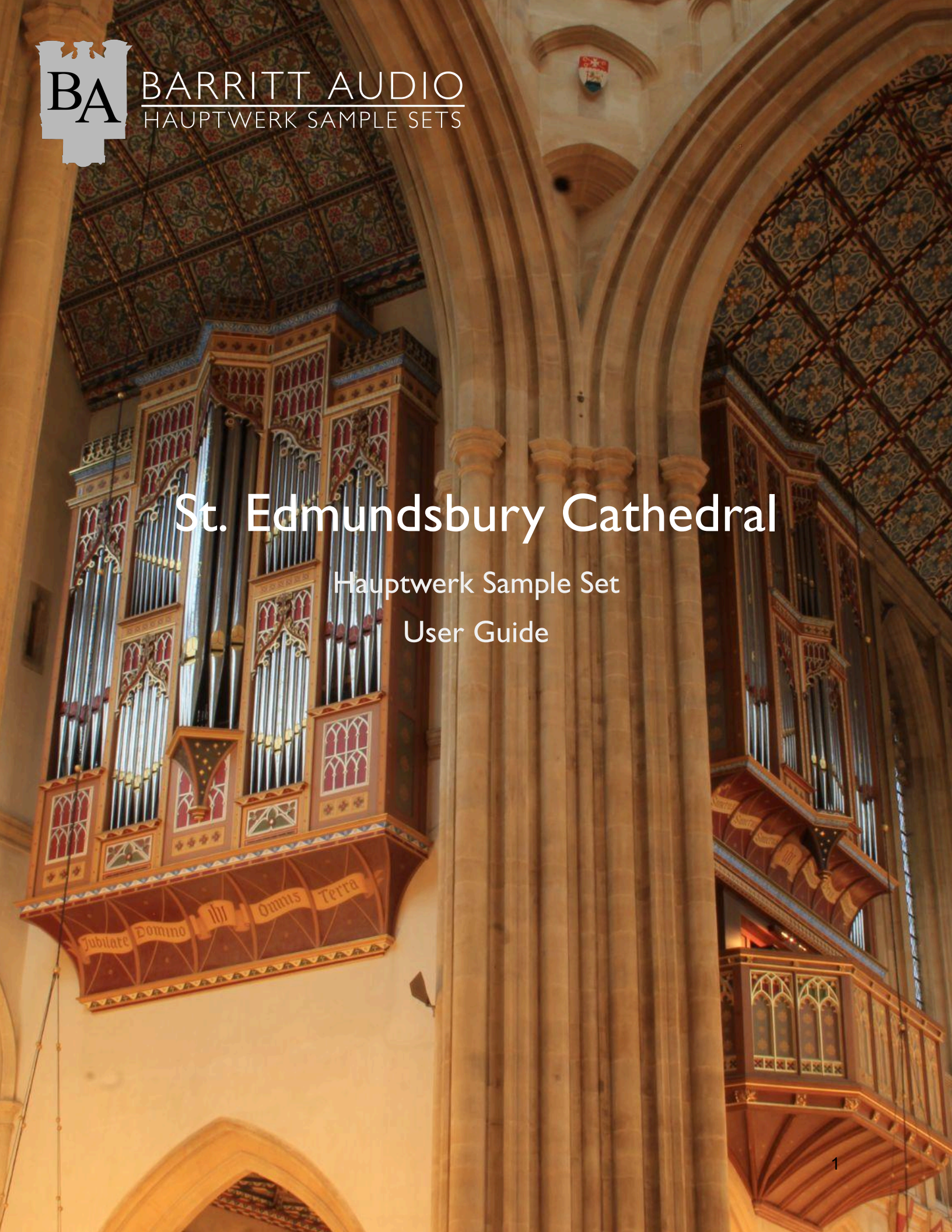

BA
BARRITT AUDIO
HAUPTWERK SAMPLE SETS
St. Edmundsbury Cathedral
Hauptwerk Sample Set
User Guide

Table of Contents

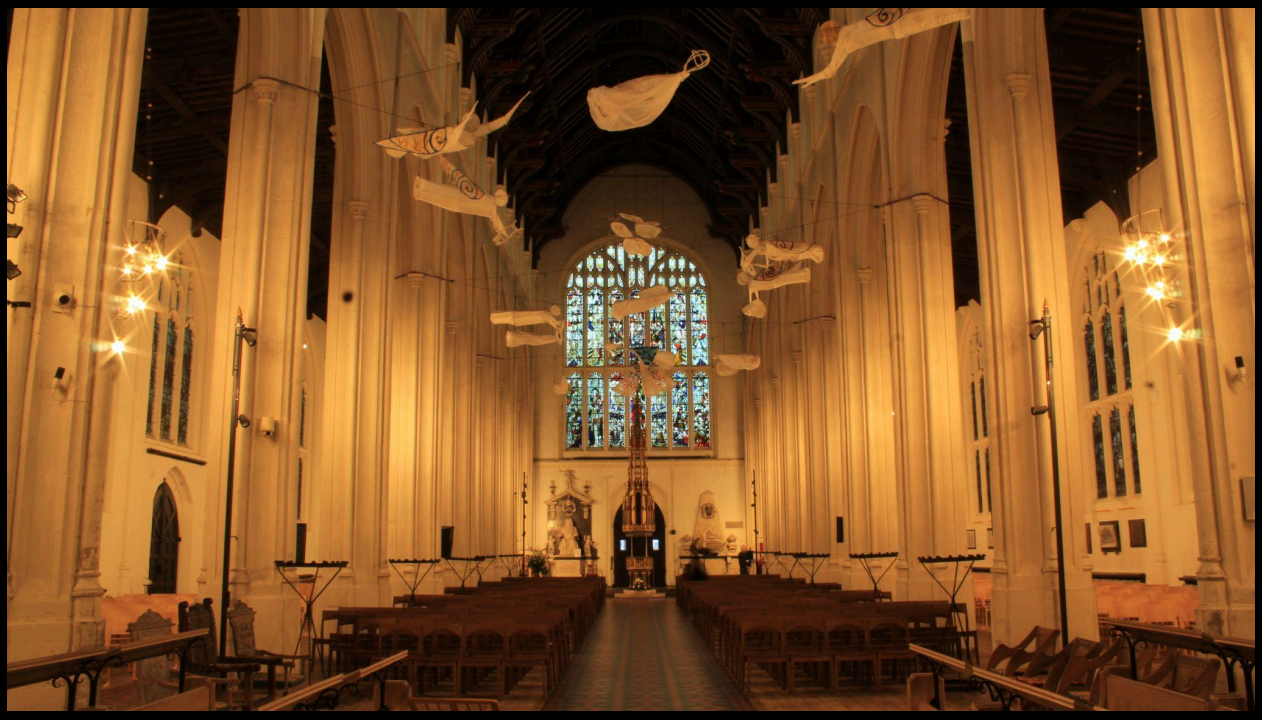
3. St. Edmundsbury Cathedral History
5. Organ History
7. Specification
8. Organ Accessories
8. Installing the Organ
9. Loading the Organ
10. Impulse Response Reverbs
11. Virtual Console
12. Simple Jamb
12. Left and Right Jambs
13. Settings
13. Microphone Perspectives
14. Memory Requirements
15. Credits

St. Edmundsbury Cathedral History

St. Edmundsbury Cathedral, located in Bury St Edmunds in Suffolk, has its origins in the early 11th century with the founding of a Benedictine abbey dedicated to St Edmund, the martyred King of East Anglia. The abbey quickly became one of the richest and most influential monastic institutions in medieval England, attracting pilgrims from across the country who came to venerate the shrine of St Edmund. The town itself grew up around the abbey, benefiting from its economic and spiritual significance. Although much of the original abbey complex was destroyed during the Dissolution of the Monasteries under Henry VIII in the 16th century, important fragments survived, including parts of the church that would later form the basis of the present cathedral.

Following the Dissolution, the former abbey church was repurposed as St James's Church, a parish church. For centuries, it served the local community in this capacity, maintaining continuity with its medieval past despite the loss of its monastic function. In the early 20th century, there was renewed interest in restoring its status and significance. In 1914, the church was elevated to become the cathedral for the newly created Diocese of St Edmundsbury and Ipswich. This marked a major turning point in its history, transforming it from a parish church into a cathedral with a broader regional role.

Throughout the 20th and early 21st centuries, St Edmundsbury Cathedral underwent significant development and expansion. One of the most notable additions was the construction of the Millennium Tower, completed in 2005, which dramatically altered the cathedral's skyline and became a symbol of its ongoing growth. The building has continued to evolve, blending medieval remains with modern architectural interventions, reflecting both its long history and its active role in contemporary religious and community life. Today, the cathedral stands as a testament to over a thousand years of history, from its monastic origins to its present-day function as a centre of worship, heritage, and culture.



Organ History

The present organ of St Edmundsbury Cathedral, Bury St Edmunds, is a modern cathedral instrument built in 2010 by Harrison & Harrison. It forms part of the completion of the cathedral's east end and is housed in two striking cases in the north transept and quire. Rather than being entirely new, the instrument incorporates pipework from earlier organs by Norman & Beard (installed when the church became a cathedral in 1914) and Nicholson (1970), creating a synthesis of historic material within a contemporary design.

The organ's development reflects the evolving status of the building itself. A major reordering in 1970 introduced a new elevated organ chamber between the quire and north transept, allowing the instrument to speak effectively into both the nave and quire. This arrangement remains central to the present organ, which is designed to fulfil dual roles: accompanying the cathedral choir in the quire while also projecting into the larger space of the nave for congregational and recital use. The current layout, with divided cases and carefully considered tonal design, is a direct continuation of these earlier architectural and musical priorities.

The 2010 rebuild replaced an instrument that was fashionable for its era of organ building, which had become unreliable and insufficient for the cathedral's needs, while preserving and revoicing earlier pipework to maintain continuity with its past. The result is a versatile instrument capable of supporting the full range of Anglican liturgy and concert repertoire, combining clarity, power, and colour within a cohesive modern framework. In this way, the organ at St Edmundsbury Cathedral represents not a single moment of construction, but an ongoing process of renewal, integrating over a century of development into a unified and highly functional cathedral instrument.

Specification

Pedal

Contra Bass 32'
Open Wood 16'
Open Diapason 16'
Violone 16' (Great)
Sub Bass 16'
Echo Bourdon 16' (Swell)
Principal 8'
Bass Flute 8'
Fifteenth 4'
Mixture IV
Double Trombone 32'
Ophicleide 16'
Trombone 16' (Great)
Fagotto 16' (Swell)

Choir

Open Diapason 8'
Stopped Flute 8'
Principal 4'
Nason Flute 4'
Nazard 2 2/3'
Fifteenth 2'
Flautino 2'
Tierce 1 3/5'
Sifflöte 1'
Cremona 8'
Tremulant

Great

Double Open Diapason 16'
Open Diapason 8' No.1
Open Diapason 8' No.2
Stopped Diapason 8'
Principal 4'
Chimney Flute 4'
Twelfth 2 2/3'
Fifteenth 2'
Mixture V
Trombone 16'
Trumpet 8'
Clarion 4'

Swell

Bourdon 16'
Open Diapason 8'
Lieblich Gedackt 8'
Echo Gamba 8'
Voix Céleste 8'
Principal 4'
Flute 4'
Fifteenth 2'
Sesquialtera II
Mixture IV
Oboe 8'
Tremulant
Contra Fagotto 16'
Cornopean 8'
Clarion 4'

Solo

Quintaton 16'
Viole d'Orchestre 8'
Viole Céleste 8'
Harmonic Flute 8'
Flauto Traverso 4'
Clarinet 8'
Vox Humana 8'
Tremulant
Tuba 8'
Orchestral Trumpet 8'

Couplers

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

Combinations

Pedal & Great Pistons
Generals on Swell Foot Pistons

Transfers

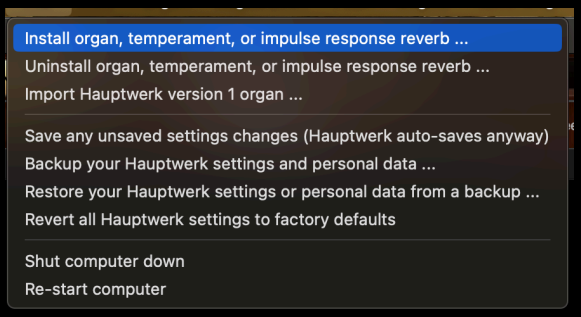
Great Reeds on Choir
Great Reeds on Pedal
Manuals I & II Exchange

Organ Accessories

- Eight foot pistons to the Pedal and Swell Organs
- 8 pistons to the Great, Choir and Swell Organs, 6 pistons to the Solo
- Reversible foot pistons: Swell to Choir, Swell to Great, 32ft Pedal Reed, Great to Pedal, 32ft Pedal Flue, Choir to Pedal, Swell to Pedal
- Reversible pistons: Choir to Pedal, Swell to Choir, Solo to Choir, Great to Pedal, Swell to Great, Choir to Great, Solo to Great, Swell to Pedal, Solo to Swell, Solo to Pedal
- Sequencer with 10 generals acting on Hauptwerk's stepper system
- Balanced expression pedals to Swell and Solo (Transept and Quire Swell shutters ganged due to how the organ was recorded)
- The manual compass has 61 notes; the pedal has 32 notes
- The actions are electro-pneumatic
- The couplers and combinations are on a solid-state system
- The pitch is A = 440 Hz

Installing the Organ components

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 '*StEdmundsburyCathedral.HauptwerkOrgan.rar* or '*StEdmundsburyCathedralDemo.HauptwerkOrgan.rar'* and the impulse responses package, and open it in Hauptwerk. Note that the sample files will take a long time to install due to the very 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. No iLok activation required as the set is unencrypted.

MD5s:

F7042d9dce577ec63ec2ffe70cf3231f - StEdmundsburyCathedral.HauptwerkOrgan.rar
2f0ec5e98c66805c43fe40cef6b4f460 - StEdmundsburyCathedralDemo.HauptwerkOrgan.rar

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 Direct, Surround 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 85 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.

For v5+ Users: There is currently a bug with Hauptwerk where the wind model polarity is inverted. To fix the bug for now, do the following steps:

1. **Go to the voicing screen.**
2. **Select all ranks (e.g. Ctrl+A on Windows).**
3. **Select this voicing adjustment: "All perspectives: wind supply mod: pitch (pct)".**
4. **Move the 'Master' slider so that the values (for all pipes) are changed to around -100 (to invert the polarity of the modulation temporarily, which should give the correct result, but you would need to change it back if subsequently upgrading to v10 in the near future).**

The Impulse Response Reverbs (v5+ Advanced users only, optional but **strongly recommended**)

This sample set includes impulse response (IR) reverbs captured from the cathedral to help recreate the natural acoustic space. Using these will significantly improve realism, especially if you are playing through speakers set up for surround sound.

There are two IRs provided:

- **Front IR** – for the main (front) speakers
- **Rear IR** – for rear/surround speakers

Basic setup

- **Stereo/headphones (most users):**
  Apply the **Front IR** to your main output. That's all you need.
- **Surround setup:**
  Apply the **Front IR** to your front speaker outputs, and the **Rear IR** to your rear speaker outputs.

How to apply (simple steps)

1. Open the **Hauptwerk Mixer**
2. Select your main output channel (e.g. "Front")
3. Add a **convolution reverb** effect
4. Load the appropriate IR file (Front or Rear)
5. Repeat for other outputs if using surround

Once set up, the organ will sound noticeably more realistic. The IRs help blend the individual release samples more naturally, while also allowing wind model pitch fluctuations and swell box changes to interact with the acoustic in a more convincing way.

The effect is intentionally subtle and should not dominate the sound of the sample set. When you load an IR onto an output, the default settings are already optimised and are recommended for best results.

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 'Pedal & Great Pistons' Stop will allow the Great Pistons to also activate the Pedal Pistons when activated and vice. This 'stop' is not integrated into the combination system and will remain neutral for all Generals and divisionals.

A wide range of couplers is also available, enabling a large variety of registration possibilities. Octave couplers on the Swell and Solo divisions will also couple through to all divisions.

Simple Jamb

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

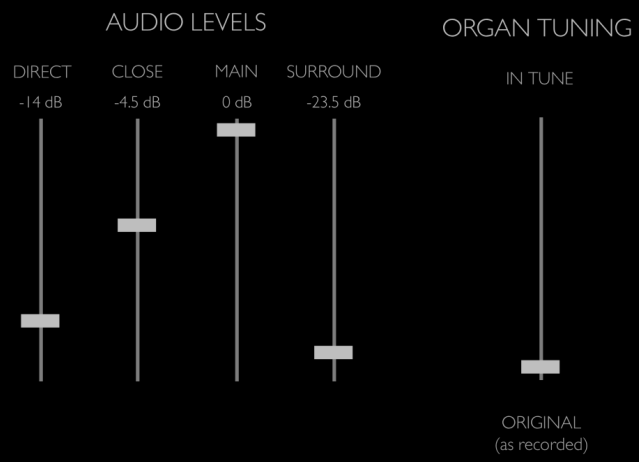
PEDAL	CHOIR	GREAT	SWELL	SOLO	COUPLERS
Contra Bass 32	Open Diapason 8	Double Open Diapason 16	Bourdon 16	Quintaton 16	Great & Pedal Pistons
Open Wood 16	Stopped Flute 8	Open Diapason 8 No.1	Open Diapason 8	Viole d'Orchestre 8	Gens. on Swell Foot Pistons
Open Diapason 16	Principal 4	Open Diapason 8 No.2	Lieblich Gedackt 8	Viole Céleste 8	Manuals I & II Exchange
Violone 16	Nason Flute 4	Stopped Diapason 8	Echo Gamba 8	Harmonic Flute 8	EXPRESSION
Sub Bass 16	Nazard 2⅔	Principal 4	Voix Céleste 8	Flauto Traverso 4	SOLO
Echo Bourdon 16	Fifteenth 2	Chimney Flute 4	Principal 4	Clarinet 8	SWELL
Principal 8	Flautino 2	Twelfth 2⅔	Flute 4	Vox Humana 8	
Bass Flute 8	Tierce 1⅗	Fifteenth 2	Fifteenth 2	Tremulant	
Fifteenth 4	Sifflöte 1	Mixture V	Sesquialtera II	Tuba 8	
Mixture IV	Cremona 8	Trombone 16	Mixture IV	Orchestral Trumpet 8	
Double Trombone 32	Tremulant	Trumpet 8	Oboe 8	Sub Octave	
Ophicleide 16	Solo to Choir	Clarion 4	Tremulant	Octave	
Trombone 16	Swell to Choir	Reeds on Choir	Contra Fagotto 16	Unison Off	
Fagotto 16		Reeds on Pedal	Cornopean 8		
Solo to Pedal		Solo to Great	Clarion 4		
Swell to Pedal		Swell to Great	Sub Octave		
Great to Pedal		Choir to Great	Octave		
Choir to Pedal			Unison Off		
			Solo to Swell		

Left and Right Jambs

There are also left and right jambs for use with multiple touch screens in horizontal and vertical layouts.

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).



The Microphone Perspectives

The Individual Microphone Perspectives, Direct, Close, Main and Surround, have been carefully mixed with different playback systems in mind. The Direct perspective was recorded as close to the pipes as possible in mono and has been panned hard left and right according to the split C and C# windchests; this perspective is optimal for live installation purposes. The Close perspective was recorded about 2 metres from the front of the main organ cases. The Main perspective was recorded 11 metres away between the two cases. This perspective is a good blend between direct pipe sound and the cathedral acoustic. If you only have enough memory for one perspective, I strongly recommend **only** loading the Main perspective. The Surround perspective was recorded using bi-directional microphones from the same place as the Main perspective microphones. This perspective is designed to be used as rear surround channels as part of a quadrophonic or 5.1 surround sound system and is not designed to be used on its own. Feel free to mix the perspectives as you see fit, to suit your taste.

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:

For All 7 Channels

24-Bit, - 78 GB

16-Bit, - 39 GB

For Stereo Channels *(Close, Main, Surround)*

24-Bit, 6 Channels - 69 GB

16-Bit, 6 Channels - 34.5 GB

24-Bit, 4 Channels - 46 GB

16-Bit, 4 Channels - 23 GB

24-Bit, 2 Channels - 23 GB

16-Bit, 2 Channels - 11.5 GB

For Mono Channel *(Direct)*

24-Bit, 8 GB

16-Bit, 4 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 Directors of Music, Claudia Grinnell and Richard Cook, 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.