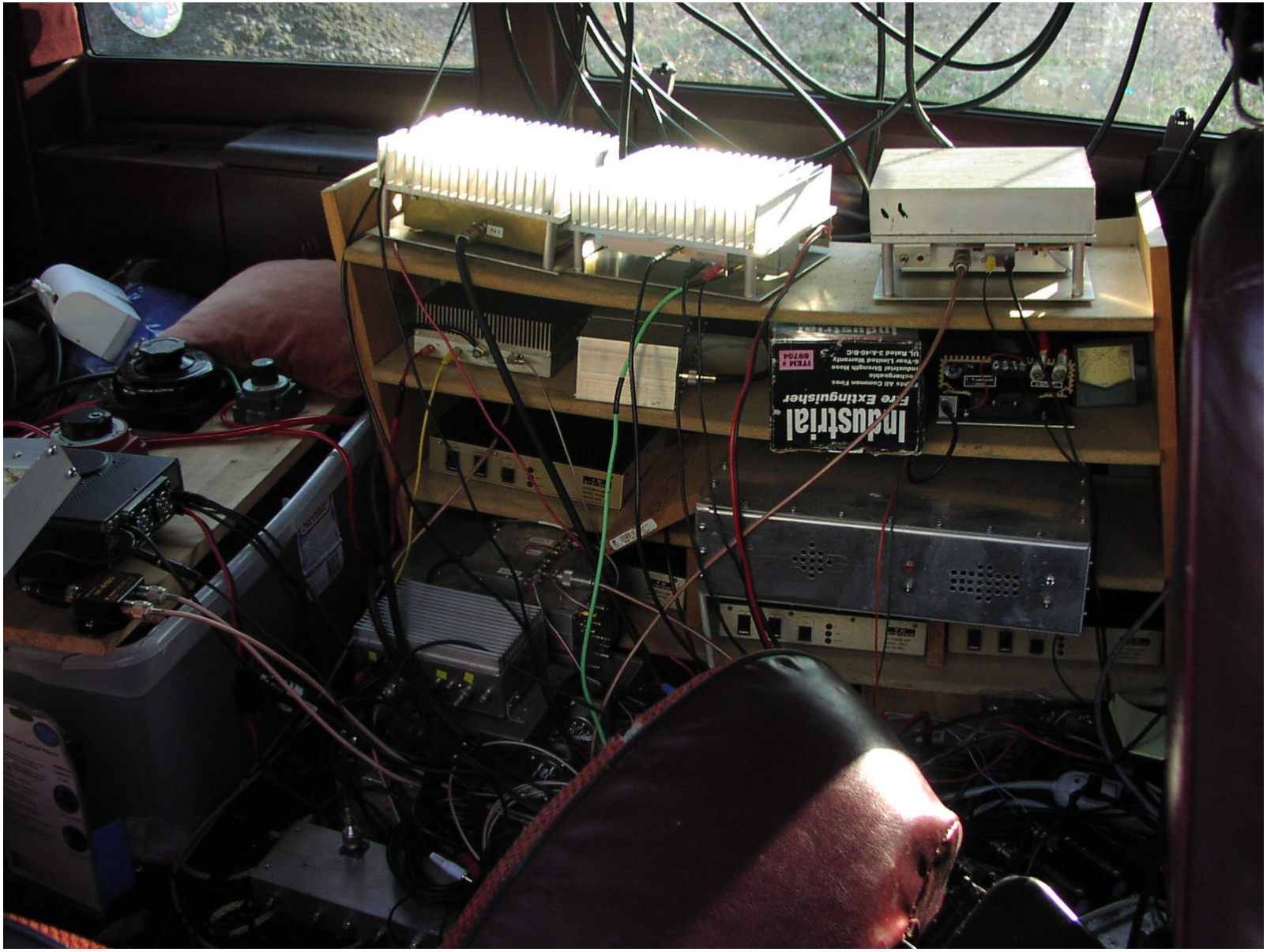


Original Operating Positions – those seats get pretty uncomfortable

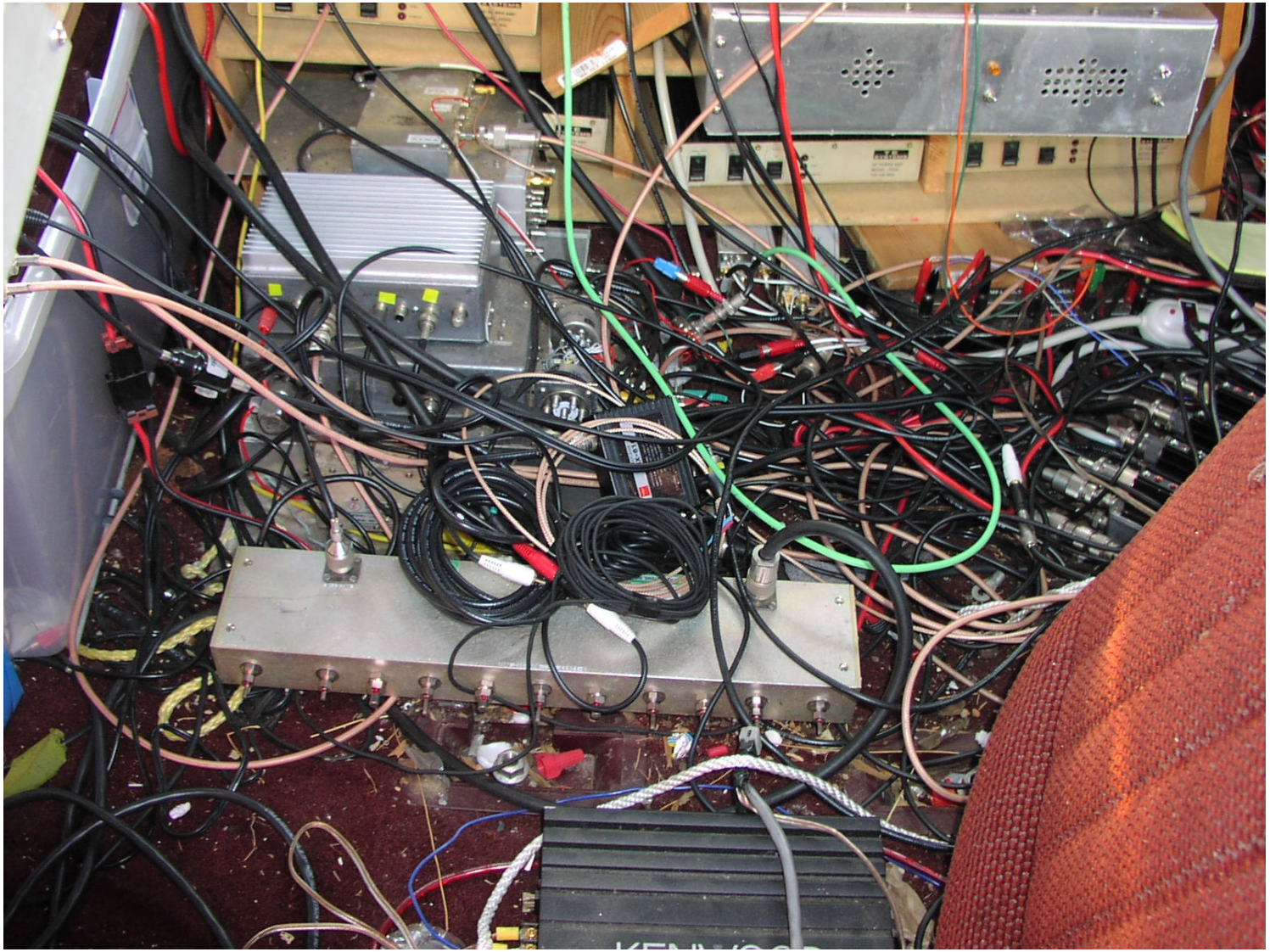
Phase 1 – Deconstruction

Driver's radios – all 10 bands

Phase 1 – Deconstruction

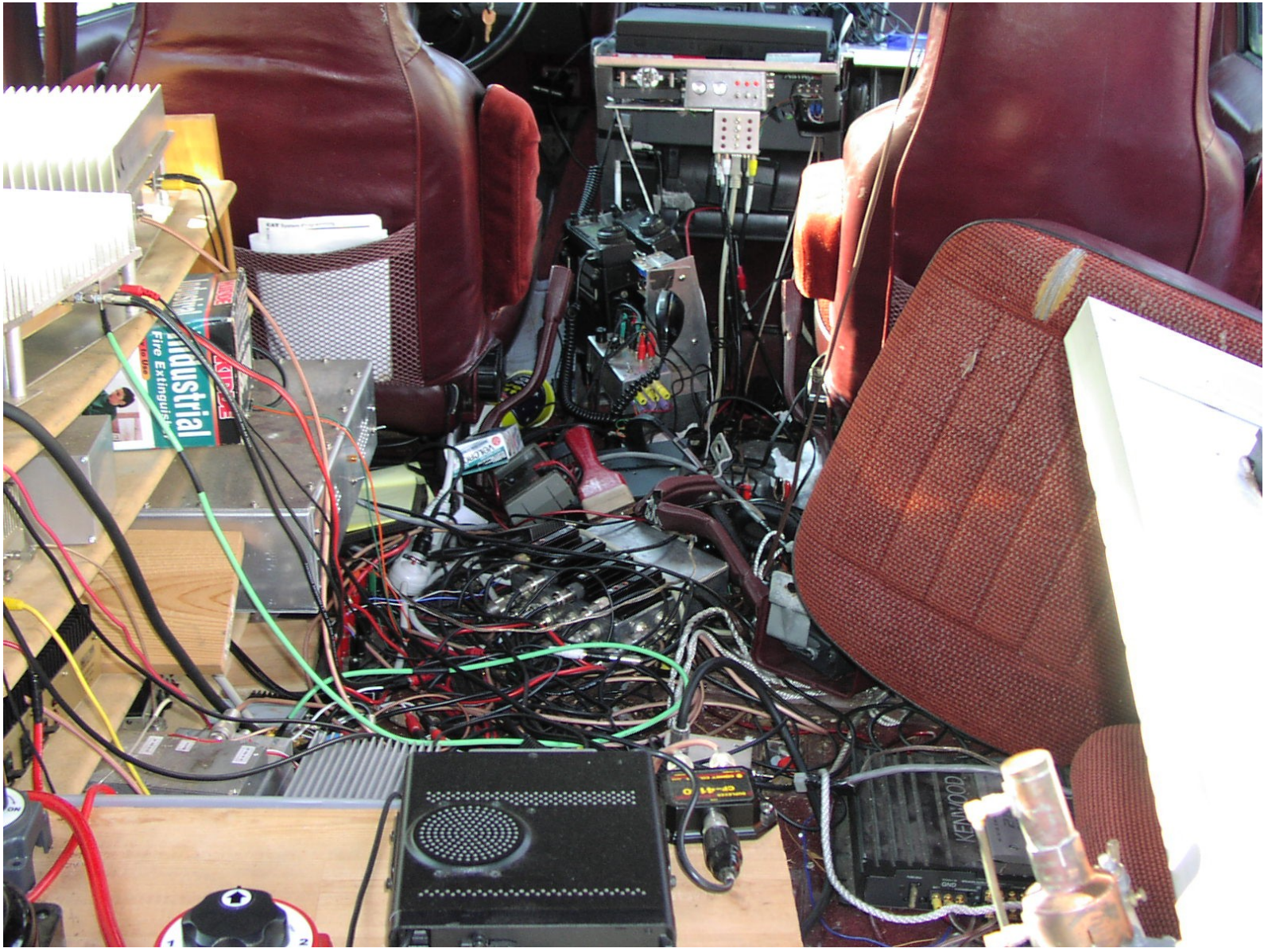


Phase 1 – Deconstruction

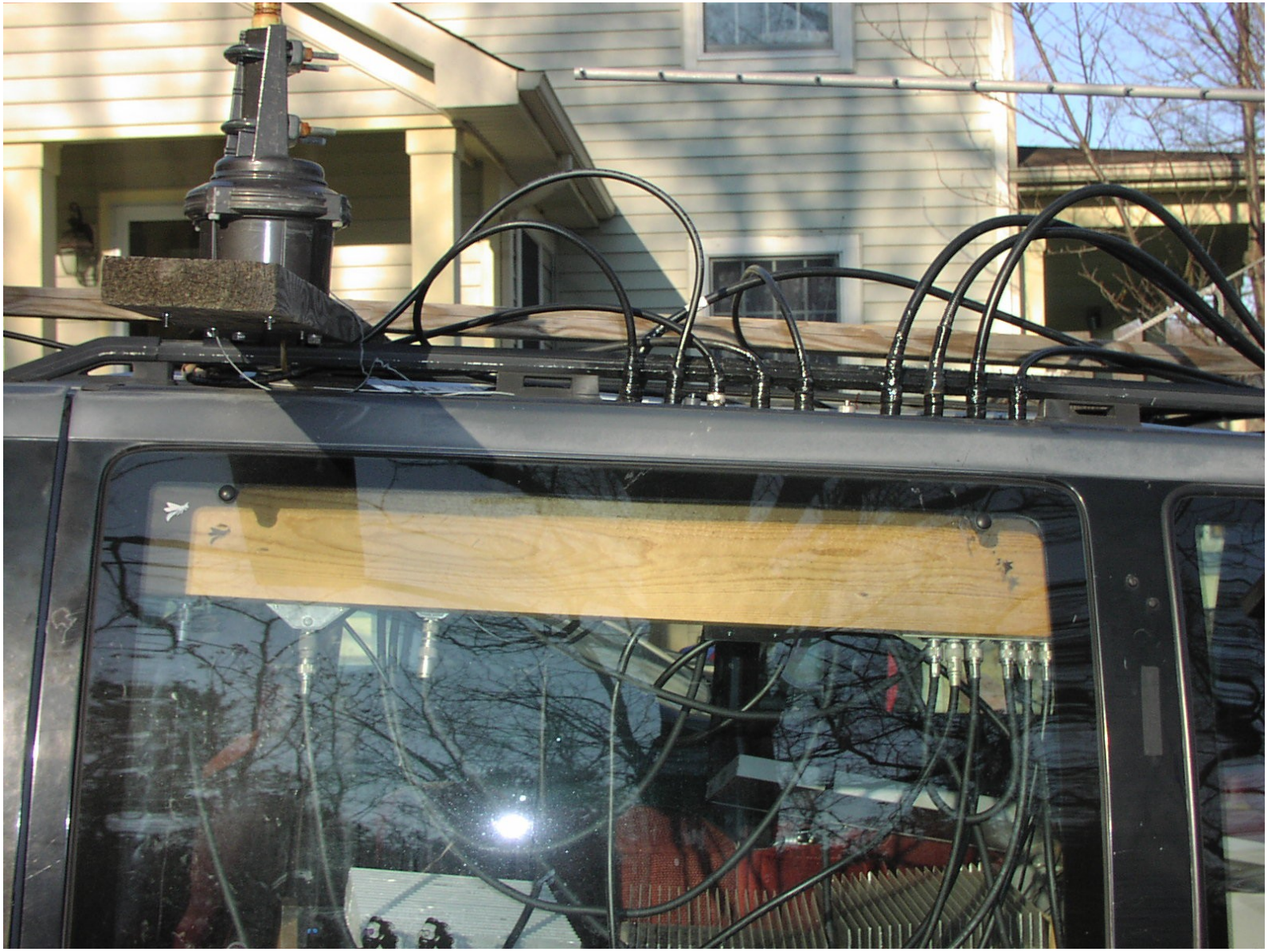


Where's Waldo?

Phase 1 – Deconstruction



Phase 1 – Deconstruction



Phase 1 – Deconstruction

- What to do??
  - Keep it as is?
  - Redesign?
    - How much?
- What is my goal as a rover?

Phase 1 – deconstruction

- Figuring out what I've got
  - IF/low-band radios
  - Pile o'Transverters©
  - Switching systems
  - Antennas
  - Power
- What's good, what's bad, what could be better

Phase 2 – Reconstruction

- Design considerations
  - Leave feedlines alone if possible
  - No more operating from the front
  - Batteries midships
  - Rack for mounting stuff

Phase 2 - Reconstruction

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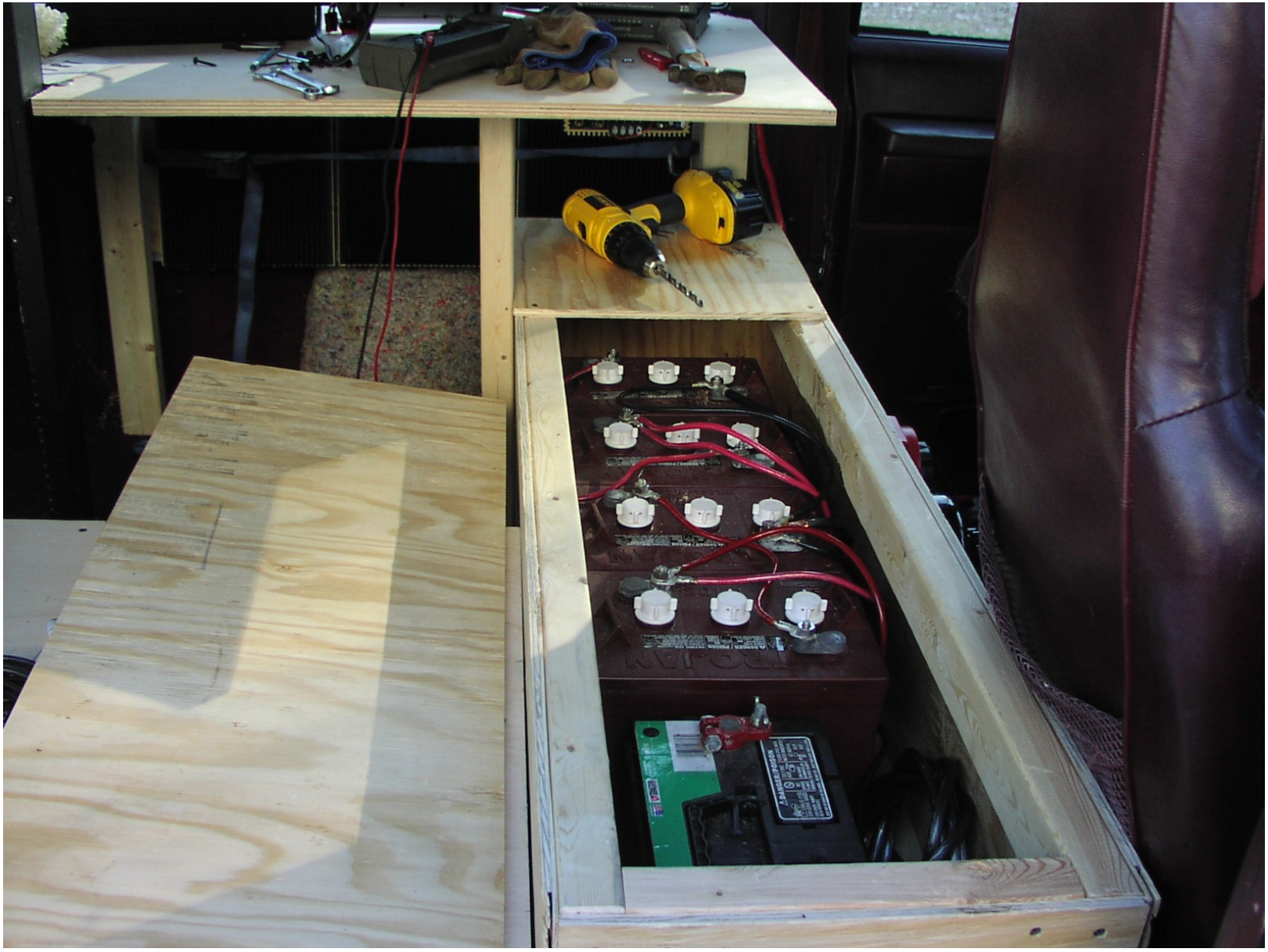


Phase 2 - Reconstruction

Phase 2 - Reconstruction

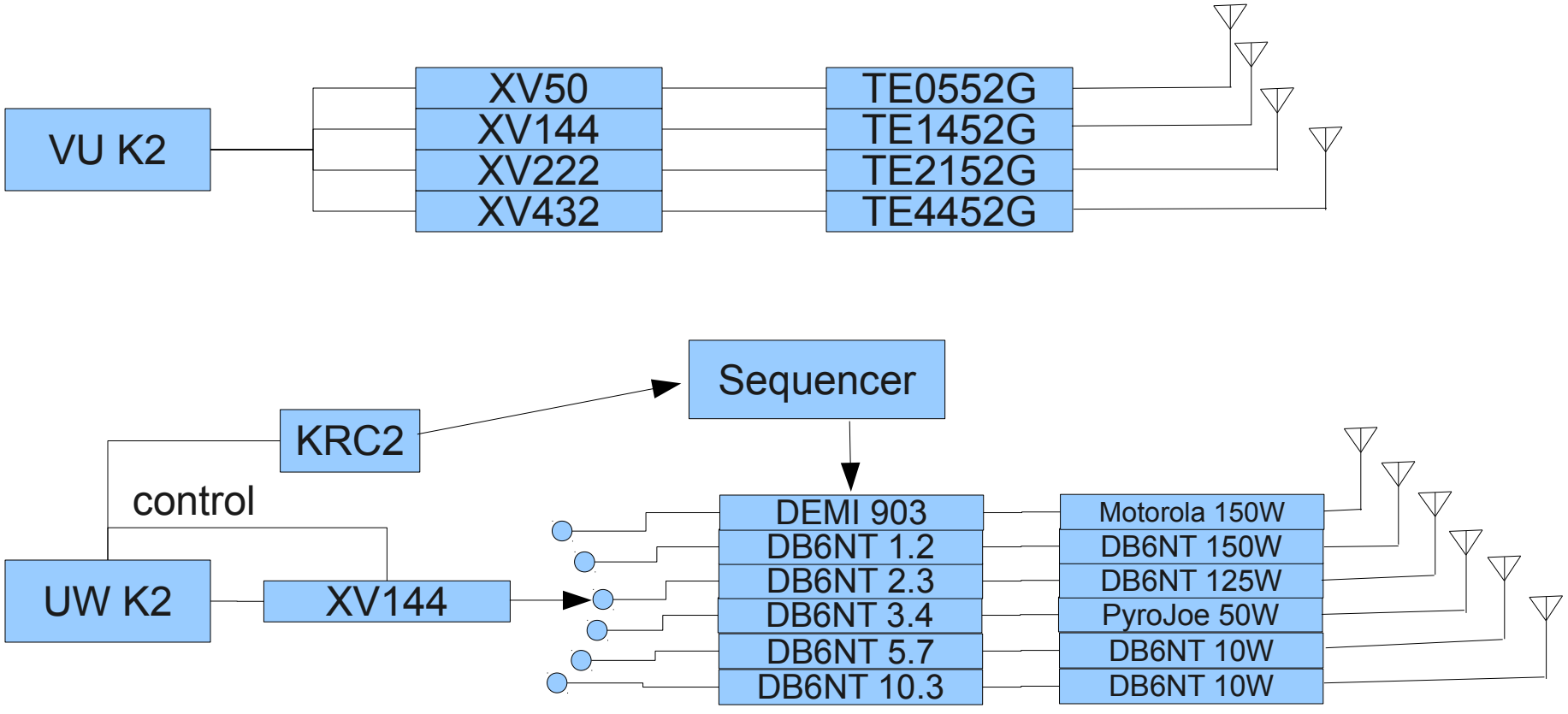
Phase 2 – early integration

- Move to K2 IF radios
  - Rice boxes in high RF environments are unhappy
- Elecraft low-band xverters
  - A mixed blessing
- KRC2 Band Decoder
- The Super Duper Sequencer
- Rovers and Linux

Phase 2 – in operation

- Mostly works
- Vehicle problems
- The Rove from Hell
  - Water is bad for radios
  - Roving north is **very** different from roving south!

Early Integration



Phase 2A – the Great Flood

in which we lose 60% of everything we own

Phase 3 – The Luxury Rover

- Time to move on!
- Shopping on ebay
- Delivery and evaluation
  - foreshadowing
- Another redesign?
- My Big 10-inch
  - Extended body van

Phase 3 - Construction

Phase 3 - Construction

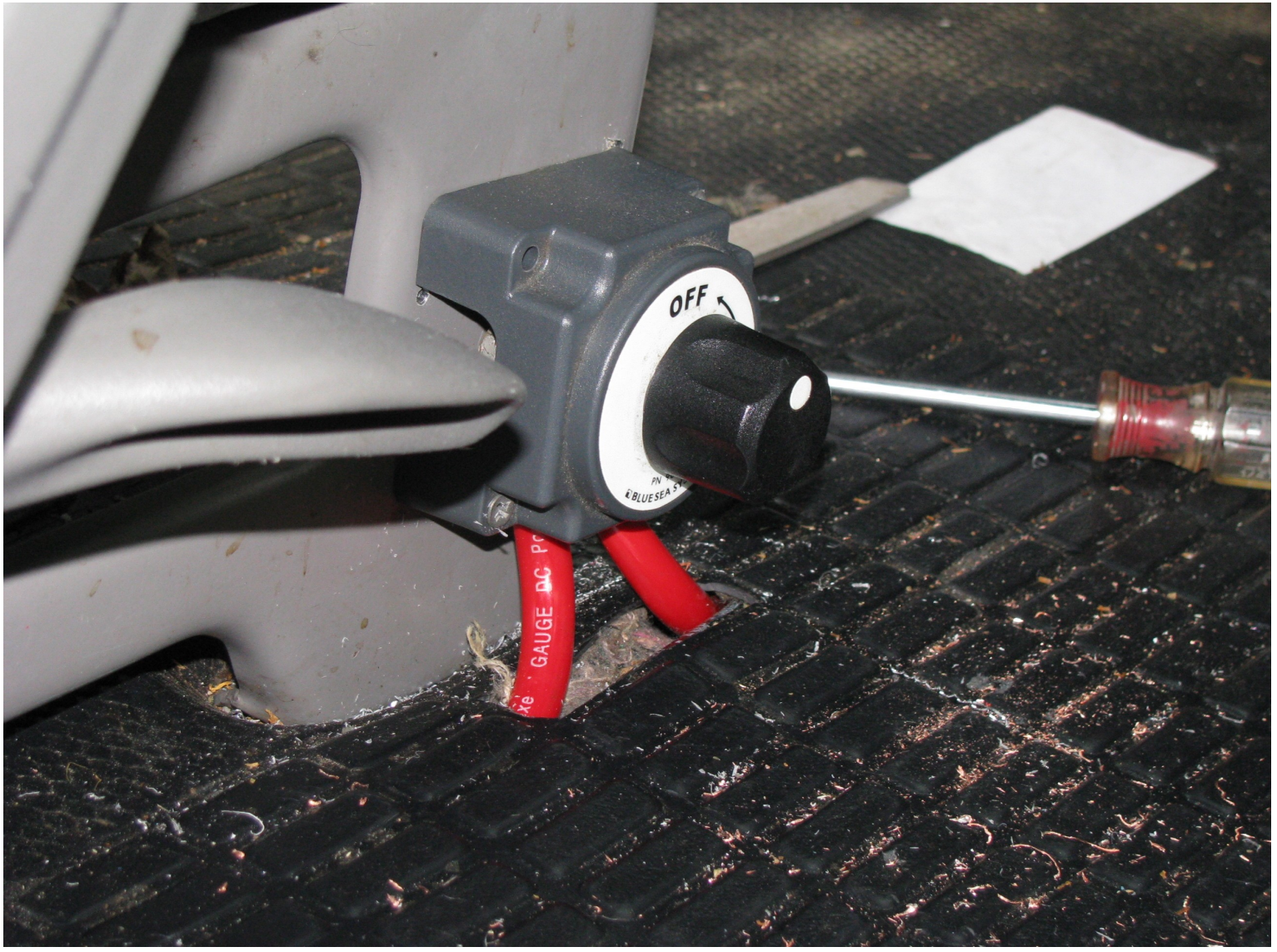
Phase 3 - Construction

An early idea .. rack and batteries in the back

Phase 3 - Construction

Insulation

Phase 3 - Construction



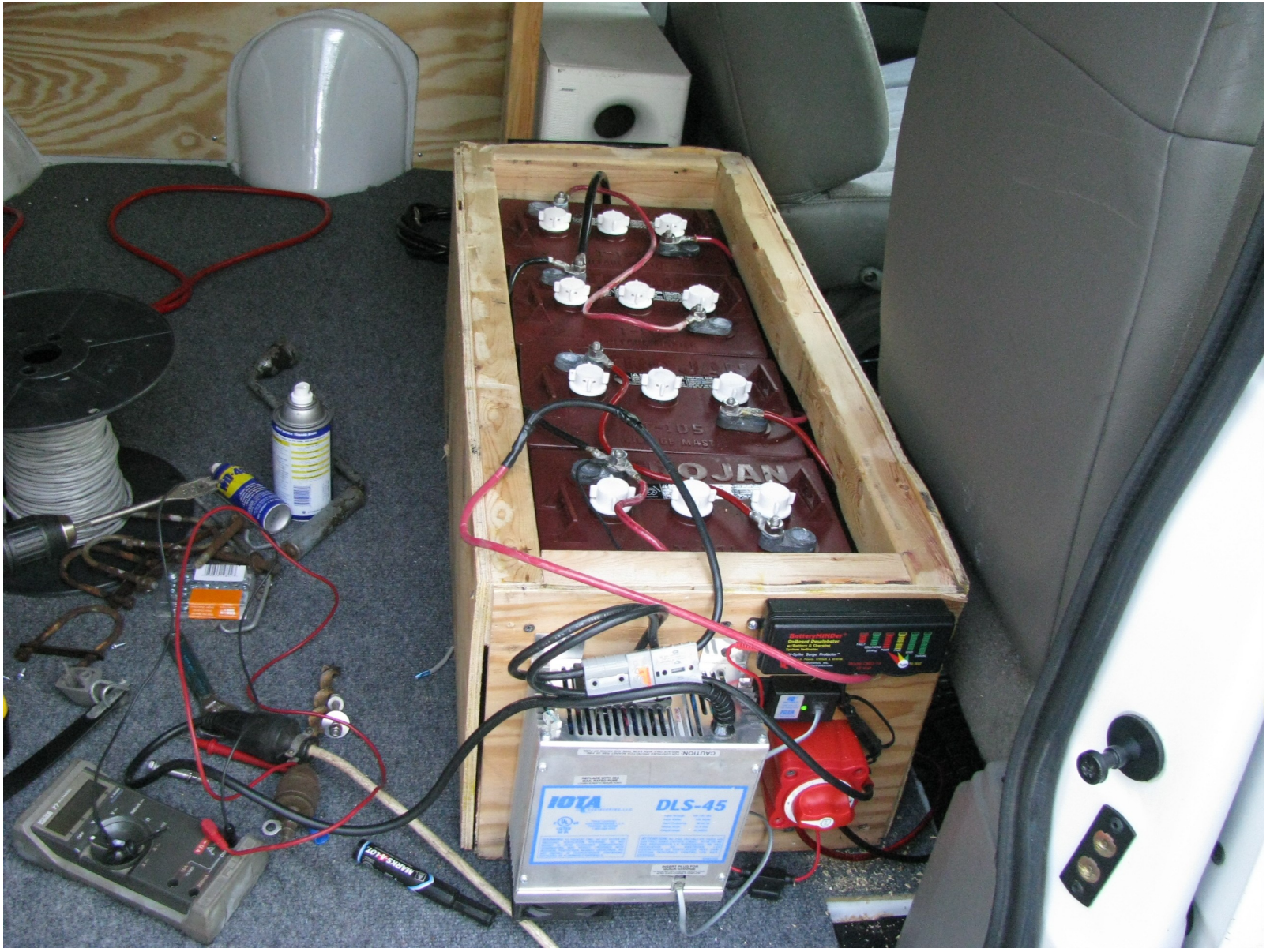
Boat stores are our friends!

Phase 3 - Construction

Phase 3 – Integration

- Operating positions
- Power distribution
- Amplifier mounting
- Computers, monitors, keyboards

Phase 3 - Integration



Phase 3 - Integration

Phase 3 - Integration

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Phase 3 - Integration

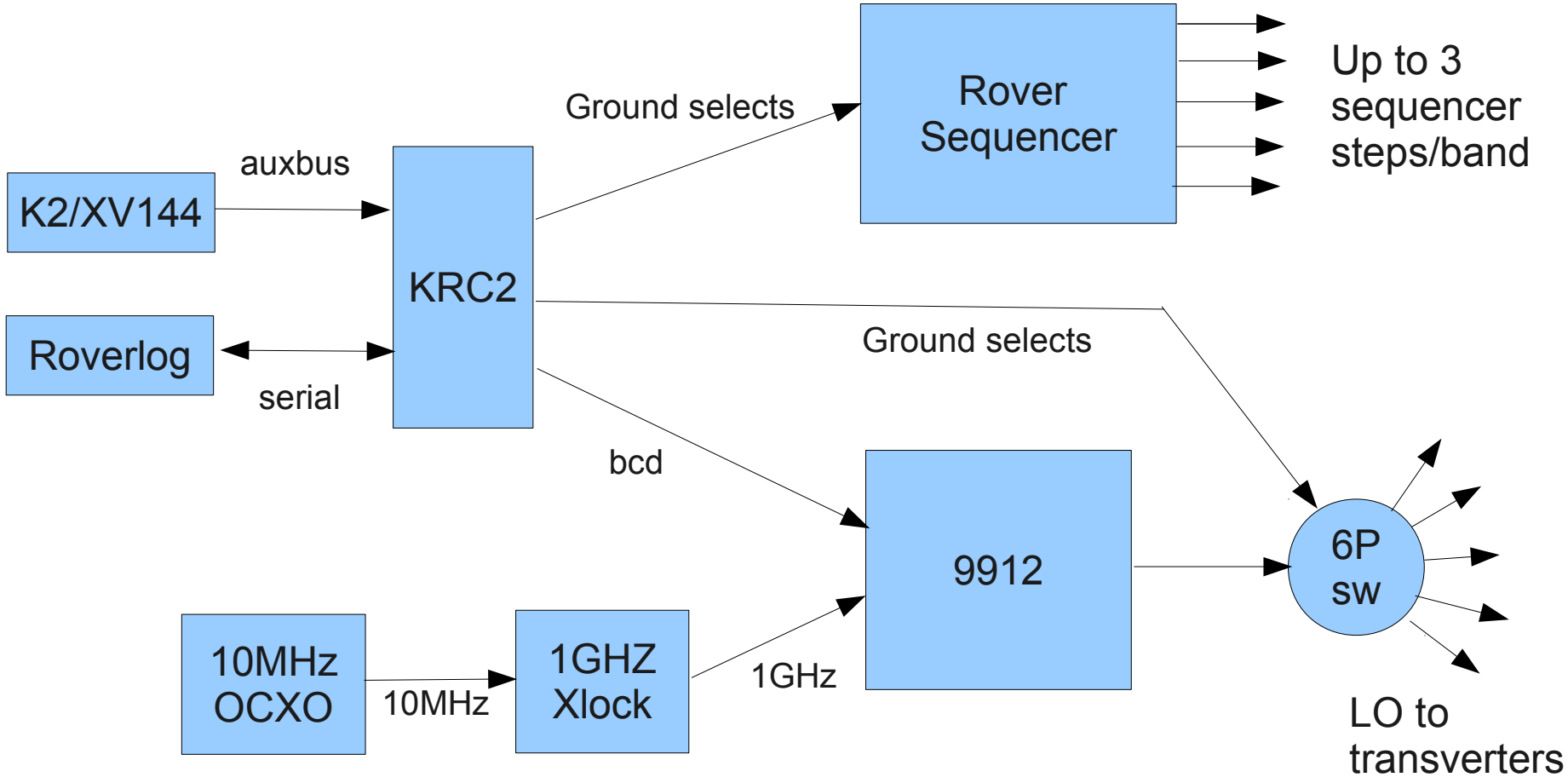
Phase 3 - Integration

Phase 3 - Integration

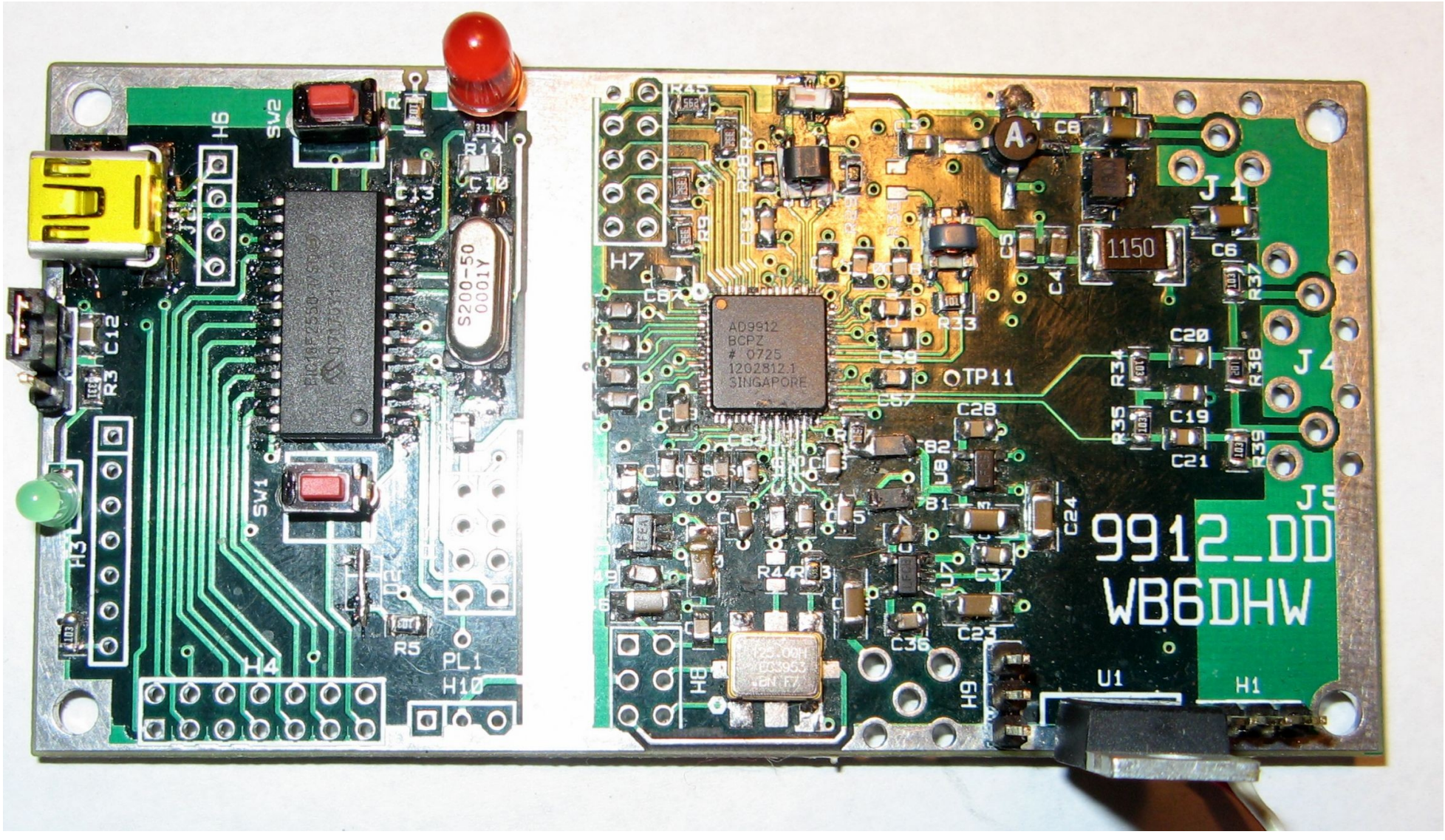
Phase 4 – Automation

- Userful Desktop Multiplier
  - 2 users, one computer!
  - Uses NVIDIA dual-monitor card
  - Jetway NC92-330-LF, 6 com ports, SSD
- Rotator control
  - Idiom Press
- Frequency control project
  - AD9912 board from WB6DHW
  - Firmware by Me and Xtof
  - Hacked version of Roverlog

Phase 4 - Automation



WB6DHW 9912 board



Rover wisdom

- The engine fan on a Safari robs you of power, but it also cools the alternator
- A 6 inch piece of 10 gauge wire can completely fill a minivan with dense, acrid smoke when used as a fuse
- Shoe-Goo makes a great watertight sealant, especially on roof leaks
- 4 hours of sleep in a real bed is well worth the $25/hour expenditure
- Always listen for the weak ones :)

The Future is So Bright

- Either seat, all bands
- Alternator diode remote
  - Unlimited power! Muahahahah!
- Monitoring, DC and RF
  - Good coupler notes from 2010 EVHF
  - Allegro current sensors
- I WANT 48V!


Morton's