

ORGAN STOPS THE FIVE FAMILIES OF PIPE ORGAN SOUND

PRINCIPALS

The principal is the basic color of the pipe organ: for leading hymn-singing or playing a forte Bach Prelude and Fugue. The principal pipes, generally speaking, dominate the manual and pedal divisions in which they live. In other words, they are usually our loudest flue stops.

Below are typical principal choruses arranged according to nationalistic traditions.

England

Open Diapason 8
Octave 4
Twelfth 2
Fifteenth 2
Mixture IV

France

Montre 8
Prestant 4
Quinte $2\frac{2}{3}$
Doublette 2
Fourniture V
Plein Jeu IV

Germany & The Netherlands

Prinzival 8
Octav 4
Quint $2\frac{2}{3}$
Octav 2
Rauschquint II
Mixture IV
Cymbal III

Other Typical Principals You Might See Locally

GEIGEN DIAPASON: The typical 8' principal of the English Swell manual. It is usually voiced less loudly than the Great Diapason, more lean, yet broad and singing. Very useful stop in accompanying choral literature. It is found on some Choir manuals also.

SPITZPRINCIPAL: Often found at 4' pitch on the Swell manual of American Classic organs. This Principal is a bit narrow and keen in sound, usually mild-mannered, but often sounding with assertive authority. It and a mixture are often the Swell's only Diapason ranks.

OCTAVIN: A French term for a Principal 2'. It is sometimes a bit flutey and on the full side, but useful.

OPEN WOOD 16: A Pedal Diapason at 16' open length. A dark and dramatic forte bass line. Wolfy but accurate in pitch.

SUAVIAL: An 8' Principal found on the Positiv of some Austin Organs, also found often in Switzerland, Germany, and the Netherlands. This is a darker than usual Principal but very quick and authoritative in speech.

ENGLISH DIAPASON: A dark, "navy blue" Diapason. Wide scale, dark, sweet, commandingly warm in congregational hymns and big choir work. Far too muddy for Baroque counterpoint.

LARGE DIAPASON 8' & SMALL DIAPASON 8': A typical fancy of British organ building. Two Diapason ranks living on the same chest, side by side. They draw separately but are wonderfully profound in service playing and in literature. The two drawn together are usually designed to give a glowing solo voice.

DIAPASON I and DIAPASON II: Another set of drawknobs for the above large/small Diapason design. The now silent Citadel Reuter contained Diapasons I and II and Octave I and II on the Great. The two ranks were older and darker with beards at the mouths.

PRINCIPALE: Italian word for Principal... Octava 4' & Octavina 2', etc. Some Rufatti organs and influences around Atlanta are our nearest Italian specimens.

MIXTURES

Mixtures are compound stops, one pipe sounding for each number in the roman numeral. These stops combine at least one mutation ($2\frac{2}{3}$, $1\frac{1}{3}$, $\frac{2}{3}$, $\frac{1}{3}$, $5\frac{1}{5}$, $\frac{1}{5}$, $1\frac{3}{5}$, etc.) and one on-pitch rank (2, 1, $\frac{1}{2}$, etc.). Practically all modern American Mixtures are built of octave and fifth-sounding ranks. The French and the English have always been fond of "Tierce" or third-sounding ranks appearing in Mixtures — typically $1\frac{3}{5}$. In England, practically any drawknob found on a Father Willis organ will contain a third-sounding rank. Stop names which sometimes include the peculiar but charming third rank are Acuta, Scharf and Cymball. The Germans have always made Mixtures of octave and fifth-sounding ranks only... always... and only. (There are mild deviations.)

Sesquialtera, a solo mixture consisting of the pitches $2\frac{2}{3}$ and $1\frac{3}{5}$, on one drawknob. Sesquialtera III would probably contain $2\frac{2}{3}$, 2, and $1\frac{3}{5}$. These are exquisite Baroque solo voices when drawn with an 8' flute. They were and are presently very, very popular in Germany, France, and the Netherlands. They can and should be added to other Mixtures in full principal choruses when playing French and English literature.

THE FLUTE FAMILY

The oldest voices of the organ, these stops always took their inspiration from the orchestral flutes and their ancestors. Flutes are made of wood or metal in many shapes, volumes, colors, and sizes. Flutes play a special role in organ building. Because so many yield a good character in wood, they are a cost advantage — wood is cheaper than metal. The disadvantage, however, is that wood takes a longer time in labor to finish.

HOLZ (German = "wood"): this prefix on any drawknob indicates that it is constructed of wood. Stopped flutes are very popular in that they are effective in wood and are "half-length" in height — less raw material (\$) and smaller pipes to fit into a chamber/chest. Stopped flutes, again, can be of wood or metal.

STOPPED FLUTES are found in all nationalities of organ building. Germans call them Gedeckt, French, Bourdon, English, Stopped Diapason or Stopped Flute. American and English organs freely interchange the terms Bourdon, Gedeckt, and Flute throughout all divisions. Pedal Subbasses (or Soubasse) are large stopped flutes. Wood is usually used for bass ranks, and wood or metal used for manual ranks. Stopped flutes tend to articulate quickly and often percussively chuff. Particularly noted for charming chuff are the Netherlands organs that spell their stop knobs flöte.

Some common stoppered flute stops are: Bourdon, Gedeckt, Lieblich Gedeckt, Pommer, Bourdon Doux, Gedecktlöte, Stopped Diapason, Stopped Flute, Nason Flöte, Nason Gedeckt, Koppelflöte, Singend Gedleckt, Subbass, and Soubasse.

OPEN FLUTES are full-length pipes of wood or metal. They are usually smoother in tone than stopped flutes, articulating more gently. Some typical open flutes are: Hohlflöte (German), Flûte Harmonique (French), Harmonic Flute, Waldflöte, Blockflöte, Concert Flute, Nachthorn, Cor de Nuit, Spitzflöte, Flauto Dolce, Melodia, and Claribel.

HALF-STOPPED FLUTES again are found in all national traditions: Chimney Flute (England), Rohrflöte (Germany), Rohrflöte (Holland), Flûte à Cheminée (French). Of course, American organs today sport all these terms. These are typically mild, supportive, well-blending stops, useful in building combinations for organ and choral literature alike. It seems of recent years to have become a favorite flute rank on Swell (and often extended to Pedal at 16) organs all over America. The construction of this pipe is as a stopped flute, but a small chimney about the size of the little finger for low C pipe, allows an opening on top.

THE STRING FAMILY

As their name implies, strings were originally and are imitations of stringed instruments. They appear in stop lists even of Bach's day. Viol de Gambe and Salicional are old words. Their tones range from keen and sizzling to broad and sedate, very close to principals. They are always full-length pipes and are almost always of metal. Pedal Violones were often wood and occasionally one finds a Viola made of wood.

THE CELESTES are the trademark of the string family. The word celeste indicates two ranks of pipes: one tuned normally and the second a trifle sharp or flat to create a shimmering, undulating, or vibrato-like effect. The celestes are essential to playing much Romantic literature and accompanying much English choral literature.

The word *celeste* usually indicates a sharp-tuned celeste.

Flat-tuned celestes include Vox Angelica, Flute Celeste, Unda Maris (usually created to celeste with Dulciana pipes).

Arranged below are some typical string ranks proceeding from thinnest and keenest to broad and lush:

Viola d'Orchestre, Salicional, Aeoline, Gamba, Gambe, Viola, Viola de Gambe, Viola da Gamba, Viola, Viola Pomposa, Cello.

THE FLUTE HYBRIDS

An extremely important and useful stop family is sometimes grouped with principals; others think of them as strings; many examples are very flutey. These are the hybrid stops, metal ranks which are tapered at the top very gradually and gracefully, somewhat like an upside-down ice cream cone. These stops have a special usefulness. Because of their tapered shape, their tones are limited in fifth sounding overtones — in which the

stopped flutes abound. Because of the absence of fifth, these pipes blend extremely well — providing support in organ and choral work without making a profound color statement. This is not to say they are dull, uninteresting timbres. Their colors, however, are very refined, dignified, and subtle. Choirs sing their best with these stops because singers' ears are not having to deal with a lot of fifths in tuning their parts or unisons. These stops make quietly lush accompaniment textures, allowing a more distinctively colored solo voice to completely shine.

These hybrid stops again date to the Baroque era, and have been extremely popular since Victorian times. These stops were one of the few Victorian holdovers that were not despised by the Baroque Revival and American Classic ideal.

Common hybrid stops are Gemshorn, Spitzflöte, Spireflute, Flauto Dolce, Dolcan, Dulciana, Erzähler, Unda Maris, Dolce.

Mixtures and mutations are sometimes made of Gemshorn or Dulciana pipes. These are exceptionally well-blending mixtures, free of pierce and slice.

THE REED STOPS

Almost every reed in the world can be used carefully as both a solo voice and as a chorus reed. Solo voice indicates a single line melody; chorus reed indicates a handful of notes at a time. Reed pipes sound in a different way than flue pipes. There is actually a reed inside the pipe that vibrates to make the tone. In flue pipes, the sound is made merely through a vibrating column of air inside the pipes. Reeds have always sought to imitate reed and brass instruments. Reeds are organists' source of fire, clang, éclat. Splendor and rage. They indeed produce our most dramatic effects.

The most common reed stop is the Trumpet. English: Trumpet: French: Trompette: German: Trompete: Dutch: Trompet. They all imitate a solo or orchestral trumpet from some phase of history.

FRENCH REEDS tend to be most fiery, shiny, and shimmering. When we say French Reeds, we usually are thinking of arch-Romantic French Reeds... the ones by Cavallé-Coll. Their tone is filled with silver, fire, and refinement. French reed names are Trompette, Trompette Harmonique, Bombarde, Clairon, Chalumeau, Hautbois, Cromorne.

ENGLISH REEDS have always been impressed by French Reeds. The English, however, tend to make reeds darker, more roaring, more nasty. The medium loud 16' manual reed is an integral sound of the English Swell. English reed names are: Trumpet, Oboe, English Horn, Cor Anglais, Bassoon, Cremona, Clarinet, Ophicleide, Tuba.

GERMAN REEDS are the oldest and have always maintained more primitive qualities in their sounds. There is more rattle and bleat in German reeds. They offer a lot of atmosphere, but do not blend especially well, and can be offensive in French and English literature. German reed stops are: Trompet, Trompete, Krummhorn, Posaune, Schalmey, Baarpfeife, Dulzian, Rankett, Zink, Fagott.

AMERICAN REEDS usually, organ by organ, take up with one of the above schools. On the average-sized instrument, the reeds must be mostly of one or two schools. Too much international mixing produces combinations that do not blend together. Reeds are expensive to build and maintain; they must all sound well together.

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Bethel United Methodist Church
Charleston South Carolina
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A PISTON PLAN FOR THE FIRST BAPTIST ORGAN
10 General Pistons Available
Pistons 1-6 for Congregational Hymns
(also bigger organ voluntaries)

General 1 (Foundations 8, 4 mild 2)

Great: Great Principals and Flutes 8 & 4, Flute 2
Swell and Positive: Flutes 8,4 & 2

General 2 (Mild Reeds for verses about sin)

Add to the above...

Swell: add Hautbois

Positive: add Krummhorn coupled 8 & 4 or 18 & 8 or just 8

Pedal: add Bassoon 16

General 3 (Forte Plenum with medium Mixtures)

All Manuals: Principals, Flutes, Strings, Mutations

Swell: Mixture

Leave the Great Mixture off this one.

General 4 (Great Plenum – some decorative reeds)

Great: Full, no reeds

Swell & Positive: Both full with reeds (mutations & mixtures if you like and super couplers)

Purpose of this piston is the avail Principal Chorus on Great either used separately but especially to accompany solo reed on melody line.

General 5 (Full Plenum – No Reeds – Maximum Shining Principal Brilliance)

Full Principals, Flutes, Mutations, Mixtures. Super Couplers is needed to pull the congregation in its acoustic.

General 6

Add every available reed to the above. A 16' stop on some manual for availability of depth, grandeur and sheer roar! Congregations can sing very well with judicious use provided you articulate your playing with style, taste and backbone.

Generals 7, 8, 9 are kept for accompanying.

General 7: (All 8's)

Great: Principal 8, Bourdon 8, Swell 8, Positive 8

Swell: Rohrflöte 8, Viole de Gamba 8, Swell 4

Positive: Gedackt 8, Erzähler 8

Pedal: Light 16, Swell or Choir coupled at 8

General 8: (Choral accompaniment 8 & 4)

Great: Principal 8, Bourdon 8, Spitzflöte 4, Swell & Positive Coupled

Swell: Rohrflöte 8, Viole de Gamba 8,

Positive: Gedackt 8, Erzähler 8, Swell 8 & 4 This puts the Swell string at 4' which is good for the choir to hear pitch.

Pedal: Appropriate support

General 9: (Solo Reed on Swell or Choir)

Great: Principal 8, Bourdon 8, Swell 8

Swell: Flute 8, Celeste 8

Positive: Gedackt 8, Krummhorn 8 or Gedackt 8, Nasat $2\frac{2}{3}$ & Terz $1\frac{3}{5}$ with tremulant

OR

Great: Flutes 8 & 4, Positive 8

Swell: Rohrflöte 8, Viole de Gamba 8, Haubois 8

Positive: Gedackt 8, Erzähler 8, Erzähler Celeste 8

OR

Great: Principal 8, Bourdon 8, Swell 8

Swell: Flute 8, String 8, Haubois 8, Tremulant

Positive: Erzähler 8, Erzähler Celeste 8, Positive 4

Pearly & Delicious – A Methodist Delight – Anglican Mysticism

General 10 (Save for Special Effect)

This piston is designed for light, heated dialogue in Baroque counterpoint or variations on a theme. These sounds are typical of the Baroque organ, especially of the Netherlands.

Great: Bourdon 8, Blockflöte 2

Swell: Rohrflöte 8, Plein Jeu III

Gedackt 8, Nasat $2\frac{2}{3}$

On each manual above, the 4' octave pitches have been purposely omitted, creating an open, flutey sound. English organists are very fond of these sounds in chorus playing and as solo lines. Lots of English Christmas carol arrangements fare well with this shepherd's pipe sound.

A PISTON PLAN FOR SERVICE PLAYING
For an organ with 2 manuals and 6 General Pistons
Pistons 1-2 are reserved for choral works.
Great & Swell Manuals Coupled

General 1

Great: Hohlflöte 8, Gemshorn 8
Swell: Gamba 8, Swell to Swell 4
Pedal: Bourdon 16, Swell to Pedal 8

General 2

Great: Hohlflöte 8, Gemshorn 8, Flute
Swell: Rohrflöte 8, Gamba 8, Nason 4 Gedeckt 4
Pedal: Bourdon 16, Bourdon 8, Swell to Pedal 8

Pistons 3,4,5 & 6 reserved for hymns, service music, voluntaries.
Great & Swell Manuals Coupled

General 3 (Mild Plenum - Principals 8,4 & 2)

Great: Diapason 8, Hohlflöte B, Gemshorn 8, Octave 4, Great 4
Swell: Rohrflöte 8, Gamba 8, Spitzprincipal 4, Flautino 2
(Swell to Great 8 or Swell to Great 4 if too dull)
Pedal: Bourdon 16, Octave 8, Bourdon 8, Swell & Great to Pedal 8

General 4 (Plenum plus medium reeds)

Great: Diapason 8, Hohlflöte 8, Octave 4, Flute 4, Fifteenth 2
Swell: Rohrflöte 8, Gamba 8, Spitzprincipal 4, Flute 4, Nazard 2 2/3
Pedal: Principal 16, Bourdon 16, Octave 8, Choralbass 4, Sub-Trompette 16, Great & Swell 8 to Pedal

OR

General 4 (Solo Trumpet Combination on Swell, Principal Chorus on Great)

Great: Diapason 8, Hohlflöte 8, Gemshorn 8, Octave 4, Flute 4, Fifteenth 2
Swell: Rohrflöte 8, Gamba 8, Spitzprincipal 4, Flute 4, Nazard 2 2/3, Flautino 2,
Trompette 8, Oboe 8
Pedal: Diapasons & Flutes 16 & 8, Great to Pedal 8

General 5 (Full Plenum)

Great: All Principals, Flutes, Strings, Mixtures, Swell 8 & 4
Swell: Full no reeds with Plein Jeu III or Mixture III
Pedal: Full Flue pipes, no reeds, Great & Swell to Pedal

General 6 (Full Organ with Reeds)

Fortissimo both manuals with Mixtures, Reeds, Super Couplers

SOLO COMBINATIONS

These combinations are essentially Baroque in concept but work very well in American contemporary literature.

Flutes 8 & 2

Flutes 8 & $2\frac{2}{3}$

Flutes 8 & $1\frac{1}{3}$

Flutes 8 & $1\frac{3}{5}$

Flutes 8 & 1

Flute 8 plus a Mixture

Flute 8, Principal 2

Any reed at 8' with or without Tremulant.

Sesquialtera: Flute 8, Nazard $2\frac{2}{3}$, Tierce $1\frac{3}{5}$

On a big 16' scale instrument, particularly France,

This can appear as Flute 16, Tierce $3\frac{1}{5}$ & Nazard $2\frac{2}{3}$

Cornet V: 8, 4, $2\frac{2}{3}$, 2, $1\frac{3}{5}$

Corno: English term for a fistful of 8' stops. The term literally means Horns.

Diapason 8, Gambe or Salcional 8

Plenum: Principals 8, 4, 2 & Mixture

Jeux Doux: Soft Foundation stops primarily at 8'

Jeux Forts: Loud Foundation Stops

Anches: Reeds

Ajoutez: Add or Draw

Otez: Put in; take a stop(s) off

Tirasse: Couple

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