

GLOSSARY OF ORGAN TERMS

For
Organ Committees and Church Members

Acoustics – The study of sound frequencies, including musical tone and how they interact with each other and with physical surroundings. Room shapes, wall, ceiling and floor designs, and building materials create the acoustic properties of a room. Acoustically live rooms have long reverberation times while the acoustically dead (dry) rooms with carpet, drapes, padding, acoustical ceiling tile, and other sound energy absorbing materials may have little or no reverberation. To support good congregational and choir singing, a reverberation time of at least 1-1/2 to 2 seconds is recommended. No echoes! Proper acoustics allow speaking with minimum or no amplification and also allows organ and congregation and choir voices to blend to create a satisfying musical experience. To understand acoustics effect on musical enjoyment, ask yourself, “Where does my voice sound better; in a closet with soft absorbing materials, or in the shower with hard reflective surfaces?”

A.G.O. – The American Guild of Organists. This organization has set specifications for the standardization of organ consoles, organ placement, order of stop controls, and proper couplers, etc. The A.G.O. grants proficiency degrees on the basis of annual examinations: Associate (A.A.G.O.), and Fellow (F.A.G.O.). It also publishes a monthly magazine called “The American Organist”.

All Swells to Swell Switch - This allows for control of all expression pedals with the Swell pedal only. When used the all divisions expression will be controlled by the Swell shoe only.

Antiphonal – This organ division is usually placed at the opposite end of a room from the main organ. It is used for echo effects, alternating choruses, or for augmenting the main organ in congregational singing. In pipe organs, the Antiphonal is a separate division. In digital organs it can be a division speaking through a separate set of amplifiers and speakers.

Blower – A motor driven unit that produces a wind supply necessary to produce sound in a pipe organ.

Celeste – Celeste is Latin for ‘heavenly’. An organ celeste consists of two eight foot stops played simultaneously with one stop tuned slightly sharp to the other. The interaction of the two sounds produces a slow beat or undulation creating an warm ensemble sound. For example, in an orchestra there are many violins playing the same note, each instrument having an ever so slightly different pitch and tone-quality combines to create that characteristic warm string ensemble sound.

Chest – See Wind Chest

Chamber – A room, usually open on at least on one side, in which pipes or speakers for the organ are placed. The open side is often finished with a decorative grill and grill cloth, and opens into the church or auditorium. These openings should be as large as possible. Pipe organs may have Swell shutters placed in the opening, which when opening and closing, control the volume of sound heard from the pipes in the church or auditorium. The Swell shutters are operated by the Swell Shoe (Expression Pedal) with the organist's foot. Chambers should be finished with hard, ridged, reflective surfaces like plaster, thick plywood, or double layers of sheetrock painted with a gloss paint to provide proper tonal egression.

Chiff – The transient harmonic component that precedes the tone in a pipe voice of flue pipes. This type of articulation is useful in playing contrapuntal music.

Choir Division – Usually denotes the bottom keyboard of an organ with three or more manuals. This division operates as an accompaniment division and also provides the stops for the traditional Postiv division. It usually contains both principal and Flute ensembles with couplers to increase its flexibility.

Combination Action – Any device on an organ by which previously selected groups of stops can be activated by the pressing of a button (piston), or toe stud. The means by which these combinations of stops are retained in the organ memory are:

- 1) Pre-sets – Combinations that do not visibly affect the stops already set. This system is used on small organs and the stop selections are not programmable or changeable. They are set at the factory or can only be changed by a technician.
- 2) Hold and Set – The combinations are retained by depressing the desired piston and holding it in while pulling all the stops desired.
- 3) Capture – This refers to the programmable memory in the organ that allows the organist to set stop combinations assigned to a particular piston for recall as needed. Capture systems can have as many as 99 memory levels and 4 to 12 pistons which give the organist over 1000 individual memories.

Compound Stops – Stops with draw multiple ranks. Roman numerals indicate the number of ranks drawn, such as "Mixture IV".

Concert Pitch – An organ with middle A tuned to a frequency of 440 Hertz (cycles per second). Denoted as "A-440".

Console – Usually constructed of fine woods, it can be very plain or extremely ornate. The console is the organist's control center or workstation. It contains manual and pedal

keyboards, and stops controls arranged in a standardized and convenient manor specified by the American Guild of Organists in American, and by other organist organizations in other countries.

Couplers – There are two basic types of couplers:

- 1) Intermanual – Enables an entire division's stops to be played on another keyboard, or by the pedals; sometimes at the same pitch level and sometimes at different pitches. Examples would be "Swell to Great 16'", or "Swell to Choir 8'", or "Great to Pedal 4'".
- 2) Intramanual – Enable an entire division to be played with itself but at an octave higher or lower. Examples would be "Swell to Swell 16'", or "Great to Great 4'". Also, an entire division can be silenced using the Unison Coupler.
- 3) Within the above – Sub Couplers are at the 16' pitch; Unison Couplers are at the 8' pitch level; and Super Couplers are at the 4' level. Couplers greatly increase an organ flexibility.

Crescendo Pedal – The Crescendo Pedal (usually the right-most shoe), gradually adds pre-selected stops in succession as it is depressed all the way up to full organ.

Diapasons – See Principals

Divided Expression – More than one expression pedal on the organ so voices on one division may be controlled, up and down in volume, while voices (stops) in another division are unaffected.

Division – The traditional groupings of pipe ranks: Great, Swell, Choir, Solo, Pedal. Each is played from the keyboard named after that particular division. Having multiple divisions, each with a separate keyboard allows for rapid changes in registration as the organist moves from one keyboard to another.

Drawknob – The oldest and most traditional manner of operating the stops of an organ. A knob with the name of the stop engraved on it is pulled out to turn on the stop and pushed in to turn it off.

Echo Organ – An Antiphonal organ usually using softer stops; used for effects of an ethereal nature.

En Chamade – A loud, horizontal solo trumpet stop.

Enclosed – Pipes located in an organ chamber or other enclosure with adjustable swell shutters that open and close to control volume.

Expression Pedal – A foot-operated pedal, which on a pipe organ opens and closes the shutters of the swell box (chamber), controlling the volume of an organ division. On digital organs the expression pedal controls not only the volume, but also attenuates the higher frequencies of the sounds, giving the characteristic “caged” sound when closed. On better digital organs, all of this is adjustable, along with the volume taper at closing and opening.

Extensions – Normally 12 additional pipes added at the bottom and/or top of a pipe rank, allowing that rank to play an additional octave higher or lower pitch.

External Speakers - Appropriate high quality speakers mounted in a location away from the console.

Façade – The front display pipes that are exposed and visible on an organ. These can be decorative or functional.

Finishing – The subjective and artistic process whereby the various elements of an organ are adjusted, controlled, modified, and harnessed to provide the musical personality of the instrument. Finishing on-site must be done by a person with a good ear and knowledge of music. To be finished, an instrument must be voiced and tuned on each individual stop and individual notes.

Flue Stops – Stops belonging to the Principal, Flute, Hybrid, and String families of pipes, also called “Labial” pipes. Flues generate their tones by the action of a sheet of wind which passes through a small gap or flue against a lip in the mouth of the pipe. This sets a column of air in motion within the walls of the pipe in the same manner as a whistle.

Flutes – The tonal family that supports the Principals and also provides another set of tonal colors for solo and accompaniment voices. Flutes may be open, stopped, or tapered. Open and tapered flutes are full-length flue pipes. Stopped flutes speak an octave lower than their length would suggest because of the cap or stopper which closes the top of the pipe. The Gedeckt and Bourdon are examples of stopped flutes. The Melodia is an example of an open flute, and the Spitzflöte is an example of a tapered flute. Tapered flutes are narrower at their tops than they are at their mouth.

Foot (Pitch) – The general term used to indicate the manner in which pitch is designated on an organ. A rank of pipes, the longest of which is 8 feet long, will produce the standard concert pitch on an organ keyboard; consequently such a stop is called an 8’ stop. A 16’ stop speaks the octave below; a 4’ stop speaks an octave above, etc...

Fractional Pitches – Organ stops that speak other than unison or octave pitches, that is, 5-1/3’ or 2-2/3’ or 1-3/5’ or 1-1/3’ and others. These are also called Mutations and are useful in building solo combinations such as Cornets, but can also add color to ensembles.

Fundamental – The portion of the musical tone that defines the pitch of the tone to the ear, normally the lowest pitched harmonic of the tone.

Great Organ – The most important division of the organ. Other manual divisions usually couple to it with 16', 8', and 4' couplers. It is characterized by complete development of the Principal Chorus, the sound most associated with the organ. It is the lower manual on a 2-manual organ and the middle manual on a 3-manual organ.

Harmonic – Any one of the many partials that give a musical tone its primary quality is called a harmonic. The relative intensity of these harmonics determines the tonal quality of a given sound.

Hertz (Hz) – Frequency of a wave-form (sound wave) in cycles per second. Organ tone ranges from 16Hz up to 22,000Hz (22kHz).

Hybrid – Tapered flue pipes that are midway between String and Principal tone or midway between String and Flute tone. Examples of these stops are the Gemshorn and the Erzähler. Hybrid is also sometimes used to describe an organ using pipe tops and digital stops in the same organ.

MIDI – Musical Instrument Digital Interface. An international standard developed for the purpose of playing and linking various instruments. Standard MIDI connectors are:

- 1) MIDI IN - Receives MIDI information from another device.
- 2) MIDI OUT - Transmits MIDI information to another device.
- 3) MIDI THRU - Allows data to pass through unaltered, which enables many instruments to be connected in series.

MIDI Sequencer - A piece of digital hardware/software that can instruct a compatible instrument to switch notes on/off at whatever velocity they were "recorded". Rather than recording sound or "audio" it records the parameters of the note. The sounds triggered are dependent on the MIDI instrument or sampler supplying the sound. There are up to 16 channels per MIDI loop operating within increments of 0 – 127. M.I.D.I. instructions (e.g. turn note off, velocity, stop change), are known as "events".

Main Organ – The body of the instrument usually containing the Great, Swell, Choir, and Pedal divisions. Echo and Antiphonal divisions are built elsewhere in the room and are not part of the Main Organ.

Manuals – Keyboards played with the hands. Organ consoles have multiple manuals to allow for quick changes in registration by moving from one keyboard to another. This also allows

solo voices to be played with accompaniment by using two or more keyboards at the same time.

Mixtures – See Compound Stops.

Mutations – See Fractional Stops.

Naturals – The “white” keys of manuals and Pedalboards. (Some organs will have the key colors reversed.)

Pedal Organ – The organ division played with the feet. This division provides the bass line and foundation for the manual registrations and has its own solo stops as well.

Pedalboard – The pedal keyboard, also called Clavier. The A.G.O. specifies a concave and radiating pedal board of 32 notes, but it can also be flat non-radiating, or flat radiating.

Percussions – Typical percussive voices on a classical organ would be Chimes, Glockenspiel, Carillon, and Harp.

Pipe – The metal and wood single note wind-blown tone-producing device that is the basis for pipe organ sound. The two basic types are Flue and Reed pipes.

Pipe Combination – The combining of wind-blown pipes with digital voices to create a combination (hybrid) instrument.

Pistons – Finger-operated pushbuttons that access the organ’s memory in the combination action. They are located on the key slips, beneath each manual.

Positiv Organ – An organ division similar to the Great Organ but lower in the dynamic level. Normally unenclosed, it is used in combination with or in place of the Choir Organ and is the bottom manual of an organ with three manuals or more.

Principals – The tonal family unique to the organ that has no orchestral counterpart. The Principal Chorus (8’, 4’, 2’ together) is the base to which all other organ voices relate. (Also called Diapason and Montre)

Rackboard – A flat, horizontal board with holes in it located on wooden supports immediately above the toe board of a windchest in a pipe organ. It is used to support the pipes and prevent them from vibrating and to keep them standing vertically.

Rank – In pipe terminology, a rank is defined as a set of pipes possessing a uniform tone quality, one pipe for each note on the keyboard or pedalboard.

Reed – One of the two classes of organ stops (also known as “Lingual” pipes). A reed pipe generates its tone by the vibration of a brass tongue against a rectangular opening, the resulting tone being given security of pitch and timbre by a resonator placed on the reed assembly. Reeds are the most colorful organ tonal family. They can be used in choruses and also as solo stops. Reeds can range from a very small delicate sound to a huge thundering sound.

Registration – The art of choosing and combining stops to produce the desired sounds in a specific organ that will properly enhance the music being played.

Regulation – A voicing procedure in which each note of each stop is adjusted to assure its proper relationship to the other notes of the stop, and that stop’s relationship to the rest of the stops on the organ.

Regulator - See Reservoir

Reservoir – A wind pressure-regulating device located between the blower and the wind-chests. (Also see Schwimmer)

Reverberation – The ability of a room to sustain sound. This quality is distinguished from an echo, which is an undesirable repeated bounce between two parallel surfaces. Reverberation is generally measured in terms of the number of seconds required for a sound to completely fade away... provides the effect of an acoustically “live” room. Can be very effective.

Reversible Action – A device applied to certain critical couplers or stops on an organ that allows them to be turned on and turned off by the same piston or toestud. Pressing the piston once turns on the device; pressing it again reverses the previous action. Reversibles are generally applied to manual to pedal couplers (ex: GT to PD), manual 16’ stops, and pedal 32’ stops. Also used on Tutti toestuds.

Scale – A term used to describe the diameter of an organ pipe, relative to its length. A larger scaled pipe yields a broader tone, and a smaller scaled pipe produces a keener tone. The scale of each pipe rank changes within the compass of the rank, providing each pipe with a unique harmonic character. This varying of the rank’s scale aids the ear in distinguishing pitch.

Scaling – The process of determining which scale to use for a particular organ voice. (See Scale)

Schwimmer – A wind pressure regulation device built into the bottom of many windchests. (Also see Reservoir)

Sequencer – A device that records, edits, and plays back musical information as MIDI data. (Also see MIDI Sequencer)

Sequencer Piston – A piston which when pushed recalls registrations saved in the organ’s memory in a specific order. This allows for a long series of stop changes to be made one after the other by pushing only one piston.

Set Button (piston) – The piston that is pressed before pressing the piston on which a combination is to be set. This applies only to Capture Action. (see Combination Action)

Sforzando – See Tutti

Sharps – The (typically) black keys of manuals or pedals.

Side Jambs – The drawknob panels beside the manual keyboards that contain drawknobs, or other stop control, and other controls, arranged by division.

Solo Organ – An Organ division normally containing only solo stops, played from the top manual of a four manual organ, or coupled to any division if it is a floating division.

Stop – Strictly speaking, a stop is a chromatic series of tones of like quality, one tone for each key on the keyboard. In practice, as distinction is made between speaking stops and non-speaking stops (couplers, tremulants, antiphonal controls, expression couplers, etc.).

Stopkey – An engraved plastic (sometimes wood) tongue that identifies a stop (voice) and actuates that stop, providing the same function as a drawknob.

Straight Organ – A term that has historically been used to describe an organ that has a separate, individual pipe for each note of each available voice on the organ.

Strings – These are smaller or narrower scaled stop that are subordinate in dynamic level to the principals and possess a brighter or keener tone. Strings are useful as accompaniment stops.

Sustain – A device that permits a gradual decay of the tone of a sound. Most commonly affecting MIDI and percussion, but on digital organs, can be applied to the entire organ to replicate acoustic characteristics of a larger space.

Swell box – A box with adjustable louvers on the front. Stops located within a Swell box are said to be “enclosed” and are perceived to swell in volume as the louvers are opened and closed.

Swell Organ – The more Romantic division of the organ named for the fact that it is enclosed in a Swell Box. The Swell contains solo and chorus reeds, as well as strings and celeste stops. It is normally the top manual on a two or three manual organ.

Synthetic Reed – Using mutation pitches on the organ, one can often synthesize reed sounds that are not actually in the organ. For instance, flutes at 8’, 2-2/3’, and 1-3/5’ drawn together

and played as a solo voice will make a fairly good Clarinet stop. A 4' and a 2-2/3' flute or an 8' string and a 2-2/3' flute can make a good Oboe stop.

Temperament – The tuning scheme used in spacing intervals between half tones on a keyboard instrument. Many temperaments have been developed, some of which favor certain keys over others. Organs are normally tuned in the most common temperament, Equal Temperament, where each interval is equal.

Tilting Tablets – Rocker switches on the console used for turning on and off stops and/or couplers. These switches are normally located on a board, which is above the organ's top manual. On a larger organ with more stops they can be in side-jambs. (Also, see Stop Key).

Toe Stubs – Foot operated switches that operate the combination action and are also used for some reversibles and the Tutti.

Toeboard – The top of a wind-chest where the pipes stand in holes designed to fit each particular pipe. Valves are located inside the wind-chest, under the Toeboard, which open the air passages under each hole when the proper key is played. This allows air to enter the pipes causing them to sound.

Transposer – A device that lowers and raises the pitch of the organ in semitones (half-steps), causing the organ to play in a key signature different than the key that is being played.

Tracker Touch – A mechanism applied to the keyboards of the modern organ, which simulates the top-resistant type of touch characteristic of ancient mechanical (tracker) action pipe organs. This touch promotes clean, articulate plying technique.

Tremulant – A device that causes a rhythmic undulation in pitch and volume that is used as a special effect most often with a single solo stop. Each individual manual division has its own tremulant.

Tuning – The adjustment of each pipe (or note in an digital organ) to play at the correct pitch. Pipe tuning is done by changing the length of flue pipes, usually with a tuning sleeve. Reed pipes are tuned by changing the length of the vibrating metal tongues with a tuning wire. The pitch of pipe organs changes with temperature changes. Pitch will shift about 2-Hertz for every degree F of temperature. (Higher temp, higher pitch; lower temp, lower pitch.)

Tuning Control – A special control that allows digital organs to be quickly tuned to a piano or other instrument, which may not be at concert pitch. (See concert pitch).

Tutti – A reversible action which, when operated, instantly brings on the full organ. When pressed again, the organ reverts to its original registration.

Unenclosed – Unenclosed pipes are located in a visible position and are therefore able to project their tones directly into the room (vs. enclosed in a Swell box). Frequently, organs will have both the Great and pedal divisions unenclosed giving them a greater presence and clarity.

Unification – The process by which a set of pipes is extended and switched to allow for playing at various pitch levels (16', 8', 4', 2', 2-2/3', etc.), thereby increasing the instruments versatility. (See extensions).

Voicing – The complex process following the testing of an organ in which every stop in the instrument is carefully adjusted for correct tonal quality. This involves balancing the stops to appropriate levels, and much of this is done at the factory, but must be finished on-site.

Wind Chest – An airtight box containing various actions, which release wind into each pipe according to, the stops selected and the keys pressed, causing pipes to sound.

Zimbelstern – A mechanical struck-bell device often located high up in the façade of pipe organs. Modern Zimbelsterns use high-pitched bells struck by strategically placed clappers to produce a continuous ringing of the bells, which highlight the tonal colors of the organ.

