

Sayville Congregational United Church of Christ
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INTRODUCTION TO THE PIPE ORGAN

This introduction focuses on the instrument at Sayville UCC. Each instrument is different. The smallest pipe organ has one keyboard. The biggest organ in the world has 7 keyboards plus the pedalboard.

Types of Pipe Organs

Tracker - Valves for each pipe are **mechanically connected** to the keyboards by a series of linking devices between the keyboards, pedalboard and the pipes. The console is physically connected to the pipe chests.

Electropneumatic - A control system whereby air pressure, controlled by an **electric current** and operated by the keys of an organ console, opens and closes valves within wind chests, allowing the pipes to "speak". This system also allows the console to be physically detached from the organ itself. (Wikipedia)

Direct Electric - A control system where the organ keys operate electromagnetic valves to let air into the pipes. Like the electropneumatic, the console can be detached from the pipe chamber.

The organ at Sayville UCC is electropneumatic.

Pipes - Two basic types of pipes: Flue Pipes - produce sound through vibration of air. There are no moving parts.

Reed Pipes - produce sound through a vibrating brass reed.

4 Families of Pipes:

Principals
Flutes
Strings
Reeds

Flutes, Strings and Reeds are designed to imitate different orchestral instruments. Principals, also called Diapasons, do not make orchestral sounds and their sound is unique to pipe organs. Principles are considered the basic organ 'stops', especially important for leading congregational singing.

Pipe Chamber:

Three "divisions" are located in the pipe chamber: Pedal, Great and Swell. The chamber also includes the **regulators**, which control the wind pressure in the chests, and the relays, which are connected to the console controls. Some of the pedal pipes are on the ceiling. The HARP is located on the ceiling. The CHIMES are located on the right wall of the chamber.

The Great Division is **unenclosed**, meaning that there is **no control of the volume** coming out of the division. The mixture, twelfth and the super octave are located high above the great.

The Swell Division is **under expression**, meaning the volume can be controlled via **swell shades**.

Note the arrangement of the pipes. Some chambers have pipes arranged **chromatically**. The pipes at Sayville UCC are mostly arranged **diatonically**. Chromatic arrangements are in musical half steps. Diatonic are in musical whole steps. A diatonic arrangement facilitates balancing the weight in a pipe chamber.

Note the façade pipes. In some organs they are '**speaking**'. In case of Sayville UCC they are merely decorative.

Console Controls:

Keyboards: Swell - top manual - 61 notes
 Great - lower manual - 61 notes
 Pedal - keyboard played with feet - 32 notes

Stops:

There are three different kinds of stops - Tabs, Rocker Tabs, Drawknobs. The Sayville UCC organ utilizes rocker tabs. "Pull Out All The Stops" means that the organist is using just about everything on the organ to get a BIG SOUND. The term comes from organs designed with drawknobs.

ORGAN SPECIFICATIONS for each of the three divisions of the Sayville UCC organ:

<u>Pedal</u>	<u>Swell</u>	<u>Great</u>
Bourdon 16' - (flute)	Bourdon 16' - (flute)	Principal 8' - (principal)
Lieblich Gedeckt 16' - (flute)	Open Diapason 8' - (principal)	Bourdon 8' - (flute)
Diapason 8' - (principal)	Stopped Diapason 8' - (flute)	Melodia 8' - (flute)
Flute 8' - (flute)	Viola 8' - (string)	Dulciana 8' - (string)
Gedeckt 8' - (flute)	Viola Celeste 8' - (string)	Octave 4' - (principal)
Octave 4' - (principal)	Violina 4' - (string)	Twelfth 2 2/3' - (principal mutation)
Great to Pedal 8' - coupler	Flute Traverso 4' - (flute)	Super Octave 2' - (principal)
Great to Pedal 4' - coupler	Flute D'Amore 4' - (flute)	Mixture III - (mixture - principal)
Swell to Pedal 8' - coupler	Nazard 2 2/3' - (flute mutation)	Trumpet 8' - (reed) - PREPARED
Swell to Pedal 4' - coupler	Flautino 2' - (flute)	Great 16' - coupler
Great to Pedal 8' - toe stud (reversible)	Oboe 8' - (reed)	Great 4' - coupler
Sforzando - toe stud (reversible)	Vox Humana 8' - (reed)	Swell to Great 16' - coupler
Swell Pedal	Tremolo	Swell to Great 8' - coupler
Crescendo Pedal	Swell 16' - coupler	Swell to Great 4' - coupler
	Swell 4' - coupler	Harp - percussion
	4 Programmable Pistons	Chimes - percussion

Couplers:

On Pedal: Great to Pedal 8' - adds Great sounds to Pedal at same pitch
Great to Pedal 4' - adds Great sounds to Pedal one octave higher
Swell to Pedal 8' - adds Swell sounds to Pedal at same pitch
Swell to Pedal 4' - adds Swell sounds to Pedal one octave higher

On Swell Manual: Swell 16' - adds additional pitch one octave lower
Swell 4' - adds additional pitch one octave higher

On Great Manual: Great 16' - adds additional pitch one octave lower
Great 4' - adds additional pitch one octave higher
Swell to Great 16' - adds Swell sounds to Great one octave lower
Swell to Great 8' - adds Swell sounds to Great at same pitch
Swell to Great 4' - adds Swell sounds to Great one octave higher.

Percussion Stops: Harp
Chimes

Pistons: Swell - 4 programmable Swell/Pedal pistons
Great - 4 programmable Great/Pedal Pistons
Pedal - 2 toes studs: Great to Pedal (reversible) and Sforzando (reversible)

EXPLORING THE PIPE ORGAN ON YOUR OWN

General Overview of the Pipe Organ in Print:

"Young Person's Guide to the Pipe Organ" - <https://www.agohq.org/young-persons-guide/> - A well organized, illustrated introduction to the pipe organ for young people "of all ages". Provides some history and an in-depth explanation of the features of the pipe organ. There are explanations about the families of pipes and the means of controlling the sound through the console. There are audio clip samplings of the types of pipes.

YOUTUBE VIDEOS

Good Overview of the Pipe Organ:

"Pulling Out all the Stops" - <https://www.youtube.com/watch?v=5VBQtzIM4c8> - 1 hr. 23 min.
Released in 1996, a very informative overview on pipe organs. Includes organs in their traditional church settings as well as in the movie theaters.

The Biggest Pipe Organ in the World:

"Take Me Out to the Ballgame" - Organist Steven Ball plays the biggest pipe organ in the world, the Midmer-Losh organ in Boardwalk Hall at the Atlantic City Convention Center - <https://www.youtube.com/watch?v=DARLev1Bqk>

The Second Biggest Pipe Organ in the World: Peter Richard Conte plays the Wanamaker organ in Macy's, Philadelphia. <https://www.youtube.com/watch?v=Tay0ZrXQrUM>

WEBSITES:

Midmer-Losh Organ - www.boardwalkhall.com - Located on the boardwalk in Atlantic City it is the biggest pipe organ in the world with over 33,000 pipes! Undergoing extensive restoration to repair and restore damage from the 1944 hurricane. More than half of the organ has been restored with a target date from completion by 2023. This venue has been referred to as "The Sonic Mt. Rushmore". (notes taken from Boardwalk Hall website)

Wanamaker Organ - www.wanamakerorgan.com - Located in Macy's (formerly Wanamaker's Dept. Store) in Philadelphia and originally built by the Los Angeles Art Organ Company for the 1904 St. Louis World's Fair, it contains 28,500 pipes controlled by six keyboards and the pedalboard. It was purchased in 1909 by John Wanamaker for use in his new "emporium". It has been meticulously restored and maintained and is billed as the biggest playable organ in the world. (notes taken from Wanamaker Organ website)