

CONCERTINA CONVERGENCE

at the National Folk Festival 2015

WORKSHOP 1 - Concertina Care with Malcolm Clapp
Song Room – Friday 3rd April 2015, 2.30 - 3.30pm

(Initial attendance 38 people, increasing to 45)

(Please note that most of the contents presented referred to traditionally built English-made concertinas, and also those of similar manufacture made by Jurgen Suttner, Wally Carroll, Chris Ghent, Richard Evans, etc. So-called hybrid models made in North America and the UK, and others makes with accordion reeds, are of a different construction, so not all of the advice may be appropriate to these models, although they work on a similar principle).

1. Regular maintenance

Nothing too onerous required. Occasionally brush the bellows folds with a soft brush to remove dust and other foreign matter. The most important thing is to regularly play the instrument; regular use will extend the life of the instrument and its components. Not recommended to take the instrument apart unnecessarily. *"If it ain't broke, don't fix it!"*

2. Common problems

Broadly, three areas of concern.

The sound (ie reeds and valves), the action (ie buttons, pads and springs) and the bellows. An unrestored Lachenal anglo concertina (thank you, Sandy) was disassembled to illustrate some of the problems often encountered.

a) Sound problems

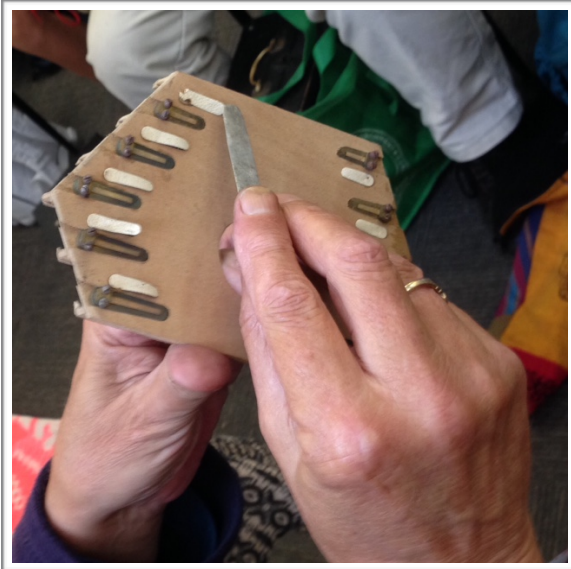
Reeds sometimes fail to sound, go out of tune or produce unusual/unwanted noises.

Access a reed-pan by removing the 6 (or 8) end bolts, using a small jewellers' screwdriver. Lift off the action section to reveal the reed-pan and use the thumb in the centre hole to pull out the pan from the bellows frame. (No need to fully remove the bolts, but if they are removed, it is recommended that they somehow be kept in order so that they go back into the same spot when re-assembling.)

Often, a non-sounding reed may be caused by a tiny piece of debris stuck between the reed and the reed shoe. Gently pinging the reed with a fine blade will often dislodge the offending particle. Otherwise, sliding a piece of paper beneath the reed will have the same effect, and possibly also remove any dust or dirt trapped there.

Unexpected and unmusical sounds are sometimes caused by the reed shoe being loose in its routed slot; a slip of paper fitted beside the reed shoe may remedy this. Sometimes though, the reed shoe may simply have become loose with use, vibration or shock and can be pushed back firmly into place.





Valves can also cause unusual sounds after some years of use; at rest, the valves should lie flat and cover the slot in the reed-pan, and should clear the edges of the reed chamber when operating. Valves can sometimes be removed, straightened and repositioned, but replacement is recommended when they begin to fail.

Another cause of non-musical sound can be caused by the reed being off centre in its reed-shoe. This can be checked visually, and often the reed can be pushed sideways with a blade to centre it. However, this may break the reed, so proceed with caution. If the reed seems to be touching the reed-shoe in just one spot, a fine needle file may be used to clear the obstruction, often being a bit of rust on the reed edge.

There are many reasons a reed may go out of tune; rust or corrosion of the reed is a common cause and needs to be removed. Chemical treatments are not recommended; fine steel wool or emery can be used on the reed face, and rust on the back of a reed can usually be scraped off with a small, sharp screwdriver. This can make the reed further out of tune, may sharpen or flatten it, or, if you're really lucky, will put it back in tune. Check the tuning against a known good pitch, a visual electronic tuner (Korgs are good), a strobe (virtual or otherwise) or a computer programme or application. (Malcolm uses shareware APTuner on a PC in his workshop; a small Korg for field repairs.)

If a reed is out of tune, it may be filed to pitch using either a needle file or a piece of fine emery or "wet and dry" folded over a lolly stick. A dull blade, a thin piece of stock brass or perhaps a feeler gauge can be used to support the reed. To raise the pitch of a flat sounding reed, the reed should be filed across its face at the tip. To lower the pitch, then the filing should be approximately a quarter of the way up from the fixed end, again across the reed face. Never change the length of the reed; it is the relative mass between the tip and the fixed end that needs to be re-apportioned, though it is a little more complicated than that in reality as the contour of the reed has to be considered, but perhaps that is a bit beyond the scope of this workshop.

Both cleaning and filing, particularly flattening the pitch, can change the set of the reed (i.e. the height of the reed above the surface of the reed shoe), so that may have to be adjusted by careful bending. This in turn can affect the tuning, so one may need to file again, then reset, then file, then reset, etc, until it is correct in both pitch and set. How much of a gap is required at the tip? As a rule of thumb, the gap should be around the same as the thickness of the reed. Keep in mind that the reed is not a flat piece of steel/brass; it is a small part of a huge curve.

If a reed is flat and it is sharpened, but starts to go flat again very quickly, it is a sign that the reed has started to fatigue and tear across its width, though difficult to see without a microscope. That reed needs replacement, and it is far simpler to replace the entire reed assembly than to replace the reed.

Tuning is not for the feint-hearted. Replacement reeds can be expensive, especially those for top end concertinas. After a few hundred reeds, it becomes easier (!), and it is recommended that maybe an old accordion can be cheaply acquired to practice on as accordion reeds, although far different in appearance, react very similarly to concertina reeds when tuning and setting. By all means have a go on a not too rare or valuable instrument, but if you are not confident, leave it to the experts. A detailed explanation of how reeds function, by maker Wim Wakker, may be found at <http://www.concertinaconnection.com/concertina%20reeds.htm>

b) Action problems

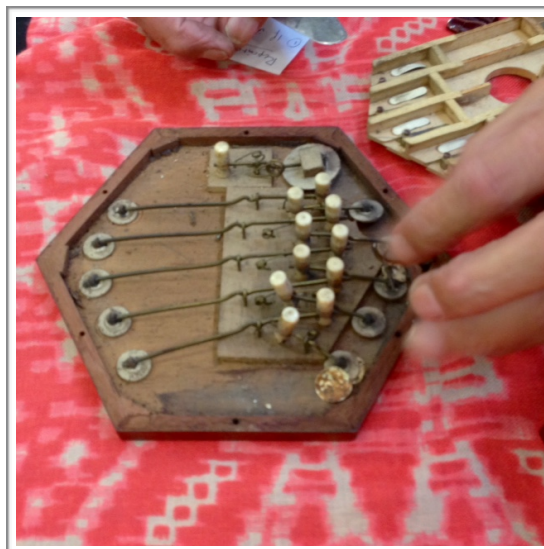
Common problems include air loss through the ends, notes sounding without a button being pressed and buttons that stick down or won't return properly.

Once the entire end has been removed as described earlier, there may be number of screws holding the end cover to the action board which need to be released. On an anglo or duet, you may find a screw from the underside of the action board into the hand rest. Also possibly screws close to the buttons; these may be only a few millimetres long, in which case they do not need to be removed, but sometimes they are 20mm or more, in which case they need to come out. On an English system, the central screw beneath the thumb-strap and the middle screw in the pinky plate will need removal.

Once the end cover is removed, the mechanism will be visible. Nothing terribly complicated, and most faults should appear fairly obvious.

Check and replace any broken springs. Can be made from a safety pin if properly made springs are not available. It is unlikely that all the springs are broken, so it should be clear how to mount a new spring by looking at how the remaining ones are fitted, and how tightly sprung the action should be.

Pads sometimes become unglued or off centre. Pads are a layer of felt sandwiched between a layer of card and a layer of leather. There should be a small disc of leather glued to the cardboard surface (known as a currant or a samper), and this is in turn glued to the "woggle" attached to the end of the rod. Sometimes there is also a strip of leather across the button and the woggle for additional reinforcement.



Before refitting a loose pad, check for damage to its structure. A pad may have come apart, or the felt may have suffered insect attack. Replacement is the best course of action if it is suspect, as the pads need to seal the holes in the pan board without needing excessive spring pressure. Failure to seal will result in air escaping or a reed sounding without a button being pressed.

Another common problem is loss of the felt where the rod enters the button. This needs to be replaced if missing, and although it looks like a fiddly job, it is quite simple, but difficult to describe. See <http://hmi.homewood.net/bushings/>

c) Bellows

Just a few hints here....

Thin leather for patches can sometimes be obtained from bookbinders' suppliers, and non-laminated card for anyone brave enough to attempt making new bellows can be obtained from artists' suppliers. Recycled leather from a ladies leather pants or skirt may be found in Op Shops.

However, it may be preferable to obtain such things from specialist concertina parts suppliers.

If the top binding and corners of the bellows ribs are badly worn, a strip of leather may be glued over the top of the existing leather, right around each entire rib rather than patching individual leaks.



All leather patching, including replacement gussets, should be on the outside of the bellows. Not all repairers agree on this, but one very good reason is that it is easier to see if a repair is about to fail than if it is inside.

3. Resources

A good source of repair information is a book by Dave Elliott entitled "Concertina Maintenance Manual". Usually available on eBay UK or US, from selected overseas concertina retailers or direct from Dave. (Google is your friend....)

(Note: unless you own a Hohner/Bastari concertina, be wary of the repair hints given at the end of Roger Watson's otherwise excellent tutor books "Handbook for Anglo Concertina" and "Handbook for English Concertina". These pages will be of little help in repairing the more traditionally made concertinas.)

www.concertina.net has many articles and threads regarding repairs and well worth searching for specific repair problems.

Specialist suppliers of spare parts include:

Mark Adey at Concertina Spares <http://www.concertina-spares.com/>

Wim Wakker at <http://www.concertinaconnection.com/>

4. General comments

There are many things that can go wrong with a concertina. This workshop tries to describe and address some of the more common faults in the limited time available. It is not claimed to be a definitive instructional, may contain errors and omissions, and at best is only a rough introduction to the subject. However, it is hoped that it may prove useful.

While all care and attention has been taken in the preparation and delivery of this workshop and of these notes, no responsibility will be accepted for loss or damage caused by following any advice or suggestions therein.

The content of this workshop and of these notes may include advice which may differ from that offered by other concertina repairers. I acknowledge and respect all contrary views, and I would recommend that these be considered no less valid than my own.

Malcolm Clapp April 2015