GARDEN-HOSE RECORDER

MATERIALS

piece of plastic garden hose, about 12" long (transparent green hose with ¼" wall works well)

1" piece of dowel, wide enough to fit *snugly* inside hose

TOOLS

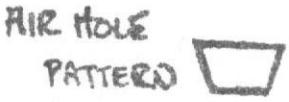
mat knife or utility knife

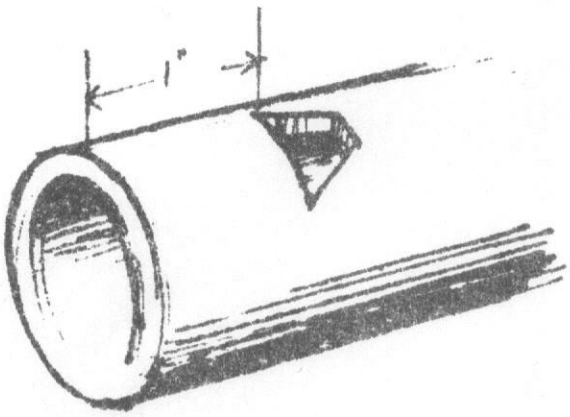
12" piece of dowel, which fits *loosely* into hose

coarse sandpaper

CUTTING THE AIR HOLE*

Cut an air hole like the one below, 1 inch from the end of the piece of hose. (You may want to trace the pattern and mark it on your hose.) It's much easier to cut the hose if you put the long *loose-fitting* dowel into the hose for a brace.

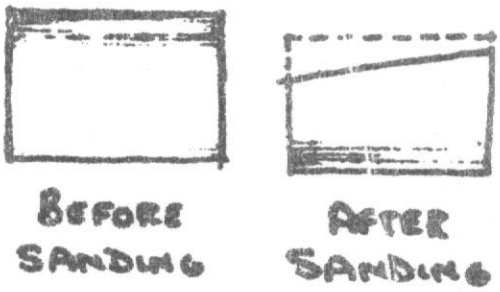




* Cutting a neat hole in plastic with a utility knife is difficult for young children. Adults or older children experienced with the tool should do the cutting for them.

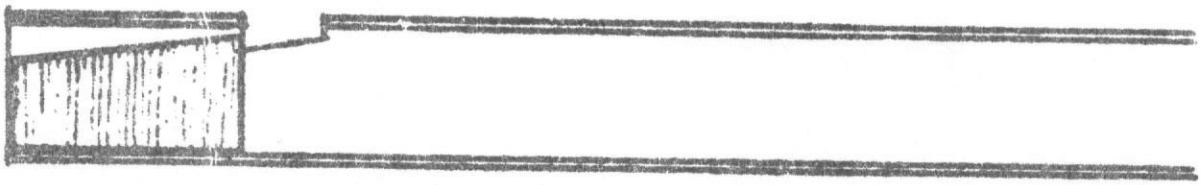
MAKING THE MOUTHPIECE PLUG

With the sandpaper flat on the table, sand the dowel until you have a smooth, flat, slanting surface along one side.



MAKING THE RECORDER PLAY

When you have sanded the plug, put it into the end of the recorder so that the sanded surface slants *up* to the air hole as shown.



If you are very lucky, you will blow a clear note right away.

If the recorder doesn't play well at first, try moving the plug backward or forward a little in the tube.

If it is hard to blow, the plug probably needs more sanding.

If there is a large air passage but the recorder still doesn't play, you may need to make the slant of the plug steeper.

If you have sanded the plug too much, you may need to get another piece of dowel and start over. However, don't start over until you have tried everything else.

MORE NOTES

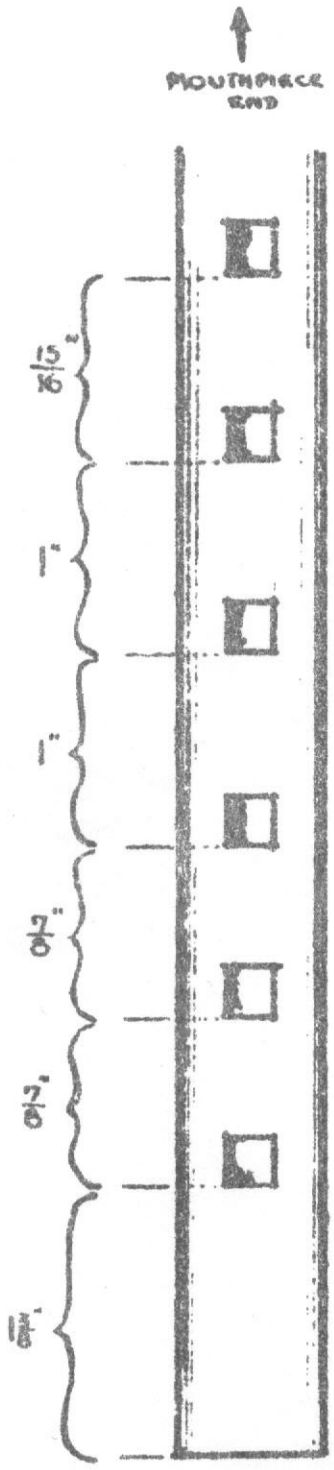
When your recorder will play one note nicely, you may want to make note holes.

First, just try blowing your recorder very softly, then harder and harder. See how many notes you can get simply by blowing in different ways.

Then insert the long loose-fitting dowel into the hose again at the end opposite the mouthpiece.

With your utility knife, make a ¼-inch square hole about 1½ inches from the end of the hose.

Play the recorder while you cover and uncover the hole. Then add as many holes as you like, keeping them about 1 inch apart. With each new hole, play the recorder to see how it sounds.



A RECORDER TUNED TO THE MAJOR SCALE

To make a recorder that will play a scale involves precise work.

Use a piece of hose exactly 12¾ inches long with a ½-inch *inside* diameter. Make all the note holes ¼-inch square, and place them as shown in the drawing.

Don't be discouraged if your first attempt isn't perfect. This is a hard instrument to make, and you may have to make more than one to get a recorder that will play in tune.

PLAYING NOTES

To play the first note of the scale, cover all the holes and blow softly. For the next six notes, remove one finger at a time, starting from the lower end of the tube. To get the highest note of the scale, replace all your fingers on the holes, and blow a little harder than you did before.

VARIATIONS

Any kind of fairly stiff tubing can be used to make a recorder. Simply make sure that you have a dowel for the mouthpiece that fits snugly into the tube. Use the pattern on page 38 as a model for your air hole, making adjustments for differences in diameter (wider hose, bigger air hole). It's best to make the air hole a little bit on the small side and then enlarge it if necessary.

A length of hula hoop will make a simple flute. Cut a piece about 12 inches long, and make a shallow hole about 1 inch wide about 1 inch from one end. Plug the end near the hole with a cork or a piece of dowel. Blow across the edge of the hole – as you would blow on a soda bottle.