

# Organ News

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## The Makin Thirlmere Organ

Nearly a year on from its initial announcement and release a few months later, the Makin Thirlmere instrument has been exceedingly successful as a model. Designed and built as a quality home practice or church instrument, this organ, although relatively small with thirty stops spread over two manuals and pedals, punches well above its weight by bringing our top quality custom sound to a standard instrument. One early customer asked why we called it the 'Thirlmere' when 'Thirlmere' or 'Thirlmore' would be more appropriate.

A number of customers have added some optional extras to the instrument such as a piano and harpsichord module which has added to the versatility of the instrument. This organ was always designed with flexibility in mind with a very careful choice of specification and several built-in stop options. For example, in some cases the organist would prefer either a Sub Bourdon or a Contra Violone as the 32' pedal stop, or perhaps a Dulciana rather than a Gamba on the Great. These and indeed other options, like a Flageolet rather than a Fifteenth on the Swell, will be available on this instrument with a varying complement of speakers according to specification choices made. This instrument really provides tremendous versatility for the player, as well as quality sounds

for the listener.

The Great Seventeenth has several functions. Firstly with the chorus in mind, the French sound with a prominent Tierce in the mixture is easily reproduced. Secondly, with the Twelfth a Sesquialtera is produced. Finally with the 8', 4', 2 2/3' and 2' stops, a Cornet is obtained. On the Swell, the Contra Oboe as the 16' reed can easily be played an octave higher, either manually or with use of Octave and Unison Off couplers for an 8' solo Oboe. In a similar vein, with use of Swell to Pedal, Swell Octave and Unison Off couplers, the Swell Cornopean is transformed into an enclosed 4' pedal reed.

So who should purchase this instrument? With an external 8.1 configuration using UL speakers, it is the perfect two manual instrument for a small to medium church. However, with smaller speakers, which can easily be floor or wall mounted, it makes the perfect English instrument for home use. As ever, we use one amplifier per speaker which means that this instrument will contain a generous set of nine amplifiers for thirty speaking stops giving a ratio of just over three stops per speaker, putting it in the exceptionally high quality range of sound.

With a plethora of playing aids, this is truly an instrument that is all things to all men.



Pedal	Seventeenth	1 3/5'
Harmonic Bass 32'	Mixture (19.22.26)	III
Open Diapason 16'	Trumpet	8'
Violone 16'	Corno di Bassetto	8'
Bourdon 16'	<i>Swell Suboctave to Great</i>	
Principal 8'	<i>Swell to Great</i>	
Bass Flute 8'	<i>Swell Octave to Great</i>	
Choral Bass 4'	<b>Swell (enclosed)</b>	
Trombone 16'	Open Diapason	8'
<i>Swell to Pedal</i>		
<i>Great to Pedal</i>		
<i>Gt &amp; Ped Combs Coupled</i>		
<b>Great</b>	Lieblich Gedackt	8'
Bourdon 16'	Salicional	8'
Open Diapason I 8'	Voix Celeste	8'
Open Diapason II 8'	Gemshorn	4'
Stopped Diapason 8'	Fifteenth	2'
Gamba 8'	Mixture (15.19.22)	III
Principal 4'	Contra Oboe	16'
Harmonic Flute 4'	<i>Tremulant</i>	
Twelfth 2 2/3'	Cornopean	8'
Fifteenth 2'	<i>Octave</i>	
	<i>Unison Off</i>	
	<i>Suboctave</i>	

# The Johannus English Chantry 170 Organ

Following the success of the Johannus Studio 170 organ for home practice, there have been a number of small chapels who have asked after this particular instrument for church use. Following some experimentation, it was evident that we had some work to do, since the Studio 170 was designed for home use only. The main concern was the amplification system which required enhancing to make sure it would meet the far greater demands of church use. Once attached to external UL speakers, the English Chantry organ was well and truly conceived.

In addition, four new intonations were produced for each set of samples (Classic, Symphonic, Baroque and Historic). This, in itself, can be a lengthy process as consideration is given to every note of every stop to ensure it fits together as one.

In a wood-based console the English Chantry is a most suitable organ for a small chapel at a price which is very affordable.



Pedal	
Open Diapason	16'
Bourdon	16'
Principal	8'
Bass Flute	8'
Choral Bass	4'
Trombone	16'
Trumpet	8'
Trombone	16'
<i>Great to Pedal</i>	
<i>Swell to Pedal</i>	

Great	
Bourdon	16'
Open Diapason	8'
Stopped Diapason	8'
Principal	4'
Open Flute	4'
Twelfth	2 2/3'
Fifteenth	2'
Cornet	IV
Mixture	IV
Trumpet	8'
Seventeenth	8'
Mixture (19.22.26)	III
Trumpet	8'
<i>Tremulant</i>	

Swell to Great	
Gedackt	8'
Viola di Gamba	8'
Voix Celestes	8'
Principal	4'
Lieblich Flute	4'
Nazard	2 2/3'
Flageolet	2'
Tierce	1 3/5'
Mixture	III
Contra Fagotto	16'
Oboe	8'
<i>Tremulant</i>	



## Sounds of the Summer & Autumn Shades Concerts

Our ever popular 'Sounds of the Summer' and 'Autumn Shades' concerts featuring Professor Ian Tracey, held during May in Mixbury and October in Shaw respectively both celebrated their sixth anniversary in 2013. Since their inception, they have always been popular, but perhaps more so this year when Ian played to packed houses with people on the reserve list for tickets. Due to this popularity, and suggestions from our audiences last year, we decided to charge £10 per head for a ticket all of which goes to the Liverpool Cathedral Organ Appeal. We plan to do the same into the future and I am pleased to say that we have booked Ian for the dates of Saturday 3rd May and 4th October in 2014.

The Shaw event was even more special with the involvement of Ian's predecessor at Liverpool, Dr Noel Rawsthorne. The packed audience was spellbound for nearly four hours whilst Dr Noel Rawsthorne (aka The Boss) and Professor Ian Tracey (aka The Organ Scholar) played a wonderful concert, interspersed with coffee breaks and lunch. The programme included four duets and many solo items.

Noel played his own composition 'Aria' and a wonderful improvisation on the 4 manual Makin custom instrument. In addition to playing a wide and varied programme, Ian also fully demonstrated the new Makin Thirlmere instrument. Thanks to the generosity of the assembled audience, nearly £900 was raised for the Liverpool Cathedral Organ Appeal.

# The all new Opus 270 and 370



For many decades, Johannus has surprised organists time and again with its Opus series. The concept is simple: complete home organs that offer a rich palette of possibilities. These contemporary instruments will blend seamlessly into the home of any organ lover.

It is easy to see why the Opus has been the best-selling organ in the Johannus range for many years. This traditional series with its rich versatility has been, and always will be, perfect for any organ-loving home. Smartly combining contemporary design, innovative technology and the unmistakably refined tones of a genuine Johannus instrument, the Opus 270 and 370 are a must play for today's organist.

See this for yourself by taking a seat at the two-manual Opus 270, or the three-manual Opus 370. Cast your eye over the instrument and you will notice its diverse disposition of 36 or 42 voices (on the Opus 270 and 370 respectively), operated using illuminated tabs. You will also spot the 32-note AGO pedalboard and three wooden swell shoes. But it's only when you actually touch the manuals that you will really sense the rich musical palette that the instrument offers. Start with an adagio, with soft strings and labial voices, then end in a virtuosic presto using three rumbling 16-foot stops in the pedal. The organ's multichannel audio system distributes your inspirational music over many built-in speakers, producing the pure and natural sound of a pipe organ. Quite simply, this is an organ to fall in love with. Whether you prefer to play American classic, baroque, historic or symphonic pieces, the Opus will respond intuitively to the registrations and settings that you select; what's more, it will respond with

overwhelming passion. In the plenum, the Opus reveals its power, while in a cantus firmus, it spreads a wonderful calm throughout your home.

This is an organ that will make you feel completely at ease. You can throw yourself into a tutti, giving it your all, and improvising as you go. Or just take a seat behind the manuals, relax and marvel at the simple layout of the extensive options. A powerful but elegant instrument.

The difference in sound between Johannus Opus and pipe organs is very small indeed. Using Real Time Sampling technology, the Opus 270 and 370 incorporate flawless recordings of famous pipe organs, rather than relying on simulation technologies. Purity and authenticity are evident each time you touch the Opus, thanks to the new OranjeCore technology, developed by Johannus.

The pure, clear sound of the Opus 270 and 370 will bring the pipe organ into your living room. In fact, thanks to the selection of styles and twelve reverb programs, you won't have just one organ, but instead a whole range of different pipe organs in the comfort of your own home.

Not only does Johannus offer a rich variety of sounds, but you can also choose from a range of colours. The console of the Opus 270 and 370 can be supplied in any colour you want. That makes it the perfect instrument for your home, capable of



Opus 370



Opus 270

matching almost any interior. We put a lot of thought into that, and the same applies to the design. Both the Opus 270 and Opus 370 feature sleek lines and a contemporary console. And so the Opus is always up-to-date.

The special English Editions of these instruments from Makin include English specifications and English voicing.

## As time goes by

As the years fly by at an ever alarming rate, there seem to be more and more important anniversaries which we celebrate, or times we remember with some sadness. Perhaps the one event most people worldwide will remember in 2013 is that it is 50 years since the assassination of JFK in Dallas. Some years ago I visited Dallas on business and found myself driving through Dealey Plaza late at night. The next day, I managed to explore Dealey Plaza, the 'Grassy Knoll' and indeed the 'Snipers Nest' by foot and was astonished that most people still think there was a single assassin since there is incontrovertible evidence that bullets came from behind and from the front of the president. My very tenuous link to JFK is simply that I was born in the year he died which meant that for me 2013 was somewhat of an anniversary in itself; as my youngest daughter put it to me, I am now half way to three figures!

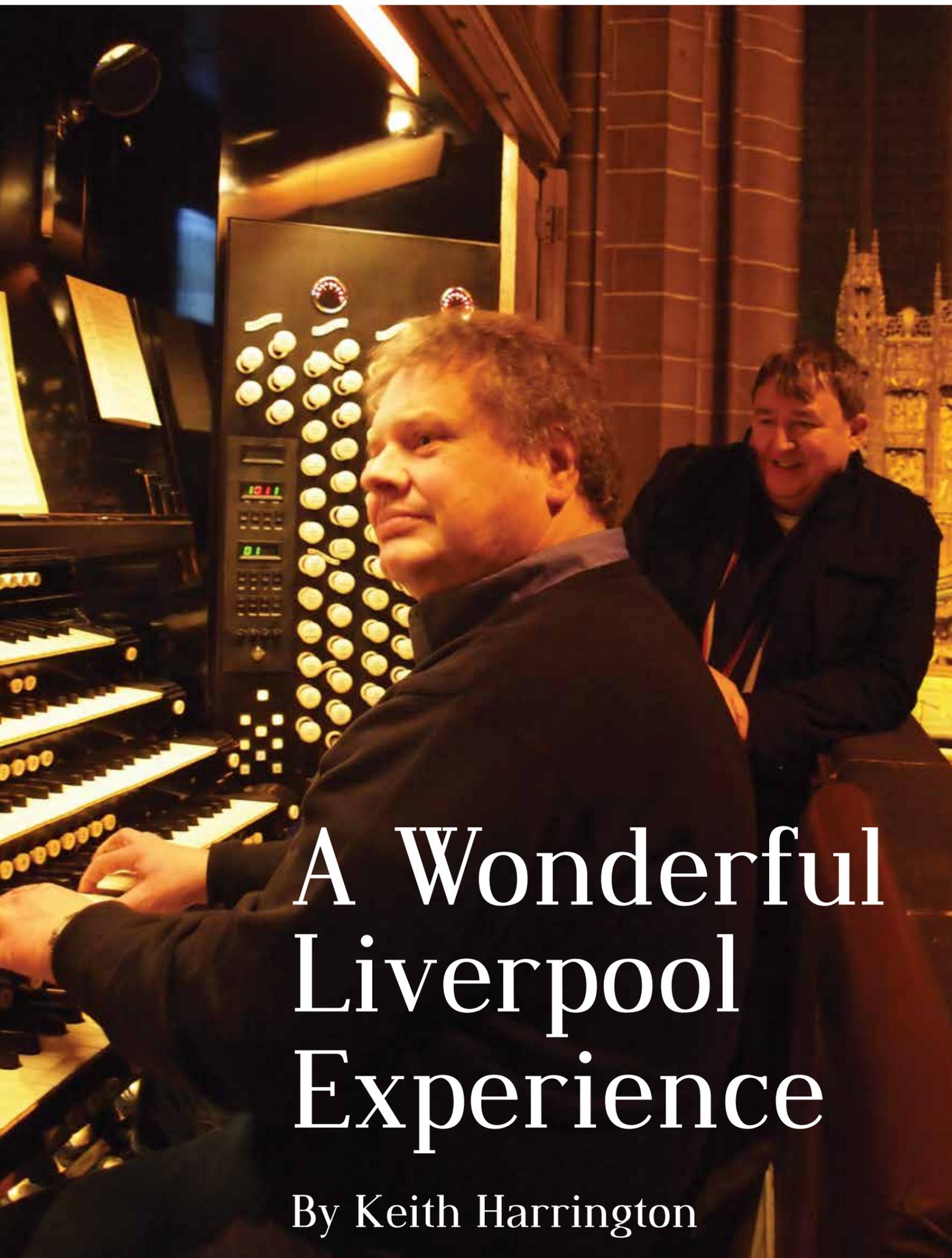
This is my tenth 'letter' to appear in Organ News and its predecessor 'Makin News' and whilst this is hardly the volume of the late Alistair Cooke's 'Letters to America' it is something of a milestone. As well known businesses around the country fold at an ever alarming rate, milestones are well worth celebrating.

I have had the honour, and at times horror, in playing the organ for many funerals; I have often concluded that music for anniversaries, funerals and remembrance services is not particularly available, or at least the pieces I want aren't. The good news is that plans are afoot for our organ music publishing service to take care of this early next year.

Here's to the next ten editions!

Dr Keith A Harrington  
Managing Director





# A Wonderful Liverpool Experience

By Keith Harrington

In late January I had an evening that I will never forget. The first choice I had to make was which five manual organ console should I use to play the 10,267 pipes represented by 152 speaking stops! Essentially upstairs or downstairs. Whilst the downstairs 'Hutson' recital console is perhaps easier to play for the uninitiated, as the whole instrument can be heard in perfect balance, it has the downside that you have to deal with the sound delay. What swung my decision was that for nearly 90 years the 'top' choir console has been used by so many famous organists; in essence there is such a history to it. After putting on my organ shoes (Why does this simple task always take forever when you are excited?) I sat down where the famous have often sat.

En passant, the number of pipes is actually a conservative figure as there are some pipes that remain in the loft but which no longer speak. For example on the pedal division there were originally two Open Bass stops, one on 10" and the other on 6" wind. Open Bass No 2 still speaks with all its majesty. However, Open Bass No 1 does not speak at 16' but is available at 32' as the Double Open Bass. This means there are 12 pipes in the loft that do not speak from this stop alone. However since this rank was originally extended up to 8' pitch on the pedals, I suspect that there are 24 unused pipes.

My first impression of the console was that it is exceedingly well designed and comfortable, and whilst there is a massive array of solenoids at both treble and bass ends of the manuals, they are all easily in reach; you actually sit 'inside' the console. Whilst it is possible to reach two hands up to the fifth manual when you are pedalling, it would soon become tiring, so more often than not the Bombarde, Central and Corona organs are played on another manual with the music desk pulled low to more or less hide the fifth manual.

On the 'Great Organ of Liverpool Cathedral' CD, Ian Tracey gives an excellent introduction to the instrument. Actually this material was originally available on tape in the 1980's and converted much later to CD, adding at the same time additional comments concerning the new Central and Corona divisions, when Ian's voice seemed to have considerably lowered in pitch.

Having chosen music that I knew backwards, it was now time to explore each division to get a feel for the instrument. The interdivisional balance is interesting since the Swell and Choir and some of the Pedal division, including the enclosed section, are on the north side above the console and as such seem quiet, whilst the Great, Solo, Bombarde and the remainder of the Pedal division are on the south side and sound very directly to the organist. The balance was particularly brought home with the Swell and Great reed chorus. The Swell has the luxury of three reed choruses on different pressures with the heavy reeds being simply enormous and from the Nave are a perfect balance for the Great reeds. However from the top console the volumes simply do not match and significant care and experience is required to keep everything in balance.

The other major challenge comes from using the original Willis III Swell boxes and their associated engines. The swell pedals themselves work differently to any other swell pedal since they are spring loaded, so they always return to an intermediate central, or neutral position, when the player's foot is removed from them, and in that position the shutters stop moving abruptly. The boxes open or close at a rate according to how much pressure you apply to a pedal. A series of lights above the relevant division indicates

One quickly understands why there is a very special 'Liverpool Technique' for playing this instrument with a much more detached touch being required than elsewhere.

the position of the shutters. Few organs now have this 'Infinite Speed and Graduation' swell box action, but I am delighted to say that there are no plans to change this during the restoration work by David Wells Organ Builders that is currently ongoing.

I found the choir organ to be simply delightful. In some ways it can be considered to be an Echo division containing some beautiful solo stops and it is when the organ is played quietly that it is at its most beautiful. In the original specification, there was an unenclosed Choir division which in essence was a Dulciana chorus. Some years ago, this was rebuilt as a Positive division designed to be really useful with early music, and to obtain those wonderful synthetic sounds.

Of particular note are the Solo strings. Available in a variety of pitches and including a mixture, they are really big French Gambas in sound with a distinct 'acid' edge.

The Pedal division is on both sides of the building, with the north side being partially enclosed in a huge swell box and the south side being unenclosed. An enclosed Pedal division is a wonderful luxury as it means that it is far more flexible to accompany the choir, even, for example, with a large 16' reed as required at the end of the Magnificat from 'Stanford in C'. The three pedal 32' flues are divided around the organ with the largest being the Double Open Metal which forms part of the case façade to the north (CI having been adopted by Makin), the Contra Violone on the south side case which is also available on the Great, and the Double Open Wood, colloquially known as an 'expensive draught', deep in the south side loft.

When you get louder, the full organ sound is simply stunning, particularly when you consider the relatively small number of stops required for this effect. As with any pipe organ, the 'full organ' does not use all the stops, since, for example quiet stops will not make themselves heard and of course can 'rob' other stops of precious wind. From the top console the two big 50" reeds (Tuba Magna and Trumpet Militaire colloquially known as 'Magna' and 'Mili') have a very different

presence than they do in the nave, still devastating, but in a different way.

One quickly understands why there is a very special 'Liverpool Technique' for playing this instrument with a much more detached touch being required than elsewhere. Do watch how Ian Tracey and Dan Bishop play ... it is the same technique that Noel Rawsthorne and Henry Goss-Custard developed.

Inevitably with me, 'Elegy' by George Thalben-Ball had to be played. Having discussed this earlier, I was aware that when GTB played this at Liverpool in the late 1970's the tenor solo was played on all five Great 8' Open Diapasons with the Solo 8' strings coupled to give an 'acid' edge. For those of us who were not at the recital back then, I can report that the effect is simply stunning!

So what's missing? Inevitably there is a wish list; on the top of this being an Echo division. This was originally planned and built, as was a West End Division to be placed on the Dulverton bridge; sadly both were destroyed before being installed during the war in 1941. The good news is that some Willis III pipework has been located and is in storage which is contemporaneous with the rest of the instrument. In fact it is the Swell division that comes from the same instrument as the Great which is now installed as the Central Space division which has revolutionised congregational singing. There is no Gamba on the Great, which is seen by many as being so important, and the delightful Positive division does not have a Larigot. Hardly things to complain about in the tuning book especially when it is so easy to 'borrow' stops from other divisions by coupling and indeed who can possibly complain with an instrument that boasts so much, including three 32' flues and two 32' reeds!

Of course my two hours went in no time at all and I do look forward to round two in due course. Corbie took a good number of photographs; I had no idea of the expression of concentration of my face when I play! One of these days I will take the inside tour of the lofts which sounds fascinating.

Fancy a similar experience? See [www.liverpoolcathedral.org.uk/about/the-organappeal.aspx](http://www.liverpoolcathedral.org.uk/about/the-organappeal.aspx) for details!

When you get louder, the full organ sound is simply stunning, particularly when you consider the relatively small number of stops required for this effect.

# Three Technologies

## Which is the best?

### Introduction

For the synthesis of organ sound there are three different techniques widely used: Real-time Sampling, Additive (or Subtractive) Synthesis and Physical Modelling.

**REAL-TIME SAMPLING** involves recording of a pipe and an authentic the playback in real-time at the moment that the musician presses a key. To make the sound sustainable, the recording is set into a loop. An example of such a recording and its loop is given in figure 1.

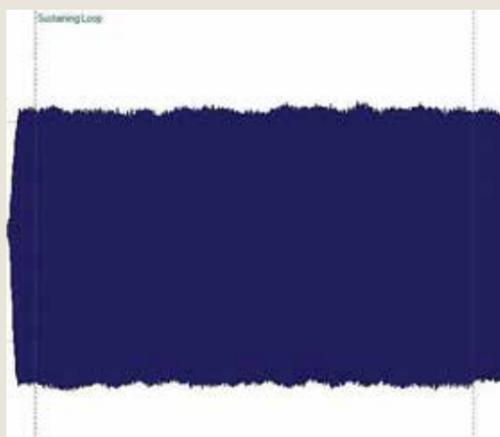


Figure 1

**ADDITIVE SYNTHESIS** is a method where the sound of a pipe is synthesized by generating time- and frequency-varying sinusoidal waves. A commercial implementation of Additive Synthesis used for organ pipe sounds was the 'Bradford System', developed at the University of Bradford and used by some organ companies in their instruments in the 1980's. In its day, this was far away the best method of organ tone production although it has now been superseded. A simple example is given in figure 2. The top two sinusoidal waves are added up to form the bottom one.

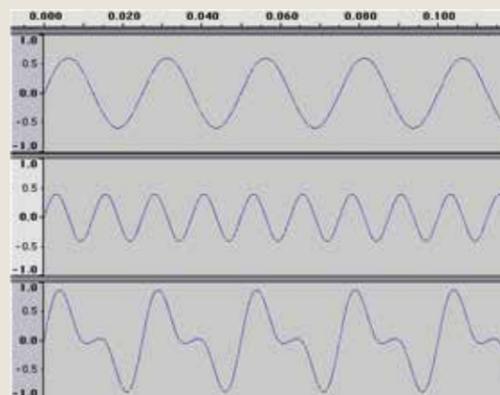


Figure 2

**PHYSICAL MODELLING** is a method in which the waveform of the sound to be generated is computed by using a mathematical model, being a set of equations and algorithms to simulate a physical source of sound. For an organ pipe this would mean that air pressure waves that travel through the pipe are simulated. In figure 3 a simple example is given how this works. Imagine for the top graph that the wave travelling to the right, being reflected and mirrored, as displayed in the middle graph, travelling back to the left. The bottom graph is the summation which represents the actual result.

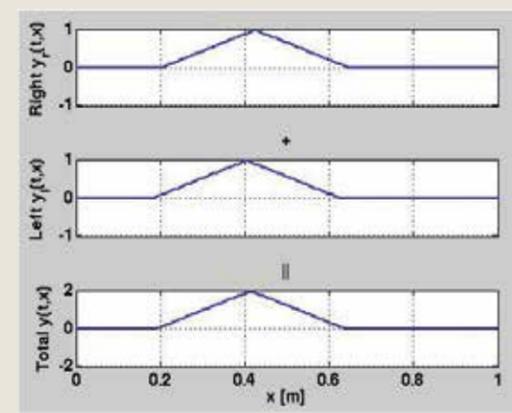


Figure 3

### Why are there different techniques?

One could ask the question why different techniques are used to generate organ sound. Some basic considerations include:-

First of all, let's start with Real-time Sampling. This is a straightforward way to accurately reproduce a sound. You record it and play it back.

Why then Additive Synthesis? Well, for one, it solved the problem for the need of big data memories. This was an important aspect in the past when Memory was exceedingly expensive. Also there was a patent that prevented manufacturers from using Real-time Sampling. By using Additive Synthesis this Patent could be circumvented.

Finally Physical Modelling was invented with the idea to have more control over the physical parameters of an instrument. For example, if the tension parameter on a simulated guitar string is changed, this directly results in a different pitch. In this way, musicians could get more control over the sound.

Continued overleaf...

## The Pros and Cons

It should be stated that every method is as good as it is implemented, which in turn depends upon a wide range of parameters from the skill of software engineers through to the skill of the organ voicer both in the factory and more importantly at the customer's site. Based upon this there are many examples of poor implementation around the country using a good technology, with the converse also being true.

That being said, there are some pros and cons of each method that go beyond how well it is implemented because it is inherent of the technique itself. First of all, with Real-time sampling it is possible to reproduce every little detail that is in a sound. Tests conducted at the Johannus factory have shown that, if you compare directly a pipe being played against a good quality recording, even experts may fail to tell the difference. Pipe organ sound is especially suited for real-time sampling because the sound in itself has little variation over time and can therefore be set into a loop so well that the human ear cannot hear the loop.

The disadvantage is that real-time sampling in itself is static, in the sense that you have a fixed recording. It does not provide a solution for dynamic effects such as poor wind supply. However, this can

be easily fixed by adding pitch effects and, where possible, multiple variants of the same sound. Recent technologies have allowed for many additional variable aspects of the sound to be included which dramatically affect realism such as dynamic chuff made by fast repetition of key strokes, wind pressure fluctuations, physiological swell pedals live tuning and the pipe decay sounds.

Finally, as mentioned before, what used to be a big disadvantage with real-time sampling was the cost of memory, which resulted in very expensive organs. Memory has now become so cheap that the issue is solved, for example with a large instrument we now install up to 3.5GB memory. Indeed with today's low cost memory, the advantages of Additive Synthesis has been lost. In addition, there is no need to find ways to circumvent any patent.

For Additive Synthesis this leaves us with the downsides only, of which there are four.

- Firstly, the technique fails to simulate wind noise. This aspect is very important because without wind noise, the sound becomes very artificial. The problem can be fixed by generating noise with an additional algorithm, but this is a poor substitute, as we can still easily hear that it is artificial since noise

is not 'connected' to the synthesized partials.

- Secondly, the edge-tones are hard to identify during the analysis phase which may provide inadequate information for the reproduction.
- Thirdly, if you want to synthesize at CD-quality, the computational load grows excessively and a cost-effective real-time implementation, even with today's technology, is not possible. Therefore, a compromise between time stepping during analysis and accuracy during synthesis has to be found, resulting in a less accurate reproduction. This compromise will likely have the consequence that micro-modulations, the fine details of the sound, are simply not produced.
- Fourthly, the chuff contains such complex information that Additive Synthesis only gives a poor approximation of the real thing.

Physical Modelling suffers from the same flaws as Additive Synthesis. Both wind noise and edge tones are problematic because of the complexity to simulate this in a model. Also note that a model always remains a simplified representation of the reality, which means that the simulation of the chuff and micro-modulations are also very simplified.

The big advantage of Physical Modelling is that special effects can be implemented relatively easy because one can simply modify the computational parameters. However, there is a problem to create the model itself, because there is no connection between the physical parameters and the computational parameters. Designers have to solve this problem by trial and error. When simulating organ pipes it may happen that the designers are not able to find a set of parameters that give a similar sound.

## Conclusion

Looking at the different methods we can see that there are three areas where both Additive Synthesis and Physical Modelling fail or have difficulty. These are:

- Noise
- Chuff
- Edge tones (these may be synthesized with Additive Synthesis with additional effort)
- Micro modulations

Therefore real time sampling appears to be the best technology to date.

Figure 4, below, gives a representation of how much information is actually missing when all these downsides are added up. Please note that in this example the synthesis has been calculated with special software, thus not in real-time. (A real-time system would give even bigger differences.)

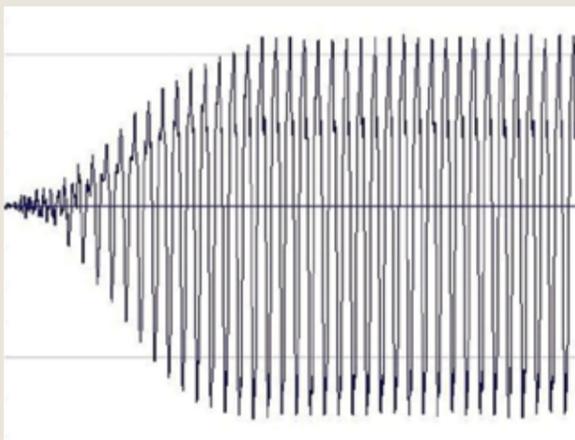


Figure 4a

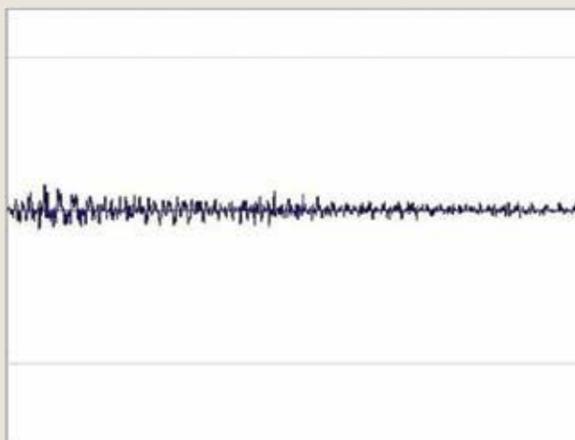


Figure 4c

Figure 4a represents the original signal.

Figure 4b represents a synthesis of this signal, where the noise and edge-tones have been left out. (Because of the limits of graphical presentation they look quite similar).

Most interesting is Figure 4c, which gives the difference between the 4a and 4b. Please note the huge difference in the chuff, but also take into account that during the rest of the sample the edge tones and noise are missing. All of this is clearly audible for the human ear.

With real-time sampling this problem does not exist. All the detail is in the sound and is like a fingerprint of the original, as can be seen in Figure 4d.

Figure 4e shows the difference between 4a and 4d.

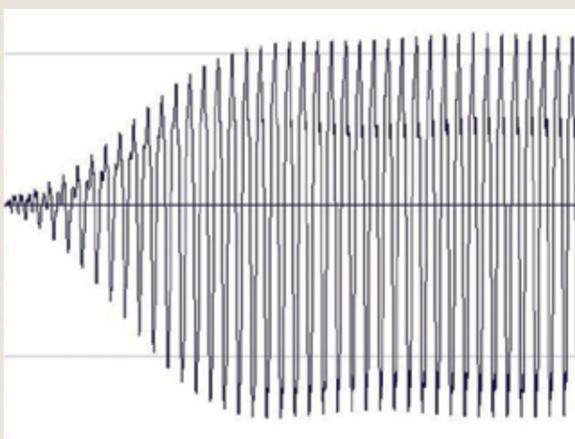


Figure 4b

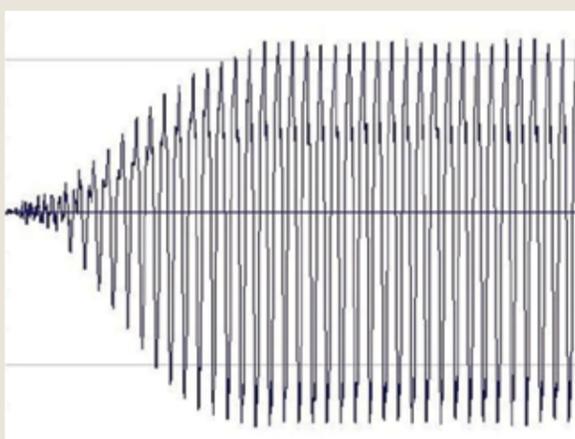
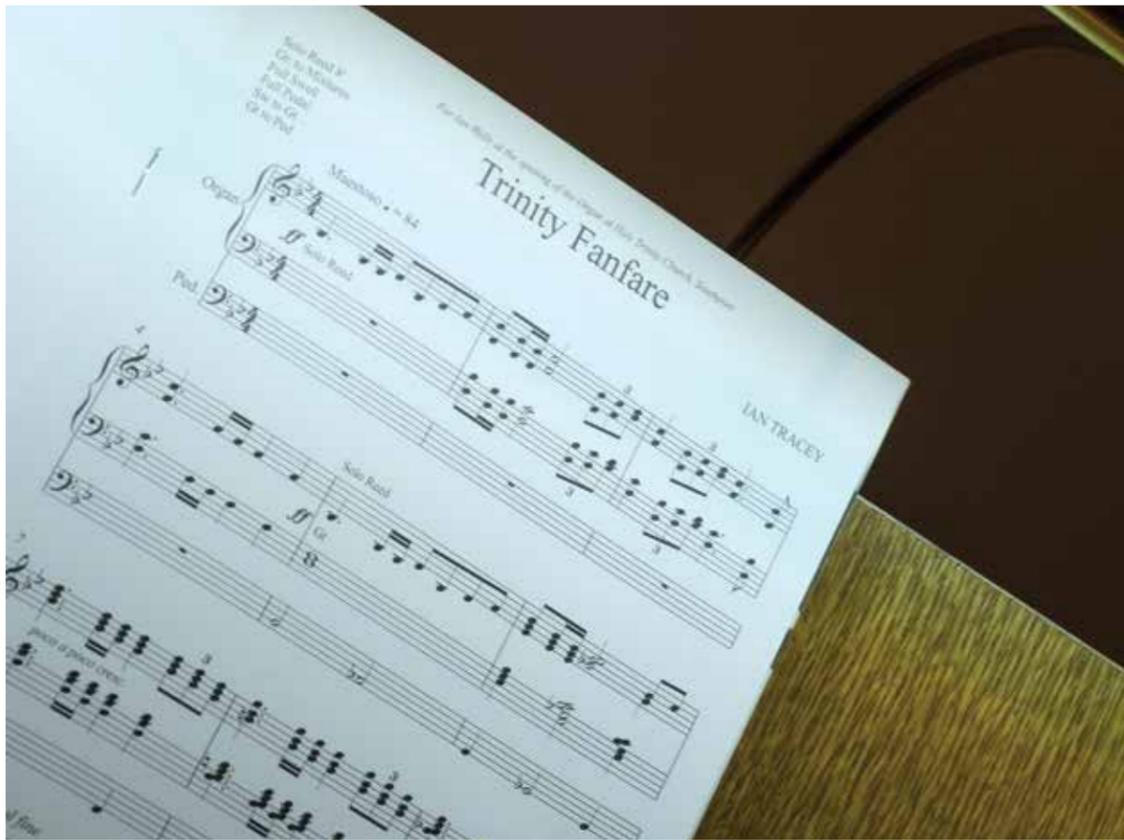


Figure 4d



Figure 4e



# The Joys of being an Organist

by Josephine Quinney

I have been an organist for more than forty years which is probably not much by some standards but enough to accumulate a fair bit of experience.

I started having organ lessons in my early twenties and it was not long before I was sent to 'fill in' at some church or other. I soon became the resident organist at a small church in Cambridgeshire. It boasted a small, but acceptable two manual and pedal organ which was situated at the back of the church with the bench on a sort of plinth. Quite a step up but I was young in those days. It gave a really good view over the congregation.

Soon we had a wedding and I played all the usual music. The bride had arrived and made her way to join the groom and the Vicar launched into the initial preamble. He had just reached the bit about the procreation of children when there was a commotion. The bridegroom had fainted! So I quickly found something quiet and played away while they revived the poor chap and found chairs for the bridal couple.

I was organist at that church for a number of years. I got married and had children. Children are a great help when playing the organ. From the age of three my daughter used to sit on the bench with me. She was really very quiet and would go and sit for awhile with someone she knew in the congregation and then come back to the organ. One morning we had just reached the last hymn and she was sitting on the bench. The tune had a pedal part that went all over the board and every time I played a note at the top she gave

my leg a gentle kick. After awhile I got rather tired of this and said 'Stop it!' She had meant no harm and was now a bit embarrassed so she leaned forward and pushed a hymn book on the little ledge near the keyboard. At this point we came to the last verse and I brought my hands down onto the great and nothing happened. There was silence. The hymn book had pushed the on/off button and we were now very much off. The congregation turned round and thought it was all very funny, but being well trained they started to sing. By the time I got the blower back on it was too late to join in.

We had a funeral. This was nicely timed for an afternoon in the holidays. The children were aged about five and six at the time and I took them with me with plenty of things to do. There was a large table at the back of the church and they were set up with paper and crayons and strict instructions not to make a noise. All was well until at a particularly quiet part of the service, there

was an almighty crash. They had managed, by accident or design, to drop the entire tin of crayons onto the stone floor. I just steadfastly looked at my organ desk while they retrieved their crayons from the floor with, I regret to say, a few muffled giggles. I did hope that some elderly mourner would not drop dead with a heart attack.

Another hazard was Father Father. This was the name we gave to the Vicar's father. He was an elderly retired priest of an Anglo-Catholic persuasion and also something of an organist. He would appear at various times in the church and would roam around. He had the irritating habit of coming up behind me when I was playing and improvising a descant above what I was playing. Even more annoyingly he would change my registration and then wander off looking pleased with himself. Mostly I endured this, but one Sunday we had the Bishop taking the service and quite a large congregation. We had reached the last hymn, which was the set to the

**There was silence. The hymn book had pushed the on/off button and we were now very much off.**

tune of Ebenezer. This has the first half in a minor key and the second in the major. It is really good for some drama and I had it all nicely set up for the last verse when Father Father came up behind me and changed everything around and started on one of his descants. I resisted the temptation to hit him round the ears with my hymn book and just said 'Go away!' He went off looking quite hurt and later told me he was only trying to help.

We then moved to Scotland and became Episcopalians. I told the children that on no account were they to tell anyone Mummy was an organist. The first Sunday was fine. I discovered they had an almost defunct pipe organ and a new electronic instrument that had been bought in memory of the recently deceased rector. The next time we went there was a visiting priest and no organist. 'Is there anyone in the congregation who can play the organ?' he said. With great glee my two children pointed at me and said 'Mummy can play the organ'. I went and looked at the instrument. It did have two keyboards; thankfully not split and some tabs. There were a few stick type pedals at one end which I ignored. So having told the children to behave themselves I played. At the end of the service a lady came and said to me 'I'm sure you really enjoyed that'. I was not sure how to reply, so I just smiled.

I did in fact go on to play that instrument for many years. I will not tell you who manufactured it but the name did not start with M, J or C-H. I found that all of its 'stops' sounded much the same and only increased or decreased the volume. I will say no more about it. However about nine years ago after much perseverance, hard work, money, a very understanding Rector, help from friends and a few other devious means the defunct pipe organ was removed. I should now tell you that it was not replaced with a beautiful Makin organ but actually a pipe organ from a redundant church was rebuilt in the space; my beautiful Makin organ lives in my nice warm music room at home. At church we now have a small, but really beautiful pipe organ with two manuals and a full pedalboard. It delights me most Sunday mornings. The church has a 'state of the art' Victorian heating system. There are times when it is very cold and Clarabella decides she is not coming out to play and sometimes takes Dulciana with her. Last year when it was very cold the entire swell decided to cipher on middle E. We never did find the cause of the problem but it has miraculously cured itself and not happened again.

A couple of years ago we had a wedding. I had the choir singing and it all went really well. I started on my concluding voluntary and the couple were about half way down the aisle. The choir had retired to the vestry and were disrobing. The organ blower is in the vestry and one of the altos took off her choir robes and dumped them on top of the blower box. As the organ was sucking in so much air at the time it also sucked her surplice into the air vent. The organ stopped in a strangulated manner. Fortunately the Rector grabbed the offending garment and the air pressure went up. This is nothing to what my blood pressure did.

The congregation are more problematic. I had one lady who always made a terrible fuss if I played Aberystwyth when we sang 'Jesu lover of my soul'. I had to use Hollingside she insisted as her father detested Aberystwyth. On further enquiry I found her father had been dead for many years. I decided it was better to just not have that hymn. She has now passed away and I must confess I still feel a bit guilty if we sing Aberystwyth.

A few weeks ago we were away on holiday and when I returned there was a general email sent out by one of the congregation saying someone had brought a guitar and they had all sat around singing songs after the service. Wouldn't it be nice if we could sing some hymns using the guitar during the service? I have yet to make comment on that one.

At a recent church meeting it was decided to install a sound system in the church. One lady enquired anxiously if it would make the organ louder. She was reassured that it would not. Was she implying my playing is too loud? I made no comment. It is not a good idea to get involved in any discussions about music in general let alone the organ.

On Advent Carol Sunday we have the carol service. Last year I was happily playing my concluding voluntary. The choir had sung well and I was enjoying playing, to a captive audience drinking coffee and eating mince pies, Bach's Great B minor prelude. I played probably with more enthusiasm than accuracy, but I was enjoying myself. The congregation never listen anyway. As I finished I was aware of an elderly lady from the congregation standing behind me. Oh dear, I thought, what have I done wrong now? So I turned and smiled at her. 'I just wanted to tell you how much I enjoyed that' she said. 'In fact I really want to say how much I enjoy your organ playing every Sunday.' Ah, the joys of being an organist!

**Last year when it was very cold the entire swell decided to cipher on middle E.**

# Analogue Versus Digital Sound

by Ian Quinney

## Analogue Sound

If you are in a church listening to a pipe organ and that sound is recorded on to magnetic tape, when it is played back through an amplifier and speakers then it is an Analogue or close copy of the real sound. There are many reasons why it is not an exact copy that you get back but mostly it is because during recording and playback the sound is subtly altered, usually unintentionally, by the equipment. Then of course a speaker is not an organ pipe and the sound it produces would not be exactly those of the original pipes. Over time the art of analogue sound recording and playback has become so good that you would find it a hard job to tell the playback from the original sound.

To use analogue sound in an organ the sound must be synthesized because it would be almost impossible to hold a recorded sound and play it back when a key was pressed without some form of electronic manipulation which would itself alter the sound.

## Synthesis

Analogue synthesis is where a desired sound is made up from other sounds. There are two main methods of synthesizing a sound, Additive Synthesis where sound frequencies are combined from sound oscillators and Subtractive Synthesis where filters are used to remove sound from white noise. Although debate has raged about which is the best method it is not unknown for the methods to be combined. Having reached a desired sound it is then fitted to an ADSR envelope. This sounds simple but in practice using oscillators, filters, envelope generators, amplifiers and speakers is a complex process that requires skilled people.

In the mid-1970s Yamaha introduced digital synthesizers and by the mid-1980s this had become the dominant form of synthesis. The advantage of digital systems is that they allow sound to be stored in computer memory. The option is there to use either synthesized sound, recorded sound or a combination of both.

## Analysis

Jean Baptiste Joseph Fourier (21 March 1768 – 16 May 1830) was a French Mathematician who was working on Heat

Flow. He proposed that any function of a variable could be broken down into an infinite series of Sine's of the variable. His theory has become the basis of other work that allow mathematical synthesis and analysis of sound waves.

Using Fourier analysis it is possible to breakdown any sound into its fundamental frequency and a series of harmonics. Using Fourier synthesis it is possible to reconstruct the original waveform from the known frequencies. Physically this is done by adding the outputs of a number of tone generators each set to one of the known Fourier frequencies. The mathematical Fourier series is infinite so a decision has to be made about just how many tone generators will be engaged so that the final summation of waves closely resembles the original wave.

## Digital Sound

With the advent of the transistor it became possible to implement a system called Pulse Code Modulation (PCM) to produce digital sound. Digital Sound is a contradiction of terms because once sound is digitised it becomes a set of numbers and is no longer a sound.

*Figure 1* (below) shows half of a sine wave. Now if the amplitude of the wave is sampled every 0.1 milliseconds there will be 19 samples having values:

0, 8.68, 17.1, 25, 32.14, 38.3, 43.3, 46.98, 49.20, 50, 49.24, 46.98, 43.3, 38.3, 32.14, 25, 17.1, 8.68, 0

This would be fine as these numbers could be converted to binary and stored in a computer but the telecommunications community needed standardisation to go a step further and dictated that amplitudes must be sampled as fixed discrete steps. The number of steps is determined by the number of binary digits to be used to represent the amplitude and the

quality of the sound required when the numbers are synthesized back to sound. If 8 binary digits (bits) are selected 1 must be used to represent positive or negative and the remaining 7 bits will give 128 quantization states. If a sample falls between quantization levels it is rounded up or down to fit. This proved to be adequate for telecommunications where they only needed to transmit speech but was inadequate for music. Quantisation levels of 12, 16 and 24 bits are in common use. Quantization is not the only issue the rate of sampling is also very important in determining quality. Claude Shannon stated that the minimum sampling frequency to give intelligible output should be twice the bandwidth being sampled so for speech only the sampling rate would need to be at least 6,540 Hz and for music 32,000 Hz". 3,270 is the speech band width and the sampling frequency needs to be at least twice that so 6,540. In practice sampling rates of 44.1 kHz and above are used with the lower rate being used for standard commercial work (MP3 and CDs) with the higher rates being used by professional sound engineers.

One advantage of digital sound is that it can be manipulated using mathematics so that adding functions like different reverberation settings is relatively easy to do as is changing sampling frequencies, quantisation levels and other functions.

These days all the work of converting from Analogue to digital and back again is done by a single computer chipset with quantization and sampling rates being set by the user via external switches or a computer. PCM is itself becoming obsolete, although the underlying principles remain, as better systems of encoding are being developed.

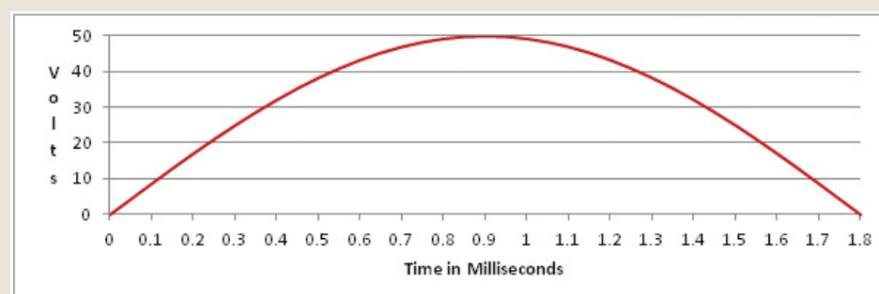


Figure 1

## Error, Error in them all

All sound reproduction systems have inbuilt problems that must be overcome or mitigated in order to produce acceptable sound output at the speaker. With digital sound you get quantization errors from having to pick the nearest quanta to the sampled level. Sound levels between samples may not be correctly interpreted producing further error. The accuracy of the sampling rate clock is also a factor in getting accurate reproduction of the original sound. Try playing a sound sampled at 44.1 kHz back at a higher clock rate, say 96 kHz. Analogue is not free from error either. There is the same problem with accuracy of clock speeds on the oscillators and tone generators not to mention the need to keep all the processes synchronised. There is also the possibility of distortion as the signal passes through the various processes of filtering and mixing as well as the decision on just how many frequencies are required to build the correct sound.

The source of errors in both Analogue and Digital systems are well known as are solutions to mitigate them. Fortunately the human ear/brain combination helps in that it can interpret what it hears and add its own filtering system so that in a good system it will be extremely difficult to tell difference between sampled sound or synthesized sound and a real pipe sound.

## Conclusion

Whether Digital or Analogue systems are better is a subject of fierce debate among their adherents. In reality it comes down to human perception of what is heard by the individual and all individuals tend to be slightly different.

ChurchOrganWorld has opted for digital systems because they believe that using actual pipe organ digital samples give the best quality sound output. It is less time consuming working with digital systems and ultimately this provides a knock on benefit to the Customer. There is also a lot more research effort being put into digital sound systems so there is a possibility of improvements in the future.

Listen! I hear angels singing or is it the Vox Angelica.

# The right shoe for the Pedals:

## A winning product

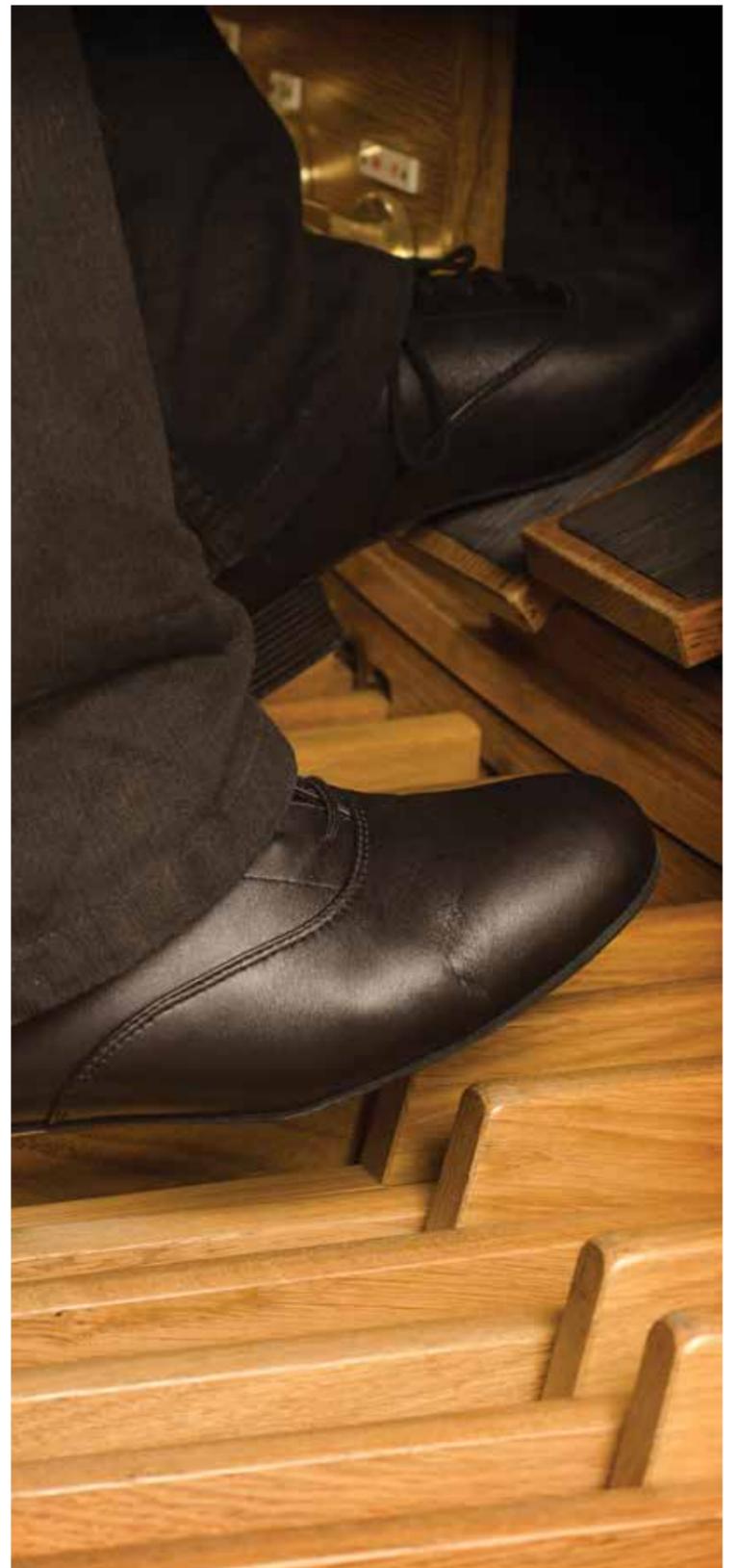
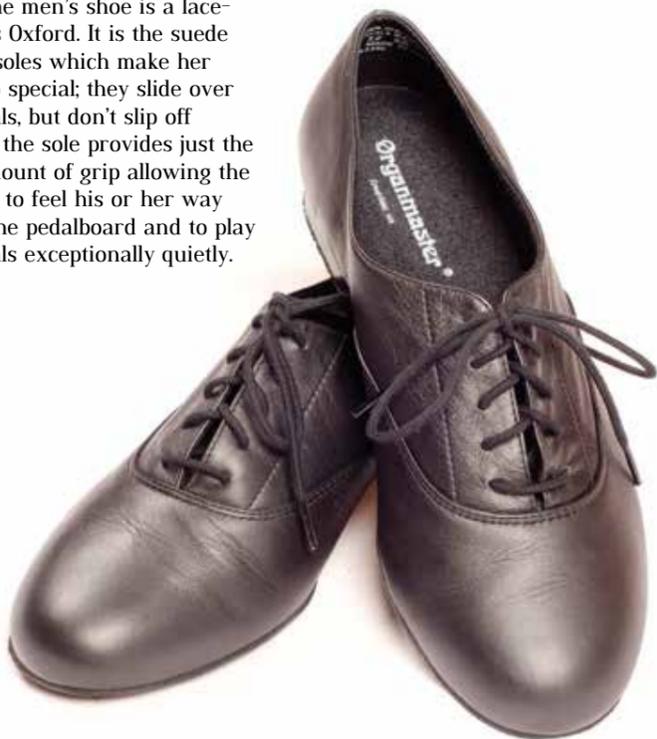
OrganMaster Shoes was founded in 1976 when an organist, Carol Carlson, struggled to find shoes that would work for organ pedalling. She knew that many organists, like herself, were playing in bare feet or slippers. Normal dress shoes did not allow the organist to feel which note the foot was touching and were often far too slippery on the pedals. After years of searching, she finally decided to design the perfect organ shoes and to sell them herself!

Her shoes for Toe-Heel pedal technique have a full feel providing solid contact on the pedals with a 1 ¼ inches high heel to avoid injuring a leg muscle. The shoes are very secure on the foot while playing the pedals, with the women's shoe having an elasticized strap with a buckle whilst the men's shoe is a lace-up dress Oxford. It is the suede leather soles which make her shoes so special; they slide over the pedals, but don't slip off because the sole provides just the right amount of grip allowing the organist to feel his or her way across the pedalboard and to play the pedals exceptionally quietly.

The shoes were an immediate success producing an overwhelming response by organists all over the world. Indeed many organ teachers require their students to wear her shoes as well. In April of 2006,

after 30 years in business, Carol sold the company to her daughter, Brenda Sturmer, who continues the family business of providing high quality shoes for organist's special requirements.

From early 2013, ChurchOrganWorld has become a distributor for these fantastic shoes with a stock being maintained at our Shaw showroom where visitors can try them out on our instruments. They have also become part of our standard range of products we take out to our Roadshows and 'Battles of the Organs' around the country. Managing Director, Dr Keith Harrington said "I acquired a pair of these shoes around ten years ago and quickly found that my pedal technique dramatically improved." He added "The height of the heel of the shoe really helps you to play pieces that perhaps were never possible before; I can now actually play a third with relative ease." Brenda Sturmer commented "Keith told me that at a recent concert in Shaw with Ian Tracey that there was soon a line of thirty organists who were interested in trying a pair of my shoes on!"



## Can a PA system be used with our instruments?

This is one of those questions which gets asked, a few times a year, by potential customers. Typically it is asked by representatives of churches who have just spent a small fortune on a top of the range PA system which they were told is all that is ever required for sound in their building. Sadly for these churches it is soon apparent that a PA system is designed for the human voice and that it is not suitable for organ sounds, at either end of the spectrum. For example a 32' C resonates at a rate of 16Hz which can only be produced by relatively

few speakers, certainly not on any PA system I have ever come across.

Additionally, our instruments are built in such a way that each amplifier deals with a small number of speaking stops and is attached to a single speaker. This means that once the organ is voiced, beyond an overall volume control there is no means for the user to modify the sounds. Whilst this might seem restricting to some, this is something that affords great value to our instruments since the organ will always sound exactly as the voicer left it, as a pipe organ. Contrast this with a PA system

where the organ is 'channelled down' to just two channels which go through a sound desk that then splits the signal up into many different channels in a truly very inefficient process. A well meaning engineer can change so many variables and turn a finely crafted pipe organ sound into something that may well resemble the 'home organs' often found in the final round of the 'Sale of the Century' as hosted by Nicholas Parsons in the 1970's! It is the organist who should control the organ and nobody else.

# Testimonials

## Burley, Mr Colvin



My Thirlmere organ has been a delight. Considering it is a non acoustically friendly environment (my living room), the sound is quite spectacular. Luckily my neighbours live a few hundred yards away!!

My experience with Makin has been very positive. The organ was from stock which made it very quick to arrive; the fitting was done with the minimum of fuss. Both the technicians were very patient with me as I was a little unsure as to the positioning of the speakers. However, once the decision had been made, everything was completed quickly & efficiently.

## Ashford Cade Road, United Reformed Church, Robin Stalker



Once I had been given permission to start investigating the possibility of purchasing a new organ, I contacted a number of potential vendors. The level of customer service I encountered from Church Organ World far exceeded any of the potential competitors.

Customer service is one thing; the main thing is tonal quality. Nicky Howarth quickly provided me with a list of organs in my vicinity which I could try. Subsequently Richard Goodall arranged for me to try some recent installation in London. I was hugely impressed by the sound quality.

Having tried a variety of organs from a variety of companies I was able to recommend the purchase of a Makin Custom organ to our church council. The key reason for this recommendation was tone quality allied to the fact that I could have "all the usual couplers and pistons" – something that the competitors could not, or in some cases would not supply.

I drew up a draft specification and was very pleased to be able to discuss it with Professor Tracey. Professor Tracey's suggestions regarding the specification and samples were extremely helpful.

Installation was handled by the two Steves. The performance of the organ "out of the box" was impressive. A couple of weeks later the voicing was attended to by Professor Tracey and Richard Goodall. The voicing took the performance of the organ to an even higher level.

I'm happy to recommend Church Organ World and their Makin Custom Organs. The sound is first rate as is their customer service.

## Glasgow, Dr Burrows

JOHANNUS

I am delighted with the Johannus Studio I70 and happy to recommend it as a home organ of great quality and wide diversity. My visit to the showroom at Shaw was most helpful and enjoyable. All my contacts with the office have been dealt with efficiently. The installation team coped with the various hazards cheerfully, including the U turn at the top of our stairs. I was most impressed with the service and am now appreciating the joy of being able to practice at home whenever I like. Thanks to one and all. I can heartily endorse the recommendations on the website that encouraged me to look in your direction.

## Oxford, Dr Clifford



Thank you so much for your newsletter and very good to hear from Makin. I am hugely enjoying and appreciating my Westmorland Custom which has allowed me to progress my studies at a very satisfying pace with help from the RCO organ school. I've just spent half a day working on a Tickell organ here in Oxford. Six months ago I would never have thought it would still be such a pleasure to return home to my own instrument which is a true reflection of the quality of the samples and voicing which I never get tired of.

## Ayr, Mr Rattenbury



It would seem that my story is by no means unusual.

I had piano lessons at school but it was the pipe organ that fascinated me. My youthful enthusiasm resulted in a post as organist and choirmaster at a popular church for a few years. But I was too young to sacrifice all those weekends and evenings, and dropped it all. I hardly looked at a keyboard for over 40 years.

Then by chance I heard about digital organ technology. I researched the market and soon found myself in Makin's Shaw showroom, and fell in love with a Westmorland Custom 4-62.

A few weeks later and the installation was complete, the team made it look easy. Then the wonderful day came when Professor Ian Tracey and Dr Keith Harrington voiced the organ for its new home, a process requiring exceptional understanding, experience and skill. My dream of having a genuine cathedral organ in my living room had come true, but my voyage of discovery had only just begun.

My first task is to regain lost playing skills, but with this organ one cannot fail to be inspired. The quality of tone makes every practise session a pleasure with such a wide range of colour and variety available. Switching the organ on and selecting stops, to use Ian Tracey's words, is a bit like opening a "Chocolate Box" and I get a buzz simply entering the room and glancing at the console, quite apart from actually playing it.

Being a returner to the organ after so many years I had to place my trust in the knowledge and expertise of Makin Organs. I had no wish to change the specification of the WMC, the result of so much experience and understanding. Now, after a year playing and researching the instrument, I am continually delighted and impressed with its design, build quality and sound performance.

Ownership of a King of Instruments has led to a further unexpected development in my musical life. For years in my youth I had played double bass in dance and jazz bands, but being unable to store and transport such an unwieldy instrument I had given it up and assumed my bass-playing days were over. But the organ has returned me to reading and making music, and when someone told me that a local band needed a bass player I was delighted. I now have a modern, easy to transport electric bass. As well as organ music I can enjoy the fun of contributing in a folk band. So you never know where a digital organ at home might take you. The voyage of discovery is under way!

As a Makin customer I like to keep in touch with the company and with the latest developments. All the various members of the team are delightful, friendly and knowledgeable. It's a pleasure to meet them from time to time at some of the first rate events they hold at Shaw, Mixbury or elsewhere around the country. Not only do I own and play a superb organ, I can be inspired and informed by the Makin Team and by Ian Tracey's magnificent recitals.

## Daniel Moulton ... world renowned recitalist



The Makin at King's school is by far the best digital organ I've ever played - you're right to be proud of it.

## Storrington, St Mary, George Jones JOHANNUS

Wednesday 14 August proved to be a significant date in the history of St Mary's Parish Church, Storrington. The stalwarts of Church Organ World's installation department arrived to deliver and set up our new Johannus D350 Ecclesia - specially built in Holland to supply us with an English registration. Richard Goodall's exemplary sales technique and administrative expertise ensured that our purchasing experience was as smooth as possible.

Our thirty year old Allen was removed and taken to a nearby house to provide a practice facility for a young organ student. This enabled the new instrument to be installed using a totally different concept of having the sound emerging from a position in the south aisle which used to house the old pipe organ. No more artificial surround sound from various locations around the church - whoopee!!

The skills of the installers ensured a quick and very successful transition and it was a great thrill to hear all the new and high quality sounds emerging from the new 'toy'.

I had already invited Professor Ian Tracey to give the inaugural recital on 11 September. It would be difficult to imagine a happier or more successful occasion. The Church had standing room only and it was a great privilege to have a musician of Ian's quality to provide a perfect mix of serious and 'fun' pieces to demonstrate the versatility and high quality sound of the Johannus organ.

Well done to Richard and all the staff of Church Organ World for making the project such a success!!

**JOHANNUS**

## Bromsgrove, Mr Deeley

Until a month ago I was the contented owner of a Johannus 3 manual Opus 60N organ which was installed in my former home in Birmingham in 1983. This instrument had afforded most excellent and reliable service over the past 30 years and despite its analogue technology, had consistently offered a very rewarding and realistic musical experience. Only very limited servicing and minor adjustments had proved necessary and this was very efficiently carried out by David Fetterman and lastly by John Coleman. However during the past year or so inevitable signs of wear and tear had become apparent, mainly in the form of troublesome minor ciphers and coupler problems. In consequence I had been looking for a suitable digital replacement for some time. And then, fortuitously, a pre-owned Johannus Rembrandt 4900 4 manual organ was advertised on ChurchOrganWorld's website as having become available.

In response I contacted the Shaw showrooms asking for relevant details which were very promptly sent to me by Nicky Howarth who subsequently also supplied me with all appropriate measurements and satisfied my few remaining queries. Upon the basis of this information I was confidently able to conclude a purchase on very reasonable terms, with delivery and installation by Steve Lanyon and his two able young assistants following a couple of weeks afterwards, and Steve Bell subsequently making and fitting an attractive bass speaker cover to satisfy domestic aesthetics.

I have to say that everyone I have encountered over the years at Makin, and latterly at ChurchOrganWorld, has always been extremely supportive, helpful, and courteous. This has especially been the case throughout the progress of this latest transaction during which Nicky has diligently and professionally arranged all the detail and logistics. Needless to say, as a very satisfied Johannus customer of long standing, I will have no hesitation in recommending their services to others and stressing their overall competence, efficiency, and cheerfulness in carrying out their respective tasks.

As anticipated the Rembrandt 4900 is a delight both to behold and to play; it is in quite excellent condition and looks as though it had been delivered directly from the factory. It had obviously been extremely well cared for by its meticulous previous owner and I would like to assure his family that it will be similarly well looked after, frequently played, and much valued here in its new home. Naturally there are significant differences both in technology and specification between these two instruments, both built by Johannus but some 23 years apart. In particular it is immediately apparent that this later digital instrument is strikingly much more realistic and truer to its pipe organ origins than the earlier analogue instrument. Generally the voicing of the Rembrandt is superb in both its available intonations, and especially so in the case of two very impressive high pressure solo reeds.

## Lytham, St Peter's, Deacon Michael Harrison



When our 130 year old pipe organ finally reached that stage when only a hugely expensive complete rebuild would bring it back into service, we turned to Makin Organs for an affordable digital solution.

From our first contact with the company they were most helpful, even to opening their showroom especially for us on a Saturday morning to accommodate our organist's working commitments. During an unwelcomed delay in obtaining Diocesan permission to make the purchase, Makins held an instrument in reserve for us, without any payment. Installation went smoothly and was completed within the day.

As the old pipe organ is an architectural feature of the church, it has remained in place, with the speakers for the digital organ nicely concealed behind the front row of organ pipes. We are delighted with the sound of our Westmorland Jubilee II organ, which has certainly enhanced our liturgy.

Thank you Makins for making our transition to the world of digital sound so easy.

## Loughbrough, St Mary Charnwood, Canon Sue Field



As part of a process of reordering the chancel area of St. Mary in Charnwood, Nanpantan, Loughborough, the Church Council decided to remove the existing pipe organ, which was quite limited and in need of repair, and replace it with a digital organ. Having heard a few different makes of organ including a recital on a Makin by Professor Ian Tracey, it was decided to explore Makin organs to see what they could offer us.

This process has taken nearly a year as we have looked at various options and, in a small building, worked through issues such as where the speakers are housed and what cabling is required, but throughout this process we have been extremely grateful for the help, support and patience of Richard Goodall and others at ChurchOrganWorld.

Our Makin Thirlmere has now finally been installed and voiced and the inaugural recital was given by Simon Lumby on Sunday 17 November to a packed church. By playing pieces such as Andrew Fletcher's "Praeludium Integritas", Vierne's Impromptu from "Pieces de Fantasie" and the Fantasia and Fugue on BACH by Liszt, Simon was able to display the full range and capability of the organ. We received very positive comments about the sound and versatility of the instrument and we have been delighted with the service we have received from ChurchOrganWorld.

# Johannus Organs in Latter-day Saints Chapels

Johannus has been a preferred vendor for the Church of Jesus Christ of Latter-day Saints worldwide and has produced custom built organs for the church to meet their specific desires. The WM-47 LDS was primarily designed to accompany congregational singing as well as to provide a variety of tonal colour for prelude music. The advanced organist will find the WM-47 LDS an exciting instrument to play each week with a variety of stops and quality of sound not found elsewhere. If an organist is unavailable the onboard hymn and prelude player can be easily operated, even by a non-musician. Johannus have put together a special website for the LDS organists to access for details and suggestions on how to use the instrument see [www.johannus-lds.com](http://www.johannus-lds.com).

Over the last few years we have been quite busy installing these organs around the country, frequently into newly built chapels. Our current list of LDS customers for the new instrument include Burnley, Birmingham, Canterbury, Christchurch, Exeter, Poole, Romford, Runcorn, Tunbridge Wells, Bradford, Hyde, Lincoln, Manchester, North Shields, Orpington, Wandsworth and Wembley. Chapels with older instruments include those in Bournemouth, Chichester, Kings Lynn, Macclesfield, Nuneaton, Oxford, Rugby, Trowbridge, Weymouth and Winchester.



## We are the First Choice for Organ Hire

Many customers have made us the first port of call for an organ hire. During the past three decades our reputation as Church organ builders has been recognised by many prestigious establishments who have approached the company for both medium and long term hire instruments.

In addition, organs, both large and small, are continually being supplied on a short term hire basis for organ concerts, orchestral concerts, choral societies, weddings, University degree ceremonies and many other such events. To meet all your needs we have a growing number of instruments in our hire fleet which now includes two 'continuo instruments' suitable for use with orchestras.

Please contact us as early as possible in the planning stage of your event. Some of our regular customers book a year ahead of schedule although typically our installation team book at least six to eight weeks in advance. However, we do have a reputation for meeting what for some would be impossible deadlines, so if

your blower dies and have eight graduation ceremonies within the following few days, do give us a call. This is what Chester Cathedral did, and we managed to get a suitable instrument installed within twenty four hours.

Long term hires frequently need much more notice to plan and to ensure you get the right instrument to meet your needs.

Recent and ongoing hires at major venues include:- Bangor University, Symphony Hall Birmingham, Bridlington Priory, Bristol Cathedral, St Mary Redcliffe Bristol, Chester Cathedral, Cirencester Parish Church, Clifton Cathedral, Durham Cathedral, Edge Hill University, Usher Hall Edinburgh, Ely Cathedral, Exeter Cathedral, The Sage Gateshead,

Guildford Cathedral, Hereford Cathedral, Houston Symphony Orchestra, International Eisteddfod, Inverness Cathedral, Lichfield Cathedral, Leeds Parish Church, Lincoln Cathedral, Liverpool Cathedral, The Barbican London, Manchester Cathedral, Bridgewater Hall Manchester, Marlborough College, National Eisteddfod, Northampton Cathedral, Oxford Brookes University, Portsmouth Cathedral, The Guildhall Preston, Ripon Cathedral, Salford Cathedral, Salisbury Cathedral, Sherbourne Abbey, St Asaph Cathedral, Southwark Cathedral, Southwell Minster, University of Central Lancashire and Wells Cathedral.





# Professional Recordings for Service Use

Many churches have found problems in finding an organist for mid-week services, and indeed some churches can find it difficult to find an organist at all. Midi Sequencers (digital recording units) often help solve this problem where an organist can record a number of pieces for playback at a later date. Indeed, organists often record music for use whilst they are away on holiday, or if they want to conduct the choir away from the organ bench.

We now provide the services of one of our professional organists who will visit your church to record hymns and other pieces of your choice for later use. Having a top-rate organist, particularly one with an intimate knowledge of the instrument, to record pieces is something that a number of customers have found very useful. Indeed, with the advent of the new Midi Sequencer Plus from Johannus, it is perfectly feasible to record the entire hymn book onto a single SD card for you.

During a typical day, we can record around 50 hymns and several miscellaneous pieces. To ensure that the work is permanently stored and archived we take a copy of the recordings we have made for you. So in the worst case scenario that an SD card is lost, our work isn't. Of course as an extra level of backup, the regular organist can download the files from the SD card to a standard PC, both to back them up and to create their own library. Selections can then easily be made for individual services to make it even simpler to use on the day by the operator.



## We now publish Sheet Organ Music

In yet another new venture, ChurchOrganWorld is publishing sheet organ music. Our music is currently aimed at the average parish organist, which will typically have a maximum of three sharps or flats in the key signature with a reasonable, as opposed to unreasonable, number of notes to be played in each chord. Our first two publications 'Trinity Fanfare' by Professor Ian Tracey and 'Trumpet Tune in D' by Daniel Bishop are now available.

Trinity Fanfare, as heard and seen by thousands on 'You Tube', was performed by Ian as an improvisation and recorded in a single take when he visited Southport Holy Trinity Church to produce a variety of video tracks in 2010. Since that time we have been asked on many occasions if it was available as a hard-copy for purchase. With the advent of good software based systems for music notation some years

ago, it has never been easier to produce sheet music, and it became obvious rather quickly that this would be a nice extension to our core business.

Over the coming weeks, months and years, we plan to increase and broaden our offerings to organists. Indeed, if you are an aspiring composer yourself, please do submit your manuscript to us electronically

in a format readable by Sibelius® 6.0, or later for consideration. There are no guarantees that your piece will be chosen for publication, but we are keen to give everybody a chance. Since well known composers will also be involved, we will anonymise copies before consideration by our publishing committee.

We continue to stock sheet organ music by Animus, Banks Music Publications, Kevin Mayhew, Oxford University Press, Spartan Press and Triumph at our Shaw showroom where customers can browse, play and purchase copies by cash, cheque or credit/debit card. We also take a selection of sheet organ music to all our Roadshows where again we accept payment by cash, cheque and credit/debit card.





# Reverberation can make all the difference

There is often a great desire to play a home organ in a large acoustic to add that extra touch of realism. For some it would arise during practice for a recital when it would be very useful to be able to practice in a similar acoustic. For others, who will never have the privilege of playing in a large venue, this would be as close as it gets to doing so. We are now able to fulfil this desire.

Put very simply, we have 'sampled' the reverberation of a number of famous venues around the world, by recording in high quality the firing of a starting pistol using several microphones in a known geometry to each other. The process is then repeated by recording sound from a wide frequency tone generation system.

Once our software engineers have performed their magic, we can make this available to customers as a live reverb add-on to our instruments. Our latest custom instruments using our 2013 and 2014 technology can have up to 12 different live reverbs built into their instrument as an option,

allowing them to play in the exact acoustic of the likes of Liverpool Cathedral, Holy Trinity Southport and many others. For customers of older instruments, we have developed a separate reverberation unit which will provide users with the same functionality as a new instrument from an external box.

Whilst our add-on box is simple in theory, in practice it is a complex piece of equipment containing many components, including the main processor board, used by our latest instruments. This box is then connected to a 4.1 speaker system to produce the reverb of your dreams.

It goes without saying, that this unit is aimed specifically at the home user since, of course, churches have their own 'built in reverb', commonly known as the best stop of the organ and do not require this additional functionality. However, I have heard of one or two customers who would like to be able to turn their small church into a cathedral for an evening of music!

Demonstrations of the system are available in our Shaw showroom and we expect to have a box hooked up to one of the instruments for our May 2014 'Sounds of the Summer' concert in Mixbury.



# Sound Bites

## Damp Chaser

This is a must for any organ which is in a cold building or one that has problems with excessive humidity. Whilst a digital organ will not go out of tune in cold, damp or hot conditions, there is a danger of condensation forming on the circuit boards of organs in churches which are not heated in winter, or indeed those where the heating sadly fails. This can lead to a hefty insurance claim or repair bill. Once a damp chaser is fitted, the temperature within the console is kept at a safe minimum temperature by an energy efficient low heat source so that condensation cannot form. Contact Jo Swain by e-mail on [joanne@churchorganworld.co.uk](mailto:joanne@churchorganworld.co.uk) or phone 01706 888 100 to organise the fitting of a Damp Chaser.



## Rodent Repellent

Recently we have become aware of a spate of damage to organs owing to mice deciding that a warm cosy organ console is the place to settle down and hibernate for the winter. Sadly, the image of a friendly cartoon mouse isn't really appropriate as prior to them sleeping, the amount of damage they cause to wiring and circuit boards can be horrendous. Customers can then face a significant bill for parts and labour, as major organ rebuilds are required. As I am sure you will realise, such damage is not covered by our guarantee, and it is certainly worth checking your insurance policy since damage due to infestation is frequently not covered. Contact Jo Swain by e-mail on [joanne@churchorganworld.co.uk](mailto:joanne@churchorganworld.co.uk) or phone 01706 888 100 to organise the fitting of Rodent repellents.



## A Professional Hand-Over

Following the purchase of an instrument from us, my colleagues Richard Goodall, Mark Johnson and Nicky Howarth pass over their responsibility for looking after our customer and indeed their instrument to our Post-Sales team which is headed up by Jo Swain. In addition to all the information she needs at her finger tips, Jo works with our engineers to make appointments with customers and to ensure we have access to all the spare parts we need.

Therefore, to receive the fastest service, please do contact Jo directly by e-mail on [joanne@churchorganworld.co.uk](mailto:joanne@churchorganworld.co.uk) or phone 01706 888 100 if you have any problems or questions you would like answering. Her contact details are also included in the organists notebook which was supplied with your instrument.

## It's Funny You Should Play That

At the funeral of the local butcher the organist played "Sheep May Safely Graze". This and other organist humour abound. Some organ humour is purely auditory. During the recent 'Autumn Shades' concert in Shaw, Noel explained that he had asked the BBC for a copy of the sea shanties played at the "Last Night of the Proms" with the idea of arranging it for organ. They apparently refused on the grounds it was copyright and not available for publication.

There is no copyright on the tunes, just the arrangement, as they are all very old and in some cases the composers are unknown so Noel decided to write his own version of the "Sailor's Hornpipe". He admits to having been a bit carried away and the result is the "Hornpipe Humoresque" in the style of Rawsthorne, Bach, Vivaldi, Arne and Widor. We were then very privileged to hear him play it, apparently for the first time in public.

Should you happen to have the Chaplain of the "Mission to Seamen" preaching in Church or it is "Sea Sunday" try playing this as the voluntary. It will be one of the few times people will actually take notice of what you play after the service.



## Console Design

Organ Console design is of course a complex process, perhaps none more so than with our top of the range Copeman Hart consoles, all of which are custom built to very demanding standards. Just a few years ago, designs for such consoles were drawn by the hand of a professional draftsman allowing the console builder to take exact measurements from the drawings for exact timber sizes and joints to be made. With the advent of computer technology, much of the drudgery was taken away from the drawing process with a skilled operator being able to put a series of drawings together. In recent years an even greater step has been taken forward by using software which will now automatically convert a series of 2D drawings into a 3D screen rendition which can be viewed from all angles. The console designer can now fully view their design work and modify problem aspects *in silico* before going to the expense of building the first prototype in wood.

## A musical bar!

C, E-flat, and G go into a bar.

The bartender says, "Sorry, but we don't serve minors."

So E-flat leaves, and C and G have an open fifth between them.

After a few drinks, the fifth is diminished, and G is out flat.

F comes in and tries to augment the situation, but is not sharp enough.

D comes in and heads for the bathroom, saying, "Excuse me; I'll just be a second."

Then A comes in, but the bartender is not convinced that this relative of C is not a minor.

Then the bartender notices B-flat hiding at the end of the bar and says, "Get out! You're the seventh minor I've found in this bar tonight."

E-flat comes back the next night in a three-piece suit with nicely shined shoes.

The bartender says, "You're looking sharp tonight."

Come on in, this could be a major development."

Sure enough, E-flat soon takes off his suit and everything else, and is au natural.

Eventually C sobers up and realizes in horror that he's under a rest.

C is brought to trial, found guilty of contributing to the diminution of a minor, and is sentenced to 10 years of D.S. without Coda at an upscale correctional facility.

Prizes to be awarded for anybody who can get a twelve, seventeenth and a flat twenty-first into this saga. What a mixture that would be!

## A SELECTION OF RECENT INSTALLATIONS

### Copeman Hart

Felpham, St Mary the Virgin 2 Manual Drawstop

### Johannus

Storrington, St Mary	Ecclesia D350
Epsom, Ruxley	Ecclesia T150
Ashford, United Church Cade Road	Ecclesia T370
Loughborough, URC	Ecclesia T370
Retford, Trinity Hospital Chapel	Opus 07
Harrogate, Christ Church Darley	Opus 07
Aveton Gifford, St Andrew	Opus 17 SE
Workop, Mr Moxon	Opus 20
Harrow on the Hill, St Dominics Sixth Form College	Opus 27 SE
St Austell, Mr Hitchens	Opus 270
Chesterfield, Mr Yeomans	Opus 30
Dunstable, Mr Cardiff	Opus 30
Margate, Mr Mansell	Opus 30
Gerrards Cross, Mr Davidson	Opus 370
Bromsgrove, Dr Deeley	Rembrandt 4900
Bicester, Mr James	Studio 170
Bolton, Dr Pearson	Studio 170
Glasgow, Dr Burrows	Studio 170
Jersey, Mr Rushton-Taylor	Studio 170
Newcastle upon Tyne, Mr Jack	Studio 170
St Albans, Dr Stokes	Studio 170
Tiverton, Mr Fennell	Studio 170
Plumstead, St Patrick RC	Sweelinck 27 SE
Clifton, Mr Lawson	Sweelinck 37
Brixworth, Mr Wakefield	Vivaldi 37
Exeter, Mr Patrick	Vivaldi 370
Birmingham LDS	WM 47 LDS
Burnley LDS	WM 47 LDS
Exeter LDS	WM 47 LDS
Manchester LDS	WM 47 LDS
North Shields LDS	WM 47 LDS
Romford LDS	WM 47 LDS
Runcorn LDS	WM 47 LDS
Wandsworth LDS	WM 47 LDS
Wembley LDS	WM 47 LDS

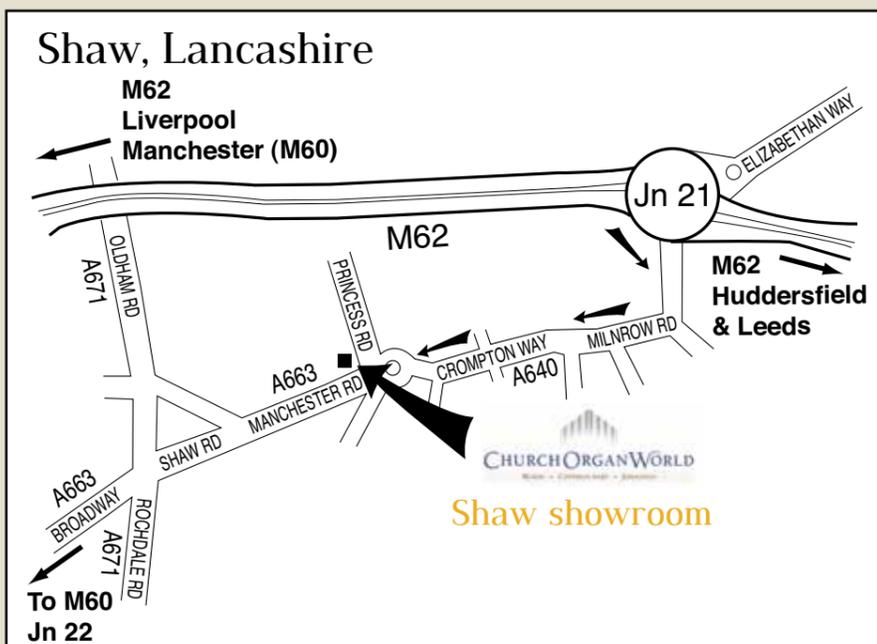
### Makin

Harlow, St Mary	Custom 2 Manual Drawstop Rebuild
March, St Mary Westry	Custom 2 Manual Drawstop
Bournemouth, St Francis	Custom 3 Manual Drawstop
Burley, St John the Baptist	Custom 3 Manual Drawstop
Moulton, All Saints	Custom 3 Manual Drawstop
Oxford, Dr Clifford	Custom 3 Manual Drawstop
Biddulph, St Lawrence	Custom 3 Manual Tabstop
Comrie, Parish Church	Custom 3 Manual Tabstop
Kirkcudbright, Parish Church	Custom 3 Manual Tabstop
Germany, Mr Adamson	Custom 4 Manual Tabstop
Dore, Christ Church	Jubilee II
Liverpool, Oakvale URC	Jubilee II
Loughborough, St Mary Charnwood	Jubilee II
Lytham, St Peter RC	Jubilee II
Clitheroe, Mr Taylor	Sapphire
Surbiton, St Raphael RC	Sapphire
Walton on Thames, St Erconwald RC	Sapphire
Burley, Mr Colvin	Thirlmere
Chelsea, Allen Hall Seminary	Thirlmere
Clevedon, St Andrews	Thirlmere
Liverpool, Mr Moore	Thirlmere
Radford Semele, St Nicholas	Thirlmere
Caerwys, St Michael	Village
Egremont, Methodist	Village
Liverpool, Christ Church Waterloo	Village
Milford Haven, St Tudwal Llanstadwell	Village
Biddulph, Mr Davis	Westmorland 34T
Salisbury, URC	Westmorland 4ID
Newbury, St Nicolas	Westmorland 4IT
Newark, Mr Bird	Westmorland Classic

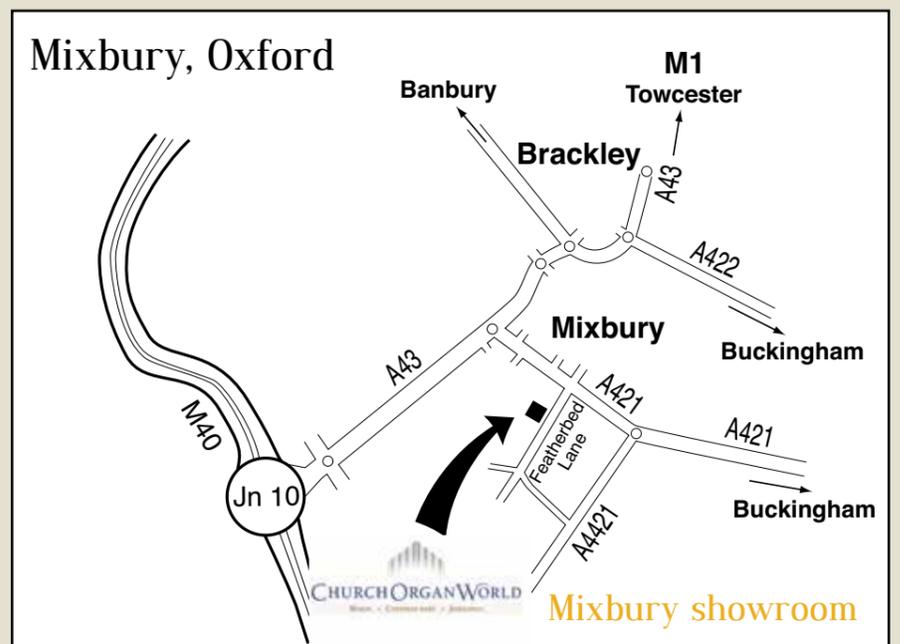
### Getting in touch

It is always great to hear from customers new and old alike and particularly to meet at our events around the country. We welcome customers to our showrooms, which are open from 09:00 to 17:00 each weekday and by appointment at other times. However, we always suggest that you contact us in advance to book an appointment so we can ensure that you get the showroom to yourself and to ensure we have an appropriate member of staff available to greet you.

### Where we are:



The Shaw headquarters at 30 Manchester Road, Shaw, OL2 7DE. There is a large car park at the rear of our premises on Princess Road.



The southern showroom in a converted barn in Middle Farm, Featherbed Lane, Mixbury NN13 5RN. There is a large car park within the farm.