

Milan
digital audio

Cavaillé-Coll
1903

Notre Dame de Metz
Metz, France

Hauptwerk User Guide

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Metz Cavallé-Coll User Guide

Installation -

Congratulations on your purchase of the Notre Dame de Metz Cavallé-Coll virtual instrument! On the 3 DVD-Roms you will find the files needed to install this sample library to your computer. You will need to treat the organ definition file, sample files and temperament file found on DVD-Rom-1 as 3 separate installations. To install this sample library open Hauptwerk then click File | Install organ, sample set, temperament, or impulse response. Navigate to your DVD-Rom drive then find the folders - files | installation files. You will find the files here called NDM-Samples-DVD-1.CompPkg.Hauptwerk, and NDM-OrganDefinitionFiles.CompPkg.Hauptwerk. You will also find a third file on the first DVD-Rom called NDM-Temperaments.CompPkg.Hauptwerk. Use the Hauptwerk installer to install each of these three files separately. 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 10 minutes or more to complete the installation. After installation all of the files from DVD-Rom-1 remove this DVD-Rom and insert DVD-Rom-2. Follow the same instructions above for installations of DVD-Rom-2 and DVD-Rom-3.

Loading the Organ -

Once all of the files have been installed you are now ready to load the organ into Hauptwerk. Due to the sample sets encryption you must have your Hauptwerk dongle installed (USB key) with a valid license for this sample set for the organ to load. To load the organ open Hauptwerk and choose Organ | Load organ from the drop down menu. Click on the file named Notre-Dame-de-Metz-Cavaille-Coll then click OK. Or you may wish to load the extended version, if so choose the file named Notre-Dame-de-Metz-Cavaille-Coll-Extended. The Rank Audio Output Routing screen will now appear allowing you to choose the options for loading the samples. All sample files are in 24 bit 48kHz however they may be loaded in 16 bit 48kHz to save memory requirements. Hauptwerk defaults all settings to 16 bit with multiple loops and lossless compression. The sample files also contain multiple loops allowing for more movement of the pipes sound, some samples contain up to 6 loops and are up to 10 seconds in length with another 3-5 seconds for releases. If you are running a computer with 4GB of RAM you may wish to load the samples in 16 bit with single loops to fit the entire organ into memory. Multiple loops can either be disabled from the Rank audio output settings screen individually for each rank, or globally under General settings | General options | Audio engine. For those with more memory (4GB or more) you may load the entire set in 16 or 32 bit with all loops enabled. You may also wish to combine compressed samples with uncompressed samples to fit the organ into a desired amount of memory.

Once you have chosen the desired settings for each rank of samples 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. 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 your Hauptwerk User Manual 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 special mappings.

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Virtual Console -

The virtual console is a photo-realistic replica of the original organ. Now you may experience the magnificent sound of the organ, as well as the visual and physical aspect of the organ. The organ defaults to display page 2 (Full View) which has larger controls for use with computer touch screen monitors, or mouse clicks. Display page 1 (Console) contains the original organ console with all controls which are found on the original organ. Display page 3+4 shows the left and right stop jambs for use with dual monitor touch screen use. Using these displays will give the most authentic feel to interacting with this virtual instrument!

Stops- The Console display page features animated 3D stop knobs which pull out or push in to add or remove a stop. All stop controls are interlinked between the Console display page to the Full View display page and also to the Left and Right jamb displays. Thus you may use either display page as your preference.

Generals- We have included 20 General "pistons" to facilitate registration changes by using keyboard pistons or other external MIDI devices. These Generals are found on all pages except for the main console display page. You will also find a SET piston marked as "S" and the General Cancel piston marked as "C". To set the Generals simply choose your registrations by engaging the stop knobs, engage the "S" piston then engage any of the Generals 1-20. Your registration will be stored in the combination system memory. Disengage the "S" piston to release the organ from capture mode. The General Cancel "C" piston will clear any stops or couplers that are engaged and return them to their off position. You may wish to save your registrations to a file which may be done by choosing Combination | Save combinations as... then give your combination file a name and choose save. The next time you load the organ you may recall this registration file by choosing Combination | Load combination file... or you may set Hauptwerk to automatically load the last used combination file upon organ load up. Please refer to your Hauptwerk user manual for more information on combination files.

Couplers- The organ includes 14 couplers. These are located at the bottom of the console above the pedals as foot levers. Please note that the Grand Orgue and Récit Unison Off couplers default to engaged. If the General Cancel piston is activated, it will clear these couplers and no stops will sound from either division. Please remember to engage these couplers for normal performance! The combinaisons affect the stops labeled with red text. If the combinaison coupler is off, then the corresponding divisions stops will not sound. These are useful couplers which allow stops to be pulled while the organist is playing, but without having them speak. The organist may then add them all at once for a dramatic effect by depressing the combinaison coupler with their foot. The list on the following page gives more details about the function of each coupler.

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Explanation of Couplers



1. Tirasses G.O. = Grand Orgue to Pédale 8'
2. Tirasses Positif = Positif to Pédale 8'
3. Tirasses Récit = Récit to Pédale 8'
4. Combinaisons Pédale = Bombarde 16' and Trompette 8'
5. Combinaisons G.O. = Quinte 2 2/3', Doublette 2', Plein Jeu III, Bombarde 16', Trompette 8', Clairon 4'
6. Combinaisons Récit = Octavin 2', Plein Jeu IV, Cornet V, Basson 16', Trompette 8', Clairon 4'
7. Copula 1 Clavier G.O. Uni. = Grand Orgue Unison On/Off. Note this coupler defaults to the on position.
8. Copula 1 Clavier G.O. O. Gr. = Grand Orgue to Grand Orgue 16'
9. Copula 1 Clavier Positif = Positif to Grand Orgue 8'
10. Copula 1 Clavier Récit Uni. = Récit to Grand Orgue 8'
11. Copula 1 Clavier Récit O. Gr. = Récit to Grand Orgue 16'
12. Copula 2 Clavier Récit Uni. = Récit to Positif 8'
13. Copula 3 Clavier Récit Uni. = Récit Unison On/Off. Note this coupler defaults to the on position.
14. Copula 3 Clavier Récit O. Ai. = Récit to Récit 4'

* The extended version also contains a Combinaisons du Positif on the bottom right stop row. This affects all of the Positif stops labeled in red text.



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Temperament Files-

In the DVD-Rom folder files/installation-files you will find an installation file called NDM-Temperaments.CompPkg.Hauptwerk.rar. You may install this in the same manner that the samples and organ definition files were installed using the Hauptwerk installer. Since the organ is originally tuned to A=435 if you choose the included Hauptwerk temperament it will maintain the A=435 tuning, however it will tighten up the overall temperament compared to using original organ tuning. The original organ tuning is slightly on the flat side, thus using the A=435 temperament file will give a more well tempered sound being an Equal temperament. Of course users also have the option to play the organ at its original recorded pitch. You may choose to do this by choosing 'Temperament|Original organ tuning' while the organ is loaded, or by using the 'General settings|General options' screen and edit the 'Temperament loading mode when loading an organ' drop down menu. If you choose to use one of the default temperaments included with Hauptwerk which are all A=440 temperaments then the entire organs pitch will shift up. You may decide to use this method if you are performing in circumstances that require A=440 tuning. By doing this please realize that the samples will become slightly stretched and shorten the reverb tails.

Random tuning error settings have been added to the organ definition file and will take place only when using a temperament other than original organ tuning. If you wish to have a perfectly tuned sound you may modify the random tuning errors settings under Organ settings | Organ options | Audio Engine then adjust the percentage in the box next to Random pipe detuning adjustment % (0-99999). Setting this to 0% will remove any tuning errors and play back the samples at absolute pitch. This box should be set to 100% as the default. Note that these settings are ignored when using original organ tuning.

Users of the Advanced Edition of Hauptwerk may also decide to adjust the tuning by using the built in voicing screens.

Tremulants-

All ranks of the Récit division are attached to a virtual tremulant with the exception of the Voix Humaine. By activating the tremulant stop you will hear the effects the tremulant on whichever Récit stop is drawn. The Voix Humaine was sampled once with tremulant and again without tremulant. The tremulant stop determines which set of samples should be played back. Since these are two separate sets of samples, they are loaded as two separate ranks, and therefore consume twice the memory. If you prefer to save memory you may try disabling the un-tremmed Voix Humaine. Note that by doing so, the Voix Humaine will not sound unless the tremulant is turned on (only the tremmed Voix Humaine will play). Since the Voix Humaine was sampled with tremulant, it is not able to be adjusted in the voicing screens as it is not connected to the virtual tremulant modulations. The tremulant stop acts as a switch to go back and forth between tremmed and un-tremmed samples. It is also important to note that if the tremulant is engaged while playing the Voix Humaine, it will trigger a new note to sound. Generally this is not common practice, so it should not create problems. If you decide to adjust levels of the Voix Humaine, please make sure to duplicate the settings for both the tremmed and un-tremmed Voix Humaine ranks.

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Multiple Releases-

This sample set contains multiple releases for every pipe sample. Some have 2 releases while most have 3. The main releases are from a fully sounding pipe which fills the church with sound. Thus it is a longer and louder reverb containing all the harmonics of the pipe and can last up to 5 seconds. The second set of releases were recorded from short staccato attacks and have little harmonic build up and a shorter reverb length. Generally these can be from 1-2 seconds. A third attack with a portato (medium) attack helps fill the gap between the short and long release samples. These range up to about 3-4 seconds depending on the rank. Utilizing these through Hauptwerk with the included organ definition file settings gives absolutely realistic results. If memory for the extra release samples is a problem there is an option to disable multiple releases in the Rank audio output settings page before loading the organ. Please note that by disabling the extra release samples every attack long or short will always play back the full length reverb sample which reduces the realism. We recommend trying to save memory by using lossless compression, lower bit rates, single loops, and even disabling ranks from loading before disabling the multiple releases.

Extended Version-

An extended version of the organ is available which augments the instrument from 38 to 48 ranks. The original organ has 6 ranks on the Positif division. We have added 7 more ranks to create 13 Positif ranks total. The extra ranks are Prestant 4', Nazard 2 2/3', Doublette 2', Tierce 1 3/5', Piccolo 1', Basson 16', and Trompette 8'. All of these ranks have been created from existing source material. Note that the Piccolo 1' has a repeating top octave. All other ranks are complete throughout the compass of the manual. The Grand Orgue has an added Flûte Douce 4' and the Pédale has a Principal 32' as well as a Contre Bombarde 32' added. Each of these Pédale ranks are unified into other ranks i.e. the Principal 32' contains 12 low notes then merges into the Contrebasse 16'. The Contre Bombarde 32' has 12 low notes then merges into the Bombarde 16'. The Principal 32' uses 12 real 32' pipe samples, while the Contre Bombarde 32' is derived from the Bombarde 16' using digital pitch shifting.

Each organ definition file contains a unique OrganID number. 000138 is for the original version and 000139 is for the extended version.. This will allow users to have two entirely different organs saved and creating custom settings for one will not affect the other (voicings, switch settings etc.). Due to this, two separate sample caches will be created on your hard drive and will require more free space. Please make sure you have ample free space before loading both organs. This will also cause each different organ to load more slowly the first time since each creates it own special sample cache for faster subsequent loads.

Also note that any combination files which are created with one version will not work with the other version. If you need to have similar combination settings for both versions you will need to create them twice after each version is loaded.

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Memory Requirements-

The NDM virtual instrument comes in stereo at 24 bit 48kHz resolution with multiple loops for each sample, with some samples containing up to 6 or more loops. The set also includes 2-3 extra release samples for every pipe. Samples are long and can be up to 10 seconds or more (choosing multiple-loop option in Hauptwerk). The following guide shows the minimum and maximum memory requirements for loading the entire instrument which will allow you to see how the organ may fit into your computer specifications. Note that users may disable ranks of samples from loading to even further reduce RAM use.

Maximum Ram Requirements STEREO (Includes Memory for Hauptwerk):

Standard version - 24 bit 48kHz-Multiple Loops Uncompressed 11.5 GB

Extended version - 24 bit 48kHz-Multiple Loops Uncompressed 13.6 GB

Minimum Ram Requirements STEREO (Includes Memory for Hauptwerk):

Standard version - 16 bit 48kHz-Single Loops Lossless Compression 2.55 GB

Extended version - 16 bit 48kHz-Single Loops Lossless Compression 3.2 GB

Note that Hauptwerk 3 now allows samples to be loaded in 14 bit which will reduce memory requirements even further. However please note that this will cause degradation of audio quality. We recommend at least loading in 16 bit for better results. Loading in 20 and 24 bit will give noise free playback.

Loading in Mono reduces Stereo memory requirements by half.

*** Memory amounts may vary slightly on different systems. These are only general guidelines.

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Finally -

We hope you enjoy performing on this historic virtual instrument! Great care has been taken to assure that this virtual instrument is of top quality and problem free. However if you should find that something does not work as intended please contact us at info@milandigital.com to let us know about your concern. We will do our 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 our website periodically for updates to this and our other virtual instrument sets by visiting www.milandigitalaudio.com/downloads.htm.

Credits-

We would like to give special thanks to the following for their help in one way or another with the creation of this virtual instrument:

Notre Dame de Metz and Organist Philippe Delacour

François Muller (France) (Contacts/Logistics)

Crumhorn Labs (U.K.) www.crumhorn-labs.com (Assistance with Organ File Creation)

Hans Schoof (Australia) (Assistance with Virtual Organ Console Image Editing)

Martin Dümig (Germany) www.duemig-neufahrn.de/Orgel/PipeTune/ (Special Sample Development Programming)