

Boatanchor Restoration

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Collins KW-1



Millen 90881



HRO-500



Ranger II



32S-3A



TX-350

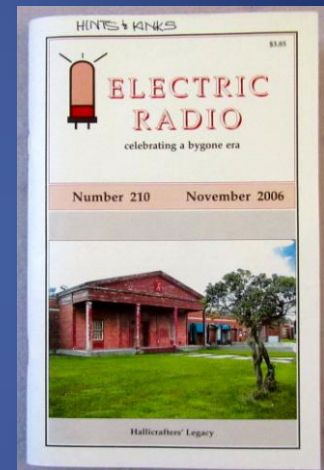
Getting Started

- Get going ... pick SOMETHing ...
- Assess tools, test equipment, parts
- Search for information
- ***SAFETY!*** Are you qualified?



Information & Parts

- Manuals: BAMA, manualman.com; ni4q@juno.com
- Reflectors: mailman.qth.net
- Electric Radio Magazine (ER): ermag.com
- Google
- QTH.com (reviews)
- Hamfests, Junque Box, eBay, QTH.com
- Traditional: Digikey, Allied, Newark, Mouser
- Small Parts Inc, Grainger, McMaster-Carr



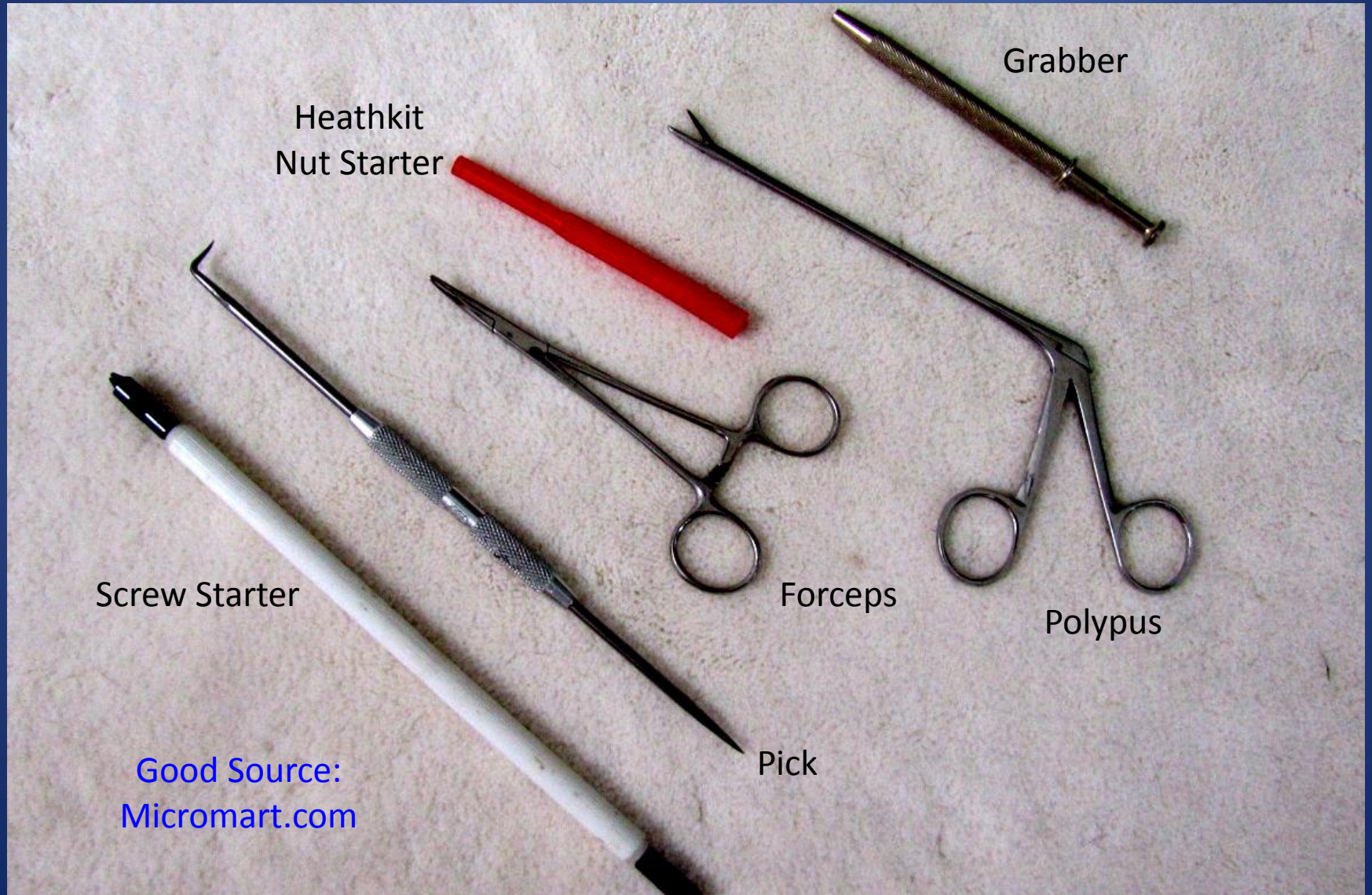
First Steps

- Remember, there is no “right” way to restore
- Originality is in the eyes of the beholder
- Decide the extent of your restoration
- Research what others have done
- Cosmetic considerations (painting, silkscreen)
- Upgrade as you deem necessary
 - Safety related (AC caps; line cord); electrolytics, circuit changes, etc.

The Details

- Every restoration is different
- Mandatory Tools/Supplies
Variac, Isolation Transformer, Polishes, Cleaners, Steel Wool, Dremel, Basic Test Equipment, Tube Tester, etc ...
- “Advanced” Tools
Bead Blaster, Air Brush, Metal working, Ultrasonic cleaner, Punch Press, etc ...
- Little things make the difference
Polish knobs, plastic; replace hardware, etc

Useful Tools



Heathkit
Nut Starter

Grabber

Screw Starter

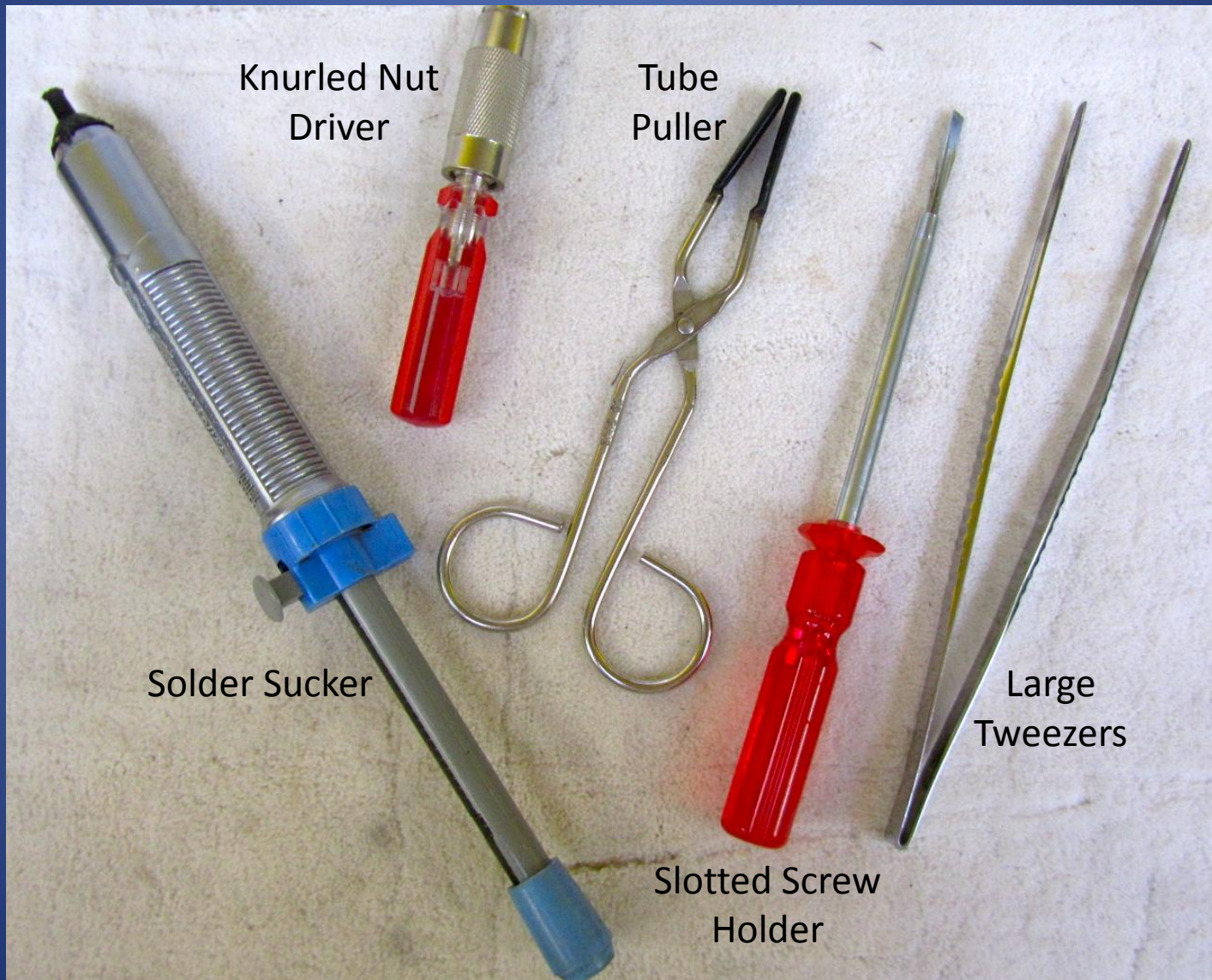
Forceps

Polypus

Pick

Good Source:
Micromart.com

More Useful Tools

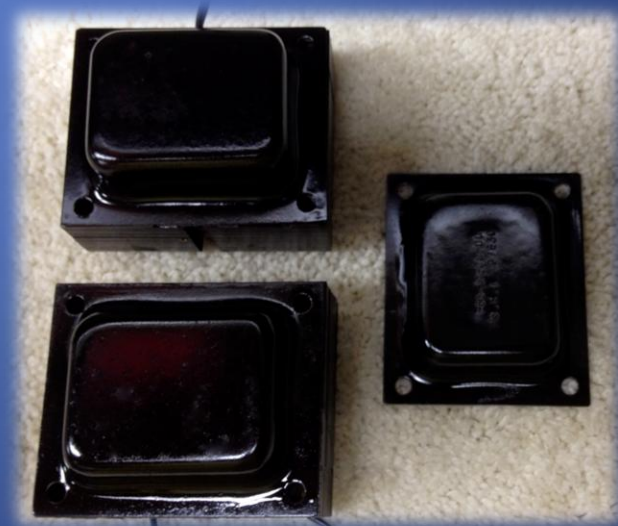
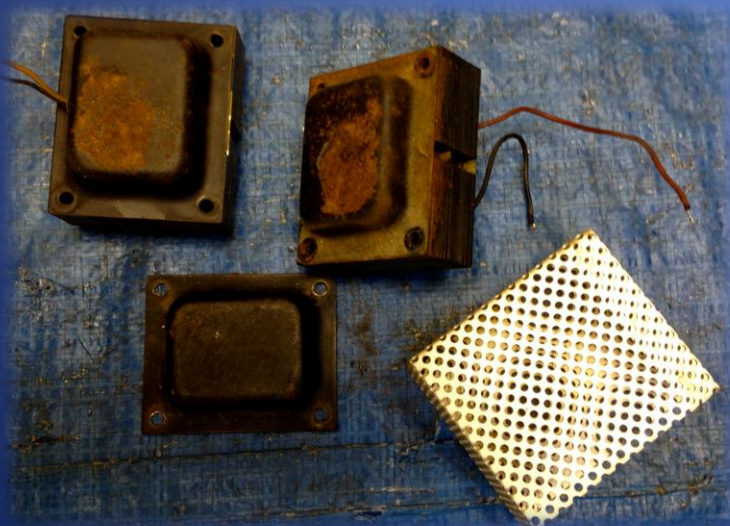


The Process

- Take numerous “before” **photos** (and throughout)
- **Disassemble** as much as practical
- **Wash and Clean** EVERYthing
- **Polish and Paint** (Best paint: Dupli-Color)
- **Test** Tubes; Replace as necessary (Be careful!)
- **Replace** electrolytics and coupling capacitors, out of tolerance resistors, etc.
- **Test** Transformers/chokes; clean and paint
- Perform any **modifications** desired
- **Clean/lube** switches, controls (DeOxit)
- **Lubricate** mechanical assemblies (be careful!)
- **Replace** line cord, AC bypass capacitors
- **Troubleshoot** and modify; Test

Painting

- Paint as required; transformers, panel, cabinet
- Touchup takes a lot of effort (Airbrush)
- Prep is everything (bead blast, clean)
- Excellent Spray Paint is Dupli-Color (Auto)
- Use fast drying Acrylics; Wet or Powder?
- Paint takes a few days to dry



My Favorite “Stuff”

- Blue Magic, Metal Armor, Wenol Metal Polish
- #0000 Steel Wool
- 50/50 Mixture of 409 and Ammonia
- GooGone
- Nevr-Dull
- PB Blaster (penetrating oil)
- Dust Off (air in a can)
- Tarn-X

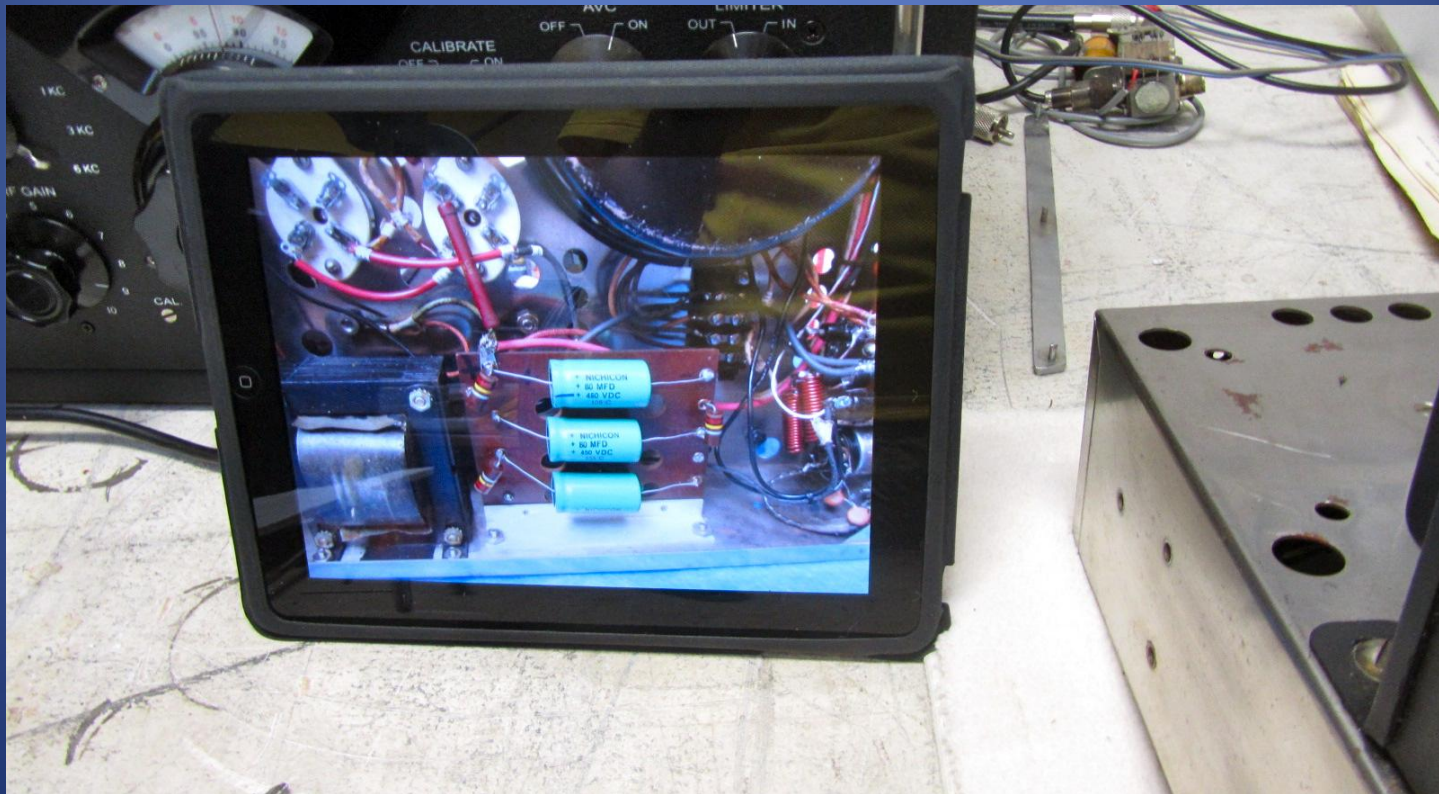
Hints and Kinks

- Be careful unsoldering!
- Lots of photos
- Save everything
- Attention to detail
- Polishing knobs ...
(Drill press, Blue Magic)

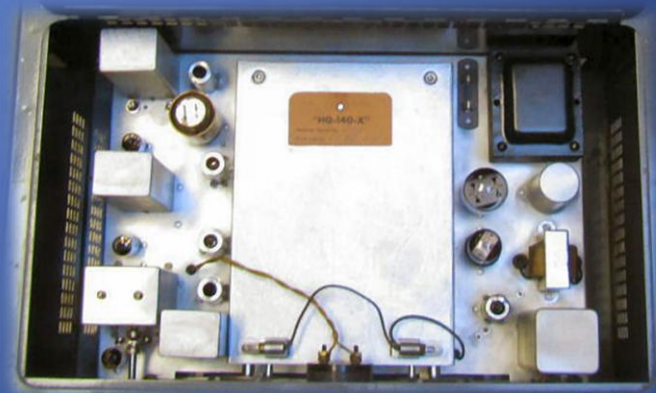
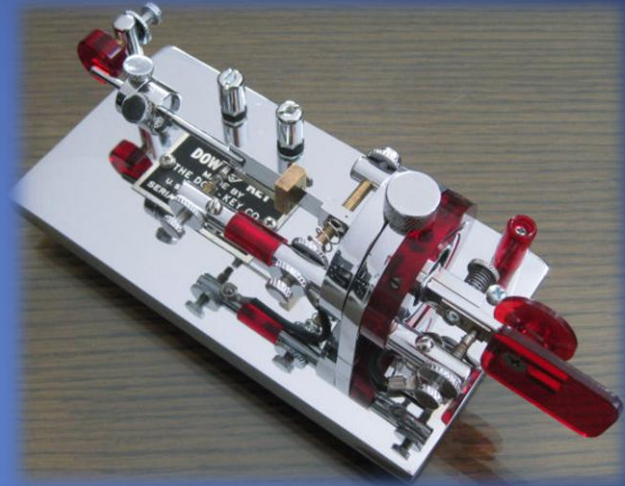
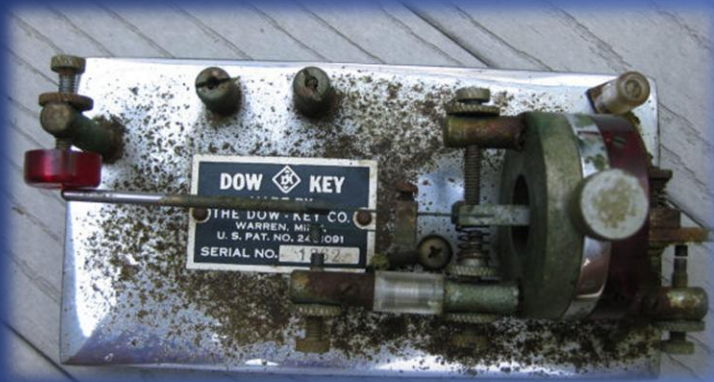


A Great Tool ...

Get yourself an Apple iPad
It's an invaluable "reassembly" tool



Projects



Projects



Projects



Before

Visit my personal website for photos of my restorations;
http://www.isquare.com/personal_pages/ras-hardware.htm

After

