

## A Three Manual Dual-Purpose Organ

Designed and made by Colin Pykett

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This electronic organ is a dual purpose instrument containing both 'classical' and 'theatre' voices. The console is in oak with much solid wood, including the lippings to all exposed edges of the veneered boards which are of blockboard or plywood. No chipboard or MDF was used. The console can be completely dismantled to 'flat pack' form to facilitate installing it in small rooms. The bench is likewise in solid oak, probably from a former organ by E Wragg & Son at St Wilfrid's church, Kirkby-in-Ashfield, Nottinghamshire prior to its displacement by a Compton 357CP Electrone c.1960. (The bench was found by the Vicar lying discarded in the boiler room!). The Herrburger Brooks keyboards are in ivory and ebony, rescued from two 1950's Compton Electrone type 348 consoles, as is the pedal board. The draw stop jambs and solenoids date from c. 1965 and were formerly in Holy Trinity church, Brompton, London, though the stop heads were in poor condition. They have been replaced and engraved to the specification below. The original action voltmeter on the right hand jamb has been retained to indicate the state of charge of the combination system memory backup batteries. The feel and general playing experience at this console was intended to match the mid-twentieth century Romantic sound of the instrument. Many recordings made on this organ can be heard on my website at [www.pykett.org.uk](http://www.pykett.org.uk).

### ‘Classical’ Stop List

(the colours below are those used on the engraved drawstops)

SWELL (enclosed)	GREAT	CHOIR (enclosed)	PEDAL
Geigen Diapason	8	Double Diapason 16	Contra Dulciana 16
Gedeckt	8	Open Diapason 8	Open Diapason 8
Salicional	8	Gemshorn 8	Stopped Diapason 8
Violes Celestes (2 rks)	8	Claribel Flute 8	Quintadena 4
Geigen Principal	4	Principal 4	Nason Flute 4
Flageolet	2	Harmonic Flute 4	Nazard 2 <sup>2</sup> / <sub>3</sub>
Mixture	III	Twelfth 2 <sup>2</sup> / <sub>3</sub>	Block Flute 2
Double Trumpet	16	Fifteenth 2	Tierce 1 <sup>3</sup> / <sub>5</sub>
Cornoepan	8	Seventeenth 1 <sup>3</sup> / <sub>5</sub>	Larigot 1 <sup>1</sup> / <sub>3</sub>
Oboe	8	Quartane II	Sifflole 1
Clarion	4	Trumpet 8	Corno di Bassetto 8
			Fanfare Trumpet 8
Tremulant		Tremulant	
Sub Octave	Swell to Great	Swell to Choir	Swell to Pedal
Super Octave			Great to Pedal
			Choir to Pedal

### ‘Theatre’ Stop List

(the colours below are those used on the engraved stop keys)

ACCOMPANIMENT (enclosed)	GREAT (enclosed)	SOLO (enclosed)	PEDAL
Diapason	8	Tuba 16	Trumpet 8
Flute	8	Tibia 16	Baryphone 16
Viola	8	Cello 16	Tibia 8
Krumet	8	Tibia 8	Clarinet 8
Octave	4	Kinura 8	Orchestral Oboe 8
Flute	4	String 8	Vox Humana 8
Viola	4	Tibia 4	Flute 8
Piccolo	2	Violin 4	String Celeste (TC) 8
		Tibia 2 <sup>2</sup> / <sub>3</sub>	
		Tibia 2	
		Salicet 2	
		Sub Octave	Accept to Pedal
		Super Octave	
Tremulant	Tremulant	Tremulant	

## Accessories

5 thumb pistons to each manual department  
5 toe studs to pedal  
5 general toe studs  
Great to Pedal reversible thumb piston, duplicated by toe stud  
Swell to Great reversible thumb piston, duplicated by toe stud  
Choir to Pedal reversible thumb piston  
Rocking tablet to Great and Pedal Pistons Coupled

Combination capture system with 8 memories each for the classical and theatre organs  
Stop control by moving drawstops for the classical organ (magnetically operated)  
Stop control by moving stop keys for the theatre organ (magnetically operated)  
Setter button  
General Cancel piston

Rocking tablet to select Classical or Theatre Organ. The drawstops on the Classical organ are automatically cancelled when changing to 'Theatre' mode. The stop keys on the Theatre organ are automatically cancelled when changing to 'Classical' mode.

2 tremulants to the classical organ - independently adjustable in speed and depth  
3 tremulants to the theatre organ - independently adjustable in speed, depth and modulation waveshape (sine through to square, continuously variable)

## Compositions of Mixtures

Swell Mixture III:

C1 - B12:	22, 26, 29
C13 - B24:	19, 22, 26
C25 - B36:	15, 19, 22
C37 - B48:	12, 15, 19
C49 - C61:	8, 12, 15

Great Quartane II:

C1 - B36:	19, 22
C37 - B48:	15, 19
C49 - C61:	12, 15

Pedal Mixture IV: 19, 22, 26, 29 throughout

## Tuning and Temperament

The instrument is tuned to A = 440 Hz using my Dorset Temperament [ref 1] with offset octaves [ref 2].

## **Audio System**

Four channels, each with a 15 channel graphic equaliser and Alesis reverberation for the manual and light pedal stops. KEF 104aB loudspeakers are used in each channel.

A fifth channel handles the heavy pedal stops using an 18" Eminence Omega-Pro loudspeaker mounted in the genuinely infinite baffle of the ceiling [ref 3].

## **Tonal Derivations**

Most of the 'classical' voices were derived from the four manual 1927 Rushworth and Dreaper organ at Great Malvern Priory, England. Exceptions are the 8 and 4 foot flutes on the choir organ which were derived from the 1858 Walker organ at St Mary's church, Ponsbourne, Hertfordshire, England, and the 4 foot Quintadena on the choir organ which was derived from a stop made by Brian Daniels, Crewkerne, England.

Most of the 'theatre' voices were derived from the three manual Wurlitzer and Rutt organs preserved at the St Albans music museum, England.

## **Acknowledgements**

Thanks are due to the church authorities at Malvern and Ponsbourne and to the trustees at St Albans for allowing the acoustic samples to be recorded. Thanks are also due to Brian Daniels for allowing his Quintaten stop to be sampled, and to Paul Minchinton for making the recordings at Ponsbourne.

## **Things they have said:**

*"Just like a town hall organ"*

*"If I didn't know better, I would say this was an Edwardian instrument with its choir organ spoiled by turning it into a baroque-type positive forty years later - much like many British pipe organs in other words. I love it"*

*"The finest electronic organ I have ever played, simply because it has a genuine warm Romantic sound rather than spit and chuff just for the sake of it"*

*"Pretty impressive - but lacking the proper starting and ending transients"*

*"You draw a stop and it sounds just like you expect it to"*

*"Very nice Colin. I'm so jealous"*

*"I'm an engineer and I know how you do it, but not how you do it so well"*

*"Amazing how the great diapason chorus can stand on the Claribel alone"*

*"The reeds are lovely"*

*"Would you take a picture? I'm writing an article for an organ magazine and I want to be seen at this splendid console"*

## References

1. "A Dorset Temperament", C E Pykett, *Organists' Review*, August 2004.

Also available at [www.pykett.org.uk/a\\_dorset\\_temperament.htm](http://www.pykett.org.uk/a_dorset_temperament.htm)

2. "Keyboard Temperaments with Impure Octaves", C E Pykett, 2008.

Available at [www.pykett.org.uk/impureoctaves.htm](http://www.pykett.org.uk/impureoctaves.htm)

3. "The Electronic Reproduction of Very Low Frequencies", C E Pykett, 2004.

Available at [www.pykett.org.uk/vlf\\_repro.htm](http://www.pykett.org.uk/vlf_repro.htm)

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