

The King of Instruments

— a brief story spanning time & space

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all images from the internet



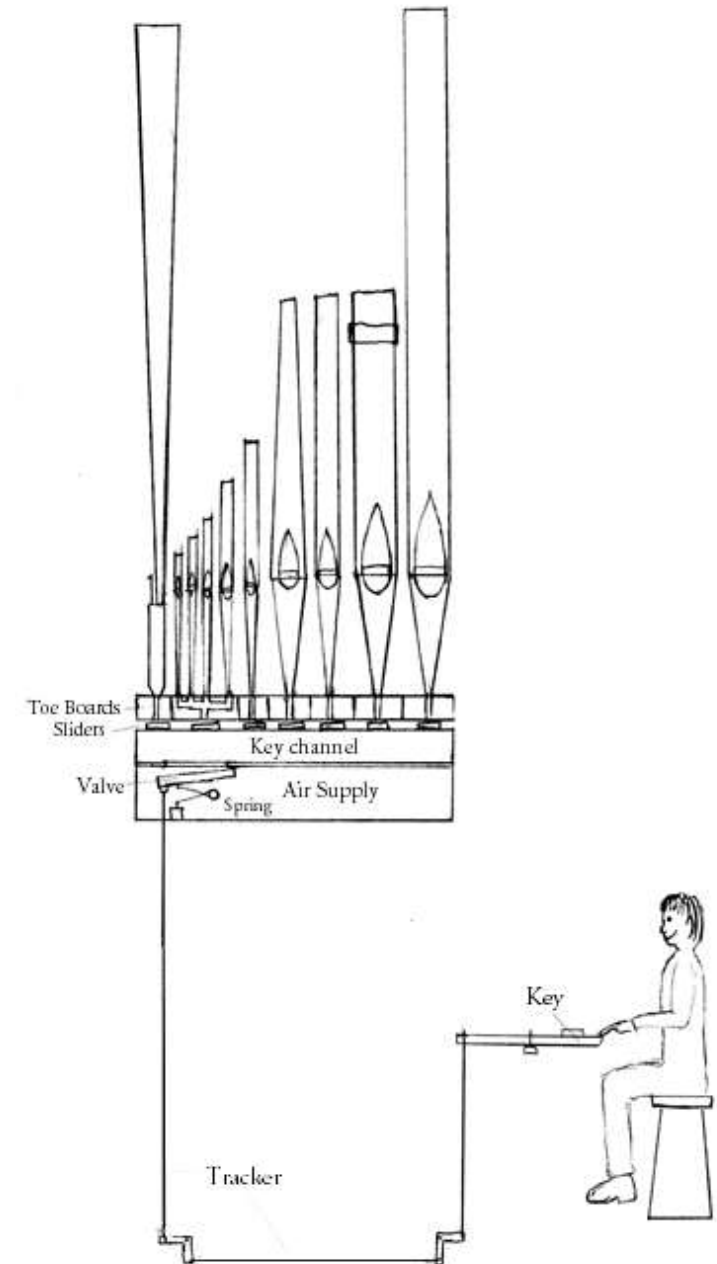
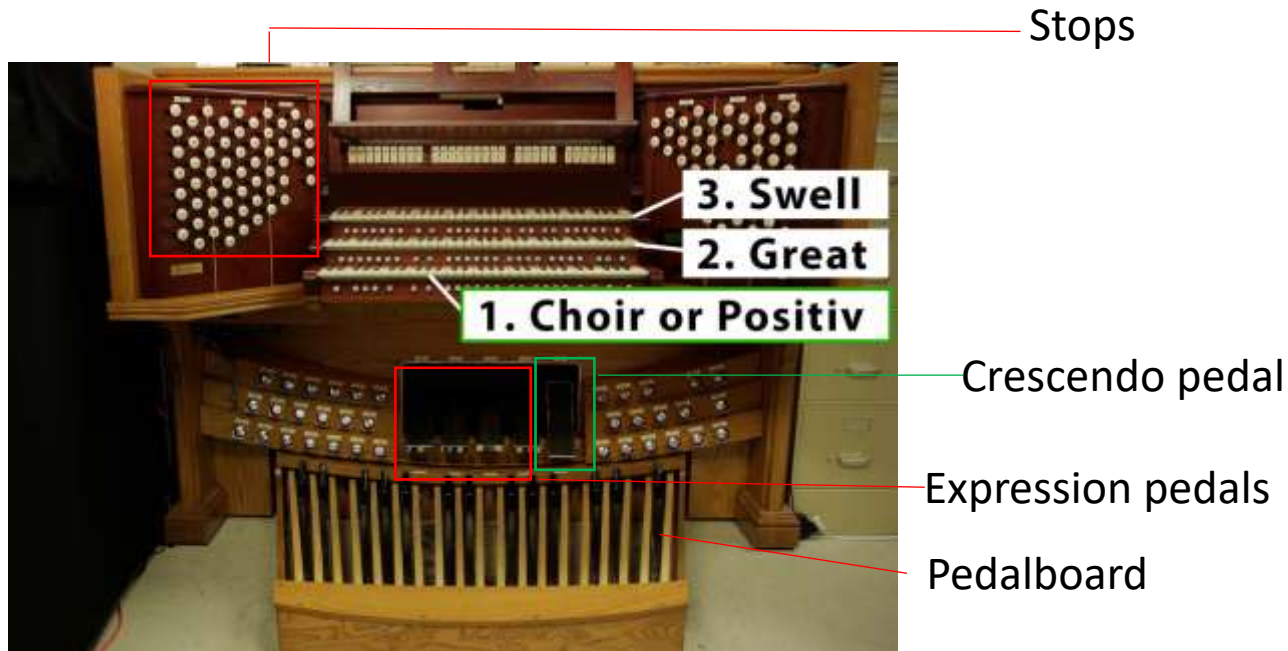
Müller organ (1738), Grote Kerk St Bavo, Haarlem, the Netherlands

What is a Pipe organ?

The organ is wind instrument which uses keyboards to play the notes.

Pressurized air (Wind) resonates through **pipes** to **produce sound** when a note is depressed.

The player's hands press notes on the **Manuals**, while the feet play on the **Pedalboard**. **Expression pedals** are used to vary the volume of the notes sounded. The **Crescendo pedal** is not an expression pedal! The choice of **Stops** will determine which type of sound is produced.



What is a Pipe organ? (cont'd)

Pipe size could range from a $\frac{1}{4}$ inch height to 64 feet! Generally, the longer the pipe, the deeper the pitch. Pipes may be made of wood and metal.



Ranks of pipes

Listen: Contra Trombone 64' stop on Sydney Town Hall organ

https://www.die-orgelseite.de/audio/sydney_64ft.mp3



Pedal pipes

The Story of the Pipe Organ In A Nutshell



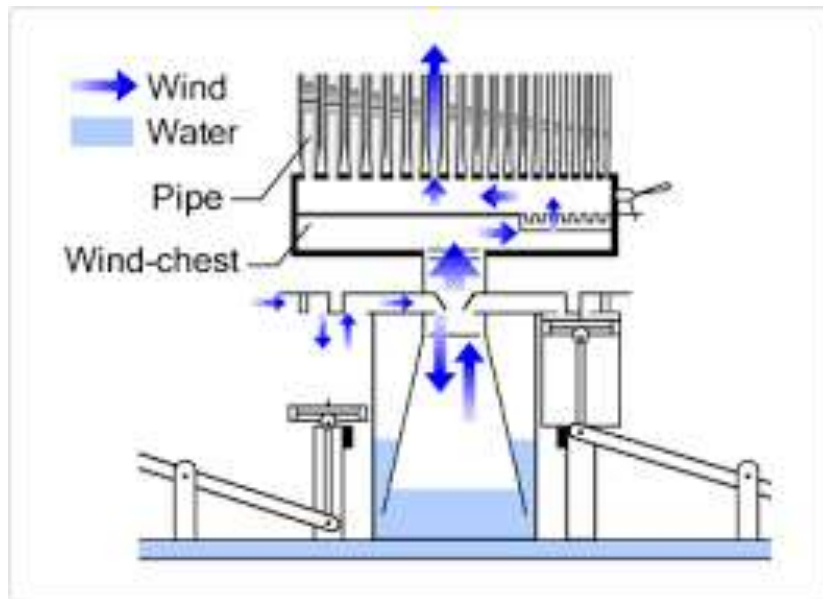
200 BC - 8 th C AD	Greek, Roman Byzantine festivals and rites (pagan)
9 th -15 th C	Western Christian Church (mostly Roman Catholic chant)
16 th -18 th C	<p>Protestant reformers Luther, Calvin, Zwingli (Lutheran Chorale, Psalters)</p> <p>Congregational singing affected organ building and music</p> <p>Organ music develops according to specific styles</p> <p>European colonialists bring worship traditions to new lands</p>
18 th -19 th C	Aristocratic power and church influence decline. The Romantic Movement and the Symphonic tradition affect organ building and music.
Late 19 th -21 st	Secularism further threatens sacred music: pop culture and mass media dominate. Traditional use of organ declines. Asia's growing interest in pipe organs.

The 1st Pipe Organ – Hydraulis

Invented by Greek engineer **Ctesibius of Alexandria** in 200-300BC

The **Hydraulis** (water organ), delivered a **wind** supply maintained through **water pressure** to a set of pipes.

The Hydraulis was played in Roman arenas



Roman organ music <https://www.youtube.com/watch?v=US50QmZaeyE>

ca. 3rd Century BC – th Century AD

Eastern & Western Europe

Wind-powered organs



Bellows were introduced in the 6th Century in Byzantium (now Istanbul). Organ was played at festivities.



Portatifs - small, hand-held organs: the **Organetto**, used by traveling musicians in 15th C Western Europe

[Perotin Alleluya](#)

<https://www.youtube.com/watch?v=qBjT-TyW3E>

ca 9th-14th Century

Western Europe

15th century Positives

Bellowed organs soon developed into larger instruments which could not be easily carried. The **Positive organ** used for entertainment, chamber music, and eventually, in Christian worship.



The Organ in Worship

Early Judeo-Christian worship did not use organs.

Separation of the church into:

Eastern (eg Greek / Russian Orthodox) –no organs

Western European (eg Roman Catholic)

In the 9th C, Benedictine monks started to use the organ in worship. Chanting & singing were **unaccompanied**.

Organ could provide pitches for singing via improvisations (**Intonations**) and interludes in between sung phrases or verses.

Intonation and chant

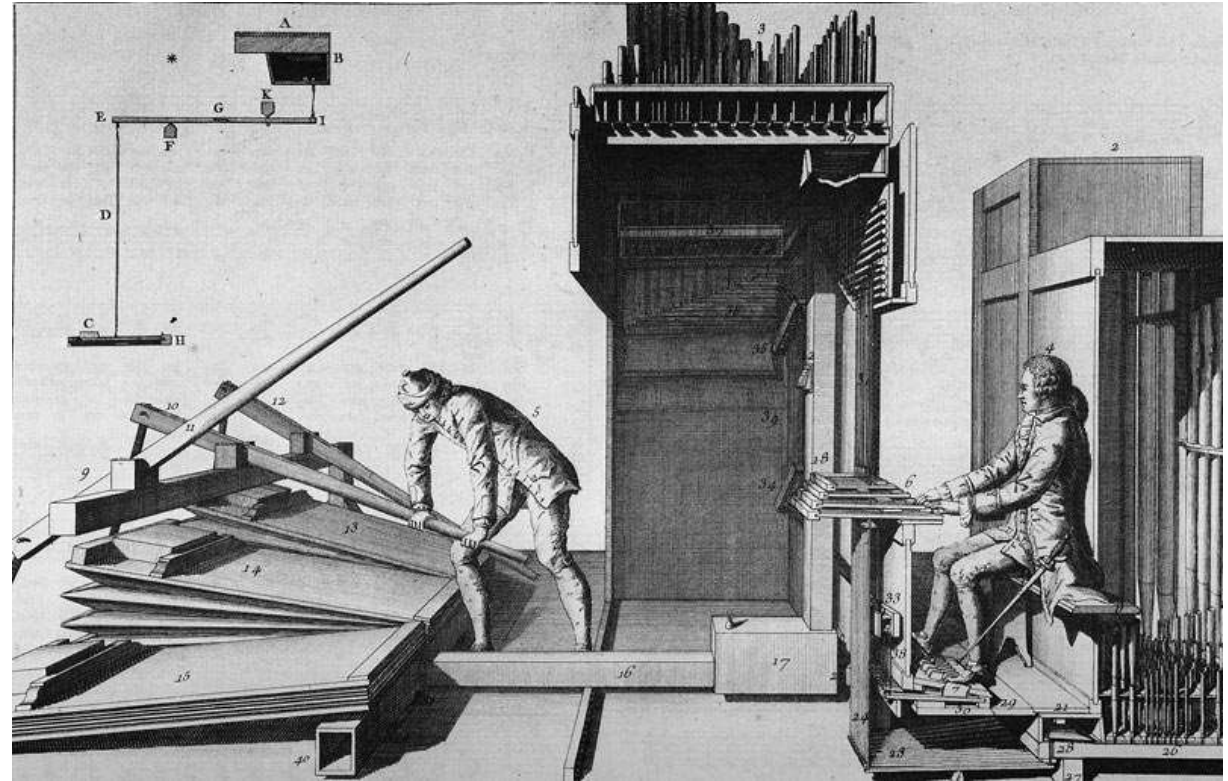
<https://www.youtube.com/watch?v=-rNnPo0ujWE>



Organ Stops

Around 1450, **stops** were invented to isolate different harmonics. The player could now choose from a small variety of tones and pitches to sound.

Larger organs were permanently placed at a location on the floor or balcony.



Hand Pumped Organ

https://www.youtube.com/watch?v=tHoXn_dQQGY

15th Century

Western Europe

The Church Organ

Listen to how the organ plays between the chanted verses of *Salve Regina*.

This is called **alternatim** practice.

Salve Regina

https://www.youtube.com/watch?v=C73TaNWL_0Y



Photo: World's oldest playable organ (1435), Château de Valère, Sion, Switzerland

The Italian Organ

Registration (choice of stops) mostly based on Principals and Flutes. Keyboards typically had a **short octave**, no /very few pedals, and a **divided keyboard**

Short octave

[https://www.youtube.com/watch?v= PtT6DNq5V0](https://www.youtube.com/watch?v=PtT6DNq5V0)

Girolamo Frescobaldi, organist and composer at St Peter's Basilica in Rome (now Vatican City), was an important composer.

Frescobaldi's Toccata on a Roman organ

<https://www.youtube.com/watch?v=QHln0FOwN3Y>



Typical Italian organ – 17th C organ in San Lorenzo de Damaso, Rome

Lutheran Music

16th-C Protestant reformers **Ulrich Zwingli** and **John Calvin** did not allow organ music. Only Psalm singing was allowed by Calvin. Dutch Reforms in 1581 allowed the organ back into Dutch services.

In 1517, reformer **Martin Luther** started the Protestant movement in Germany. The congregation sang the hymns-- **Lutheran Chorales** in German. Chorales replaced the Latin chants in services. The **Chorale Prelude** originally was played by the organ as the introduction to the Chorale.

The Chorale soon became the basis for **Choral Fantasias**, **Choral Partitas** (Variations) and **Cantatas**



Chorale "In dulci Jubilo" <https://www.youtube.com/watch?v=wgEkvwH4Fbc> (Dresdner Kreuzchor)
<https://www.youtube.com/watch?v=SR4H6FEypAw> (Zachau's chorale prelude)

German organ music



Arp Schnitger (1689-93), St Jacobi, Hamburg



Gabler (1750), Basilica of St. Martin, Weingarten

In the baroque period, **North German** and **Dutch** organs tend to have tall pedal towers with emphasis on the pedal division. **South German** and **Austrian organs** often have a window around the pipes and emphasize manual divisions .

German organ music (cont'd)

Northern German music often had extended pedal passages, big flourishes and echo effects.

Buxtehude, Bruhns, Weckmann and Luebeck wrote many chorale settings, **Preludia** and **Toccatas**. Organ builder **Arp Schnitger** built many instruments in the North, and in the Netherlands

[Bruhns Preludium](#)

<https://www.youtube.com/watch?v=HcLWXZaAC7g&list=RDUsQhMgqxjml&index=16>



1655 Schonat at Nieuwekerk,
Amsterdam, the Netherlands

German organ music (cont'd)

Johann Sebastian Bach

The Chorale Preludes written by JS Bach became more complex, often containing musical symbolisms; they evolved into independent pieces rather than introductions to the chorale.

Chorale: Komm Gott Schöpfer

<https://www.youtube.com/watch?v=OQ-lap44pp4>

Komm, Gott, Schöpfer, Heiliger Geist BWV 667

<https://www.youtube.com/watch?v=g0saZqGChzs>

Bach's other organ music developed in complexity and virtuosity. Organs by **Gottfried Silbermann** blended South German organ building with French style.

Toccata in D, BWV 565

<https://www.youtube.com/watch?v=tRZrhg1fm50>

The
Silbermann
"smile"



G. Silbermann organ (1714), Freiburg Cathedral,
Freiburg, Germany

The English Organ

The Church of England (Anglican) began in 1533. English prayer books replaced the Latin service.

Most organs in England from 1534-1660 destroyed because of religious and political upheavals due to Puritanism (Calvinist influence).

Organs in 18th C had no pedals, usually 2 manuals (**Swell, Great**)

The English **Voluntary** – a organ piece (non hymn based) played before and after the service. Usually in 2 sections—slow beginning and a faster section, usually a Cornet or Trumpet voluntary.

John Stanley: Voluntary in A-minor

https://www.youtube.com/watch?v=oOLUWH_-9tE



Reconstruction of Father Smith organ (1688),
Durham Cathedral

The Iberian Organ

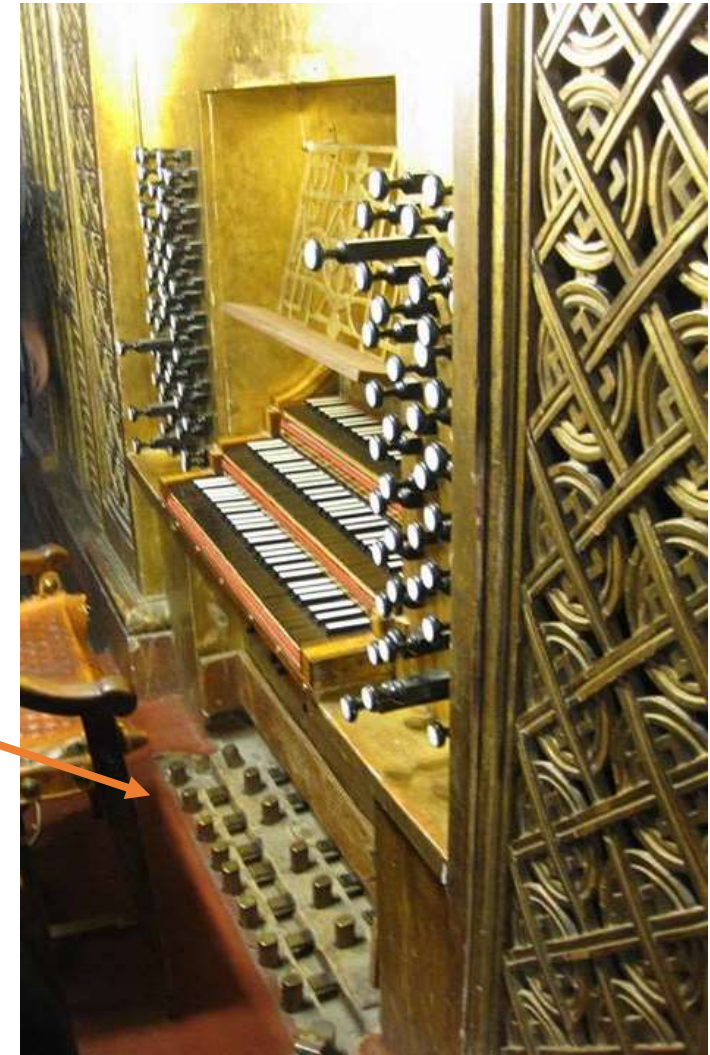
Spanish and Portuguese organs may have **horizontal trumpet** pipes – sounded prominently, good for battle music and fanfares. Pedals were very small. (see pic)

Battala Imperiale by Juan Cabanilles

<https://www.youtube.com/watch?v=hP1D-l3ngwQ>



Leonardo Ávila organ (1744-49),
Granada Cathedral, Spain



José & Pedro Echevarria (1702),
Toledo Cathedral, Spain

The French Classical organ

The music for the French Classical organ has sets of registration corresponding to each piece-- usually for the **Mass**, **Magnificat** or as **Hymn** versets.

The organ did not have many pedal stops.

Music is very elaborate--influence of the French court starting from **King Louis XIV** (the Sun King) in Versailles, France.

See the elaborate interior of the Versailles Chapel, bombastic character of the reed stops:

Louis Marchand's **Grand Dialogue** in Versailles Chapel
<https://www.youtube.com/watch?v=c1SRCvBgKQ4>

Couperin's "Elevation" for the Mass- (Tierce en Taille)
<https://www.youtube.com/watch?v=AGaJZblx-eM>



Dom Bedos (1780), Abbey of St Croix,
Bordeaux, France

The French Symphonic organ

The **Organ Symphony** : multi-movement piece for solo organ, imitating the colours of the symphony orchestra.
Use of **expression pedals** and **registration combinations**.
Legato technique / absolute legato for long melodic lines

Aristide Cavaillé-Coll 's organs and **César Franck**
Franck "Pastorale

https://www.youtube.com/watch?v=a9uJfzW_9WA

Lighter key action, quicker stop changes and rise of the virtuoso organist. **The French Toccata**

Widor's Toccata from Symphony No. 5

<https://www.youtube.com/watch?v=iZDp8hw7xUE>

Organ improvisation a necessary skill during worship

Easter at Notre Dame Cathedral -entrance hymn

<https://www.youtube.com/watch?v=Jo4ERFQLFRw&list=RDntuPYbloqmk&index=25>



5- manual Cavaillé-Coll organ (1862) at the church of St Sulpice, Paris

The German Romantic organ

Organ music in 19th Germany various “style groups”: composers Mendelssohn, Rheinberger & Brahms; Franz Liszt and Reubke; Reger and Karg Elert.

Organs by **Wilhelm Sauer** (1831-1916) embody the thick, complex mood of the German Romantic movement.
(Think of German operas by Richard Wagner)

Ein fest burg chorale (original version)

<https://www.youtube.com/watch?v=ul7QMtXBLgY>

Reger's “Ein feste Burg” Choral Fantasy

https://www.youtube.com/watch?v=PZa4EKKwBLI&list=PLbe8ytjyB_ESqp9xTt79wAJ0iPez3CcOJ&index=4



4 manual Sauer organ (1905), Berlin Cathedral, Berlin

Anglican Organ Music

English Organs had no pedals until 1830's.

Purpose to **accompany** the congregation and choir in singing, and to perform **voluntaries** before and after the service.

Main services: **Eucharist** (Mass order), **Matins** (morning service), **Evensong** (evening service with Magnificat & Nunc Dimittis)

Stanford Magnificat in C

<https://www.youtube.com/watch?v=LUWKSTysnpg>



Harrison & Harrison (1934), King's College Chapel, London

Anglican style hymn singing & organ accompaniment

Hymn "Jesus Christ is Risen Today" <https://www.youtube.com/watch?v=rMwPEmUMP7U>

20th -21st century

European Settlements

Colonial Influences



1834 Willis, Birmingham Town Hall, UK

British



1866 William Hill, St Andrews' cathedral, Sydney



1898 Willis, St Mary's Cathedral Kuala Lumpur



1747 Ortega, Rueda, Valladolid, Spain

Spanish

1894 Fr Diego Cera, Las Piñas, Philippines
(bamboo organ)1735 Nassarre, Metropolitan Cathedral,
Mexico City

American Organ Music

Settlers from Europe brought worship traditions and organ building styles into the New World. Reed organs (pump organ/harmoniums) and small organs for small chapels and in homes

The American organ evolved and thrived in concert halls, schools, homes and churches, catering to the worship practice and culture of each region.

Mason & Hamlin pump organ

<https://www.youtube.com/watch?v=im53HCS1UDo>



American reed organ (1800s)



Rosales/Glatzer-Götz (2004), Walt Disney Concert Hall, Los Angeles, CA

American Organ Music (cont'd)



World's biggest organ! 7-manual (314 register, 33,114 pipes) , Midmer-Losh Opus 5550, Boardwalk Hall, Atlantic City, USA

American Organ Music (cont'd)

-The **Theatre Organ** for silent movie accompaniment, entertainment and at baseball stadiums. There are actual percussion instruments in the organ!

Wurlitzer at a pizza parlour!

<https://www.youtube.com/watch?v=OOvXRqpy1Ys>



Wurlitzer Theater organ (1930's), Alabama
Theater, Birmingham, AL

American Organ Music (cont'd)

Jazz and Gospel organ music and Mega Churches



African-American church music,
Hammond electric organ

Gospel style

<https://www.youtube.com/watch?v=c8AulW4IZVs&list=RDlcUdR4sio8M&index=2>



Coral Ridge Presbyterian Church, Florida

<https://www.youtube.com/watch?v=YoW6GuJQLzc>

Organ in the Orchestra

Developments since the Symphonic Organ style of the 1800's enabled the organ to complement and support the symphony orchestra as well as stand out as a solo instrument. Organs in Town Halls and Concert spaces.

Saint-saens' "organ" symphony No. 3
<https://www.youtube.com/watch?v=eW-7S9fjyfU>



3-manual Klais (2002), Esplanade Theatres on the Bay, Singapore

20th -21st century**European Settlements****The Electric Organ**

Attempted to imitate the sound of the Reed Organ, Theatre Organ and Pipe Organ.

The Hammond drawbar organ began as the electric substitute of the pipe organ and reed organ, but evolved into organs suited for Jazz and gospel music.

Console organs resemble the pipe organ in their layout and function, with full size pedalboards. Intended for church as a substitute to the pipe organ

Spinet (Home) Organs have small pedalboards and features which imitate a wide variety of orchestral sounds. Cheaper than the Console Organ, intended for home entertainment. Paved the way for synthesizer keyboards.



Where do we go from here?



Wishing you many enriching experiences in the future with the King of Instruments!



Organ Classes and Resources

Methodist School of Music: www.msmlmusic.edu.sg

Online Improvisation class pt 1

<https://www.facebook.com/MethodistSchoolOfMusicMSM/videos/244921293545241/>



Community and Resources

Singapore Chapter of the American Guild of Organists www.singaporeago.org

www.facebook.com/AGOSingapore

New Timbres

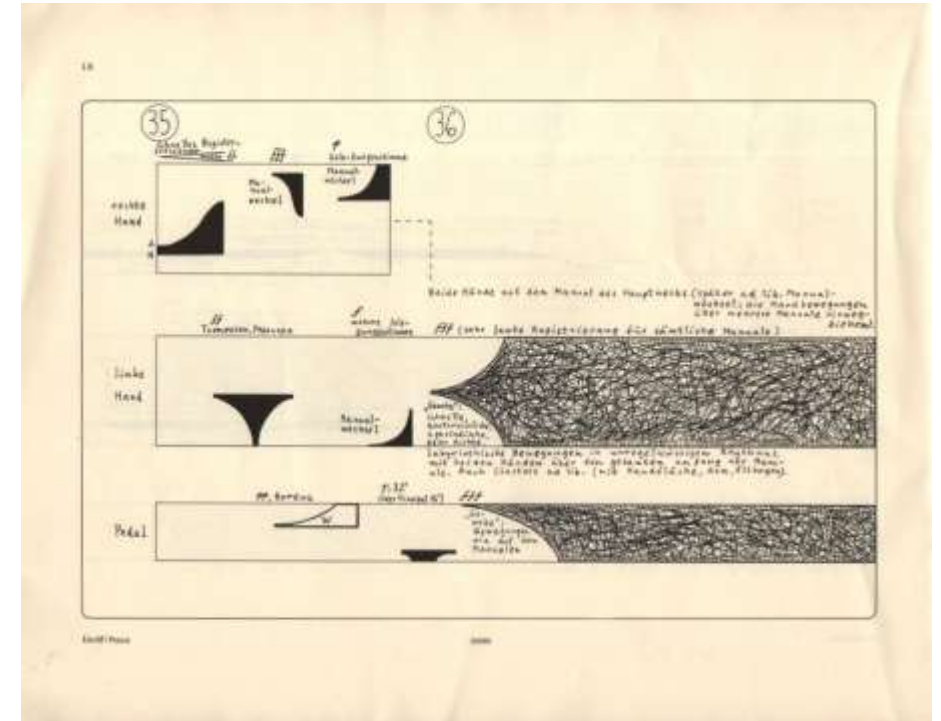
Composers such as Olivier Messiaen and György Ligeti used the harmonics of organ tones and the unusual registration to create new musical effects.

Messiaen infuses bird chirps in the **Pentecost Mass**
“Communion” (*fwd to 18:13*)

<https://www.youtube.com/watch?v=DoouENffQCs>

Ligeti explores sound scapes in **Volumina**

<https://www.youtube.com/watch?v=MoA7vgEgxHg>



Excerpt from *Volumina* by Ligeti