Do-it-Yourself "Hose Horn"

Here's What You Need:

1. Find an old Bb Trumpet at a flea market, garage sale, or on "e-bay." Don't pay more than $50.

2. Buy at least 6 feet of ¾" vinyl tubing (¾" outside and ½" inside diameter) and two heavy duty cable ties at a hardware store. (Braided tubing may maintain integrity of shape better than non-braided.)

3. Find an adult who has access to a workshop and can supervise the steps in these instructions. You will need a vise, a saw with a blade to cut metal, a file, some lubricant (slide grease), and a measuring tape. A calculator may come in handy as well.

At top of above photo is a hand-made reproduction of a mid 18th century Nuremburg trumpet by Johann Leonard Ehe III (made in 1998 by Frank Tomes of London).

In the middle is the Prototype "Hose Horn" that is pitched in "C" concert. It plays the same harmonic pitches as the "Ehe" Trumpet.

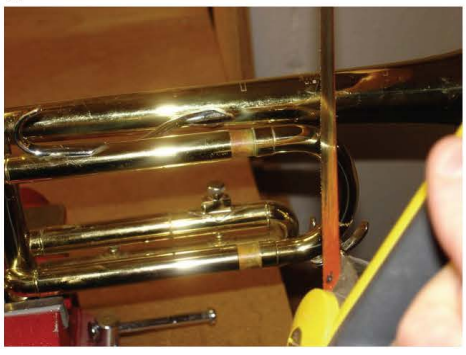
At bottom are the materials you need to make a "Hose Horn" at home or school with adult supervision (Bb tpt, vinyl tubing, heavy duty cable ties, vise, and saw with blade to cut metal).

Begin Here:

1. Put trumpet in vise (A) and cut upper portion of tuning slide as shown below (B). Cut easily and slowly- brass is very soft!

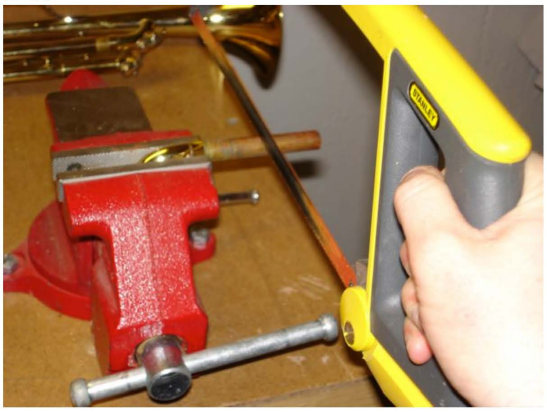
A.

B.



2. Take upper and lower portions of tuning slide out of the trumpet. Put upper portion of tuning slide into vise (C). Not too tight- we don't want to collapse the tube! Measure 1.5" from end of sleeve and cut as shown (D1). Keep this upper portion (D2) of the tuning slide for later. File off any excess metal around the cuts to make relatively smooth.

D1.



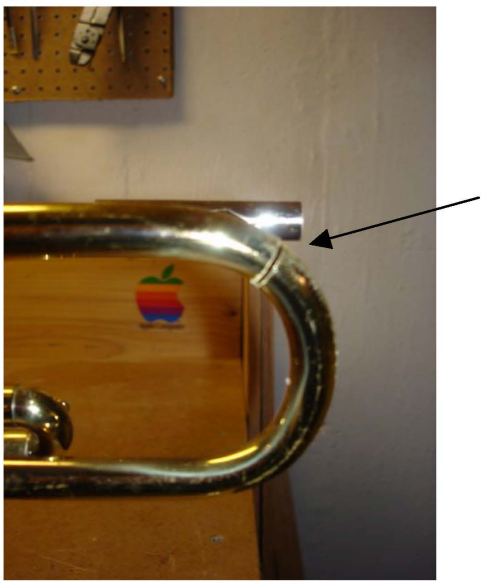
3. Turn trumpet around on vise and cut end of bell section as shown (E). The finished cut should look like: (F).

E.

C.

D2.

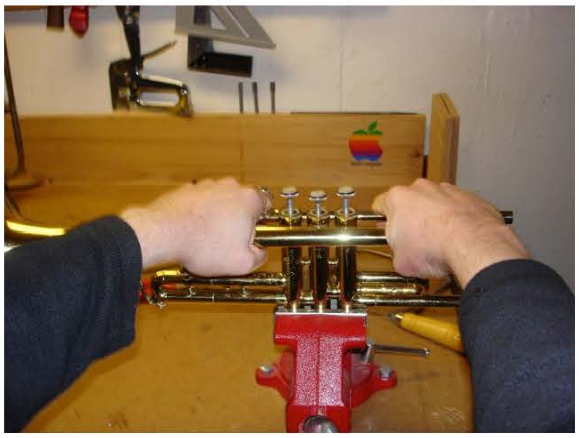
F.



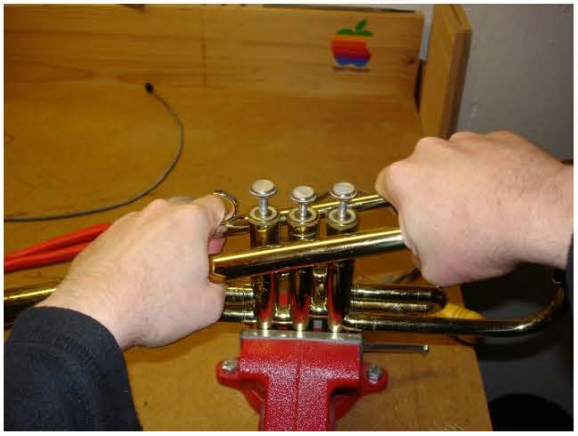
4. With trumpet firmly attached to vise, grab with both hands and gently rotate as shown (like teeter-totter) until small braces attached to the middle valve break off. (G, H, I, J, K)

G.

H.



I.



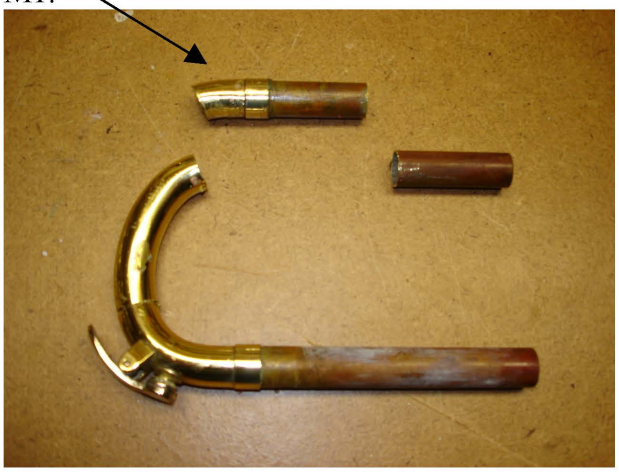
J.

K.

5. Now you have everything you need to assemble your "Hose Horn" (L).

Put some lubrication on the lacquered (shiny) portion of your tuning slide (M1, M2) and slide one end of vinyl tubing over until it reaches the end of the sleeve (N).

M1.



N.

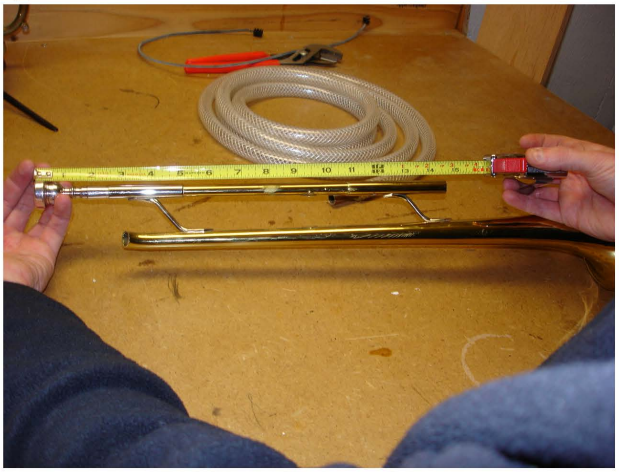
6. Now it's time to take some measurements:

Put mouthpiece into leadpipe and measure from mouthpiece to end of leadpipe (O). We'll call this measurement **"x."**

L.

M2.

O.



Now measure from end of bell section to tip of bell (P). Subtract 1.5” from this measurement to account for the overlap of the hose when we connect to the bell section. We’ll call this measurement **“y.”** (example: 19” bell, minus 1.5” overlap = 17.5” for the “y” measurement)

The total length from mouthpiece to tip of the bell should be about 99” to make the instrument play in “C” concert pitch.

Use the following formula to get the hose length which we will call **“z.”**

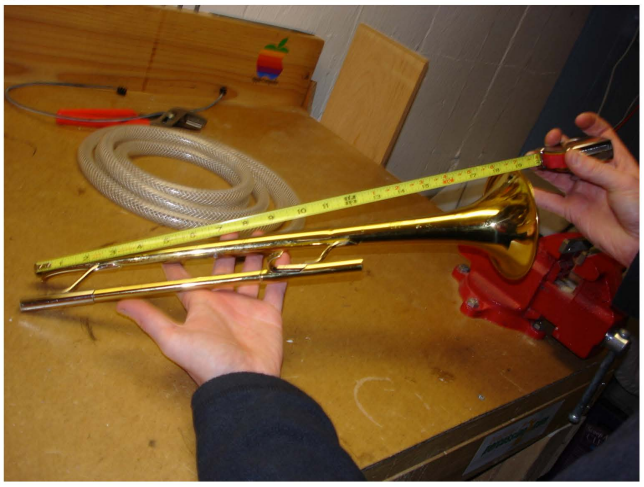
Total length - x - y = z (hose length)

99” - ____” - _____” = ____” (hose length)

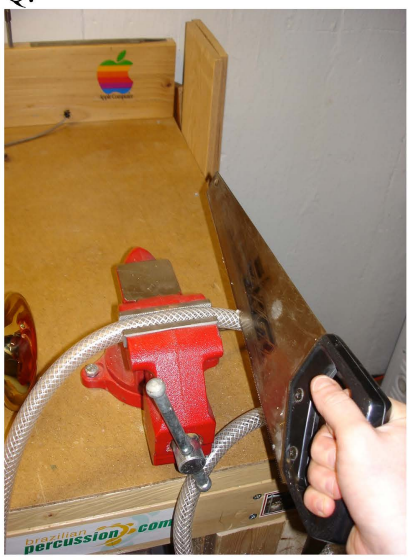
7. Put the end of the vinyl tube connected to the upper portion of the tuning slide (N) into the vise, stretch out the vinyl hose, measure (only the tube- not the metal slide), and cut to your “**z**” measurement (Q).

8. Now you are ready to assemble your “Hose Horn.” Lubricate the tuning slide and fit into leadpipe (R). Lubricate end of bell section and slide hose 1.5” onto brass tube (S).

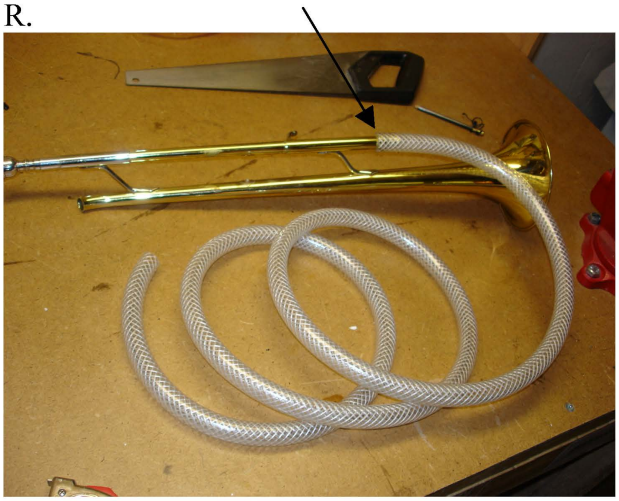
P.



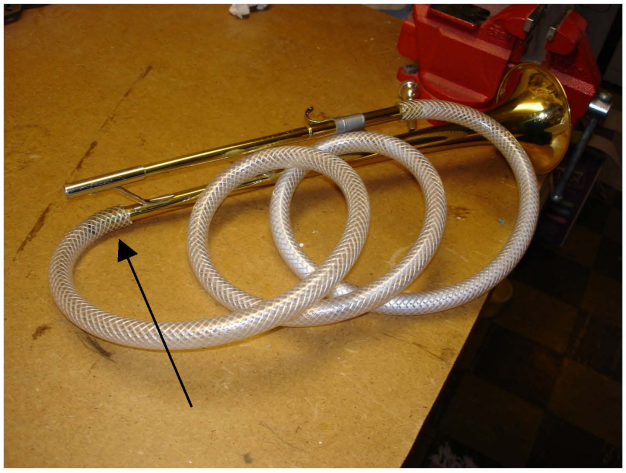
Q.



R.



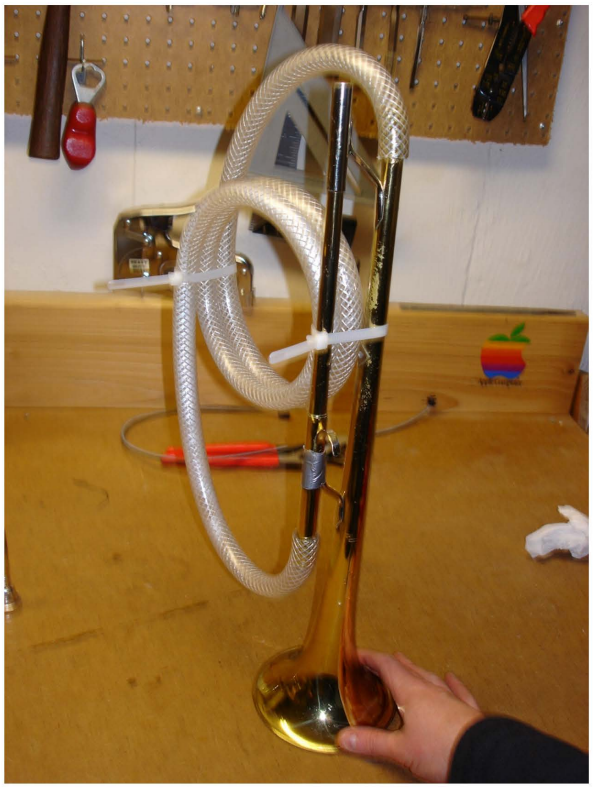
S.



9. Fix the cable ties on top and bottom of double wrapped portion of tube to give your "Hose Horn" a sturdy form (T, U).

T.

U.



Now you're ready to enjoy your very own "Hose Horn" which plays all the same notes and sounds astonishingly similar to an 18th century natural trumpet!

To empty water, simply pull out tuning slide and aim hose downward. You may be able to pull molded material out of instrument case so that it can be used to carry your hose horn.