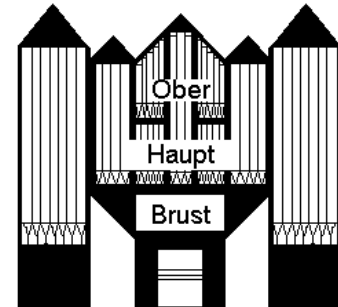


Divisions and Stop Names

The name of a division in a German organ identifies both its tonal characteristics and its placement in the case. You can think of the typical main case of a German organ as having three levels, with the Head (*Haupt*) being the most important. The division placed below the head is the Breast (*Brust*), generally a very lightweight division with “tinkly” sounds, and a division placed over (*ober*) the head is secondary in importance but has more substance than a *Brust* division. Another subsidiary division may be placed at the organist’s back (*Rück*). With the exception of the *Hauptwerk*, any of the subsidiary divisions might be called a *Werk* or a *Positiv*. In different styles of organ-building in Germany, the Pedal division may be placed either in prominent side towers (*Turm*) or behind the main case – out of sight, but never out of earshot. Other divisions you could find are *Schwellwerk* (an enclosed division), *Solo*, *Unterwerk*, or *Fernwerk* (Echo division).



Most of the German names for stops are familiar to us because of their use by American builders over the past 150 years, but we will run into some unusual spellings. The most interesting names will be found on the late Romantic organs built by Sauer. There we’ll hear such stops as a Harmonica, a Schalmey that’s not a reed, a Fernflöte, and a three-rank Harmonia aetheria.

Mechanics

You’ll see and hear a lot about different types of chest design, and occasionally references to different types of action. For the most part, we’ll be concerned with organs that use mechanical action (*mechanischer Traktur*), which means that there’s a direct mechanical link (usually thin strips of wood) between the key and the part of the windchest that allows wind into the pipes. This type of action may also be applied to stop controls (*Register Traktur*). On a couple of instruments (those built by Sauer, in particular) we’ll run into pneumatic action (*pneumatischer Traktur*), in which wind power is used not only to sound the pipes but also to open the valves that admit the air to the pipes.

The *Laden* (windchests – the parts that contain air under pressure and control access of wind to the pipes) may be slider chests (*Schleifladen*) or spring chests (*Springladen*). We don’t find many spring chests in the US, but they were fairly common in seventeenth century Germany. We will also get to experience pneumatic chests on the Sauer organs.

Two types of couplers might be new to you. A “shove coupler” (*Schiebekoppel*) is engaged when you actually move one of the keyboards forward or backward. Generally it will move only about an inch. Often a *Schiebekoppel* between *Hauptwerk* and *Rückpositiv* is the *only* one on large Baroque organs. A *Ventilkoppel* uses a second pallet box attached to a windchest, and most often these second pallets were permanently connected to the pedals. The pedal keys sounded the notes only when air was admitted to the second pallet box through a *ventil* – a wind way. *Ventilkoppels* were common in organs built by Silbermann, especially small ones with very small pedal divisions.

Composition pedals were developed in the late nineteenth century and are found chiefly on organs built in England, Germany and the U.S. They function like pre-set, unchangeable combination pistons, most often physically moving the stop knobs. *Freie Kombinationen*, on the other hand, can be adjusted, and

function like the combination pistons you find on American organs today.

Historical and Geographical Differences

The first organs we'll see will be from **seventeenth-century north Germany**, primarily meant to be used in Protestant services, and generally consisting of a *Hauptwerk*, a *Rückpositiv*, and a Pedal division located in side towers. For the most part, an *Oberwerk* is rare in this type of instrument, a *Brustwerk* being the most common choice for a third division. Each division is usually complete within itself and consists of a principal chorus, some flutes, mutations, and very few reeds. The most important reed stops will be in the Pedal. Spring chests and mechanical action are common. This tradition continued through the eighteenth century with some modifications. These are the instruments associated with the music of Böhm, Buxtehude, Lübeck, and many other composers.

Organs in **central Germany** tended to have more colorful stops, but less power. By the **early eighteenth century**, string stops were still new, but were becoming common. Pedal divisions didn't always have a complete chorus, and the secondary manual division might be considerably quieter than the primary chorus. The *Rückpositiv* was less common, and on smaller instruments, pedal towers would have been absent. As in the earlier north German instrument, the strongest reeds were in the pedal. These are the instruments associated with the music of Pachelbel and Bach.

Late-Romantic organs were usually very colorful, with almost all of the tonal variety provided by flues rather than reeds, continuing a trend seen in many mid-eighteenth-century organs, particularly those built by Trost. Technical improvements made playing with all manuals coupled a real possibility for the first time, and mechanisms for making rapid stops changes were introduced, including composition pedals and devices for making crescendos. In spite of these developments, often only a few stops were enclosed in swell boxes. These instruments are essential to the music of Reger.

After WWI the *Orgelbewegung* of the 1920s was characterized by a renewed interest both in surviving instruments of the past and in the inclusion of their tonal properties in new instruments. As is often the case with such movements, the **Neo-Baroque** produced instruments that exaggerated some characteristics of the true Baroque organ while ignoring others that were equally important. The works of Pepping and Schroeder are idiomatic music for these instruments.

In the last quarter of the twentieth century, some builders began studying characteristics of surviving Baroque organs and consciously trying to imitate these organs on every level. Such "historically informed" instruments are meant to restore the organ to its perceived "pure" form of the so-called Golden Age of organ-building — 1650-1750.

Builders

Arp Schnitger (1648-1719) built c. 160 organs all across northern Germany, Poland, and Holland, and is generally considered the best of the north-German Baroque builders. His instruments are characterized by high lead content in the principals, spring chests, and open, "vocal" voicing. Each division is a complete and independent tonal entity, so much so that couplers are rare. If one is present, it is usually only a *Schiebekoppel* that couples the *Hauptwerk* and *Rückpositiv*.

Gottfried Silbermann (1683-1753) learned the trade from his brother Andreas in Alsace, then returned to Saxony in 1710, where he built most of his 45 instruments. They are often described as having a "silvery" sound, and not just as a pun on his name: "Silver man." His principals are high in tin content, the chorus work refined, the overall effect quite powerful, the pedal reeds very strong.

Silbermann's case designs are quite distinctive, all of them based on principles seen in his Opus 2 in Frieberg Cathedral, which he built to a design made by Linzner, the organist there at the time. He included some string stops (new at the time), but didn't go so far as some did in including the "new" sounds of the time. Other important figures of this period include Zacharias Hildebrandt, who worked with Silbermann at one time, and Tobias Heinrich Gottfried Trost, a Thuringian builder whose milder instruments are more like the ones Bach knew before moving to Leipzig.

Important builders in the nineteenth century were E. F. Walcker (1794-1872), whose firm continues in existence today, and Friedrich Ladegast (1818-1905), whose instruments are particularly associated with the music of Liszt and Reubke.

Wilhelm Sauer (1831-1916) learned the trade from his father, then traveled through Germany, France, and England. He worked both with E. F. Walcker and Cavallé-Coll before establishing his own firm in 1857. largely because he introduced "factory" procedures to organ-building, he was able to build over 1100 organs, among them the largest and most respected of the late nineteenth century. He also introduced many late Romantic tonal characteristics to his dispositions, introduced both pneumatic and electric actions, and patented a system of combination pedals.

Pitch and Tuning

Modern standards of pitch and tuning are so pervasive that we sometimes think they must be the result of natural laws, or at least must be somehow superior to anything else. On this trip we'll hear a variety of instruments on which the international standard $a^1 = 440$ is only a theory — and a late one at that. Even in the seventeenth century, there were two different pitch standards, choir pitch and chamber pitch. Middle C on an instrument in *Chorton* was not the same as middle C on an instrument in *Kammerton*, and in different times at different places, the difference could cover the range of a third. Earlier *Chorton* was the lower pitch, but by Bach's time the reverse was true. We'll hear organs where a^1 is as low as 415 and as high as 475 hz., a wide enough spread that even those of us who aren't saddled with absolute pitch recognition will be able to tell the difference.

We'll also hear tuning systems other than equal temperament, some historical and others newly devised. Our ears are accustomed to a system in which each half-step is the same size, described conveniently as consisting of 100 cents. We'll hear tuning systems in which some half steps are as small as 90 cents, while others are 110 cents large, giving a totally new quality to a leading tone, for example.

Another way to think about the difference is to realize that in equal temperament all major or minor keys sound alike – perfect fifths are all just a little bit flat, major thirds just a little bit sharp, and so on. In fact, only octaves are perfectly in tune with the equivalent pitch in the overtone series. In *unequal* temperaments, no two major keys sound exactly alike – some are more in tune than in equal temperament, others are less so. Some perfect fifths are truly perfectly in tune (better than equal temperament), others not. The same with thirds, fourths, sixths – even dissonances like the major seventh can be better in tune than in equal temperament.

How to Listen

In some churches the host organist will play literature (or improvise) for as long as 45 minutes at the beginning of our visit, in others we might hear only a few minutes of playing before we have a chance to get “up close and personal” with the instrument ourselves. Whether you are listening to the resident organist or each other here are some questions you can use to guide your ears and get more out of the experience.

How would you describe the sound of the 8' Principal on the main manual division? Compared to the organ you know best, is it rounder, stringier, harsher, milder, chiffer, fluffier, louder, softer, ... ?

How do the stops of the principal chorus(es) relate to one another? Does the mixture (mixtures?) blend in or dominate?

How do the principal choruses of different divisions relate to one another? Is the difference caused by dynamics, placement, pitch or other factors?

How would you describe the sound of the trumpet? How does it relate to the 8' principal on the same division? Compared to the organ you know best, is it rounder, harsher, softer, ...?

What about the other manual reeds – krummhorn and Vox humana?

How would you describe the flutes, and how do the 8' flutes on different divisions compare to one another?

How does the pedal division sound compared to the main manual division?

How would you describe the reeds in the pedal? How do they compare to the manual reeds? To the pedal flues?

How to Play

The importance of this experience doesn't lie in how good your performance is, but in what you will remember of the instrument, and what it will teach you about playing music that is appropriate to that kind of organ. Your experiences on this trip should inform your playing for the rest of your life.

Years ago – *many* years ago, in fact – a very fine teacher told me that the most difficult thing for a musician to do is to listen to himself while performing. When you have a chance to play an organ on this trip, do your best to listen carefully to the response you get as you play. Listen to the instrument and listen to the room and its response to the sound of the organ.

Notice how the action feels when you play. The tactile sensations we have when we play are those that the composers we respect had. Flat pedalboards, shorter keys, stiff action, odd speech characteristics when you play with too much force — all these and more affect us the same way they affected the composers, and they can tell us a lot about how the creators of our favorite literature *felt* when they played.

Finally, write it down. Talk to each other, refine your comments, and write down every random impression you have in each location. A year from now – maybe sooner – you'll be glad you did.