



## The Wersi Sound Factory Master Classes

### Master Class 3 : February 2013 : The Wersi Pipe Organ Registrations

We are taking a small departure from continuing to look at the tab sections of Sound Factory in order to converge with the final part of our Wersi Classical Pipe Organ Project. In that Project this month, Jeff Ormerod has provided thirteen registrations, which he uses on a classical organ, in Wersi format, employing sounds from the Sacral Package. In this Sound Factory Master Class each of those registrations is being presented as a single sound, using the editing facilities of Sound Factory to produce them.

Here is the list of the Registrations:

#### The Swell Organ

1. Flutes - 1 (Gedackt 8)
2. Flutes - 2 (Gedackt 8 and Rohrflöte)
3. Flutes - 3 (Gedackt 8 and Rohrgedackt)
4. Flutes - 4 (Gedackt 8 and 16 and Quint 2 2-3)
5. Strings - 1 (Voix Celeste)
6. Strings - 2 (Voix Celeste and Gedackt 8)
7. Diapasons - 1 (Principal 4 and Gedackt 8)
8. Reeds (Regal 16 and Gedackt 8)

#### The Great Organ

9. Diapasons - 2 (Principal 8)
10. Diapasons - 3 (Principal 4 and 8)
11. Diapasons - 4 (Principal 4 and 8 and Octaav)
12. Diapasons - 5 (Principal 4 and 8, Octaav and Mixture 4)
13. Full Organ (Principal 4 and 8, Oboe and Mixture 4)

#### The Pedal Organ

14. Pedal - 1 (Gedackt 8 and 16)
15. Pedal - 2 (Gedackt 16 and Tutti 3)

It would be useful to read the article provided by Jeff ("Wersi Classical Pipe Organ - Part 4") in conjunction with reading this Master Class because Jeff provides considerable additional information which has been used to prepare this Class.

Two-manual pipe organs have the Upper Manual designated as the Swell Organ and the Lower Manual as the Great. Looking at Registration 12 above, four sounds are included which means that registration has to be set up on the upper manual of a Wersi organ, assuming that Selector Plus is activated if the instrument is not a Scala or Louvre. No such problem occurs when using Sound Factory to set up registrations as each registration is contained within a single sound. By arranging those sounds in different Selectors it is possible to retain the Lower Manual as the Great and the Upper Manual as the Swell. Not only that, one Total Preset could have each Selector acting as one complete registration allowing many combinations of "Stops" within the one Total Preset.

It goes even further. Each sound in Sound Factory can have up to ten sample sounds so the maximum limit of 4 ranks of pipes for the Upper Manual, three for the Lower and two for the

pedals no longer applies. This can be particularly useful for the pedals, allowing even those owners with a single pedal Selector to combine 16' and 32' pipes, for example.

We shall be returning to this Classical Pipe Organ use of Sound Factory in a later Master Class, in order to take advantage of all those extra facilities as well as introducing Octave Coupling as a feature.

Registrations 1, 5 and 9 consist of a single sound each so there is no point in representing them with a Sound Factory equivalent. For each of the others the settings used in Sound Factory will be represented here by the use of tables for the essential parameter values.

### How to set up each Sound

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1. One of the sounds used in the Registration is loaded into Sound Factory. This can be done either by putting that sound into a Selector, then entering Sound Factory where that sound will be displayed, or by entering Sound Factory and then loading that sound.
2. All the Sacral sounds have one or more sound sample layers which are "active". The final three sound sample layers are "inactive" in that their volume level is zero in each case. These three sound sample layers are deleted each time.
3. To add further sound sample layers which have all the characteristics of the sound on its own requires a special loading sequence. The sound is loaded into Sound Factory and the first active sample is copied to the clipboard.
4. The Sound being constructed is then loaded into Sound Factory and the sound currently on the clipboard is pasted either before or behind as appropriate.
5. This process is repeated for each active sound sample layer. For example, the sound Principal 4 has two sample layers for a left and right version of each Principal 4 sample. It is easiest to use this sound as the starting point, even though, in the original registrations set by Jeff, Principal 8 is the first sound. To keep to this, though it doesn't really matter about the layer sequence here, the Principal 8 sample is pasted in before the left Principal 4. Normally pasting can be done behind the first sample in the list.

All will be made clear as we build these sounds, so let's start with Flutes - 2.

### How to set up Flutes - 2 as an example of setting up each sound.

#### 2. Flutes - 2

- Load the sound Gedackt 8 into Sound Factory.
- Delete the sample layers Sacral Tutti (both of them) and Church Organ.
- Save this sound as "Flutes - 2".
- Load the sound Rohrflöte into Sound Factory.
- Highlight the first sample in the list (Rohrflöte) and touch "Layer to Clipboard" at the bottom of the screen.
- Load your new sound Flutes - 2 into Sound Factory.
- Highlight the Gedackt 8 sample and touch "Paste Behind" at the bottom of the screen.
- Notice there is a final Effect Layer called "Hall Reverb". This is common to all the Sacral sounds and we shall not be changing it at all during this Class.

The above procedure should be used to produce all the sounds in this Class. Simply use the list of samples given each time to replace those in the above procedure.

Producing the sounds in the above way should not require any further adjustments to any of the Sound Factory parameters, except where volume levels and/or pitch changes are needed. As these are covered in the Sample page under "Expert Edit", only that page's parameters (except for Play-Mode which doesn't change) will be provided for each sound. The volume levels have been adjusted to provide as close a balance to the original registration given by Jeff as possible.

Here are those parameters and values for Flutes - 2, followed by the remainder.

**The Swell Organ**

**Gedackt 8 sample**

Flutes - 2  
Registration  
Sound

Volume		Pitch		Sample Edit		Sample Delay	
Volume dB	+6.3	Octave	0	Wave Start	0	Mode	Off
Panorama	C	Semi	0	Velocity	0	Delay ms	0
Pan Key	0	Cent	0	Random	0		
		Key	+100				

Master Volume  
is -3.1 dB

**Rohrfloete sample ("oe" represents the German umlaut over the "o" in -flöte)**

Volume		Pitch		Sample Edit		Sample Delay	
Volume dB	-1.1	Octave	0	Wave Start	0	Mode	Off
Panorama	C	Semi	0	Velocity	0	Delay ms	0
Pan Key	0	Cent	0	Random	0		
		Key	+100				

Flutes - 3  
Registration  
Sound

3. Flutes - 3

**Gedackt 8 sample**

Volume		Pitch		Sample Edit		Sample Delay	
Volume dB	+5.1	Octave	0	Wave Start	0	Mode	Off
Panorama	C	Semi	0	Velocity	0	Delay ms	0
Pan Key	0	Cent	0	Random	0		
		Key	+100				

Master Volume  
is -2.0 dB

**Rohrgedackt sample**

Volume		Pitch		Sample Edit		Sample Delay	
Volume dB	-6.2	Octave	+2	Wave Start	0	Mode	Off
Panorama	C	Semi	0	Velocity	0	Delay ms	0
Pan Key	0	Cent	0	Random	0		
		Key	+100				

Flutes - 4  
Registration  
Sound

4. Flutes - 4

**Gedackt 16 sample**

Volume		Pitch		Sample Edit		Sample Delay	
Volume dB	+4.0	Octave	0	Wave Start	0	Mode	Off
Panorama	C	Semi	0	Velocity	0	Delay ms	0
Pan Key	0	Cent	0	Random	0		
		Key	+100				

Master Volume  
is -3.1 dB

**Gedackt 8 sample**

Volume		Pitch		Sample Edit		Sample Delay	
Volume dB	+2.9	Octave	0	Wave Start	0	Mode	Off
Panorama	C	Semi	0	Velocity	0	Delay ms	0
Pan Key	0	Cent	0	Random	0		
		Key	+100				

**Quint 2 2-3 sample**

Volume		Pitch		Sample Edit		Sample Delay	
Volume dB	+0.3	Octave	0	Wave Start	0	Mode	Off
Panorama	C	Semi	0	Velocity	0	Delay ms	0
Pan Key	0	Cent	0	Random	0		
		Key	+100				

Strings - 2  
Registration  
Sound

6. Strings - 2

**Voix Celeste sample**

Volume		Pitch		Sample Edit		Sample Delay	
Volume dB	0	Octave	0	Wave Start	0	Mode	Off
Panorama	C	Semi	0	Velocity	0	Delay ms	0
Pan Key	0	Cent	0	Random	0		
		Key	+100				

**Gedackt 8 sample**

Volume		Pitch		Sample Edit		Sample Delay	
Volume dB	-3.9	Octave	0	Wave Start	0	Mode	Off
Panorama	C	Semi	0	Velocity	0	Delay ms	0
Pan Key	0	Cent	0	Random	0		
		Key	+100				

Master Volume  
is -1.2 dB

Diapasons - 1  
Registration  
Sound

7. Diapasons - 1

**Principal 4r sample**

Volume		Pitch		Sample Edit		Sample Delay	
Volume dB	-4.8	Octave	+1	Wave Start	0	Mode	Off
Panorama	R64	Semi	0	Velocity	0	Delay ms	0
Pan Key	0	Cent	0	Random	0		
		Key	+100				

**Principal 4l sample**

Volume		Pitch		Sample Edit		Sample Delay	
Volume dB	-4.8	Octave	+1	Wave Start	0	Mode	Off
Panorama	L64	Semi	0	Velocity	0	Delay ms	0
Pan Key	0	Cent	0	Random	0		
		Key	+100				

Master Volume  
is -5.3 dB

**Gedackt 8 sample**

Volume		Pitch		Sample Edit		Sample Delay	
Volume dB	0	Octave	0	Wave Start	0	Mode	Off
Panorama	C	Semi	0	Velocity	0	Delay ms	0
Pan Key	0	Cent	0	Random	0		
		Key	+100				

Reeds  
Registration  
Sound

8. Reeds

**Regal I6 sample**

Volume		Pitch		Sample Edit		Sample Delay	
Volume dB	0	Octave	0	Wave Start	0	Mode	Off
Panorama	C	Semi	0	Velocity	0	Delay ms	0
Pan Key	0	Cent	0	Random	0		
		Key	+100				

**Gedackt 8 sample**

Volume		Pitch		Sample Edit		Sample Delay	
Volume dB	+2.3	Octave	0	Wave Start	0	Mode	Off
Panorama	C	Semi	0	Velocity	0	Delay ms	0
Pan Key	0	Cent	0	Random	0		
		Key	+100				

Master Volume  
is -0.2 dB

The Great Organ

10. Diapasons - 3

Principal 8 sample

Volume		Pitch		Sample Edit		Sample Delay	
Volume dB	0	Octave	0	Wave Start	0	Mode	Off
Panorama	C	Semi	0	Velocity	0	Delay ms	0
Pan Key	0	Cent	0	Random	0		
		Key	+100				

Principal 4r sample

Volume		Pitch		Sample Edit		Sample Delay	
Volume dB	-7.8	Octave	+1	Wave Start	0	Mode	Off
Panorama	R64	Semi	0	Velocity	0	Delay ms	0
Pan Key	0	Cent	0	Random	0		
		Key	+100				

Principal 4l sample

Volume		Pitch		Sample Edit		Sample Delay	
Volume dB	-7.8	Octave	+1	Wave Start	0	Mode	Off
Panorama	L64	Semi	0	Velocity	0	Delay ms	0
Pan Key	0	Cent	0	Random	0		
		Key	+100				

11. Diapasons - 4

Principal 8 sample

Volume		Pitch		Sample Edit		Sample Delay	
Volume dB	0	Octave	0	Wave Start	0	Mode	Off
Panorama	C	Semi	0	Velocity	0	Delay ms	0
Pan Key	0	Cent	0	Random	0		
		Key	+100				

Principal 4r sample

Volume		Pitch		Sample Edit		Sample Delay	
Volume dB	-4.8	Octave	+1	Wave Start	0	Mode	Off
Panorama	R64	Semi	0	Velocity	0	Delay ms	0
Pan Key	0	Cent	0	Random	0		
		Key	+100				

Principal 4l sample

Volume		Pitch		Sample Edit		Sample Delay	
Volume dB	-4.8	Octave	+1	Wave Start	0	Mode	Off
Panorama	L64	Semi	0	Velocity	0	Delay ms	0
Pan Key	0	Cent	0	Random	0		
		Key	+100				

Octav 4 sample

Volume		Pitch		Sample Edit		Sample Delay	
Volume dB	-5.7	Octave	+1	Wave Start	0	Mode	Off
Panorama	C	Semi	0	Velocity	0	Delay ms	0
Pan Key	0	Cent	0	Random	0		
		Key	+100				

Diapasons - 3  
Registration  
Sound

Master Volume  
is -4.8 dB

Diapasons - 4  
Registration  
Sound

Master Volume  
is -3.6 dB

Diapasons - 5  
Registration  
Sound

12. Diapasons - 5

Principal 8 sample

Volume		Pitch		Sample Edit		Sample Delay	
Volume dB	+1	Octave	0	Wave Start	0	Mode	Off
Panorama	C	Semi	0	Velocity	0	Delay ms	0
Pan Key	0	Cent	0	Random	0		
		Key	+100				

Principal 4r sample

Volume		Pitch		Sample Edit		Sample Delay	
Volume dB	-4.8	Octave	+1	Wave Start	0	Mode	Off
Panorama	R64	Semi	0	Velocity	0	Delay ms	0
Pan Key	0	Cent	0	Random	0		
		Key	+100				

Principal 4l sample

Volume		Pitch		Sample Edit		Sample Delay	
Volume dB	-4.8	Octave	+1	Wave Start	0	Mode	Off
Panorama	L64	Semi	0	Velocity	0	Delay ms	0
Pan Key	0	Cent	0	Random	0		
		Key	+100				

Octaav 4 sample

Volume		Pitch		Sample Edit		Sample Delay	
Volume dB	-7.2	Octave	+1	Wave Start	0	Mode	Off
Panorama	C	Semi	0	Velocity	0	Delay ms	0
Pan Key	0	Cent	0	Random	0		
		Key	+100				

Mixture 4 sample

Volume		Pitch		Sample Edit		Sample Delay	
Volume dB	-8.3	Octave	0	Wave Start	0	Mode	Off
Panorama	C	Semi	0	Velocity	0	Delay ms	0
Pan Key	0	Cent	0	Random	0		
		Key	+100				

13. Full Organ

Principal 8 sample

Volume		Pitch		Sample Edit		Sample Delay	
Volume dB	+1	Octave	0	Wave Start	0	Mode	Off
Panorama	C	Semi	0	Velocity	0	Delay ms	0
Pan Key	0	Cent	0	Random	0		
		Key	+100				

Principal 4r sample

Volume		Pitch		Sample Edit		Sample Delay	
Volume dB	-4.8	Octave	+1	Wave Start	0	Mode	Off
Panorama	R64	Semi	0	Velocity	0	Delay ms	0
Pan Key	0	Cent	0	Random	0		
		Key	+100				

Master Volume  
is -3.6 dB

Full Organ  
Registration  
Sound

Master Volume  
is -4.1 dB

**Principal 4I sample**

Volume		Pitch		Sample Edit		Sample Delay	
Volume dB	-4.8	Octave	+1	Wave Start	0	Mode	Off
Panorama	L64	Semi	0	Velocity	0	Delay ms	0
Pan Key	0	Cent	0	Random	0		
		Key	+100				

**Oboe sample**

Volume		Pitch		Sample Edit		Sample Delay	
Volume dB	-7.2	Octave	+2	Wave Start	0	Mode	Off
Panorama	R15	Semi	0	Velocity	0	Delay ms	0
Pan Key	0	Cent	0	Random	0		
		Key	+100				

**Mixture 4 sample**

Volume		Pitch		Sample Edit		Sample Delay	
Volume dB	-8.3	Octave	0	Wave Start	0	Mode	Off
Panorama	C	Semi	0	Velocity	0	Delay ms	0
Pan Key	0	Cent	0	Random	0		
		Key	+100				

Pedal - 1  
Registration  
Sound

14. Pedal - 1

The Pedal Organ

**Gedackt 16 sample**

Volume		Pitch		Sample Edit		Sample Delay	
Volume dB	+4.3	Octave	0	Wave Start	0	Mode	Off
Panorama	C	Semi	0	Velocity	0	Delay ms	0
Pan Key	0	Cent	0	Random	0		
		Key	+100				

Master Volume  
is -0.4 dB

**Gedackt 8 sample**

Volume		Pitch		Sample Edit		Sample Delay	
Volume dB	+4.3	Octave	0	Wave Start	0	Mode	Off
Panorama	C	Semi	0	Velocity	0	Delay ms	0
Pan Key	0	Cent	0	Random	0		
		Key	+100				

Pedal - 2  
Registration  
Sound

15. Pedal - 2

**Gedackt 16 sample**

Volume		Pitch		Sample Edit		Sample Delay	
Volume dB	+7.0	Octave	0	Wave Start	0	Mode	Off
Panorama	C	Semi	0	Velocity	0	Delay ms	0
Pan Key	0	Cent	0	Random	0		
		Key	+100				

Master Volume  
is -0.4 dB

**Tutti 2 sample**

Volume		Pitch		Sample Edit		Sample Delay	
Volume dB	-1.4	Octave	0	Wave Start	0	Mode	Off
Panorama	L32	Semi	0	Velocity	0	Delay ms	0
Pan Key	0	Cent	0	Random	0		
		Key	+100				

**Tutti 3 sample**

Volume		Pitch		Sample Edit		Sample Delay	
Volume dB	+1.3	Octave	0	Wave Start	0	Mode	Off
Panorama	R32	Semi	0	Velocity	0	Delay ms	0
Pan Key	0	Cent	0	Random	0		
		Key	+100				

The Tutti 3 sound from Registration 13 Pedals in the Pipe Organ (Part 4) article uses Tutti 1 and Tutti 2 samples. They have been given a small stereo spread here. This Pedal - 2 registration is also effective when used on a manual.

There is a lot more that Sound Factory can do with these sounds and in later Master Classes we shall investigate that. Jeff makes the point in his Article that Sample 13 (Full Organ) has to be a compromise owing to the Wersi limit of four Selectors for the Upper Manual. The limitation for Sound Factory is ten samples, so it's possible to produce the non-compromised Full Organ where the registration includes the Octava stop in addition to the Oboe. You may wish to try this out for yourself.

The next Master Class (number 4) will be in April 2013 when we shall begin to look at the Filter-Map tab.

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