



Fix-It Workshops

What: ReUse Industries seeks to hold “Fix-it Workshops” for the general public in Athens and Vinton Counties. These workshops will bring together volunteers with repair skills to help other residents repair household items. The initial focus is on items with electronic or electrical components, based on research findings indicating that these are the types of items for which there tends to be a high level of demand for repair. We have numerous successful models in the U.S. and Europe to learn from, as well as some people experienced with these kinds of events who are willing to help us pull it off.

Why: The core mission of ReUse Industries is waste reduction. We see repair as a key component of a robust strategy for waste reduction as well as an opportunity to support a growing “do it yourself” movement in the communities we serve.

How:

- Fix-it Workshops will be advertised through various channels including ReUse thrift stores, social media, radio PSAs, and print.
- The focus of the workshops – what types of items can be repaired – will be specified in advertisements to the greatest extent possible. The types of items to be focused upon will be dictated by the skills of the “volunteer fixers” involved and the tools/facilities available.
- The emphasis is on participation, teaching, and learning because 1) we want to attract people who want to learn repair skills; and 2) we want to discourage people simply dropping items off and expecting a free repair job. Therefore, communications will emphasize the message of learning to fix and people sharing skills with other people.
- The main role of volunteer fixers at these events will be to help others fix and learn how to fix, so that after the event people will have a functioning item but also a greater understanding of how things work.

Key Requirements:

- Volunteer fixers are the number one initial requirement. Without them, this is not possible.
- Tools/equipment are required, and we have a list of required tools provided by a good model in California (attached). ReUse Industries does not yet have resources to purchase these tools, but may be in a position to obtain some resources if we can demonstrate the existence of some committed volunteers.
- Space/Facilities. We require primarily power/electric and internet access. Many models we have looked at do not have a set location, but will hold these events at public libraries, community centers etc. ReUse is in the early stages of setting up a Maker and

Fixer Workshop at its Athens location, and has an existing space that could work at its Albany location.

Timeframe and Next Steps:

- This is a start-up situation. ReUse is doing this largely with volunteer labor and needs to put all of the pieces together gradually. Again, recruiting an initial set of “volunteer fixers” is Step One, which will in turn provide an impetus for ReUse Industries to invest more resources in it.
- Step Two will be to cost out the required equipment and secure some resources for that equipment (unless it is provided by volunteer fixers who have the right tools).
- Step Three will be bring the volunteers together to plan out the first event and solidify a date and location for it.
- ReUse Industries is committed to holding at least three of these events by June 2014.

Examples:

Fixit Clinic Video on Youtube: <http://www.youtube.com/watch?v=rInHSdGkz3w>

Recent Minneapolis Fixit Clinic video

http://www.youtube.com/watch?feature=player_embedded&v=6lOfD83fbjw

Suggested list of tools and supplies for Fix-It Clinics (provided by an event organizer in California):

Venue Setup

- Extension cords and outlet strips
- Computer Access / Laptops to research problems and access disassembly guides, order parts on the internet
- Signage / Banners
- Badges / Lanyards for all Fixit Coaches
- Check-in table
- Have Business Cards out
- Sign in Sheet / Waiver

General Disassembly

- Jewelers Screwdriver Sets, both phillips and flat head (Lots of good 0 and 00 phillips)
- Specialty screwdrivers and bit heads - torx, security torx, metric hex, pentalobe, tri-wing (for cell phone disassembly). etc. Tamper proof fastener tool set *
- Wrench and hex nut drivers of various sizes
- Pliers
- Needle nose pliers
- clamps, hemostats

- Small saw / Hacksaw / coping saw
- Drill and drill bits, bit gauge
- Dremel tool
- Goggles to protect eyes when using power tools like the dremel tool
- Old credit cards as "spudgers" to pry open tabbed plastic things without marring (like you would with a screwdriver)

Troubleshooting / Research

- Multimeter - VOM - continuity tester
- Alligator clip test leads, small sizes
- 91% drugstore isopropyl Alcohol (and, ideally, an eye dropper to apply it), Q-tips to apply alcohol
- Compressed air
- Clean paint brush for dusting things off, old toothbrushes, rags/towels for cleaning things
- Batteries: AA and AAA, at least 4 of each,
- Button cell batteries of various sorts is a plus
- Eraser for cleaning electrical contacts, battery contacts
- Steel wool for cleaning electrical contacts, battery contacts
- Emery board for cleaning electrical contacts, battery contacts
- Files (particularly jeweler's files), fine sandpaper
- Contact cleaner spray
- Freon spray to test thermal behavior of components
- ¼" to ⅝" stereo adapter, and vice versa, to use earbuds with older stereo equipment, older headphones with new stereo equipment
- Colored sharpie magic markers to mark electrical wires before pulling them (or different colors of nail polish)
- 1-3 music CDs to check CD players (and changers)
- 1-3 DVDs to check DVD players (and changers)
- Small monitor (or TV) with line input to display video, appropriate RCA cable for video input

Repair

- Healthy assortment of lubricants e.g. WD-40, lithium grease
- Healthy assortment of glues and adhesives, super glue for sure
- Hot glue gun
- Clear packing tape, scotch tape, electrical tape
- Scissors
- Soldering Kit - iron and solder, rework station would be great (and someone comfortable with using it)
- An assortment of DC power supplies: 5V, 6V, 9V, 12V, (?), both to test things and to offer as replacements
- paper clips
- assorted wire, various gauges and lengths
- AC zip cord, plugs (some sort of way to determine if the AC line cord and/or power switch is bad)

Laptop / Computer-specific trouble shooting/repair

- IDE and SATA hard drive external housings
- VGA cable, computer monitor (to test laptops with bad LCD panels)
- Windows Install / Recovery CD
- Ubuntu Install CD and/or USB

Bonus Items

- Rework station (Iron + Hot-air)
- Extra bench iron
- Bench power supply
- Logic analyzer
- Handheld OScope
- Signal generator with various cables
- DVM
- Assorted hose clamps
- Inner tube rubber of various diameters (to make rubber bands, insulating sleeves)

Fixit Clinic Venue Selection Criteria (provided by an event organizer in California):

- Access to AC power
- Access to Internet
- I prefer venues it's easy for Fixit Clinic participants (and, ideally, us too) to get to (e.g. not a long drive)
- I prefer the venue not to charge admission for access to Fixit Clinic
- I prefer venues that are interested and willing to promote Fixit Clinic aggressively
- I prefer indoor venues with good natural lighting (windows), large working surfaces, access to AC power, internet access, smooth, clean floors (when a screw drops we can find it) access to water (e.g. a sink)
- I prefer venues where there's ample parking and move in / move out is easy
- I prefer weekend, daytime venues
- I prefer child-friendly venues
- Close to where people live so they can run home and grab a broken thing when they accidentally discover what we are doing.
- No more than 4 hours long, ideally three hours; these events are exhausting on the Fixit Coaches and tend to run over time anyway.

- At least three (, ideally four) Fixit Coaches should commit to participate, at least one Fixit Coach needs to know how to solder (I say four Fixit Coaches because we need to assume something may come up that keeps at least one Coach from actually participating)
- There should be a good chance that the Fixit Clinic can be self-sustaining at that venue for the long run (implies that venue has a local champion, shepherd, advocate, who will sustain it, and attracts "Fixit Coaches" too, at least at this point. At Chabot, LHS we need to see if Docents, staff can be encouraged to clone Fixit Clinic)
- It should effectively advance Fixit Clinic's stated mission of "technology and science literacy through guided disassembly of your broken stuff"
- It should provide good leverage for the amount of our effort invested (e.g. press coverage, ongoing buzz, societal dialogue that lasts well beyond the actual event)