

CREATING CHURCH AND THEATRE ORGAN REGISTRATIONS

GETTING STARTED

Wersi Pipe Organ Sounds

On your Wersi organ you will find a small collection of church (sakral) and theatre organ sounds. Some of these are longwaves sounds sampled from actual church and theatre organs whilst others are constructed from the drawbars in the OX7 drawbar unit. You can extend this set by purchasing two additional sound packages, the *Sakral Sound Package* and the *Theatre Sound Package*. These are exclusively longwaves samples from a variety of different instruments. All the registrations associated with this article include sounds from both these packages.

For the most part the sounds provided correspond to single organ stops, for example *Prinzival* or *Clarinet* but there are also some ensemble sounds that correspond to combinations of stops, for example *Sakral Tutti* (full organ). This article, together with a set of example registrations, describes how to combine these sounds in the way that a church or theatre organist would do in order to achieve that authentic pipe organ sound.

We begin with a brief explanation of how a pipe organ produces its sounds then move on to consider the types of sounds available. Next we look at some of the tricks of the trade that pipe organists use in combining these sounds and finally conclude with a series of church and theatre total presets that you can use in your playing and could employ as a basis for designing your own registrations.

Pipes and Pitches

Pipe organs, whether church or theatre, are constructed from two basic types of pipe, namely *Flue Pipes* and *Reed Pipes*. The type of sound they produce depends upon the material used for their construction, (normally wood or metal), their cross-sectional shape, (cylindrical, conical or square/rectangular) and their scale (small, medium or large diameter). Reed pipes are essentially flue pipes with a vibrating metal reed incorporated to produce a more strident tone.

Located on the organ console will be a variety of knobs or tabs known as *Stops*. Each stop will have the name of a particular sound inscribed upon it and it makes that sound by activating a collection of similarly constructed pipes known as a *Rank*. There will be a pipe in the rank for each key on the keyboard (manual) or pedalboard and to sound at the correct pitch each pipe will need to have a different length. At standard pitch the longest pipe in the rank will be 8 feet and corresponds to the lowest note on the organ's 5 octave keyboard, the C two octaves below middle C. This is referred to as an 8 foot stop and to signify this it will have an 8 inscribed below the stop name. If we double the length of all the pipes in the rank each key will now sound an octave lower, this is now a 16 foot stop. Conversely if we halve the length of all the pipes in the rank each key will now sound an octave higher and this then becomes a 4 foot stop. You will recognise this nomenclature as identical to that used on the harmonic drawbars of your Wersi organ, its origin being directly derived from the pipe organ world !!

Types of Stops

The two types of pipe, flue and reed, produce between them a range of stops that can be classified into four distinct tonal groups.

Diapasons

These are constructed from medium scale flue pipes and produce the characteristic pipe organ sound. As such they are not intended to imitate any of the orchestral instruments. They are usually labeled as *Diapasons* or *Principals* or *Prinzipals* and can span the complete pitch range from 32 foot to 1 foot.

Flutes

These are constructed from large scale flue pipes and are so called because they possess similar tonal qualities to the flute instruments of the orchestra. Stop names such as *Flute*, *Gedackt* and *Bourdon* are typical.

Strings

These are constructed from small scale flue pipes and are so called because they possess similar tonal qualities to the string instruments of the orchestra. Stop names such as *Celeste*, *Gamba* and *Viol* are typical.

Reeds

These are constructed from the reed pipes and are so called because they possess similar tonal qualities to the reed and brass instruments of the orchestra. Stop names such as *Clarinet*, *Oboe* and *Trumpet* are typical.

Also on a typical pipe organ it's usual to have a number of stops that sound at non-octave pitches. For example a *Quint* stop sounds at a pitch of $2 \frac{2}{3}$. Often a number of higher non-octave pitches will be combined together to form a *Mixture* stop which forms part of the diapason family.

Combining Stops

Theoretically any stop can be combined with any other stop but there are certain combinations that work well together and some that definitely do not. We can formulate a set of guidelines that will assist in producing the most suitable combinations.

Ensemble Playing

In ensemble playing we are generally playing with both hands on the same keyboard.

- Combine stops of similar volume. Flutes and strings are generally quieter stops so combine well together, diapasons and reeds are louder stops so also combine well together. Combining a loud stop with a quiet stop will generally drown out the quieter stop so its effect will not be heard. Flute stops combine well with quieter diapasons to fill out the sound.

- Combine stops of the same type but at different pitches. This is the technique used to obtain the classic pipe organ sound. For example combining 8 and 4 foot diapasons gives a brighter sound, 8,4 and 2 foot diapasons and 8,4,2 and 1 foot diapasons produce an even brighter sound and 8,4,2,1 foot diapasons and mixtures provide the full works.
- Adding 16 foot stops on the keyboards will tend to make the sound too heavy and indistinct. Playing an octave higher than normal however with these stops added will produce a full, rich sound.
- Setting up a registration on one keyboard that is different to that on the other keyboard in tonal quality and/or volume then moving from one to the other is an effective way of achieving contrast in the music.

Solo/Accompaniment Playing

In solo/accompaniment playing we would generally have chords being played on one keyboard and either a single note melody or a melody in chords being played on the other.

- Select a quieter stop or ensemble for the accompaniment and something a little louder for the solo.
- Stops with different tonal qualities work well in this configuration providing contrast to the sound. For example we could play chords with a flute stop on the lower keyboard and a melody with a reed stop on the upper keyboard.

The Examples

This article provides two sets of associated examples, one for church organ registrations and one for theatre organ registrations. They have been designed on the Wersi Scala model which allows for 4 layers of sound on the top keyboard and 3 layers of sound on the lower keyboard. In registrations where all these layers are utilised, and should your model not provide this facility, those sounds that can be omitted will be identified.

The church organ registrations were designed to be played with the Chorale from *Cantata No. 147* also known as *Jesu Joy of Man's Desiring* by J.S. Bach. Four registrations are provided starting with soft and gradually building up to full organ. They are suitable for both ensemble and solo/accompaniment playing and will support a range of church organ music.

The theatre organ registrations were designed to be played with the song *Over the Rainbow* by E.Y Harburg and Harold Arlen. Four registrations are provided with string, tibia, brass and full organ voicing. They are suitable for both ensemble and solo/accompaniment playing and will support a range of theatre organ music. Most of these registrations also incorporate samples from the church organ package to add more weight and substance to the sound.

There are a limited number of pipe organ pedal sounds available in the sounds database but none that the author finds entirely suitable. As a consequence the registrations provided use pedal sounds constructed specifically for the purpose. Details of how to do this are given in the examples.

I hope you like the example registrations and will find them useful in creating some of your own.

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