

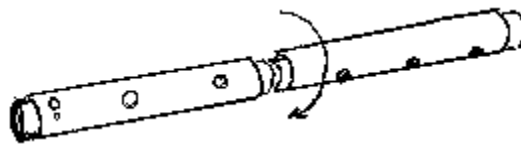
Adapting a Recorder - One-Handed Play

The following article was written and reprinted with permission from Bob Harrell. Bob plays the recorder with one hand.

This is information that may help someone duplicate (or improve on) my recorder. The recorder works great. I do not pretend to be a musical instrument technician! This is done with what I had on hand or could get at the hardware. Knowledgeable people may know better ways. What I did may seem silly to real technicians. The recorder plays very well.

OPERATION ONE

Keyed holes need to be on the bottom of the recorder. All seven finger holes are on top. The rear three holes and the thumb hole must be keyed for single-handed use. Now what? Cut the recorder in half and glue it back together! This is not very difficult. Mount the recorder body (center piece) in a lathe. Cut a groove in the body to take a sleeve. Then cut in half with a sharp tool or knife. The cut should be as narrow as possible so as not to affect the tuning of the recorder. I used a very sharp knife and the lathe. The tuning was not affected.



I made a sleeve out of a piece of PVC pipe. I cut and sized it with the wood lathe. The body was glued back together with the sleeve in place. It is very sturdy. Epoxy glue was used.

I used a 1/2 inch dowel to mound the recorder body in the lathe. The dowel was built up with masking tape until it was a tight fit in the body. I was using what I had. I had a 1/2 inch drill chuck to fit the lathe. There is not a lot of stress if you are careful.



Here is the PVC splice in the recorder body.

I am sure that a plastics person could cut and splice a recorder body with ease. The recorder is made from ABS. I think there are glues that could glue the body and show no marks. Could the recorder be cut with a hot wire cutter? Perhaps you have a plastics shop and want to give them a try.

Could you buy the body undrilled? You could turn another body out of wood. How about ebony?

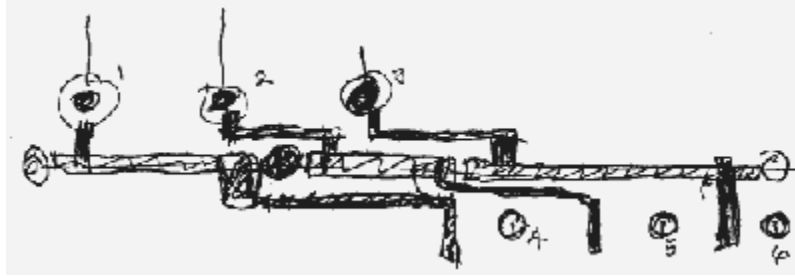
I checked the Yamaha 302 with my Korg tuner before I cut it. It was tuned very well. I could notice no change when the glue dried. The tuning on the finished instrument is all you could expect from a \$40 recorder and then some.

A visitor to this site says that he fills the holes and drills new ones. He is a very smart man. His letter makes that apparent. You may want to do it that way. I think you might want a bit of experience before trying that. If you want the fastest way to a single-handed recorder it is easy to splice the tube.

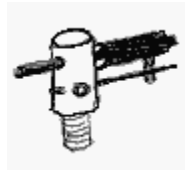
I was very careful with the cut and the splice.

DRILL NEW HOLES?

I have just drilled new holes on a wooden Ariel soprano recorder. The operation is very nice. It plays in tune. I have completed the keyworks and it plays great. I checked it before and after with a tuner and everything is great. I took a drill that fit through the upper three holes by only a slight bit. I drill through to the back to make new holes. I then plugged the old holes with a wood dowel. This is a fine instrument. The total cost is about \$40.



Here is my first sketch. It is really all you need to start. I have been too busy plotting, planning, and building that I have not made a good cad drawing.



I use three post. They have been made of brass or aluminum. I have used a threaded hole and two Allen screws to hold the spring.

This is not general practice. The spring is usually just wedged in place. I have mounted the post in two ways. I have threaded the post and tapped the recorder. I have glued the post into a press fit hole in the recorder. Both work fine. Thanks for epoxy glue. The bottom of the rod rides about 1/4 inch over the recorder body. Nothing critical here.



I have put this arm in place on the alto recorder for stability. Only hole A is drilled for tone hole one. Hole A is sawed out for tone hole 2 and 3. This allows the arm to be slipped on with ease. It still adds to the stability. See the picture. Hole B has the brass lift rod soldered into it for tone holes 2 and 3. Is that perfectly clear? The tip of the arm may have to be trimmed to fit before it is soldered to the key cover.

The levers on my recorders have been made from brass rod. See the picture above. I find that the rod fits between my fingers and does not obstruct movement when playing the lower keys. I like that. I have not put any fancy cover on the rods so far. I like just plain rod. It may hurt the fingers of a small child or lady. I have a can of Plastic Dip that I am going to try.

I have made pads from several different materials. I have no great solution. I use leather or felt material and have covered the surface with a thin air tight foam that I happened on. It was used as wrapping for the parts in a Thomas the Tank Engine set I bought my grandson. It works and so I have not hunted something better yet. It is too fragile for general use.

Boehm said to use felt and cover it with an air tight membrane. He says to double the membrane in case of a puncture.

I did not flatten or change the tone holes to be covered in any way. I reasoned that if you cover the hole with your finger then it should be no trouble to do so with a simple key pad. I was right. I checked for leakage only by using the Korg. If the note is correct then the hole must not leak? Right? I would like to do something fancy with the tone holes as I realize the instrument people do not make special seats just for fun.

TIDBITS

The tuning and tone of the recorder is not so very fragile. I have had posts sticking down into the tube and can detect no difference before or after I grind them and seal the hole with epoxy. The Korg AT120 can not tell the difference.

When I glued a tube together a ring of excess epoxy was left inside the tube. No difference in tuning was found. I could not tell the difference when I removed it. Neither could the Korg.

If you change the length of the tube you will affect the tuning at once. Don't!

Quality is minding every little detail. I don't leave any post sticking into the wind stream. I clear the glue out of the tube if any gets there. I try not to use excess glue. I try to leave the recorder as near to the way I found it as possible.

Cheap plastic recorders are tuned very well. I have a \$5 recorder. It really ticks me off that it is tuned as well as a \$21 one. Buy a kid a Yamaha YRS24B. Try putting keys on one. You can't lose much. Check it on a tuner. Amazing!

I have just put keys on a soprano Aulos that costs about \$7. It is tuned very well and is easy to play with one hand. I have cut and spliced 300 series Yamaha soprano and will soon start putting keys on. I have keys on a customized Zen On from Lee Collins. It plays very nice. I have not quite finished it.

These recorders are all easy to play. That is, the notes can be fingered with ease enough to allow one to play. I have not let the fact that I don't know how to play a recorder hold me back.

Build one if you want to play. It is not difficult. Anyone can work with brass and silver solder. The point of this is just fun.

Every child should learn to play an instrument. What you put in determines what you get out. Is that a good lesson?