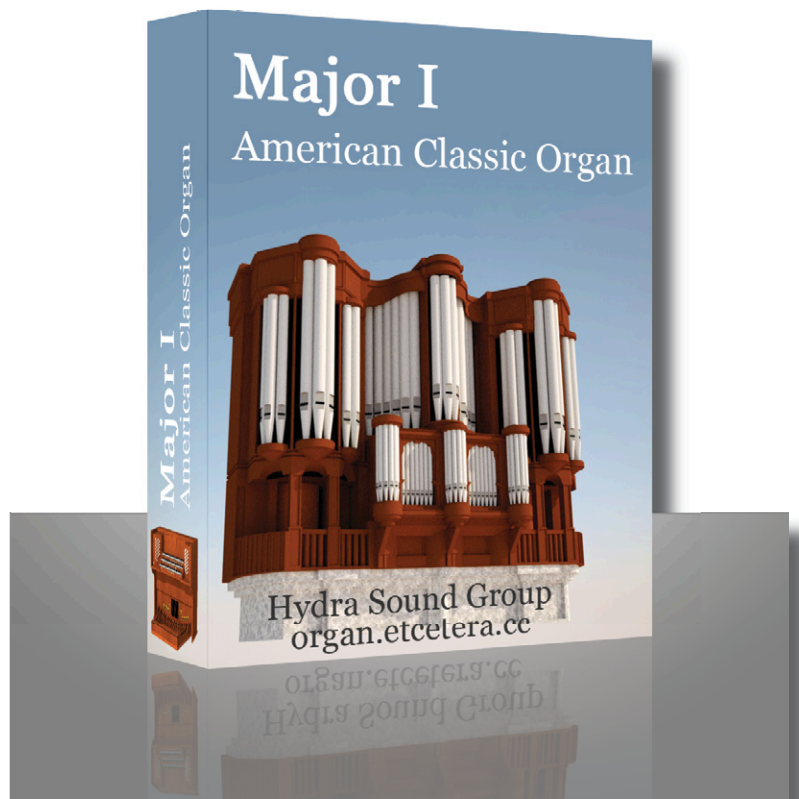


Major I American Classic Organ

- American Classic Organ
- 3 manuals + pedal
- Pedal, Swell, Great and Choir divisions
- Wet and Dry versions
- 65 ranks, 70 Stops
- Landscape and Portrait modes, with
Main Console, Left and Right Jamb views



A virtual Instrument for the Hauptwerk Virtual Pipe Organ

Major I – American Classic Organ
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 Jonathan Orwig,
 Magne Nilsen, Etcetera Consulting AS
<http://organ.etcetera.cc>

The American organ tradition

Symphonic and Romantic

Organs: – 1930

The Symphonic Organs in the US were built in response to an increased interest in and availability of orchestral transcriptions for the organ. As the name implies, the organs included ranks and voices that imitated the many sounds available in a symphonic orchestra. This included strong tonal and color contrast, few mutations and mixtures, enclosing of all divisions and the possibility of more extreme volume variations.

Ernest M. Skinner & Company

Ernest M. Skinner was one of the most successful American organ builders of the early 20th century. His desire to bring the organ under the complete and easy control of the organist was coupled with his lifelong interest and obsession with “orchestral” tonal colors and their application to the pipe organ. During the first decade of their existence, Ernest M. Skinner & Company developed a national reputation, building large organs for some of the most prestigious churches, concert halls, colleges, and auditoriums in the country. The company implemented a streamlined building methodology, and several new inventions were brought to life within the company. This included huge and highly sophisticated fore-runners of modern computers that were built of wood, leather, and metal organ parts,

and used low-voltage DC Current and low pressure pressurized air (“wind”) to control and direct the thousands of switching and control commands which are constantly sent to all parts of the instrument when being played. A large Skinner organ and its Action system would contain tens of thousands of precision moving parts and mechanisms, many miles of wiring, and represented the pinnacle of craftsmanship, engineering, and ingenuity for their era.

The American Classic Organ 1930-1970

The arrival of **George Donald Harrison** at Skinner and the later merger into the **Aeolian-Skinner** Company in the early 1930’s was followed by a change in organ philosophy. While the bulk of Harrison’s work was as a tonal designer and voicer, Harrison is most famous for his association with the “**American Classic**” organ design. This design concept was partly a reaction to the proliferation of romantic-orchestral “symphonic” organs that had been in fashion to that point. The symphonic organ sought to emulate the effects of a symphony orchestra with imitative solo reeds, colorful flutes and warm string-toned stops. The American Classic organ, on the other hand, sought a return to design principles of the 18th century, particularly the development of clean diapason choruses topped by several brilliant mixtures.

The organs also contained stops and expressive divisions evocative of the romantic organ writing of the 19th and early 20th-century French school. The voicing of these instruments, in particular, allowed for a clear interpretation of fugal passages and chorale writing where each inner voice could be heard and articulated clearly. Harrison, along with other builders such as Walter Holtkamp, conceived the American Classic organ as a single instrument that could effectively and convincingly play music of all styles and eras with equal facility. In many, if not most of his instruments, he is considered to have achieved this goal, adapting his instruments effectively to the particular acoustic qualities of American concert halls and churches. This then meant a change into more versatile instruments, which were built on some of the 18th century principles, but still retained much of the beauty of the romantic organ, which was more symphonic in nature. The American Classic Organ brought Mutations and Mixtures back and properly voiced, clarity and transparency of tone again became important, and same for the achieved versatility from combining the tonal characteristics of the 18th century with modern instruments.

Sources: internet articles, including:

http://en.wikipedia.org/wiki/Ernest_M._Skinner

http://en.wikipedia.org/wiki/G._Donald_Harrison

The Hydra Sound Group

The Major I Organs are the first in a series from the Hydra Sound Group, a cooperation of Pipe Organ recording companies and individuals from all over the world. Etcetera Consulting is the coordinating and publishing partner for the Group. The group represents many of the most skillfull contributors to the Virtual Pipe Organ community, with expertise in recording, playing, noise reduction, voicing, UI design and programming. Members of the group have contributed to more than 20 of the organs currently available, and are involved in several organs soon to be released, some at Etcetera Pipe Organs, but also as consultants and suppliers to other Virtual Pipe Organ publishers. You can visit us at

<http://organ.etcetera.cc>

Major I Organs - Background and Details

Organs and pipes recordings

Over the last 8 years we as a group have been acquiring recordings from several different organs built in the peak of the ACO period from organ builders that have been influenced by the same philosophy and with similar tonal characteristics.

Most of our Master recordings were done at 96kHz/24 bit to have enough latitude for later processing. A few were done at 48kHz/24 bit. The recordings were done using precision electret condenser microphones with an omni-directional polar pattern. The samples are later processed with Noise Reduction software, and a lot of other utilities to make them behave and appear good. Great care has been taken to keep the

“soul” of the individual pipes and ranks.

Some of our organs were recorded in their complete state, while on others we have recorded some ranks that we found to be of special interest for the projects. We have been recording **Dry**, meaning that the local acoustics and reverb has not had much influence on our recordings. Compared to what some seem to advocate, we do not believe that the pipes themselves know what context they live within, so a pipe by itself without its local acoustics, surrounding pipes and voicing is not baroque or romantic, it is just a pipe. Recording Dry separates the individual pipes from their local acoustical environment and surroundings, and thus makes it possible to blend them with pipes re-

Background and Details, contd.

corded at different locations. We have concluded that recording Dry gives the best results when recorded just outside their enclosures, so ours are not extremely Dry or artificially dried out to be all flat, and often includes a little of their enclosure acoustics, meaning that they do have small natural reverb tails of ~500 ms. length. We find this to give the best results if they are later placed in an acoustically rich environment, or for adding artificial reverb to reproduce a given acoustical environment and placement. We also find that this makes the Major I Dry organ perfectly fit for training purposes, since your playing details are not hidden in a huge reverb, and as such can more easily be heard and corrected if need be.

Building a ‘new’ organ from old — bringing the past to the present.

The Major I seems to be among the first Hauptwerk organs of this scope that uses select Dry samples from several organs, aligns their Dry reverb and then voices, scales and intonates their tonality to fit well together, and then for the Wet version applies a complete and homogenous Wet reverb including multiple releases. In this project we have done something that has been possible for a long time, but has been missing among the available Hauptwerk sample sets. While we applaud and also contribute to the availability of historical documents of given organs in their complete and current state, we think the Hauptwerk model currently by far is the best available way to model any organ, and the opportunity to build new organs should be equally attempted. Some would say that’s what several other manufacturers have been trying to do with variable success and quality for years. The big difference being that we have done this on the very best software available. So – while our model has been a 1950-ish American Classic Organ, we have used the best technology available in the 21st Century to perform our task. Compared to some of the others having built their organs this way, we have not gone to extremes regarding adjustments and replacement of individual pipes that sounded a bit differently than their neighbors. For us, this individuality is an important part of the “life” and “soul” of any pipe organ, and overdoing the removal of such

differences in the aim of a very clean organ so easily gives a synthetic feeling to an organic and very much alive instrument as the pipe organ is. Pipes that were clearly mistuned have been retuned, but again – we have not even in this area aimed for 100.0% perfection, though compared to your average physical instrument ours should appear to be tuned pretty much as if is the organ tuner had just been visiting you.

The amount of work in building a Hauptwerk organ happens mostly after the recording of the samples. For these samples we have probably done more work than a historic document of a given organ would have needed. We have built a new organ, and we have done as many organ builders have done in the past, and still do, we have selected the best ranks from different suppliers, and adjusted those to fit homogenously within the organ model we were aiming for.

The Major I Tonal characteristics

The Major I organs are designed to create a rich and warm sound, but were also designed with great care and attention for diversity and clarity. Individual pipes and ranks have been voiced to be musical on their own, and we have tried to follow the best design principles from American, English and European organ builders. The voicing, scaling and tonal finishing performed has followed historical traditions in the same way as the original builders of American Classic instruments did in the past, and some still do. Divisions have been voiced on their own to make them balanced, and then scaled and voiced to fit together with the other divisions, and as a whole. Like a physical instrument, final voicing should still be performed at the location if the Dry organ is placed in a reverberant space with its own acoustical environment, but our default balance and tonality is meant to make this task consistent and effortless using Hauptwerk’s voicing capabilities.

American Classic Organs exist in many shapes and versions, and are not an exact science, so you might still find stops that you would like to voice somewhat differently. We have set the individual amplitude levels at defaults that should be close to our organ model and intentions. As an example we

know that some of you would prefer the Trompette à Chamade 8’ (which is in a floating division and available from all divisions) to be even louder, and maybe also the same for the Choir’s Tuba 8’. In a “symphonic organ” setting this would have been normal, but we have set them such that they mainly “go on top” of the Swell and Choir divisions for solo usage. Some like them to “go on top” of the Great or even the full organ and then they should probably be voiced up 3-6 db, but then they are too loud to be used with the Swell and Choir only. The Tuba at +6 db overwhelms the complete Choir, and then it becomes almost useless for that usage.

As another example, some might like the Great Principal Chorus to be even warmer and less edgy, and then lowering the Mixture amplitude or brightness is a way of achieving this. At the same time, the American Classic Organs did have strong Great Principal Choruses, so for the model that we have aimed for, their level and appearance is correct.

We have scaled and voiced the organs to have good default behavior within the American Classic Organ tradition, so if you start changing the relationships too much, you might end up with isolated changes that could be more to your liking, and maybe better suited for a given style repertoire, but we would be careful of overdoing this, otherwise the tonal balance of the organ model we have aimed for could be lost or displaced, generating a harmonic appearance and balance that would be too distant from the rather rich and warm sound of the American Classic Organ.

Thanks:

- The beta team, for your advice and suggestions, PanosG, FrancoisR, AlM, OddgeirN and JarleF
- Al Morse, for helping out with the Crescendo programming
- Milan Digital Audio, for creating the Hauptwerk software, and for letting us use derived graphics and default data from the St. Anne organ as a part of this distribution

Specifications

Organ:

- American Classic, 3 manuals + pedal
- Pedal, Swell, Great & Choir divisions
- Swell & Choir: Expression & Tremulant
- 65 ranks

Audio:

48kHz, 16bit from 96/48kHz, 24bit masters

Hauptwerk:

Version needed: 4.0

Loads with Free Edition: No, memory requirements limitation
(Max 1.5 GB in Free Edition)

Dry version:

Releases: 1

Reverb : ~500 ms.

Memory: 2.2 GB for full organ, so full Dry organ needs Hauptwerk Basic Edition at minimum

Wet version:

Releases: 3

Reverb : ~2.5 sec.

Memory: 4.5 GB for full organ, 3.4 GB with single release, so full Wet organ needs Hauptwerk Advanced Edition

Noises:

- Blower
- Key Action
- Stop Action
- Tremulant Action
- User selects if Noises are loaded or not

Screen layouts:

Landscape formats:

- Console, Left Jamb, Right Jamb, Crescendo

Portrait formats:

- Console, Left Jamb, Right Jamb
- Portrait layout is automatically enabled on portrait format monitors and windows

Compass:

Manuals: 61 notes

Pedal: 32 notes, Chimes: 25 notes

Accessories:

- 8 pistons to Pedal Organ
- 8 pistons to Choir Organ
- 8 pistons to Great Organ
- 8 pistons to Swell Organ
- 10 General pistons to full organ



Major I

Landscape format Views

All Views that appears without showing virtual keyboards (the Portrait and Landscape Jamb Views) will also show a small green indicator above the Division Name plates, indicating Midi activity.



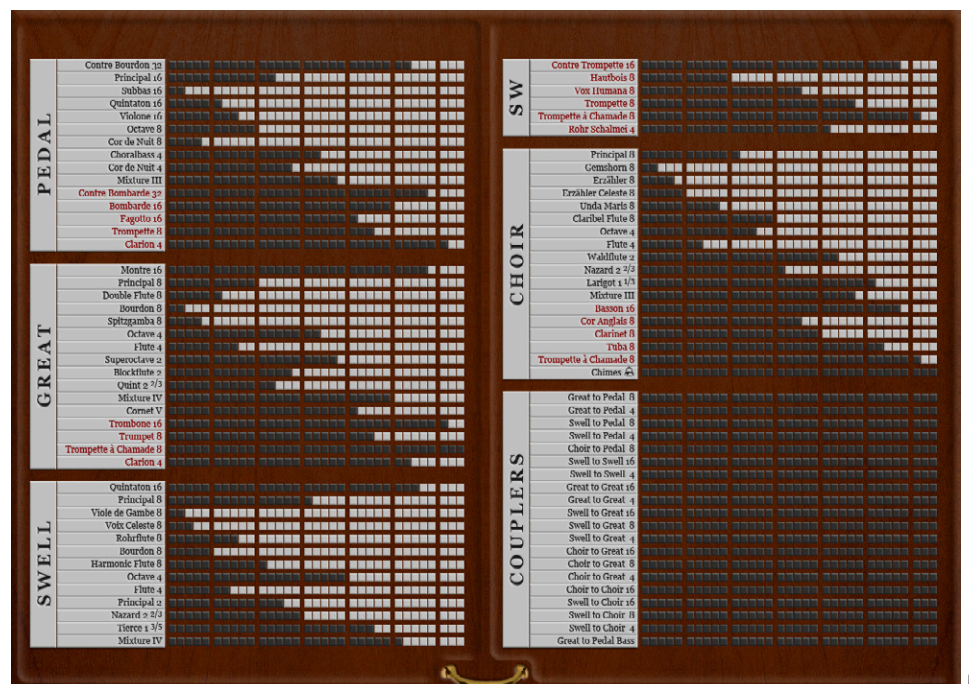
Main Console View



Left Jamb



Right Jamb



Crescendo Setter View

Major I

Portrait format Views

Portrait layout is automatically enabled on portrait format monitors and windows, but you can also from Hauptwerk's menus select:

>View > Console Window 2 / 3 / 4

to open up extra Windows. If you size those windows to be higher than they are wide, the portrait versions will automatically be shown. If you size them back to landscape format they will show the Landscape Views. If you have two Portrait monitors, typically one on each side of your keyboards, you can show the Left and Right Portrait Jamb on each side of your console.



Main Console View

Left Jamb



Right Jamb



Major I & American Classic Organ

License agreement

Major I – American Classic Organ

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This sample set can only be installed in Hauptwerk after accepting this agreement.

