

Information pack for examination candidates

St Barnabas', Dulwich, London SE21

This Information Pack contains the following material:

- § Map of the location of the church
- § History of the organ, its specification and accessories
(This document is taken with permission from the Church's booklet about the instrument, first published in 1997.)
- § Diagrammatic representation of stop layout
- § Diagrammatic representation of the console layout
- § List of pre-set stops on divisional pistons
- § Map of the location of the church



Please enter the church by the front door.
On the day of the examination, the waiting room will be signposted clearly.

IMPORTANT

Under no circumstances should candidates contact the examination centre directly. Please address all enquiries, in the first instance, to Andrew Macintosh at the RCO (telephone 05601 269426; email andrew.macintosh@rco.org.uk)

The new St Barnabas organ

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The new organ is a three-manual-and-pedal pipe organ, designed and built especially for the new church by Kenneth Tickell & Company. It has 35 stops, and 2428 pipes which range in size from a tonal length of more than 19 feet to smaller than the size of a pencil. The case is over 27 feet high, and 16 feet wide, and the weight of the instrument is assessed at approximately 11 tons.

The organ case is made of American White Oak, finished with an oil polish. The vigorous grain characteristic of this timber is well suited to contemporary design, and it has also been used for the church furniture. From the outset the organ was conceived with full-length 16-foot pipes in the front, and flamed copper was chosen for these large Pedal pipes as being not only an economic alternative to tin, but allowing creative possibilities. The colours are produced from the copper by heating the metal with a gas torch, and the pipe-makers have achieved an extraordinary effect which harmonizes with the colours of the windows and of the choir robes. The mouths of the Pedal pipes contrast tin against copper, those of the Great gold leaf to polished tin. Inside the organ the pipes are mostly made from alloys of tin and lead, together with wooden pipes of poplar, mahogany and cedar.

The console emerges naturally from the woodwork of the lower case. The keyboards have coverings of fine bone and ebony, while the stop knobs are of African Blackwood. A closed-circuit television system has been included in the console which allows the organist to see the choir conductor and celebrant, and there is a sophisticated combination system which enables instant recall of selected stop combinations.

Tracker actions connect the keys and pedals to the soundboards and pipes. A system dating back many centuries, the mechanism consists of long, slender wooden trackers, aluminium rollers and wooden levers which place the player's fingers in direct contact with the speech of the pipes. Inside the soundboards, small pneumatic balancers are fitted to the lowest notes of the Great and Swell soundboards in order to maintain an acceptably light touch when the keyboards are coupled together.

Within the organ case the various departments are arranged as suggested by the front pipes: the Pedal pipes are placed on two levels at either side of the case, the Choir division is immediately above the console, and the Great is at the top of the organ, with the Swell behind. I had initially hoped that all three manual divisions would sit above each other inside the main case, but it soon became clear that there would be insufficient height for this without intruding in front of the circular window. At the same time the evolution of the specification had placed importance on the full-length 8-foot basses in the Swell, and I therefore decided to place this division behind the Great in a substantial Swell box, anticipating that the brickwork at the back and to the sides of the organ would ensure the adequate projection of sound from the Swell. So far this appears to be justified.

The specification of the organ follows closely on lines established in our previous three-manual instrument at Douai Abbey, but here is widened in scope to include

full-length Diapason and Salicional basses in the Swell, as well as the 16-foot Double Trumpet. The Choir and Pedal organs are also more fully developed. The scaling of the pipework was carefully planned to take account of the expected acoustical characteristics of the new building and to produce varied and interesting choruses. Our voicing style aims to control the speech of the pipes to a sufficient degree, while still enabling a lively and vigorous tone.

The 35 stops of the organ have independent ranks throughout, with the exception of the Flute 8, and Octave 8 on the Pedals which are extended from the Subbass and Open Diapason respectively. The budget for the project would not stretch to the cost of the extra large bass pipes which would have been necessary to make these ranks independent, but the arrangement has worked well, and in the event it might have been difficult to provide space for additional large pipes.

The instrument has taken over a year to build in the workshop, and several months to install and finish in the church. There has been a great sense of commitment and achievement by all of our staff. Barry Plummer joined the firm as a cabinet maker at the start of the project, and this, his first instrument, has also been the firm's largest to date. His thoughts on building the instrument are expressed as follows:

'New to the process of building an organ, to me it seemed to evolve through various stages, like a growing child. First, the embryonic stage. Following the arrival of the wood, steel and boxes of parts, various areas of the organ began to evolve, recognizable shapes appeared. Then, one day, a massive steel frame grew and the true size of our offspring dawned upon us.

'The development in the workshop is surprising. Of course, it actually grows day upon day, level upon level. Then, all at once, it takes on a character of its own, moving to a point where it assumes a gender. The progression from this point to completion is fairly uncomplicated, because now I am dealing with a friend.

'I have lived with him for fifteen months and found him generally benign, although he has displayed some petulance on the odd day. It has been a joy to be a part of the creation of our organ and I think I am proud of this new life which has matured and is ready to face the wider world.'

In a small company such as ours there is very little demarcation between jobs, and all the staff have had some part in most aspects of the instrument. The chief responsibilities were as follows:

Kenneth Tickell Design, project management, electrics, tonal finishing

Tony Coles Soundboards, casework, winding, installation

Barry Plummer Casework, Swell box

Tim Pipkin Casework, coupler action, wooden pipes, electrics

John Furniss Voicing, actions

Others involved in the making of the organ include Tom Jansky, Murray Burns,

David Galbraith, Adrian Griffiths and David Frostick. The metal pipes were made by T Davies (flue pipes) and F J Rogers (reeds) of Leeds. The pipe shades were designed by John Brennan and carved by Derek Riley and Keith German of Lyndale Woodcarving.

The Design of the Case

© *Kenneth Tickell*

By the time I was approached about the design of the organ a decision had already been reached that the instrument was to be situated at the east end of the new church building. I was naturally very happy with this position, as it would enable the instrument to speak directly down the major axis of the building, a desirable feature, and one for which the space available was adequate in the scheme being considered. Moreover, the brickwork surrounding the instrument and lack of glass in the lower levels promised unimpeded speech from the pipes.

The architects were concerned that the whole east end of the building should be very carefully integrated, and at various stages I had discussions with the furniture designer and the glass artist. Some of the jointing features of the church furniture stem from details established in the organ case, while in the choir stalls the stainless steel rods which support the music rests echo the polished tin pipes of the organ. In response, we have made use of the profile of the legs of the altar as a feature for the borders around the pipeshades. The relationship of the organ with the windows was of great importance, in particular that sight lines to the large circular window should be carefully thought out. This therefore determined the overall height of the instrument. The colours expected from the copper pipes influenced some of the colours of the windows, and in turn I was able to make an ink between the structures of the Pedal pipe shades and the window leading.

I was asked to introduce an element of asymmetry into the design. Within the otherwise regular structure of the woodwork of the case this has been expressed in the disposition of the front pipes, in which the natural tuned lengths automatically make the pipes on the C (left) side of the organ longer than those on the C# (right) side. The length difference is further accentuated by grouping adjacent pipes in major thirds eg C, E, G#. This feature became an underlying discipline for the design of the case, being used for most of the front pipe-groupings. In addition the panelling on either side of the console and the rectangular sections of the carved pipe shades are all proportioned in relation to the pipes.

Further visual interest has been created by stepping some of the pipe bays forward of others, and by subtly angling the large pedal towers to wrap round slightly, somewhat reminiscent of the choir stalls. The Great appears to float in front, overlapping the inner pedal pipes and the tops of the Choir case.

Of all aspects of the design of the instrument, finding the right solution for the pipe shades was perhaps the most difficult. In an existing church one can often find features or motifs to develop, but in a new building the issue of how much decoration to include was sensitive. I was convinced that the organ required an element of free

movement in the pipe shades, while the architects were keen to continue the vertical emphasis. In the upper part of the case therefore, panels of free carving are contained by vertical strips, while the larger shades of the pedal have a more complex structure in which the carved panels are supported by horizontal lattice work. All of the carvings employ an ivy leaf motif, those of the Choir division being the most detailed.

Great C–a, 58 notes, Manual II

1	Bourdon	16
2	Open Diapason	8
3	Stopped Diapason	8
4	Principal	4
5	Spitz Flute	4
6	Fifteenth	2
7	Sesquialtera II	2 $\frac{2}{3}$
8	Mixture IV	1 $\frac{1}{3}$
9	Trumpet	8

Swell C–a, 58 notes, Manual III

10	Open Diapason	8
11	Chimney Flute	8
12	Salicional	8
13	Voix Celeste	8
14	Principal	4
15	Wald Flute	2
16	Mixture IV–V	1 $\frac{1}{3}$
17	Double Trumpet	16
18	Trumpet	8
19	Oboe	8
20	Clarion	4
i	<i>Tremulant</i>	

Choir C–a, 58 notes, Manual I

21	Gedackt	8
22	Principal	4
23	Nason Flute	4
24	Nazard	2 $\frac{2}{3}$
25	Octave	2
26	Tierce	1 $\frac{3}{5}$
27	Sharp Mixture III	$\frac{2}{3}$
28	Cremona	8
ii	<i>Tremulant</i>	

Pedal C–f, 30 notes

29	Open Diapason	16
30	Subbass	16
31	Octave	8
32	Flute	8
33	Gemshorn	4
34	Mixture IV	2 $\frac{2}{3}$
35	Trombone	16

Couplers

iii	Swell to Great
iv	Choir to Great
v	Swell to Choir
vi	Swell to Pedal
vii	Great to Pedal
viii	Choir to Pedal

Piston couplers

ix	Great and Pedal combinations coupled
x	General on Swell toe pistons

Thumb pistons

*6 pistons to each manual, Great, Swell and Choir
6 general pistons*

Reversible pistons for Sw to Ped, Gt to Ped, Sw to Gt, Sw to Ch

Setter and General cancel pistons

Advance and Retard pistons for Sequencer

Toe pistons

6 toe pistons to Pedal

6 toe pistons selectable as Swell or General pistons

Reversible pistons for Sw to Gt and Gt to Ped

Advance and Retard pistons for Sequencer

Combination system

16 levels of memory for Departmental pistons

64 levels for General pistons

Sequencer with 384 stops

Diagrammatic scheme of the organ

Swell		Pedal		Choir		Great	
	Tremulant		Trombone 16	Tremulant		Trumpet 8	
Clarion 4		Mixture IV			Cremona 8		Mixture IV
	Trumpet 8		Gemshorn 4	Mixture III		Sesquialtera II	
Double Trumpet		Flute 8			Tierce 1 3/5		Fifteenth 2
	Oboe 8		Octave 8	Octave 2		Spitz Flute 4	
Mixture V		Sub Bass 16			Nazard 2 2/3		Principal 4
	Wald Flute 2		Open Diapason	Principal 4		Stopped Diapason	
Principal 4		Swell to Pedal			Nason Flute 8		Open Diapason 8
	Voix Celeste 8		Great to Pedal	Gedackt 8		Bourdon 16	
Salicional 8		Choir to Pedal			Swell to Choir		Choir to Great
	Chimney Flute 8					Swell to Great	
Open Diapason 8							

Pistons reading from bass to treble

- under music desk:
: [Stepper display] : GEN 1 : 2 : 3 : 4 : 5 : 6 : [Divisional levels] [Display] [General levels]
- under Swell keyslip:
: Sw-Ped : DIV 1 : 2 : 3 : 4 : 5 : 6 :
- under Great keyslip:
: Sw-Gt : Gt-Ped : DIV 1 : 2 : 3 : 4 : 5 : 6 :
- under Choir keyslip:
: Setter : Sw-Ch : DIV 1 : 2 : 3 : 4 : 5 : 6 : Gen Cancel :
- Ped Bass Toeboard (Swell or Generals).
Top : 6 : 4 : 2 :
Bottom : — (*Stepper retard*) : 5 : 3 : 1 : [Sw-Gt]
- Ped Treble Toeboard (Pedal or Great).
Top : 2 : 4 : 6
Bottom : [Gt-Ped] : 1 : 3 : 5 : + (*Stepper advance*)

LIST OF PRE-SET STOPS ON DIVISIONAL PISTONS

The following divisional settings will be pre-set (and locked) on Channel 16 (Divisional) for RCO examinations. Stops are not numbered.

Swell

- 1 Salicional 8, Chimney Flute 8
- 2 Open Diapason 8, Chimney Flute 8
- 3 Open Diapason 8, Principal 4
- 4 Open Diapason 8, Principal 4, Wald Flute 2
- 5 Open Diapason 8, Principal 4, Wald Flute 2, Mixture V, Trumpet 8
- 6 Open Diapason 8, Principal 4, Wald Flute 2, Mixture V, Oboe 8, Double Trumpet 16, Trumpet 8, Clarion 4

Pedal

- 1 Sub Bass 16
- 2 Sub Bass 16, Flute 8
- 3 Sub Bass 16, Octave 8
- 4 Sub Bass 16, Octave 8, Gemshorn 4
- 5 Open Diapason 16, Sub Bass 16, Octave 8, Gemshorn 4, Mixture IV
- 6 Full Pedal

Choir

- 1 Gedackt 8
- 2 Gedackt 8, Nason Flute 4
- 3 Gedackt 8, Principal 4
- 4 Gedackt 8, Principal 4, Octave 2
- 5 Gedackt 8, Principal 4, Octave 2, Sharp Mixture III
- 6 Cremona 8

Great

- 1 Stopped Diapason 8
- 2 Stopped Diapason 8, Spitz Flute 4
- 3 Open Diapason 8, Principal 4
- 4 Open Diapason 8, Principal 4, Fifteenth 2
- 5 Open Diapason 8, Principal 4, Fifteenth 2, Mixture IV
- 6 Bourdon 16, Open Diapason 8, Principal 4, Fifteenth 2, Mixture IV, Trumpet 8