

flap-o-phone Construction and Assembly Instructions

by Christopher DeLaurenti

[See the related article "[The flap-o-phone, a Site-Specific Turntable](#)" in this issue of *eContact!*, where the author discusses the background and development of the instrument.]

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Making the flap-o-phone

Figures 1a, 1b, 1c. Tools and components required to build you flap-o-phone.

Preparations

Gather the following tools:

- **measuring tape** (measurements below are given in metric [followed by imperial measurements in square brackets], e.g.: 2.5 cm [1"])
- **X-Acto knife** or box cutter, razor blade or a razor saw
- sturdy **scissors**
- large or medium-sized **drafting triangle** (about 10x15 cm [4x6"], though a T-square or a 30 cm [12"] ruler will suffice)
- **blue painter's tape**
- **needle-nose pliers**

You will need the following components:

- A long piece of **cardboard** in good condition with no folds, holes or staples; it should be about 30x70 cm [approx. 12x28"] — the exact final shape is about 21.6 cm [8.5"] wide and 63.5 cm [25"] long. The cardboard should be about 2 to 4 mm [3/32 to 5/32"] thick.
- flap-o-phone mounting: a square-ish **cardboard box, or a hunk of Styrofoam**, or any material that is strong but flexible enough to rest on the knees. Ideal dimensions are about 7.5 to 15 cm [3 to 6"] deep and at least 30x30 cm [12x12"], though I strap it to the top of my laptop. Scrounge materials at construction sites, big box tech stores, college campus dumpsters and behind grocery stores.
- A stubby **nylon flange** less than 1 cm [3/8"] tall or an ink cartridge mount from a Bic Round Stic Medium pen (should be 6.5 mm [1/4"] in diameter, 7 mm [9/32"] for a snug fit) which serves as a spindle for the 78 rpm record.
- several 18- or 17-gauge **wire brads** 3.18 cm [1.25"] or 3.8 cm [1.5"] long
- generic **binder clip** that can clamp
- **sheet of thin plastic** slightly thicker than cellophane, thinner than a theatre gel or aluminium foil
- oddball assortment of **coins, slugs, and heavy washers**
- set of **furniture pads**: small (about 6 mm [1/4"] in diameter) round felt dots backed with adhesive found at hardware and "home improvement" stores
- 1 **Papermate pen** to mark spots and turn the record

Instructions

1. From a large, long piece of cardboard, measure and cut out a rectangular piece of cardboard 21 cm wide by 62.3 cm long (about 8.5" x 25").
2. Make discreet hash marks along the long portion of the cardboard in the following increments: 19.6 cm, 21.2 cm, 0.5 cm and 21 cm [7-3/4", just shy of 8-3/8", about 3/8" and 8-1/4"]
3. Use the drafting triangle to draw exact lines from the hash marks to the opposite edge of the cardboard.
4. Use the X-Acto knife (or box cutter or a razor blade) to slit the outer layer of the cardboard. Do not cut all the way through the cardboard! These incisions make the cardboard flexible to fold.
5. Turn the cardboard over so you can see the un-slit side. Position the cardboard should so that the 0.5 cm [3/8"] "strip" is underneath and on your right.

6. From the upper right corner, measure 7.5 cm [about 2-15/16"] along the top edge and make a hash mark. Measure 5.8 cm [about 2-1/4"] along the right edge from the upper right corner and make a hash mark. Align the drafting triangle to the hash mark and use the pen to mark the point; this indicates the spindle.
7. Gently poke a hole into the marking for the spindle. From underneath, slowly enlarge it somewhat — but not too much — with the tip of scissors, so that the nylon flange (or an ink cartridge mount from a Bic Round Stic Medium pen) has to be wiggled into the hole snugly.
8. Set up the flap-o-phone so that the side with the spindle marking rests flat. Make a triangle by folding the other two flaps up.
9. Measure the clamping slit for the binder clip: Position the hanging flap near the spindle mark and make a hash mark 1.5 cm [19/32"] to the right of the spindle. Take the scissors and cut a vertical slit 3 cm [about 1-1/4"] from the bottom edge of the hanging flap into the cardboard.
10. *Optional modification:* take an X-Acto knife (or box cutter or a razor blade) and cut a circle or diamond or any shape you can manage into one of the upright flaps. Tape or otherwise affix a stretched out sheet of thin plastic slightly thicker than cellophane, thinner than a theatre gel or aluminium foil over the hole.
11. *Another optional modification:* to reduce wear on the 78 rpm record and muffle the noise of the spinning disc, apply adhesive cloth furniture dots to the spindle flap of the flap-o-phone. Make sure to place the dots outside the radius of the record label.
12. Take the binder clip and, while squeezing the little handles, slide it into the slit on the hanging flap. The lip of the clip should face left. Remove one of the handles by gently pinching each side.
13. Bend an 18- or 17-gauge wire brad 1.25 or 1.5 inches long so it has a slight curve; work the tip of the brad into the three open holes of the binder clip. You may have to experiment with bending the brad as well as using the needle-nose pliers to tighten the holes. The curve of the brad should rest against the middle of the binder clip.
14. Once the brad seems secure from slipping, begin taping coins and other weighted objects a few inches away from the binder clip.
15. Attach the flap-o-phone to a flat surface with tape, put on a 78 rpm record. Play a disc by placing a pen tip in the open hole and gently rotating the record clockwise. You may have to experiment with angling the “needle.”

Preparing the Record

Preparations

Gather the following tools:

- **safety glasses**
- **drill**
- 7 mm [9/32"] **drill bit**
- **cardboard** surface
- 3 sheets of **white paper**
- roll of **blue painter's tape**
- 1 **pen** to mark the drilling spot

You will need the following component:

- A single **78 rpm record**

Instructions

1. Lay the 78 rpm record flat on the cardboard; the cardboard protects the underside of the record.
2. From the edge of the centre spindle hole, measure about 2.5 cm [1"]. Mark the spot with a pen. This is where you will drill the secondary hole. Optionally, to reduce debris on the other side as you drill through the record, you can tape the opposite side with a square of blue painter's tape.
3. Cover the 78 rpm record with 3 sheets of white paper; leave a square about 2.5x2.5 cm [1x1"] around the spot marking the secondary hole. The paper protects the surface of the record from debris.
4. Put on safety glasses. If your drill is not a cordless drill, make sure it is unplugged.
5. Insert the drill bit into the drill, making sure it is tightly secured. If your drill is not a cordless drill, plug it in.
6. Press the drill bit gently but firmly against the spot marking the secondary hole. The drill should be perpendicular to the drilling surface. With your other hand, hold down the paper-covered 78 rpm record firmly but not so hard that the record breaks!

Safety note! *If you worry about the drill slipping and hitting your hand, you can wear heavy gloves. If you are unfamiliar with a drill, that's OK! You can practice with just one hand using the drill on a record you don't care much about.*

7. Begin drilling! You will see curly black debris. When you begin to see light brown curls, stop! That's the cardboard. You have drilled through the record.
8. Gently remove the drill and unplug it if possible. Lift the paper up deftly and discard the debris.
9. Use a piece of blue painter's tape to "sop up" the remaining debris particles.
10. Your record is ready for the flap-o-phone!

Credits

The basic design of the flap-o-phone is based on the CardTalk record player designed by [Joy Ridderhof](#) and her associates at the [Gospel Recordings Network](#) in the late 1940s.

Some instructions are based on diagrams from the "Neat Science" site of Dan Keith and revised by Christopher DeLaurenti. <http://www.neatscience.com/CardTalk.pdf> [Last accessed 16 February 2012]

"Preparing the Record" instructions by Christopher DeLaurenti.

Modifications to the flap, spindle, needle and needle housing by Christopher DeLaurenti, who remains indebted not only to his teachers at Bard College and their many suggestions, but also to scores of helpful staffers at several Seattle area hardware stores including Hardwick's, Tacoma Screw and Limback Lumber.

The flap-o-phone was named by Jeremy Hoevenaar.

Thank you to turntablist Marina Rosenfeld!

Biography

Christopher DeLaurenti is a sound artist, improviser, and phonographer based in Virginia. His albums include *Perforate Silence* (Spectropol), *N30: Live at the WTO Protest November 30, 1999* (unAmerican Archive), *Favorite Intermissions: Music Before and Between Beethoven-Stravinsky-Holst* (GD Stereo), *of silences intemporally sung: Luigi Nono's fragmente-stille, an Diotima* (reductive), and, with Stefan Tcherepnin, *Bleed the*

Capacitors (DRAFT). Christopher is a co-founder of the Seattle Phonographers Union. Live, his recent solo performances include Museum of Modern Art (New York, 2011), Chapel Performance Space (Seattle, 2011), INSTAL 10 (Glasgow, 2010), Bellingham Electronic Arts Festival (2009) and the Seattle Improvised Music Festival (2008).

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