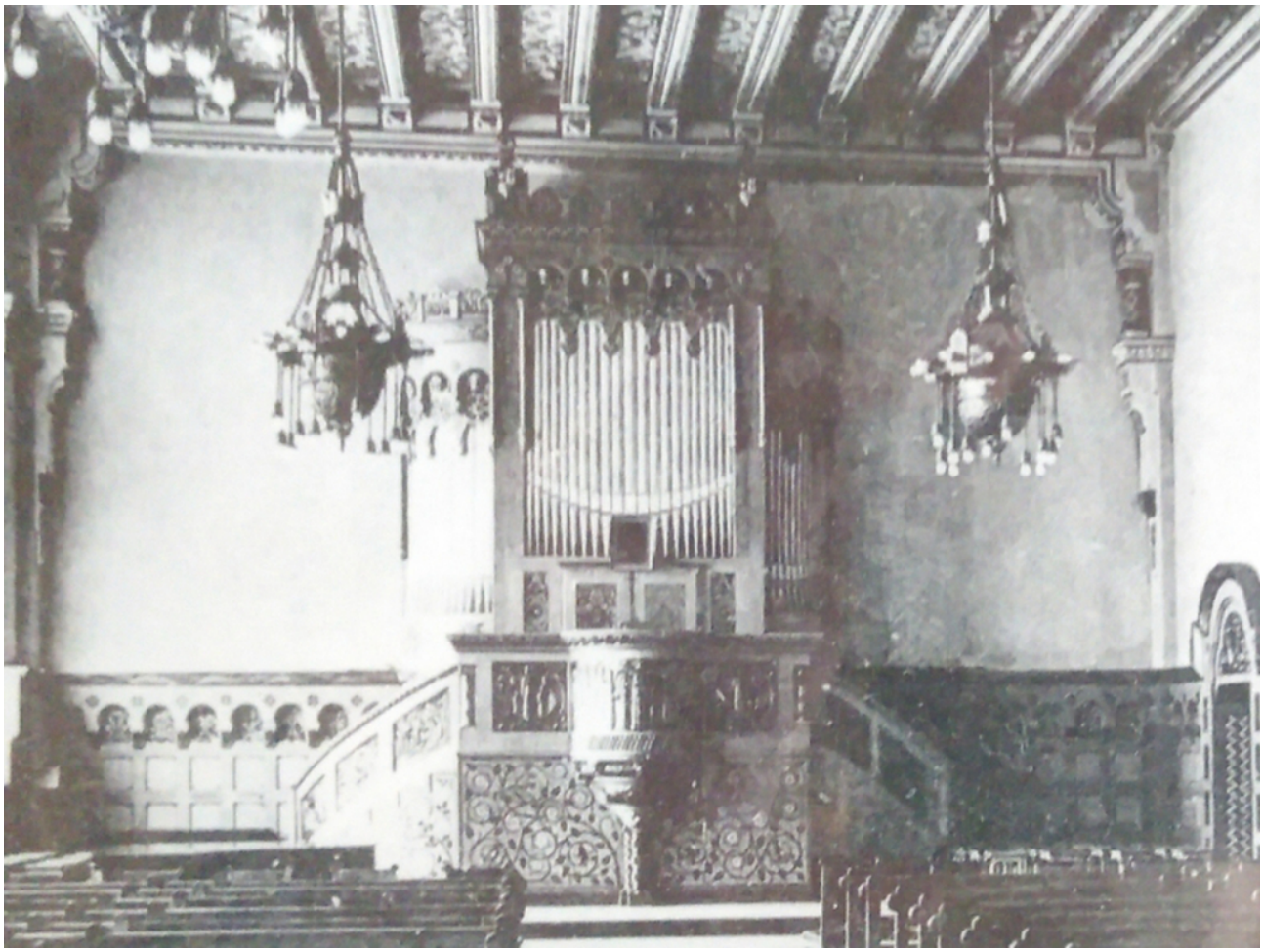

HAUPTWERK VI
VIRTUAL PIPE ORGAN

Goethe-Gymnasium Berlin-Wilmersdorf

User Manual v1.0.0

Organ built by Wilhelm Sauer (Frankfurt/Oder, Germany)

(1904)



Visit Hauptwerk-Organ.com on the Internet at `https://www.hauptwerk-organ.com`.

Table of Contents

List of Figures

List of Tables

Welcome

Welcome to the sample set of the Goethe-Gymnasium Berlin-Wilmersdorf (Germany). In October and November 2020 the organ has been faithfully sampled with three stereo channels. The microphones were placed in the following positions:

- in 4 m distance from the console in XY configuration with two RØDE NT5 cardioid microphones,
- in 4 m distance from the console in ORTF configuration with two RØDE NT5 cardioid microphones, and
- in 8 m distance from the console in AB configuration with two RØDE NT55 omni microphones.

The audio signal was recorded in 32-bit and 196 kHz using a MIDAS M32R mixing console.

For this sample set all three stereo channels are made available. They can be individually adjusted (see section on page 14).

Berlin / Potsdam, March 2021
Gottfried Thore Drywa & Christoph Schmitz

The Organ

History of the Organ

The school organ of the former Viktoria-Louise School in Berlin-Wilmersdorf (Germany) was built in 1904 by the official court organ builder Wilhelm Sauer (1831 – 1916), who in the same year also built the famous organ at Berlin Cathedral. Many historical newspaper articles still demonstrate that until 1938 many highly-praised concerts were given in this auditorium. Temporarily the capital's former conservatory moved into the building that is now the Goethe-Gymnasium. The Berlin Philharmonic Orchestra, young students, and later renowned performers rehearsed here for some time. The building and the organ survived the Second World War almost intact. The Sauer organ of the Goethe-Gymnasium Berlin-Wilmersdorf is the last playable historic school organ in Berlin.

From 1954 to 1956 the organ was significantly changed. The auditorium was modernized according to the prevailing taste at the time. The original organ case was removed and the existing pipework was installed in a modern case. The original romantic stop list was changed in favor of a neo-baroque one. The pneumatic tracker action was replaced by an electric one. The pneumatic console, which was originally placed on a platform, was removed and replaced with an electric console on ground level.

Today, the Sauer organ has many technical defects due to its age of over 100 years, and there is a danger that the instrument will become unplayable, as it was already the case from 2004 to 2007. This is largely due to the fact that, depending on the funds available, repairs have so far been carried out rather makeshift than on a long-term basis. So far, a fundamental concept for a permanent restoration was lacking.

The aim is to restore the instrument to its original condition of 1904 with the necessary sustainability. This requires

- restoration of the technical installation,
- restoration of the original stop list,
- conversion to and reconstruction of the pneumatic tracker action,
- restoration of the old facade pipes,
- and above all reconstruction of the old case, which is still stored in the workshop of the Wilhelm Sauer company in Frankfurt/Oder (Germany).

It is a mammoth project that will require a lot of goodwill, commitment, passion, and courage and will certainly take several years. At the end of which, the instrument will not only shine again in its old external and tonal beauty but will also remain available to future generations for musical education and inspiration.

Specification

Original Stop List (1904)

Pedal	Manual I	Manual II
Subbaß 16´	Prinzipal 8´	Spitzflöte 8´
Violoncello 8´	Bourdon 8´	Lieblichgedackt 8’
	Gemshorn 8’	Aeoline 8’
	Octave 4’	Vox céleste 8’
	Mixtur III 1 1/3’	Vox humana 8’

Current Stop List (2021)

Pedal (C – d’)	Manual I (C – f”’)	Manual II (C – f”’)
Subbaß 16´ (1904)	Prinzipal 8´ (1904)	Spitzflöte 8´ (1904)
Violoncello 8´ (1904)	Bourdon 8´ (1904)	Lieblichgedackt 8’ (1904)
	Octave 4’ (1904)	Feinflöte 4’ (?)
	Gemshorn 2’ (1954)	Prinzipal 2’ (1954)
	Mixtur III 1 1/3’ (?)	Quinte 1 1/3’ (from c°) (1954)

Couplers: I/P, II/P, II/I

Thumb and toe pistons: Forte, Tutti, Auslöser

Requirements

Hard- and Software Requirements

The Berlin-Wilmersdorf Goethe-Gymnasium sample set can be used with the Hauptwerk™ virtual pipe organ software, available from Milan Digital Audio for both PC and Mac. The software can be found on the Internet at `http://www.Hauptwerk.com`. Hauptwerk™ Advanced Edition and a high-performance computer are recommended to experience full, flawless and convenient operation of this sample set. This extension works with Hauptwerk™ 4 and higher.

RAM Requirements

Table 1 lists approximate numbers for the amount of RAM (memory) the sample set requires with various different loading options set as tested with Hauptwerk™ VI. None of these numbers take into account the RAM needed by the operating system and the Hauptwerk™ program itself. Where no number is given, that particular loading option (although valid) hasn't been tested, mainly because it wouldn't make sense to use it.

	24-bit (32-bit aligned)	20-bit (32-bit aligned)	16-bit
Uncompressed, multiple loops, multiple releases	7667 MB	7667 MB	3909 MB
Lossless compression, multiple loops, multiple releases	4280 MB	4009 MB	2228 MB
Lossless compression, single loop, multiple releases	●	●	1941 MB
Lossless compression, single loop, single release	●	●	1272 MB

Table 1: RAM Requirements

Installation

The sample set comes with two installation packages, one, which contains the audio files and images, and a second one with the OrganDefinition file. The sample set is encrypted, but does not require an iLok license. There are two versions available: one for Hauptwerk™ 4 and one for Hauptwerk™ V and higher. Please download and install the version that is appropriate for your setup.

The installation packages can then be installed with

Hauptwerk > File > Install organ or temperament, or impulse response reverb ...

After installation (for further information please refer to the Hauptwerk™ User Manual) you can load the sample set with

Hauptwerk > Organ > Load organ ...

A dialog (see fig. 1 on the following page) is shown where you can, among others, enable or disable ranks and action noises and adjust bit rate, compression and release sample truncation settings. For best quality we strongly recommend to choose 20 or 24-bit resolution and load all available loops and samples as shown in figure 1 on the next page.

Un-Installation

The sample set can be easily un-installed using the build-in Hauptwerk™ un-installation function:

Hauptwerk™ > File > Un-Install organ or temperament, or impulse reverb ...

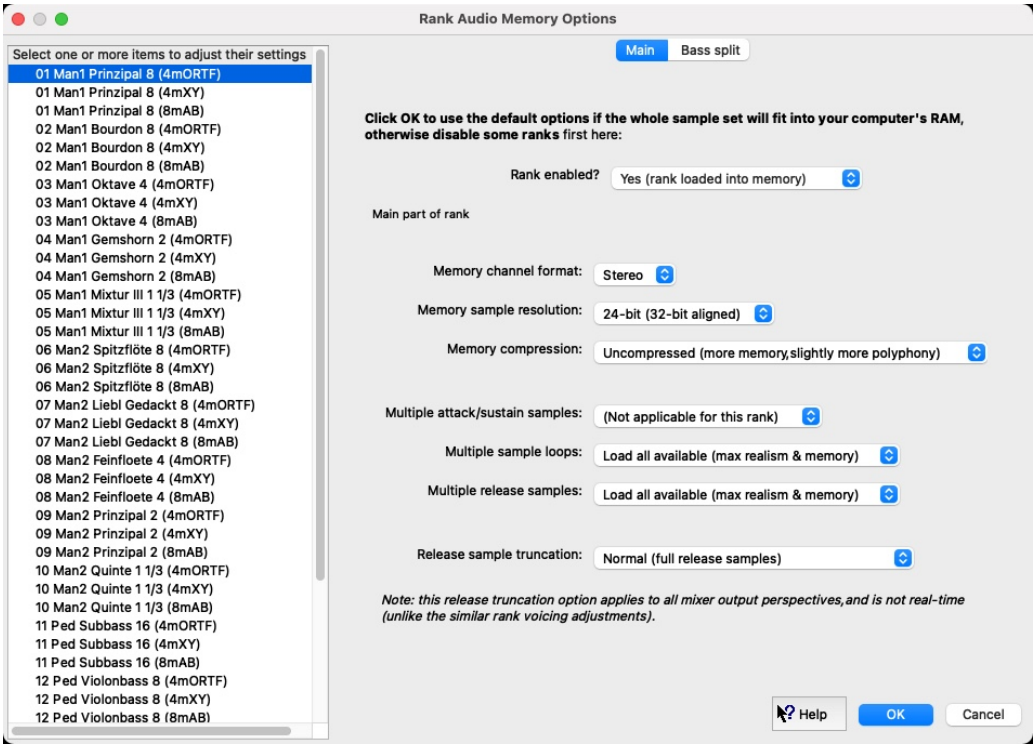


Figure 1: Rank Audio/Memory Options and Routing Screen

Using the Sample Set

Compass

The original compass of the organ is 54 keys for the manuals (C – f'''), and 27 keys for the pedal (C – d'). The compass of the virtual organ has been extended to 56 keys for the manuals (C – g'''), and 30 keys for the (C – f').

Screens

The sample set comes with four screens in landscape orientation:

- Console (fig. 2 on the following page)
- Stops (fig. 3 on page 15)
- Simple Screen (fig. 4 on page 15)
- Info (fig. 5 on page 16)

All screens support 4k resolution (3940 x 2160 pixel).

MIDI Learn (Settings Auto-Detection)

From the console screen the keyboards can be connected to a MIDI console via MIDI learn (figure 2 on the following page). MIDI-learn can be initiated by right-clicking on any virtual control and then choosing '*Auto-detect ...*'. On the console screen keyboards, stops, and pistons can be MIDI learned. The large illuminated button on the right hand side of the manuals is to switch off the **Blower**.

Blower

The Hauptwerk™ wind model has been implemented into this sample set. Disengaging the blower will mute the stops after a few seconds after the air has been consumed by the pipes. If you want to mute the blower but still play the organ, move the corresponding slider on the **Simple Screen** down to zero (see fig. 4).

Pistons

The original instrument has three illuminated latching thumb pistons and three momentary toe pistons labeled with **Forte**, **Tutti**, and **Auslöser**. **Forte** and **Tutti** are not programmable. The function of **Tutti** is self-

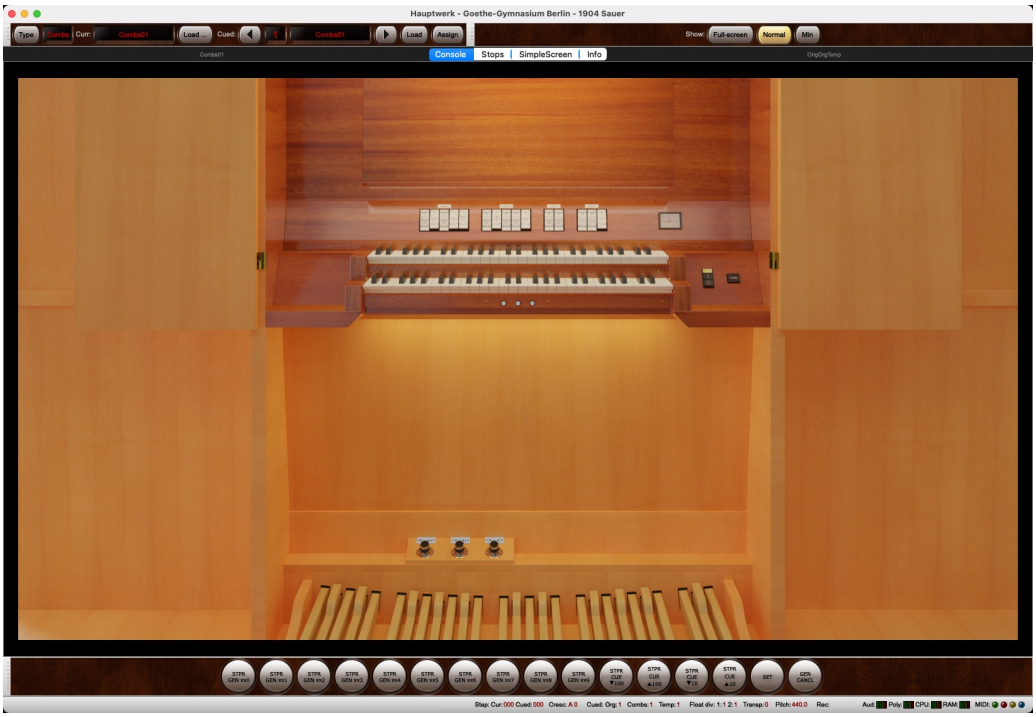


Figure 2: Console screen

explanatory, the stops and couplers, which are engaged with **Forte**, are listed in the next subsection. The console screen imitates the function of the pistons on the original console. The corresponding pistons on the **Stops** screen and **Simple Screen** imitate the function of the illuminated thumb pistons. Pressing on **Forte** disengages **Tutti** – if engaged – and vice versa. **Auslöser** disengages both **Forte** and **Tutti** and engages the stops, which are selected with the stop tablets.

Forte

Forte engages the following stops and couplers:

- Coupler II-I
- Pedal: Violonbaß 8'
- Manual 1: Prinzipal 8', Gemshorn 2'
- Manual 2: Spitzflöte 8', Feinflöte 4', Quinte 1 1/3'

The piston automatically disengages all other stops and couplers.

Settings

The volume of the three stereo channels and the noises (blower noise, tracker noise, stop action noise) can be individually adjusted with the sliders on the **Simple Screen** (fig. 4 on the next page). Sliders move between 0 and 127. The **Reset** buttons reset the corresponding sliders to 100 for the three stereo channels and to 63 (which is approximately 50 %) for the noises slider. A sound can be muted, when the slider is moved to 0.

Figure 3: Stops screen

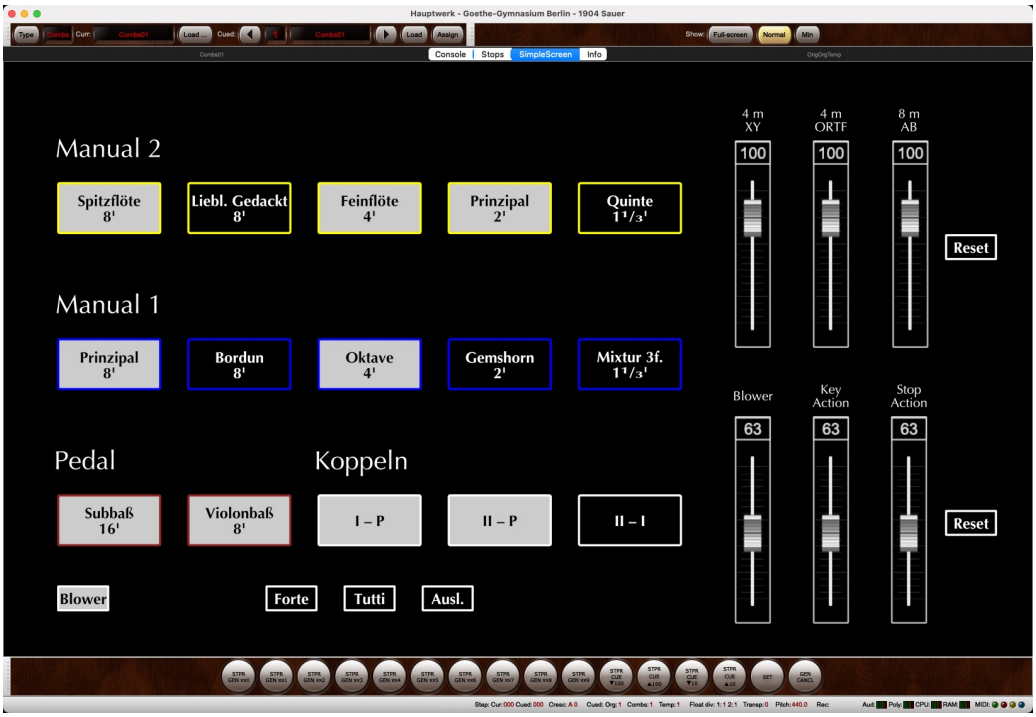


Figure 4: SimpleScreen

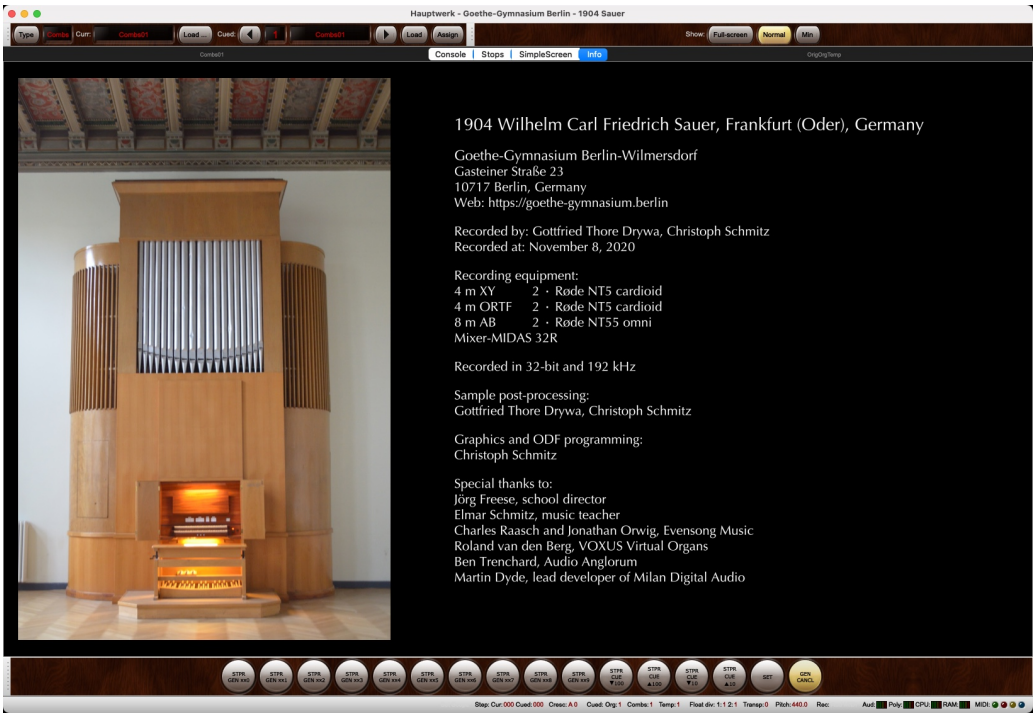


Figure 5: Info screen

Contact

Gottfried Thore Drywa
Postfach 580417
10414 Berlin, Germany

Web: https://www.hauptwerk-organ.com
Email: concertorganist@drywa.info
Phone / Fax: + 49 (30) 4057 7140

Hauptwerk-Organ.com
Christoph Schmitz
Otto-Nagel-Str. 1a
14467 Potsdam, Germany

Web: https://www.hauptwerk-organ.com
Email: info@hauptwerk-organ.com
Mobile: +49 (178) 196 2888

Credits

Many thanks to a few people without their support this project could not have been carried out:

- *Jörg Freese*, school director
- *Elmar Schmitz*, music teacher
- *Charles Raasch* and *Jonathan Orwig*, Evensong
- *Roland van den Berg*, VOXUS Virtual Organs
- *Ben Trenchard*, Audio Anglorum
- *Martin Dyde*, lead developer of Milan Digital Audio

Changelog

v1.0.0 (March 2021)

- First public release