



Royal Hospital School Grand Organ

Hauptwerk Sample Set
User Guide v1.2

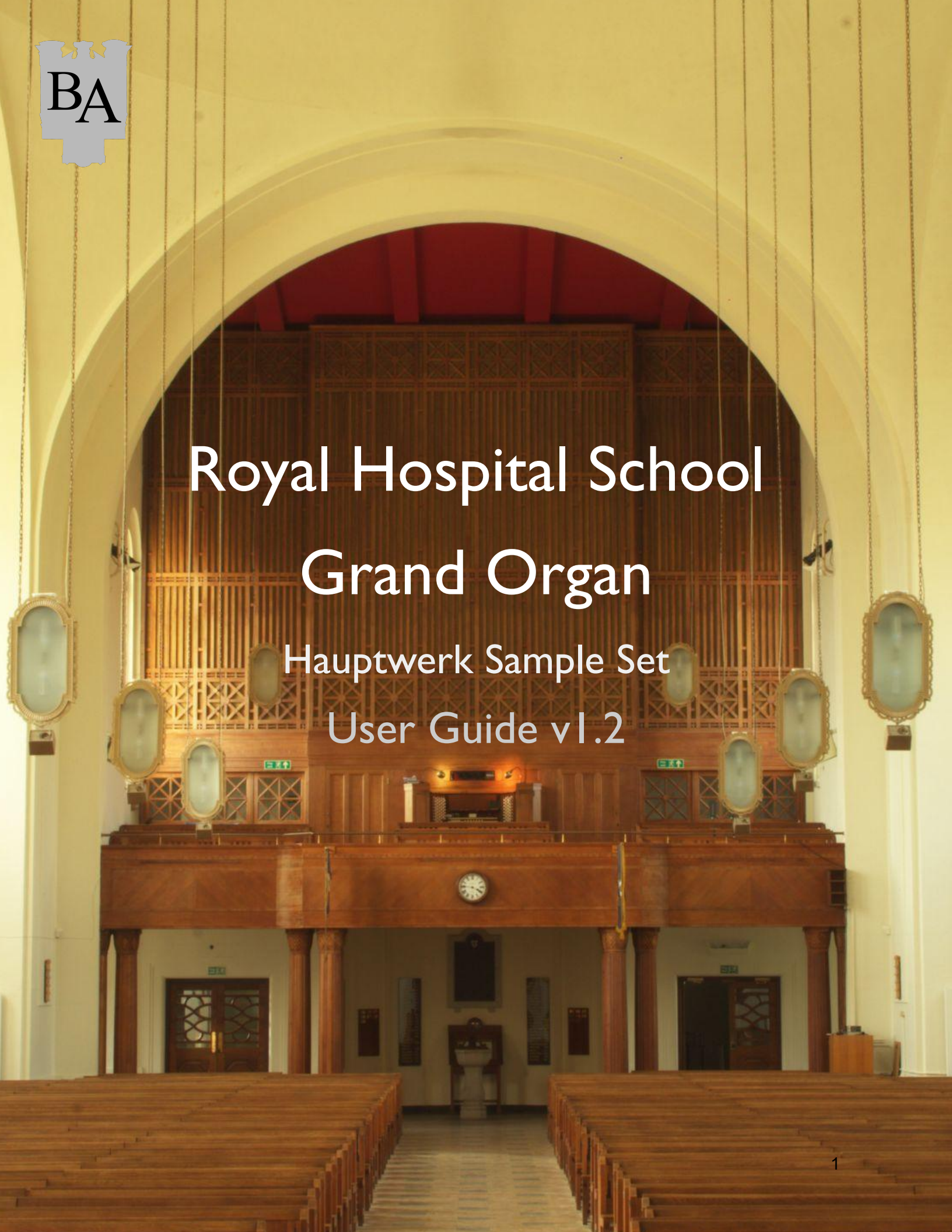


Table of Contents

- 3. Royal Hospital School History
- 5. Organ History
- 7. Specification
- 10. Installing the Organ
- 11. Loading the Organ + Tremulant Sampled Ranks
- 12. Virtual Console
- 13. Simple Jamb
- 13. Settings
- 14. Microphone Perspectives
- 15. A Few Notes on Voicing + Memory Requirements
- 16. Finally + Credits

Royal Hospital School History



The Royal Hospital School was originally located at Greenwich Hospital, in what is now the National Maritime Museum in Greenwich, London. Founded by royal charter, the Hospital was established in 1694, and the school in 1712. In the 1820s, the Royal Naval Asylum school was incorporated into the Royal Hospital School. The institution's original purpose was to provide assistance and education to the orphans of seafarers from both the Royal Navy and the Merchant Navy, and it grew to become the largest school for navigation and seamanship in the country.

In 1933, the school relocated to Holbrook. The Holbrook campus was designed by Birmingham-based Arts and Crafts architect Herbert Tudor Buckland and built by J. Gerrard & Sons Ltd of Swinton. Today, most of the buildings are Grade II listed, with the chapel holding Grade II* status.

Historically, admission was limited to children or grandchildren of seafarers, a policy in place until the mid-20th century. Until the 1950s, boys needed to pursue careers in the Royal or Merchant Navies, resulting in a curriculum heavily focused on maritime subjects. While these requirements have since been removed, the school continues to maintain naval traditions such as wearing naval uniforms, holding formal divisions (parades and march-pasts), and incorporating marching into school activities.

The school became coeducational in 1991, with girls first joining Hood House, followed by Cornwallis, Howe, Blake (now all co-educational), and Anson. Initially, girls wore a different naval uniform from the boys, but this was later changed to match, keeping pace with the dress standards of the Royal Navy. The first female Head of School was appointed in 1992 to serve alongside her male counterpart.

In 1994, the entire school travelled to Greenwich Hospital to parade before Queen Elizabeth II in celebration of the Hospital's tercentenary. The parade was held on the parade ground in front of the Queen's House. In 2012, the school marked its 300th anniversary with the opening of a Heritage Centre and the publication of a commemorative book.



Organ History



In 1933, the Royal Hospital School in Holbrook commissioned the construction of its Grand Organ, an instrument whose current replacement value exceeds £2,000,000. The chapel housing the organ measures 220 feet in length, 64 feet in width, and 62 feet in height, with the instrument itself remaining incomplete by one planned pedal mixture stop.

The contract for the organ was awarded to the renowned firm of William Hill and Son, and Norman and Beard Ltd, at a cost of £7,098. Job No. 2878 was conceived on a grand scale, with thick ivory keys, four large expression boxes, and a tonal design tailored to accompany the school's vigorous singing. Notable features include a variety of strings, reeds, mutations, and an imposing pedal division, culminating in a thunderous 32ft Double Ophicleide. These components are concealed behind Britain's largest organ grille, within an acoustic offering a seven-to-eight-second reverberation. Despite its refinement, the organ has endured challenges, including a fire in 1983 that destroyed the chapel's Robson organ and necessitated extensive cleaning, as well as flooding in 1998 that damaged the Ophicleide wind chest and required substantial restoration work.

Today, the Grand Organ remains a centrepiece of the school's musical life and a recognised historic asset, holding a Grade One historic organ certificate from the British Institute of Organ Studies. The Royal Hospital School was granted Accredited Institution status by the Royal College of Organists in 2020, reflecting its commitment to organ tuition. Under the stewardship of its current Director of Music, the instrument continues to be maintained in its original specification and is regularly heard in both educational and recital contexts.



Specification

Pedal

- Double Open Wood 32'
- Open Wood 16'
- Open Diapason 16'
- Bourdon 16'
- Violone 16'
- Dulciana 16'
- Octave 8'
- Principal 8'
- Bass Flute 8'
- Ophicleide 32'
- Ophicleide 16'
- Trumpet 16'
- Posaune 8'



Choir

- Double Dulciana 16'
- Open Diapason 8'
- Orchestral Flute 8'
- Viole da Gamba 8'
- Dulciana 8'
- Muted Viol 8'
- Spitz Flute 4'
- Harmonic Flute 4'
- Octave Quint 2 2/3
- Tierce 1 3/5
- Septième 1 1/7
- Piccolo 2'
- Oboe 8'
- Tremulant



Great

- Double Open Diapason 16'
- Open Diapason I 8'
- Open Diapason II 8'
- Open Diapason III 8'
- Clarabella 8'
- Octave 4'
- Principal 4'
- Wald Flute 4'
- Twelfth 2 2/3'
- Fifteenth 2'
- Mixture IV
- Contra Tromba 16'
- Tromba 8'
- Octave Tromba 4'



Swell

- Contra Viol 16'
- Open Diapason 8'
- Stopped Diapason 8'
- Salicional 8'
- Vox Angelica 8'
- Gemshorn 4'
- Lieblich Flute 4'
- Nazard 2 2/3'
- Fifteenth 2'
- Mixture IV
- Double Trumpet 16'
- Trumpet 8'
- Trompette 8'
- Clarion 4'
- Tremulant



Solo

- Harmonic Flute 8'
- Cor de Nuit 8'
- Viole 8'
- Voix Celeste 8'
- Unda Maris 8'
- Concert Flute 4'
- Orchestral Oboe 8'
- Clarinet 8'
- Orchestral Horn 8'
- Tuba 8'
- Tremulant

Couplers

- Solo to Pedal
- Swell to Pedal
- Great to Pedal
- Choir to Pedal
- Swell to Choir
- Solo to Great
- Swell to Great
- Choir to Great
- Swell Octave
- Swell Unison Off
- Swell Sub Octave
- Solo to Swell
- Solo Octave
- Solo Unison Off
- Solo to Choir
- Choir Octave

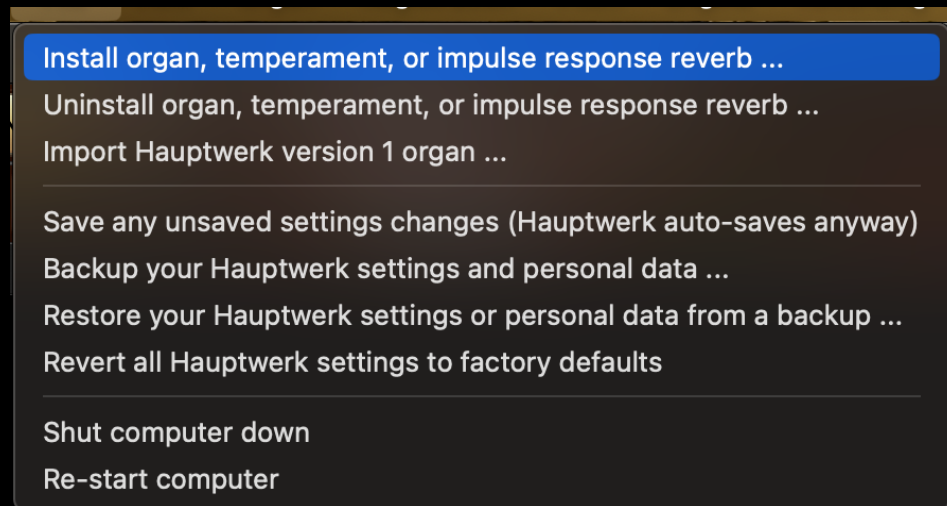
Combinations

- Great & Pedal Pistons Combined
- Doubles Off



Installing the Organ

To install this sample set after downloading all the files, open Hauptwerk, then click File | Install organ, sample set, temperament, or impulse response.



Navigate to your downloads folder, then find the file named *'RoyalHospitalSchoolGrandOrgan.HauptwerkOrgan.rar'* and open it in Hauptwerk. Note that the sample files will take much longer to install due to the large file sizes. Due to this, please allow your computer to run uninterrupted, as it may take up to 15 minutes or more to complete.

Loading the Organ

Once all of the files have been installed, you are now ready to load the organ into Hauptwerk.

All sample files are 24-bit 48kHz; however, they may be loaded in 16-bit 48kHz to save memory. If you only want to use one stereo channel to save more memory, you can disable either the Rear or Close Perspectives entirely. You can also disable the tremulant samples to save memory if you don't wish to use them. Once you have chosen the desired settings for all ranks, click OK, and the organ will begin to load. Note that the first time you load the organ, it will take slightly longer due to the files being saved into a special format, which enables subsequent loads to become much faster. Please make sure that you have at least 90 GB of free hard drive space for the saved files. After the organ has finished loading, you will see the console display appear, and you are ready to begin performing on this virtual instrument. Please consult the Hauptwerk User Guide for more information on setting up stop controls and mapping your MIDI keyboards to the appropriate organ controls of this organ. Most virtual organ controls contain default settings to get you started; however, certain controls may need to be set up manually with custom mappings.

Tremulant Sampled Ranks

According to the original specification, here are the only ranks that are affected by Tremulants on the organ:

Choir: Double Dulciana 16', Orchestral Flute 8', Viola da Gamba 8', Dulciana 8', Spitzflöte 4', Quintflöte 2 $\frac{2}{3}$ ', Tierce I $\frac{3}{4}$ ', Septieme I 1/7', Piccolo 2', Oboe 8'

Swell: Contra Viola 16', Salicional 8', Vox Angelica 8', Lieblichflöte 4', Mixture IIII, Trompette 8'

Solo: Harmonic Flute 8', Viole 8', Viole Celeste 8', Unda Maris 8', Cor Di Nuit 8', Concert Flute 4', Orchestral Oboe 8', Clarinet 8'

The Virtual Console



To assign any of the controls, Right-click any of the keyboards, swell pedals, stops or pistons to *Auto-Detect MIDI/trigger settings*.

A variety of pistons are included to allow greater flexibility while registering for live performance. Reversible pistons will toggle the state of the relative stop or coupler. All of these can be assigned from the virtual console page or the *Organ Settings - Stop/coupler/tremulant switches and pistons/button* tab.

The Ped. Great Compositions to Pedal Pistons stop will allow the Pedal foot pistons to instead activate the Pedal divisionals as well as the Great divisionals when activated. This stop is not integrated into the combination system and will remain neutral for all Generals and divisionals.

A wide range of couplers are also available, enabling a large variety of registration possibilities. Octave couplers on the Choir, Solo and Swell divisions will also couple through to the Great, Choir, Swell and Pedal divisions. There is also a 'Doubles Off' Switch that cancels all the manual 16ft stops, all the pedal 32ft stops, and all the octave couplers.

Simple Jamb

PEDAL	CHOIR	GREAT	SWELL	SOLO	COMBINATIONS
Double Open Diapason 32	Double Dulciana 16	Double Open Diapason 16	Contra Viola 16	Harmonic Flute 8	Gt. Compositions to Ped. Pistons
Open Diapason Wood 16	Open Diapason 8	Open Diapason 8 I	Open Diapason 8	Cor Di Nuit 8	Doubles Off
Open Diapason Metal 16	Orchestral Flute 8	Open Diapason 8 II	Stopped Diapason 8	Viole 8	EXPRESSION
Bourdon 16	Viola da Gamba 8	Open Diapason 8 III	Salicional 8	Viole Celeste 8	SOLO
Viola 16	Dulciana 8	Clarabella 8	Vox Angelica 8	Unda Maris 8	SWELL
Dulciana 16	Muted Viol 8	Octave 4	Gemshorn 4	Concert Flute 4	CHOIR
Octave 8	Spitzflöte 4	Principal 4	Lieblüchflöte 4	Orchestral Oboe 8	
Principal 8	Harmonic Flute 4	Waldflöte 4	Nazard 2 ½	Clarinet 8	
Bass Flute 8	Quintflöte 2 ½	Twelfth 2 ½	Fifteenth 2	Orchestral Horn 8	
Ophicleide 32	Piccolo 2	Fifteenth 2	Mixture IIII	Tuba 8	
Ophicleide 16	Tierce 1 ¾	Mixture IIII	Double Trumpet 16	Tremulant	
Trumpet 16	Septieme 1 ½	Contra Tromba 16	Trumpet 8	Sub Octave	
Posaune 8	Oboe 8	Tromba 8	Trompette 8	Octave	
Solo to Pedal	Tremulant	Octave Tromba 4	Clarion 4	Unison Off	
Swell to Pedal	Sub Octave	Solo to Great	Tremulant		
Great to Pedal	Octave	Swell to Great	Sub Octave		
Choir to Pedal	Unison Off	Choir to Great	Octave		
	Solo to Choir		Unison Off		
	Swell to Choir		Solo to Swell		

The Simple Jamb offers a clear and simplified view of all the stops, couplers, and expression gauges available on the Sample Set.

Settings

From this page, you can adjust the volume levels of the individual perspectives. As well as the tuning of the whole Sample Set. Note that the scaling for the Audio Levels is in decibels. For reference, an attenuation of 6dB is equivalent to 50% of the maximum volume (0dB).

AUDIO LEVELS

CLOSE

0 dB

FRONT

0 dB

REAR

0 dB

TUNING

In tune

Original
(As recorded)



The Microphone Perspectives

The Individual Microphone Perspectives, Close, Front and Rear, have been carefully mixed with different playback systems in mind. The Close perspective was recorded directly in front of the pipes; therefore, this perspective will work very well in a live church installation. The Front perspective was recorded about 9 metres from the front of the main organ case. This perspective is a good blend between direct pipe sound and the church reverb. If you only have enough memory for one perspective, I strongly recommend **only** loading the Front perspective. The rear perspective was recorded using bi-directional microphones from the same place as the Front perspective microphones. This perspective is designed to be used as rear surround channels as part of a quadrophonic or 5.1 surround sound system. You can also use this perspective to blend with the front perspective to add more reverberant sound if you wish. I don't recommend using the rear perspective alone, as there isn't much extra low-frequency content in the samples which are needed to carry the weight of the full organ sound. Feel free to mix the perspectives as you see fit, to suit your taste.



A Few Notes on the voicing of the Sample Set

The Sample Set has been carefully voiced and mixed to capture what is heard in real life. There are potentially a few unexpected things to be made aware of:

- Choir Dulciana 8' is tuned flat, so it can be used as an undulating stop with the neighbouring string stops
- Solo Tuba 8' Isn't overpowering compared to most English Tubas
- The Orchestral reeds and softer strings may seem very quiet compared to other stops
- The Great mixture has an unusual composition where one of the ranks is a 7th. It is not out of tune.
- Bottom 6 notes of the 32ft Open Diapason are quinted

Artificially increasing the amplitude on any of the ranks using voicing settings will change the overall character of the organ.

Memory Requirements

The following list shows the minimum and maximum memory requirements for loading the entire instrument, allowing you to determine how the organ may fit within your computer's specifications. Note that you may disable ranks of samples from loading to even further reduce RAM use.

For Lossless Compression:

24 Bit, 6 Channels - 90 GB

16 Bit, 6 Channels - 45 GB

24 Bit, 4 Channels - 60 GB

16 Bit, 4 Channels - 30 GB

24 Bit, 2 Channels - 30 GB

16 Bit, 2 Channels - 15 GB

Finally

I hope you enjoy playing on this Sample Set! Great care has been taken to ensure that this virtual instrument is of high quality. However, if you should find that something does not work as intended, please contact me at ivan@barrittaudio.co.uk to let me know about your concern. I will do my best to fix the issue and get you back to playing on your new virtual instrument as soon as possible. Thank you for your support, and please check my website periodically for updates to this and other Sample Sets that will be on offer.

Credits

Special thanks to the Director of Music, Edward Allen, for letting me record and produce this Sample Set.

Special thanks also to all my testers who helped make this Sample Set as good as it could be.