

by Donald WG Lindsay

Ascension Method / Modh Dìreadh

LINDSAY SYSTEM CHANTER / PÌOB AN T-SIONNAICH: PART ONE

In August of this year, I arrived with my family on Ascension Island in the South Atlantic. At around the same time, back in Glasgow, issue 98 of *Piping Today* went to press, featuring the open source plans for my extended range Lindsay System chanter. The week after our arrival, Malin Lewis, Jarlath Henderson and Ally Hutton played to a full house and standing ovation during Glasgow's *Piping Live!* festival, in a show titled *Two Octaves*. The show was focused on exploring the new chanter. In keeping with the open source ethos of the project, Malin played their own ebony iteration on the design, made at their workshop on the island of Skye. Malin's first chanter, made from native Laburnum, was already "retired" after only a year. As the first Lindsay System chanter to be made from wood, it was shortly to join my own prototypes *The Rainbow Set of Pollok* and *A' phìob ghrianach* in The Museum of Piping.

A week or two prior to our departure, BBC's *Pipeline* enquired about an interview. Unfortunately this proved logistically difficult on arrival here. Ascension is home to the BBC Atlantic Relay Station, however this station has no studio or broadcast facilities, and only a poor quality low bandwidth internet connection shared by the island. By way of this internet connection, I began to receive news by email of the negotiations with record label *Good Energy* for the release of my forthcoming album *The History of Sleep*, a collection of four duet improvisations featuring my own 3D printed "Lindsay System" set, in collaboration with Glasgow based experimental musician Richard Youngs' electric guitar & eBow.

It might seem that I should be in Glasgow, or at least within reach, while all this was going on. Why travel to a remote island at all, at a moment like this, and why Ascension? The simple answer is, that my wife Hannah was offered an opportunity of a "dream job" here. It seemed like a good move for her career, and for us as a family, to take it. Our family is young, with our littlest Rory just beginning school, our daughter Rosie in primary four, and our oldest Ryall having just left secondary school. He would have the opportunity of a "year out" on a desert island (where he's found himself a role as drum tutor at the island school), while Rosie and Rory would have the opportunity to spend a couple of years in the sun amongst land crabs, green turtles and wild donkeys, go swimming and stargazing under perfectly dark skies, and attend a school of only 100 other children. My days on Ascension would be spent looking after our family, growing vegetables for us to eat – there are rarely any in the shops here – and (hopefully) catching our fish. The clincher was, it would allow me two years of effectively uninterrupted time, to continue my research.

I would use this time primarily to 'write the book' on the chanter, something

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that is an essential step, in order for the instrument's many possibilities to be opened up for the average piper to enjoy. To this end, I'd push myself daily, stretching my own technique and exploring the limits of what the instrument can do. I'd hopefully learn to utilise the entire three octave range, of which it is capable, effectively. These experiences would then provide the foundations of a thorough method, and materials, for learners to use. In addition, I'd be composing, recording, and interacting with friends and followers via the internet, and collaborating where possible to take the design further. If all of these goals could be met, then the price of 'stepping out the room' at such an exciting moment for the Lindsay System chanter project, would be more than worth it.

If time allowed, and with the help of my 3D printed bagpipe collaborators (foremost amongst them Zexuan Qiao), we would also crack one of the most intriguing problems of the chanter – how to design a downloadable, 3D printable file set, suitable for use on any domestic desktop 3D printer. This step, once made, will open access to the instrument to more or less any piper, regardless of geographical or financial circumstances. In keeping with the spirit of the project, the file set in a basic form would be made available for a donation via an online database such as Thingiverse.com, and would be itself open source with the drawings available for other makers to develop further under the terms of the Creative Commons CC-BY-SA license.

In practice of course, time flies. When features manager, John Slavin, contacted me to ask if I'd be willing to write for *Piping Today*, I checked the calendar and couldn't believe that we'd already been here three months! A lot can happen in three months, and despite its remoteness, small size and tiny population (around 800), this is as true on Ascension as anywhere else! The task of developing the *Ascension Method* for the chanter has been in hand on weekdays now for around eight weeks, and much ground has been covered in exploratory practice sessions, so I suggested to John that I serialise the *Ascension Method*. This would allow readers to gain insight into the new chanter, its capabilities and the musical possibilities it offers. Below, as a first instalment, I provide a basic outline and discussion of the chanter's various "registers".

Note about terms used: part of the intention of the *Ascension Method*, is to lay the groundwork of a kind of 'theory' of the Lindsay System chanter. The word 'theory' in this context, implies a diverse range of methods that will be used to illuminate and promote better understanding of what the chanter is, how it does what it does, and how the player can best relate to it. The musical terms coined and used below, reflect an intention to weave stories and metaphor into this theory, in ways that help to clarify and promote easy memorisation. The chanter's story is already being written in



the hands of many players, and wherever possible this story will be reflected back into the 'theory' being constructed here. Reference to established musical concepts will play a role of course, as will examinations of the physical characteristics of the sounds being produced. Like the chanter itself, both theory and story are open source projects, with the *Ascension Method* representing just a first step in the journey.

Note about use of Gaelic: despite not being a Gaelic speaker myself, the Lindsay System chanter has since an early stage had contact with, and been supported by, Gaelic speaking players. Its physical and musical character owe as much to the traditions and forms of Gaelic music and piping, as it does to the Northumbrian-derived physical form of the Scottish Smallpipes, and the sometimes under-rated creative "sandbox" provided by the community of the Lowland & Border Pipers Society (which was a supportive "incubator" for the bellows pipe revival itself, as well as innovations like the chromatic Border pipe chanter). For this reason, and at this stage in the development of the *Ascension Method*, English terms used will be paired up with Gaelic terms, with the Gaelic often having an alternative meaning. As above, this process of development of the chanter's terminology is open, and these suggestions for Gaelic terminology are regarded as a starting point rather than an endpoint.

Note about geographical references: the role of place, and its influence on the transmission and development of ideas (particularly musical ones), is prominent and valued in traditional music. This is as true in piping, as in other forms. The production of the first *Rainbow Set of Pollok* took place in a spacious A-frame loft, in an ex-council house in Crookston, South Glasgow. Prior to that, significant strides had been made in Muthill, Strathearn, where the return bore or "back bore" idea was conceived. The first semi-functional prototype was printed in the former "MakLab" makerspace that briefly flourished in The Lighthouse, Glasgow, while a Buddhist blessing placed on the "newborn" instrument by the Gyuto monks at Watercolour Music, Ardgour, marked a turning point in the story. Malin Lewis' successful manufacture of wooden Lindsay System chanters in Skeabost Bridge, Skye, linked that island to Glasgow and Muthill, as places of significance, while Zexuan Qiao's work on the 'download' version of the chanter links Glasgow to Edinburgh, London and Shanghai in an ongoing connection. Makers and players in Arizona, Seattle and Frankfurt are devoting hours and days of their time to investigations of the instrument, and as the community grows, the places and stories attached to it will accumulate. The writing of the method on *Ascension*, of course, places an important next chapter here, in the remote middle of the South Atlantic.

Registers, "Voices" and "Hands"

The first step towards understanding the Lindsay System chanter and its capabilities, lies in understanding the range it offers, and how it can be used. Bagpipes, generally speaking, are not general purpose instruments, each being specifically adapted to its own music and playing techniques. Of course this can be said to be true of all instruments, but pipes in most cases make a virtue of this kind of specialism. The Lindsay System, although designed to offer a broader musical palette, is no different in this respect. It is consciously specialised, and designed to extend not



Photo: Ryal Lindsay

only the voice of the Scottish smallpipes, but its music and its distinctive character.

The *Ascension Method* will set out to define a kind of 'theory' for the chanter, and as a first stage the chanter's range is explored in detail below. The entire range is divided here into six 'Hands', extending the practical concept of *Top Hand* and *Bottom Hand* commonly applied to the nine note chanter in a more theoretical direction, to describe discrete groups of notes with common characteristics. The further the player explores the chanter, the more sense these groupings will make, and their definition here will hopefully speed up the early stages of this exploration for many pipers. In addition, four groups of two adjacent *Hands* are grouped into 'Voices'. The purpose of this should be clear enough to the reader, and will make perfect sense to players of the chanter. This approach will be explored more fully in the book.

LOW REGISTER / Guth Ìosal

The two central voices within the Low Register are the *Master* voice and the *Bull* voice.

The three *Hands* of the Low Register are *Top*, *Bottom* and *Back Bore*. These *Hands* are defined below.

The Low Register is the range within which the vast majority of music will be played, and many players will have little need to move beyond this range. Within the Low Register, the chanter will offer the same degree of flexibility and facility to the player, as a standard nine-note chanter.

Low Register Voices

(main divisions of the range):

1. THE MASTER / An Ceannard

The first, central voice of the chanter, is the nine-note pipe scale that should be familiar to readers. This is the familiar scale of the Highland bagpipe, Border pipe and Scottish smallpipe. The tones sounded in this range by a Lindsay System chanter, are the same as those of a standard Scottish smallpipe in the key of A. The *Master* voice lies more or less in the centre of the overall range of the chanter, and is played exactly as it would be for any other Scottish pipe. No additional technique needs to be learned in order for a piper to play with the *Master* voice, making it possible for any piper to 'pick up and play' their existing repertoire on a Lindsay System chanter. The majority of *Master* exercises in the *Ascension Method* will deal with concepts of key and mode often missing from piping books and lessons, and on developing improvisational skills with regard to both melody and gracenoting.

2. THE BULL / An Tarbh

The *Bull's* voice is formed of the *Back Bore* and *Bottom Hands*. This is a deep red voice, reaching into the bass clef, and when played from the lowest note forms a scale of an octave in D major.

Low Register Hands

(sub divisions of the range):

1. TOP / An Ceann

The *Top Hand* is exactly as its name will suggest to pipers, and corresponds to the top hand of the scale of the Highland bagpipe, Border pipe and Scottish smallpipe. The notes of the *Top Hand* are D4, E4, F#4, G4 and A4, referred to as D, E, F, High G, and High A

in the usual way. In the *Ascension Method*, the *Top Hand* is regarded as overlapping the *Bottom Hand* on D.

2. BOTTOM / A' Bhodhaig

As with the *Top Hand*, the *Bottom Hand* is familiar territory for pipers. The notes included are G3, A3, B3, C#4, and D4, and these are referred to as Low G, Low A, B, C, and D.

3. THE BACK BORE / An Drochaid Ìosal

Most of the Lindsay System chanter's additional range is made possible by the addition of a 'return bore' that doubles back from the Low A (RH pinkie) hole. This bore sounds Low G from a rear thumb hole, and allows three additional low notes F#3, E3 and D3, referred to as Low F, Low E and Low D respectively. It also enables access to the high *Hands* detailed below, however the *Back Bore Hand* as a musical term is only used to refer to the four lowest notes of the chanter, beginning with Low D, and overlapping with the *Bottom Hand* on Low G.

HIGH REGISTER / Guth Àrd

The ranges detailed below comprise the High Register of the chanter. These pitches are produced using overtones, and the fingering for each of the High Register notes closely corresponds with the fingering of a Low Register note – e.g. the fingering for Low E will also produce High B with a slight adjustment. The High Register requires more advanced technique to use, and with the exception of *Cronks* (see below) the higher *Hands* are of less use musically to the average player. The high reaches of the *Steps Hand* are probably only of interest to professional musicians and composers.

The two primary voices, and the three *Hands*, of the High Register have been named in English for geographical features of Green Mountain, the central peak of *Ascension Island*. These names are metaphorical, alluding to the role and behaviour of the notes in each *Hand*. The Gaelic terms are also metaphorical, although these don't refer to specific geographical features, and are not direct translations of the English. Both English and Gaelic terms will make perfect sense to those already experienced in playing the chanter. The three *Hands* of the High Register increase in difficulty of use, as the range is ascended.

High Register Voices

(main divisions of the range):

1. RUPERTS & CRONKS / An Uilleann

Two connected routes crossing Green Mountain, that traverse mainly the "rear" or North-West side of the mountain, and provide a view out across the endless ocean. A great view, a sense of being high up and far away, and no particular difficulty in the walking. The Gaelic name for this voice is *An Uilinn*, which reflects its role in joining the Low Register to the highest parts of the range, the physical shape of the "crook" of the return bore around which this voice is found, and the sound of the voice itself which resembles a blend of the Uilleann pipes and the Scottish smallpipes.

2. DEW POND / Sgùrr Dearg

Complete mastery of the new technique of 'Pinching', and absolutely steady bag and bellows technique, is

required to play with this voice. Its names reflect in different ways, the experience of playing within this range and the restrictions & challenges that the player needs to learn to negotiate. The Dew Pond is at the peak of Green Mountain, accessed by way of a narrow path of long wooden steps, and both the pond and its approach are hemmed in by a tall forest of bamboo which sways continually in the trade winds. Sgùrr Dearg is of course the peak in the Cuillins where the 'Inaccessible Pinnacle' can be found. This voice is formed from the Ruperts and Steps Hands.

High Register Hands

(sub divisions of the range):

1. CRONKS / An Drochaid Àrd

The first *Hand* of the High Register is *Cronks*. While the whole of the Low Register retains the characteristic sound of the Scottish smallpipes, the High Register begins to take on a little of the plaintive cry associated with the uilleann pipes. *Cronks*, *Top*, *Bottom* and *Back Bore Hands* together provide a range of two octaves, as used by Malin Lewis in his show of the same name. The top thumb technique of "pinching" is essential within *Cronks*, and throughout the High Register. Pinching gives access to the High Register beyond high B, and allows dynamic tuning of pitches. Once this technique is mastered, the player can pitch all High Register notes perfectly to the drone without the use of tape. This is essential, and allows any taping of holes to focus only on the notes of the Low Register. *Cronks'* notes are B4, C#5, and D5, referred to as high B, high C, and high D respectively. Good thumb technique can allow the use of colourful 'split tones' within *Cronks* and *Ruperts*. This will be covered in more detail in the book.

2. RUPERTS / An Dòigh-Obrach

Slightly higher than *Cronks*, and connected to it, the *Ruperts Hand* forms the bridge between *Cronks* and *Steps*, and is combined with one or the other to provide the *Ruperts & Cronks* or *Dew Pond* voices.

3. STEPS / Mullach Caol

The *Steps Hand* is named, partly for the Dew Pond Steps that ascend steeply through a bamboo forest to the peak of Green Mountain, and partly for the step-wise technique that is required to play with this *Hand*. These notes can only be reached by 'stepping' from one to the next when ascending or descending, and while jumps of a third (skipping one note) are possible within this range, enabling the playing of arpeggio, jumps of a fourth are unreliable and greater spans impossible. Access to the *Steps* can only be achieved from *Ruperts*, and once a player is 'on the steps' then movement is restricted to the range given below as 'Ruperts to Dew Pond'. Notes to be found "on the Steps" are G#5, A5, B5 and C#6. These notes don't have a settled nomenclature, but Top G, Top A, Top B and Top C will do for now. The rules of playing 'on the steps' can be taught by the chanter itself, however it is a hard master, and the experience can be dispiriting.

Detailed guidance on the rules and techniques of this highest portion of the range, along with discussions of the role of the reed (some reeds refuse to enter this range, others only offer *Ruperts*), will be included along with compositions designed to make the most of it. ●

LINDSAY SYSTEM CHANTER / PÌOB AN T-SIONNAICH

Registers, Voices and Hands

LOW REGISTER / Guth Ìosal

