



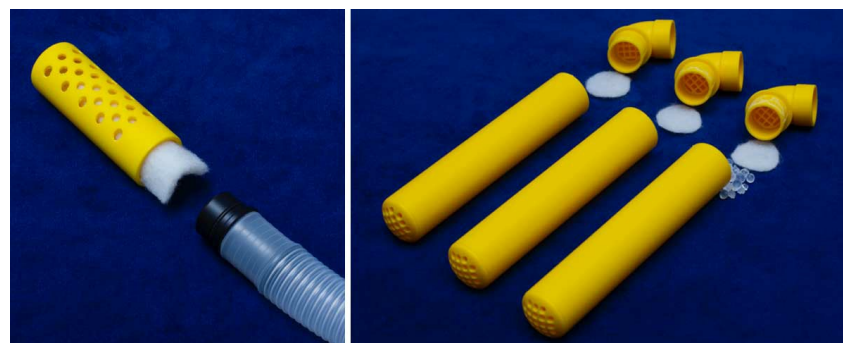
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Hi Friend,

It looks like things are moving in the right direction for a summer of piping. This certainly seems to be the case in the northern hemisphere. That said, I judged at Phoenix Highland games and in Las Vegas last weekend and I noticed that attendance numbers were a little down on pre-pandemic years. Many people have been impacted with COVID-19 in one way or another and I sense that some people are a bit hesitant to return to in-person events, including piping and highland games. We shall see ...

I would like to thank you for your continued support throughout the last couple of years. It certainly has been a challenging period for all of us in the bagpipe world due to the on-going pandemic. It is not over yet so we must do all we can to make the bagpipe a safe instrument to play, practically in public ...

This brings me neatly to some modifications and additions I am making to my products which I think you will be interested to read about. You may or may not be aware that the filters of



many facemasks are not actually fine enough to block the Coronavirus. After much research in this area, I found in my native New Zealand the product I have been looking for. This filter takes out 99% of particles and viruses larger than 0.3 microns and is made from natural Merino sheep

wool. This type of sheep produces the world's finest wool. It is extremely fine and soft: strong, broad wool.



Interestingly, it is the same wool filter that NASA is now using in its spacecraft, because it filters both water and smoke out of the atmosphere when fighting fires.

Control the environment inside your bag – and therefore control your pipes

Most musical instruments are subjected to climatic conditions. The bagpipe being mouth blown and having four reeds is definitely subjected to climatic conditions. Therefore, we tend to play in controlled environments, for example, in halls where we can control the temperature and acoustics etc. If playing outside, we try and play somewhere dry or shaded. Recording studios have controlled filtered air systems to control the environment. I have been to the corporate headquarters of Apple Inc. in Cupertino, California, and it's the same set up there.

We can do the same inside our bags to help as much as possible to control the environment. By blowing through the filter cloth, you purify the air - cool it down and take out moisture - this then provides more consistent controlled cooler - drier air to the reeds which helps them to stay on resonance longer and therefore produce more harmonics.

As many of you may know already, my moisture systems act as an 'air conditioner unit', providing cool dry clean air to the reeds. Now, by adding the filter cloth, this is elevated to an even higher standard, and, of course, it filters out viruses plus any dust piratical or impurities. It is imperative that the air – your breath passes through the filter cloth – producing pure, cool air as much as we possibly can. I believe my moisture systems are the only ones where your breath can flow through the filter cloth therefore acting as a filter and not just a cloth absorbing condensation. These are fitted in my moisture tubes and spilt stocks plus my drone moisture systems.

***One player who can testify to this is Stuart Liddell
[pictured, left in 2021, with the Argyllshire Gathering***



Medal].

Stuart has been using my systems for well over a decade now and has won all the major solo-piping prizes with them.

However, this is science that is backed up with the use of a Sound Analyzer. John Patterson, a live long friend who is a sound engineer, has spent a lot of time diagnosing samples of sound from filtered and unfiltered drones and comparing harmonics strengths and their clarity. His experiments show clearly that the sound quality with the filters is the better sound. Better controlled air = Better controlled sound. Of course, you need to have reeds that produce harmonics in the first place to be able to record them. Most brands of drone reeds don't have higher harmonics. Mine do – in abundance – and I remain grateful to all the positive comments I receive from my customers in this regard.

[Check out the cloth and the new products on my website](#)

I have been reluctant to interduce this new products/cloth sooner until we had done intensive research and testing. The interesting aspect was apart from the virus protection provided it just enhances my moisture systems so much that it is worth using it just to increase the effectiveness of the moisture systems alone.

Recently, I received an email from a customer asking about regulating the amount of air the drones take and increasing the pressure forced into the stocks using a valve or tone enhancers with some of the holes taped off. My correspondent compared this to placing your thumb at the end of a garden hose which increases the water pressure.

He seemed to me to be describing the Venturi effect. This is the principle that my moisture control systems are based on. The

Venturi effect is used in air pressure systems, water pipes and oil pipes etc. It is also what is happening when reeds are operating properly. The pressure increases over the smaller surface area, while the narrow flow then creates a vacuum in the water/air. The fluid's kinetic energy increases results in a pressure decrease. The principle was discovered by Italian physicist, Giovanni Battista Venturi (1746 and 1822), pictured above.



In our bagpipes, our lung pressure – and pressure on the bag when taking a breath – forces air through. A Venturi device cannot be used to increase flow pressure and reduce velocity. This is the opposite of what a Venturi actually does. Think of the end of your hose and placing your thumb on it to increase the pressure but reduce the flow. It is this effect which creates the condensation/moisture.

It seems to be that there is some confusion out there about this. Briefly, if you reduce the air pressure to your drones you will reduce the volume. It's logical: less air = less volume. This, however, does not change the tone of the drone. It can't, as the tone is produced by the reed and the characteristics of the inside bores of the drone. You can compensate for any volume drop by opening the bridle. This is a big subject and one I can fully explain but maybe in another newsletter.

Maybe someone can prove me wrong or provide a different perspective, but this is my experience and understanding which certainly works.

++ PIPING WORKSHOPS AND SCHOOLS ++

1) I will be delivering a workshop in San Jose, CA on 30th April. Pipers of all abilities well get something from this one-day workshop. Come and join like-minded pipers and learn more about our instrument and its music. Details from Wes Weber at wesweberjr@gmail.com 669-221-1017

2) Don't forget the Rob McLintock, California School of Piping & Drumming is taking place on June 17-24 in San Diego.

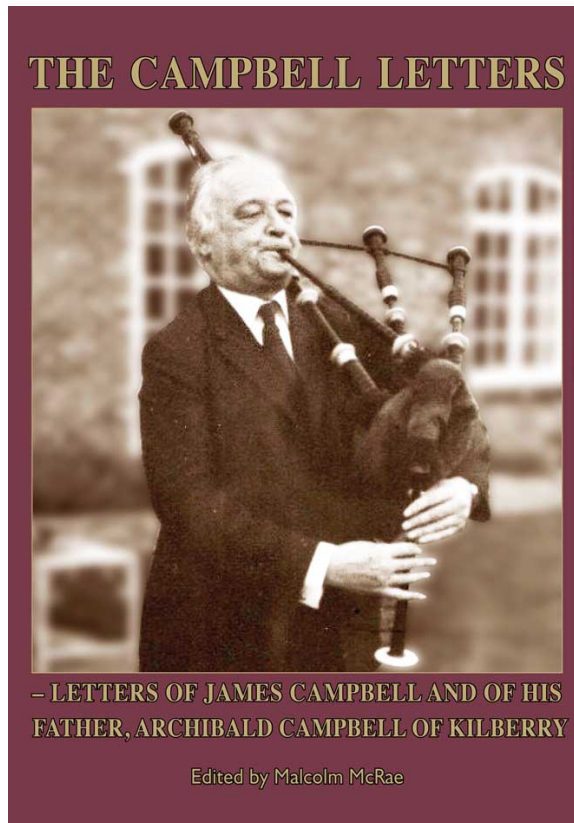


The deadline for scholarship is 24th April. Go to the website for more information or email Sue Jacobi at: suejacobi@msn.com

3) The Jim Thomson School of Piping and Drumming is scheduled for July 8-15 at Northern Arizona University, in Flagstaff, Arizona.

For further information contact Marianne Sullivan at JTUSSchoolInfo@yahoo.com

I see that my good friend, Malcolm McRae has published a book on the correspondence of James Campbell. For those of you who may not know, James Campbell was the son of Archibald Campbell of Kilberry, who was President of the Piobaireachd Society and who edited many of its books as well as his own book, the *Kilberry Book of Ceol Mor*. He was an immensely powerful man in piping. James was also a highly influential and well-respected individual. As well as being an authority in piping, particularly ceòl mòr, he taught law at Pembroke College, Cambridge.

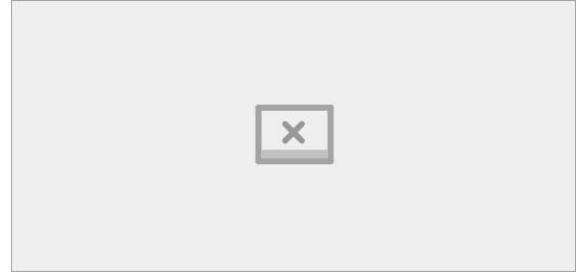


Malcolm McRae.

I am working my way through Malcolm's book but so far I find the excerpts of Campbell's letters

fascinating. Malcolm has done the piping world a great service in publishing this book. I urge you to get a copy, which can be obtained [HERE](#).

One of my customers, Tam McGirr from Brisbane, bought a set of my HR3 drone reeds recently.



He had them in his pipes for only 20 minutes then made this recording. Enjoy.



I wish you a Happy Easter. Enjoy your piping.

Bruce Hitchings MBE BEM.

As ever, please send me photos or videos you'd be willing to share at bruce@highlandreeds.com including a caption of event and date. Please also leave a product review on the appropriate produce page of my website – or leave a comment or video clip of you playing on the ['Submit your comment/playing' page](#).

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