

A 'GDB' refreshed

The restored organ in the Meeting House, University of Sussex

Paul Hale

Sussex University is fortunate possessor of a particularly significant organ, made in 1966 for the University 'Meeting House', non-denominational chapel, circular in shape, designed by Basil Spence. This instrument has recently been restored and electrically updated by Clevedon Organs. Just as Spence showed himself to be at the leading edge of building design in his work at Coventry Cathedral, winning projects such as the new University of Sussex shortly after, so did a fledgling firm of organ-builders - then named 'Grant, Degens & Rippin' - find themselves in the avant-garde of the progressive organ world.

The long-established London organ-builders, John Compton & Co., were in decline from the mid-

1950s, their work being considered dated, and sometimes rather rough. Three leading employees left the company in 1961 and set up their own company - called 'Degens & Rippin' - in Hammersmith. John Degens was a superb pipe voicer and Ted Rippin was a fine craftsman in wood and an experienced console-maker. Together Compton-trained pipe-maker they set out to build high-quality instruments (initially modern electric-action rebuilds with a classical leaning) at a modest price. They soon attracted the attention of wealthy enthusiast Maurice Forsyth-Grant, who was Technical Director and a founder of Racal, and Chairman of Grant's Whisky. Grant had experimented in his own workshop with progressive techniques and materials that he had observed in modern North European organ building (as he explains in his book *Twenty-One Years of Organ-Building*, Positif Press), and needed a company to build the type of organs he felt the emerging educated British market would – should – desire.

Grant was quite correct in that belief and soon gathered an following enthusiastic among leading British organ teachers and academics, including Peter Hurford (who had just founded the St Albans Organ Festival), Dr David Lumsden (then Organist of New College, Oxford) and Nicholas Danby (organ professor at the Guildhall School of Music and Drama). All three were to commission organs from the company, including Grant's magnum opus in New College Chapel, Oxford (1968/9).

Original specification

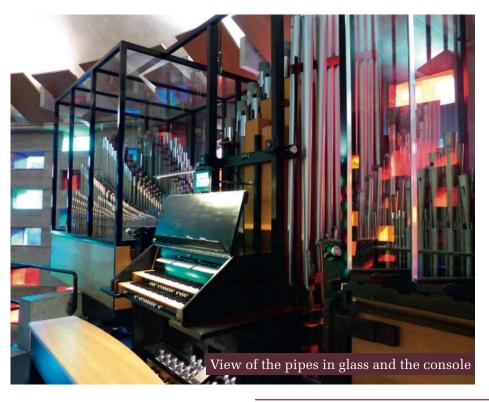
CDEAT	
GREAT	
Quintadena bass	16
12 pipes of 5 ¹ / ₃ pitch	
Principal	8
bass octave haskelled pipes	
Gedackt	8
Octave	4
Lieblich Flöte a chimney flute; open tapered treble	4
Blockflöte	2
voiced as a cross between	2
a principal and a flute	
Sesquialtera 12.17	I–II
the tierce rank enters at tenor G	
Mixture 19.22.26.29	IV
breaking back one rank on every C	
Tremulant	
Swell to Great	
SWELL	
Rohrflöte	8
Spitzgamba	8
bass octave haskelled pipes	
Koppelflöte	
open tapered trebles	
Principal Larigot	$\frac{2}{1^{1}/_{3}}$
Larigot Cymbale 33.36.38.40	IV
breaking every minor 6 th (?)	1 V
Dulzian	16
Clarinet construction, half-length tu	
Trompette	0
small scale	8
Siliali Scale	8
Tremulant	8
Tremulant PEDAL	8
Tremulant PEDAL Subbass	16
Tremulant PEDAL Subbass wood	16
Tremulant PEDAL Subbass wood Octave	16
Tremulant PEDAL Subbass wood Octave Hohlflöte	16 8 4
Tremulant PEDAL Subbass wood Octave Hohlflöte Mixture 15.19.22	16 8 4 III
Tremulant PEDAL Subbass wood Octave Hohlflöte Mixture 15.19.22 Fagot	16 8 4 III 16
Tremulant PEDAL Subbass wood Octave Hohlflöte Mixture 15.19.22 Fagot Rohr Schalmei	16 8 4 III
Tremulant PEDAL Subbass wood Octave Hohlflöte Mixture 15.19.22 Fagot Rohr Schalmei Great to Pedal	16 8 4 III 16
Tremulant PEDAL Subbass wood Octave Hohlflöte Mixture 15.19.22 Fagot Rohr Schalmei	16 8 4 III 16
Tremulant PEDAL Subbass wood Octave Hohlflöte Mixture 15.19.22 Fagot Rohr Schalmei Great to Pedal Swell to Pedal	16 8 4 III 16
Tremulant PEDAL Subbass wood Octave Hohlflöte Mixture 15.19.22 Fagot Rohr Schalmei Great to Pedal Swell to Pedal 3 general pistons	16 8 4 III 16
Tremulant PEDAL Subbass wood Octave Hohlflöte Mixture 15.19.22 Fagot Rohr Schalmei Great to Pedal Swell to Pedal 3 general pistons 3 general toe pistons (duplicating)	16 8 4 III 16
Tremulant PEDAL Subbass wood Octave Hohlflöte Mixture 15.19.22 Fagot Rohr Schalmei Great to Pedal Swell to Pedal 3 general pistons 3 general toe pistons (duplicating) 1 setter toe piston	16 8 4 III 16 4
Tremulant PEDAL Subbass wood Octave Hohlflöte Mixture 15.19.22 Fagot Rohr Schalmei Great to Pedal Swell to Pedal 3 general pistons 3 general toe pistons (duplicating) 1 setter toe piston 1 reversible toe piston to Great to Pe	16 8 4 III 16 4
Tremulant PEDAL Subbass wood Octave Hohlflöte Mixture 15.19.22 Fagot Rohr Schalmei Great to Pedal Swell to Pedal 3 general pistons 3 general toe pistons (duplicating) 1 setter toe piston	16 8 4 III 16 4

Educational trips to Germany and Denmark ensued and orders began to come in for the firm, which became 'Grant, Degens & Rippin'. Finding an architect with a passion for organs and a similarly modernistic (not to say iconoclastic) outlook to his own, Grant brought into the partnership Frank Bradbeer, and the company name changed one more time, to 'Grant, Degens & Bradbeer' (Ted

Rippin having left by then, to run a bicycle shop in Brighton). It is a 'GDB' label that graces the Meeting House organ.

After a concert at their workshops in September 1965 showcasing two new small organs, Peter Hurford and Robert Caffyn (who became a notable donor to the University of Sussex, and whose company remains one of the dominant car dealerships in Kent and Sussex) asked Grant how much an organ for the new University of Sussex would cost. Grant suggested £10,000 and Caffyn offered £7,500, for which sum the organ was built, though reportedly costing Grant about twice that amount. Basil Spence and his team (particularly Anthony Blee) were deeply involved in the visual design, specifying, for example, plate-glass tonal cabinets, including glass swell-shutters both of them British 'firsts' and to this day a rarity. The striking black metal framework and black finish to the console relate to that which Spence had earlier specified for Coventry Cathedral where uniquely the 4-manual Harrison & Harrison console has black leather facings. The black finish to the Meeting House console is in the same vein and is, along with the glass tonal cabinets, part of its iconic and now historic significance. Frank Bradbeer liaised with the Spence team to ensure that their visual concept was rendered practical in organ-building terms; he had an easier ride than he was to have with George Pace at New College (see Paul Hale *The Organs of New College, Oxford*, Positif Press, 2015).

The instrument was made with Grant's design of slider soundboard for the Pedal, using contemporary materials such as high-grade chipboard for the table and upperboards, double-sided hardboard for the sliders, along with traditional hardwoods. The Great and Swell soundboards were bought in from Laukhuff, probably the last time the company did so. The soundboards are fitted with an electro-pneumatic under-action on heavier wind pressure than the pipes. There are double-acting electro-pneumatic slider-machines, and a 'Schwimmer' wind regulator on the bottom-board of each soundboard. The Tremulants are operated by pulsators agitating a large pneumatic motor on the pan of each Schwimmer. The GDB Schwimmer design proved to be the most successful in the UK for





many years, until J.W. Walker/P&S and Kenneth Tickell in the 1980s matched its clever valve control 'secret' with equally effective techniques of their own, to be followed closely by Nicholson.

The stop-key console is in the centre of the instrument, the player's back being to the audience, with the Pedal soundboard running from the back of the console towards the back wall of the building. The trebles are at the console end. On the left hand side is the Great tone cabinet, a chromatic soundboard with the basses on the LH end. The Swell tone cabinet is on the right hand side, also a chromatic soundboard, with the basses on the RH end and the reeds at the front. The blower sits behind the Swell.

The flue pipes were made both in house and by Stinkens, the Dutch firm which supplied pipes to many UK organbuilders during the 1960s and 1970s, particularly to GDB, HNB, Mander, Nicholson's, Rushworth & Dreaper and Cousans. All scales were drawn up by Grant;

smaller pipes (mainly by Stinkens) are of spotted metal, the larger (GDB) of zinc. Some reed stops came from Giesecke in Germany, who until its unfortunate demise in 2012 was considered the world's finest and most experienced producer of reed pipes. The large wooden Subbass pipes were from Laukhuff in Germany, as were most of the original 1966 electrical components, the most numerous being the lever-magnets which operated the soundboard underactions, the stop-key solenoids and the piston relays.

The console itself is made of veneered and edged chipboard with some solid wood, the keyboards being fine quality English keys with ivory sharps and flats. The pedalboard, though concave and radiating, is of ISO (European) proportions rather than British, and is perfectly comfortable; this was a standard the firm used elsewhere, such as at New College a couple of years later. The glass swell shutters were originally

mechanically controlled from the console, the initial run being by Bowden-cable. The stop-keys are of the Compton pattern, though a little longer, and the stop names are engraved on a black Formica strip rather than on the stop-keys themselves, which display only pitches. Underneath the stop-keys is another black Formica strip giving a registration number for each stop, consecutively from left to right.

The Bishop of Chichester dedicated the organ on 30 October 1966. The opening recital was given by John Birch, the organist of Chichester Cathedral, who had been appointed University Organist. Dr Birch (who died in May 2012) established the weekly recital series which his successors have maintained to this day.

Ten years after its completion, John Birch commissioned some minor improvements, in light of the experience gained in his weekly performances.

- An 8ft Flöte was added to the Pedal Organ, on a chest behind the Great.
- The three General Toe Pistons and the setter toe piston were made into four Generals, duplicated on thumb pistons, and augmented by four thumb pistons to the Great, four to the Swell and four toe pistons to the Pedal.
- A 'Great & Pedal Combinations Coupled' stopkey was added.
- The Swell Cymbale IV (33.36.38.40) was considered (no doubt with good cause) too high-pitched to be of much use and so was recast as a Plein Jeu IV 22.26.29.33 (though on the console, mistakenly, it was engraved an octave lower 15.19.22.26).

The work was carried out not by Grant, Degens & Bradbeer, but by Tony Foster-Waite, who added his nameplate in 1976 to that of Grant,

Degens & Bradbeer, and maintained the organ for many years.

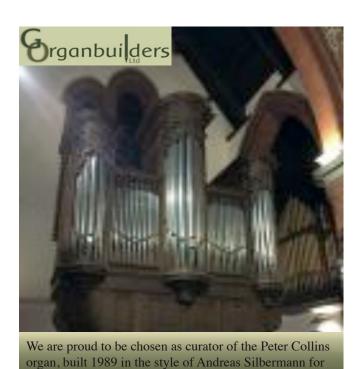
Anthony Hall, of Clevedon Organs, takes up the tale:

From this point in time there was an unfortunate and gradual decline in the condition and regular use of the organ, presumably viewed by some as an obsolete curiosity with little relevance to the contemporary musical academiccourses being offered. Eventually there was concern on the part of the University that the organ would be completely marginalised unless something were done to bring about its revival and, as 2016 was to be the 50th anniversary of the organ's installation, this was to herald the epoch for revival. A consultant was appointed and Clevedon Organs was invited to inspect the organ and present ideas. From a personal point of view, I found this extremely exciting, as I had harboured a fascination for GDB organs since my time undertaking some work experience in the school holidays of 1986, observing John Bailey and Paul Bloomfield revoice the organ of New College, Oxford. The consultant's advice was unequivocal; the organ should be carefully overhauled in conservational manner with little or minimal changes to the tonal character, other than to make certain experimental ranks work and to rationalise some of the later tonal modifications. He also alluded to the possibility of adding a second, mobile console at ground level with modern features, such as MIDI, thus enabling exciting possibilities of using the organ with other MIDI-based instruments and providing a more interactive visual connection with the audience. It was felt that this would enable the organ to be viewed as more relevant to the present day and open up interesting possibilities for the courses of the music department, which included the production of music for media and films. There was also talk of starting a proper Organ Scholarship (the 'John Birch Organ Scholarship'), thus a multi-level piston capture system with stepper and sequencer was deemed essential.

The organ presented a sorry sight when I inspected it in 2015. The glass tone cabinets were covered in a thick layer of concrete dust, the open-tip voiced pipework was off-speech due to the ingress of dirt and several of the five Schwimmer regulators were badly leaking, causing horrendous wind noise and pressure loss. Many pipes were collapsing and several of the reeds had serious lead oxide corrosion. The electrical systems were becoming unreliable and to cap it all, one of the glass Swell shutters had shattered and shards of glass had filled the Swell reeds. At the time, it was difficult to see the huge potential of the organ. This was all put right with some effort. The original console was carefully restored and the ebonised finish to the stop key console painstakingly re-finished. New thumb and toe pistons were provided to suit the greatly enhanced piston provision, in matching style to the original and there was space for one additional piston coupler stop tab. We decided to add two additional stops, a Zimbelstern and Pedal Quint Bass 10²/₃, extended from the 8ft Flöte unit, which we planted on a new chest, positioned at the rear of the Pedal section above the drawstop machine. To preserve the historic integrity of the original GDB console, these two stops are only available on the new mobile console, but are usable through the pistons of the Gallery console. The pipework was treated with the utmost reverence; gentle cleaning and repair has revealed the utter genius of John Degens in the superlative tonal regulation and inter-relational balances.

Now englification	n	
New specification		
GREAT	4.0	
Quintadena [revoiced] Principal	16 8	
Gedackt	8	
Octave	4	
Lieblich Flöte	4	
Blockflöte	2	
Sesquialtera 12.17 Mixture 19.22.26.29	I–II IV	
Tremulant	1 V	
Swell to Great		
SWELL	0	
Rohrflöte [revoiced] Spitz Gamba	8	
Koppelflöte	4	
Spitz Principal	2	
Larigot	$1^{1}/_{3}$	
Plein Jeu 15.19.22.26 [re-cast]	IV	
Dulzian [revoiced] Trompette	16 8	
Tremulant	0	
PEDAL		
Subbass	16	
Quint Bass [ext. Flöte] *	$10^{2}/_{3}$	
Octave Bassflöte	8	
Hohlflöte	4	
Mixture 15.19.22	III	
Fagot	16	
Rohr Schalmei [revoiced] Swell to Pedal	4	
Great to Pedal		
Zimbelstern *		
* = new stops; on mobile console o	nlv	
Great & Pedal Combinations Uncou		
Swell Combinations on General Toe Pistons	1	
6 thumb pistons to Great & Pedal, and 6 to Swell		
6 thumb pistons to Pedal & Great, and 6 Generals		
6 General toe pistons (duplicating)		
setter and cancel piston		
1 reversible toe piston to Great to P		
1 reversible toe piston to Swell to 0	Great	
Stepper Advance and Retard thumb and toe pistons		
3 MIDI couplers (mobile console or	nly)	
MIDI In, Out and Through (mobile console only)		
Multi-player, multi-level piston cap system with individual Stepper and Sequencer, plus record and playbac facilities	d	

The pipework was slightly improved by bringing a touch more warmth to the Quintadena and Rohr Flöte, by recasting once again the Swell Plein Jeu to be more sociable, by loudening the Rohr Schalmei and revoicing the Dulzian. Clevedon set about designing a new mobile console, to be made by Renatus of Bideford. They were inspired by the GDB



the International Organ Festival, St Albans.



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ethos and chose to exhibit this in today's contemporary style, just as GDB might have done had they still been in business. Anthony Hall again:

Referring to the materials of the organ structure (metal, glass and wood) and the geometric forms in the Meeting House architecture (rectangle, circle and ellipse), the concept for the mobile console was conceived, like the organ façade, to have a strong functional appearance with all internal elements display, including the technology being utilised. The frame of the console is, therefore, tubular brushed steel, echoing the visible pipes of the organ. Smoked glass panels are used throughout, including the toe piston sweeps, allowing LED back-lit views of the system module, Pedal optical contacts and illuminated stop units. The elliptical glass key bench echoes the form of the 'eye of God' roof window, which is stunningly

reflected in the key bench and visible to those seated at the console. The upper section of the console is arranged in tripartite fashion, in similar manner to the organ façade, with reverse coloured keyboards in the centre and two stop pods either side, appearing to float above the key bench, as the Swell and Great tone cabinets float above the parapet. The timber chosen for every part of the console is European cherry, with ebony border inlays, emulating the black lines of the metal tone cabinet frames in the organ facade. The circular ebony stop buttons have illuminating bezels, relating to the colours in the walls of the rotunda.

As in their organ at The Lord Mayor's Chapel (Bristol), Clevedon chose 'wireless' technology to connect the mobile console to the organ. The University of Sussex prides itself on being a 'wireless' campus, so this accorded well with the progressive attitude which prevails in this technologically-advanced institution. The visually dramatic console has certainly ignited a fresh interest in the organ and has proved to be something of a spectacle when demonstrated at regular monthly recitals by the newly appointed University Organist, D'Arcy Trinkwon.

I found the sound of this organ, enhanced by the reverberant acoustics of the Meeting House, to be immediately compelling, bright but warm, colourful, surprisingly flexible and, in short, entirely successful. Indeed, with the fluework re-finished, the reeds nicely regulated and adding a vivid splash of rather 'French' colour, the organ presents probably the most original and persuasive example of a GDB in existence. Forsyth-Grant would, I'm sure, be delighted, as is the University of Sussex, while its musicians plan a new era of creative music-making inspired by this instrument - an organ once again receiving the attention and approbation it surely deserves.

Paul Hale is Cathedral Organist at Southwell and a professional organ consultant.

Whilst Organ Scholar of New College, Oxford (1971–4), Paul Hale began to write about the organ – his first published piece was in *Organists' Review*, of which he was later to become Reviews Editor and then Editor (1990–2005). A noted recitalist, lecturer and choir trainer, Paul is well-known in the UK, in Europe and in the USA. As well as being an Organ Adviser for the Dioceses of Southwell and Lincoln, Paul is an accredited member of the AIOA and has designed many new and restored organs throughout the UK. He is a diploma examiner for the RCO, Chairman of the RSCM in his area, and has been awarded honorary fellowships by the GCM and the RSCM for his contribution to church music. More information is available at www.PaulHale.org