

SPIEGEL DER ORGELMACHER UND ORGANISTEN -

important early 16th century treatise on organ building;

Provenance: Germany

Author: [Arnolt Schlick](#)

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Language: German

The first copy to be found in modern times was discovered in the mid-19thc behind the chimney of a farmhouse in Reinhardtsgrμμα, Saxony. Eitner owned this copy which was later acquired by the English businessman, Hirsch, in 1900. It accompanied his library to Cambridge (GB:) and then passed to the British Library. A second copy was discovered in the Halle Marienbibliothek in 1952, bound with two other musical treatises from later in the 16thc.

Schlick commences with a letter of privilege from the Emperor Maximilian which identifies him as “organist of Heidelberg”.

In the preface, Schlick writes that “the organ is the pre-eminent instrument of music, since the greatest number of voice parts, as many as six or seven, may be controlled by one man. It is customarily used in churches for the praise of God, to facilitate choral singing, and to refresh human spirits and vexations. It is produced with great and heavy outlay and expense, and certainly through ignorance it is easily wasted, ruined, and all the cost may be vainly expended.”

Contents: There are ten chapters according to the following scheme:

I (Organ) Placement

The organ must be so placed that it is properly heard in all parts of the church; not too far from choir or the priest at the altar. The organ is “an ornament to the church ... if it has a proper appearance...not lightminded wrong and evil. For example, such a one built a few years ago in the cloister of a mendicant order, there was, just for effect, a rather large figure of a monk under the organ, which, when one played on it, lunged out of a window as far as its waist and then snapped back in again. This often shocked young and old, men and women, so that some were often prompted to swear and others to laugh. This should be properly avoided in church, especially by the clergy. Likewise, the grotesque faces with wide mouths that open and shut, and long beards, and complete figures that strike about, encourage improper manners. And too, rotating stars with little bells that ring, and such things do not belong in church. Yet when our Lord God holds a church fair the devil sets up his stall next to it...”

II Pitch

In order to be pitched suitably for singers, the organist must play “using the semitones, which is not convenient for everyone.” Schlick gives $6\frac{2}{3}'$ as the measurement for F below gamut G in the pedal. One could also have an organ a fifth larger, with tenor C in the pedal at this length, or even larger, with $13\frac{1}{3}'$ ($2 \times 6\frac{2}{3}'$) producing the lowest pitch. “The very biggest organs have their largest pipes 20, 24 or 30 feet long ... It is not possible to hear clearly what

is played on them, because of the length and number of the pipes. Also the organist cannot bring off his performances as realistically or as powerfully as on smaller instruments because of the high wind pressure, large pallets, springs, stop knobs, rollerboards and other things that make trouble..." ... "Playing only on the manuals has been standard practice outside the German countries hitherto, but now they are studying the pedals as well, and not without reason, for with the hands alone it is impossible to play every piece correctly and with the parts in proper relation. But if one has the pedal to help, taking two or three voices, and also four in the manual, this makes seven parts altogether, which is impossible on the manuals without the pedal." Sometimes parts move far away, or coincide at cadences. The $6^{2/3}$ ' pitch is convenient for most of the chants and is best for "some newer registers or pipes, such as the rauschpfeif or krummhorn and trompette such as are now made. These, in the other (lower) pitch, will be too high or too low, and may not have their right proportions."

Schlick reiterates the importance of playing "fluently and securely through the semitones". "If one could shift the whole of the organ a tone higher or lower when it is already tuned to the correct choir pitch it would be a great advantage to the organist and singers. I have heard that a Positive was made thus years ago. But I know of only one really complete instrument, which with its Rückpositiv, two manuals, pedal and all registers, which are many and unusual, can be drawn a tone higher and down again...which instrument I use daily." pp. 35-7

III Console Specifications (dimensions)

Proper adjustment of the action; proper space between manuals and pedalboard. Manual compass: three octaves and a third f-a³. Pedal compass: F under gamut to middle c, with lowest F#, G#: "Although not everyone knows how to use them, one should not on this account leave them out and make the whole instrument incomplete. This is as if a person who was not able to keep fruit or grain and wine built a house, and on account of this would not build any cellar or storeroom in it. He who then may possess the house after him, if he knows well how to use a cellar and storeroom and chests, and how to devise means for [including] them ... must pay for the original owner's ineptitude because the house is not complete." B-natural in the pedal should be a semitone key, "where our predecessors were accustomed to have it, and where at this time it is more useful to everyone. In that until this time, few organs have had pedals that go above the high B-flat; therefore when top b-flat is a semitone and b-natural is a natural key, ..., this is almost unknown to the organist and often makes for confusion." Manual and pedal keys should not be too short. The action should be smooth and light: small, light rollers and long, narrow pallets of fir-wood, tapered toward the back. "It must be playable with the fingers, not so stiff, sticky and clumsy that one should hit it with a sledge hammer or a flatiron. Each individual object is designed for its own job. A knife that does not cut, or a horse that does not go, are useless, fruitless, and not serviceable for the purpose for which they were created or manufactured."

IV Pipe Construction

"it seems to me that the less lead and the more tin, or pure and all tin, is much better and more enduring, although it is harder to work and to cut..." "The long scaling is sweeter than the short, but the short scaling speaks faster than the long. Thus I would advise that each register in the instrument that is a principal include a so-called koppel or flute ... If the organ builder has a long scale alone and cannot voice it properly, as is often found, then a key in the manual or pedal can be held down almost as long as an *Ave Maria* before the pipe begins proper

speech, if it ever does.”

V Registers (specification)

“It is not commendable to build many registers, especially those sound rather like each other. Rather one should select those which are to be heard and recognized as different from one another. With eight or nine good registers, which go well together and yet are interchanged with one another [for tonal variety], one may give much pleasure to the hearer.”

1. principal [koppel or flute]
2. octave, long scale [or in large instruments, double octave]
3. gemshorn, short wide scale, octave above principal [or double octave]
4. zimbel
5. hintersatz
6. rauschpfeife
7. wooden percussion “like bowl hit with a spoon”
8. zink

Schwegel (3-holed flute used with tabor)

Regal “Five years ago one was made well and artistically for our all-merciful lord the Roman Emperor as a little instrument similar to a positiv, a regal or super-regal. Its sound was charming and unusual to the ear. Its pipes quite astonish those who are not acquainted with it, who cannot possibly conceive even of its shape and scaling. But the arts thrive and multiply daily -- Adam's children never rest.”

Pedal: octave goes well with principal, but these should be separate so that one can use the octave alone, and the hintersatz; trompetes, posaunes; Schlick does not advocate zimbels and small octaves “sedetzlein” in the pedal; the manual and pedal registers should all be individually controllable; he recommends the rauschpfeife, trompete, and hintersatz together and does not like a register that plays a gross tierce and quint on each note, nor the $5\frac{1}{3}$; he scorns multiple Positiv divisions: “one at the back, another in the *Brust*, a third inside the instrument, serving no purpose but to prolong the time and unnecessarily raise the useless costs. Much broth and little fish.”

Rückpositiv registers

1. principal of wood pipes, or tin pipes made to sound like wood (more articulate)
2. small gemshorn
3. zimbel
4. small hintersatz

RP hintersatz with main manual rauschpfeife; RP principal with main manual octave

Six: The Mixture (called the “Lokaz” by Schlick)

This is determined by the size of the church and the size of the instrument. It should be “sharp-edged, not of fifths and thirds that one may hear distinctly”. The $5\frac{1}{3}$ and $2\frac{2}{3}$ should be avoided. “It should also not be overladen with other large pipes that make the instrument rough and gross, fit for swine since they scream like sows.”

VII Voicing and Regulation

Good voicing and Uniformity (regulation) of each rank is important, there should be no borrowed keys or registers since these are “... unworkable, and organ builders are

wrongheaded thus to mutilate and bungle an instrument, because, as the philosopher says, a misformed limb makes a great difference and deforms an entire body. How convenient or well formed, then, is an instrument that has many members thus lacking and missing?"

VIII Pitch and Tempering

Schlick mentions an organ, built "in the last twelve years," that had split keys in manual and pedal. "It was however vain and wasted, not usable."

G# wolf Eb/D# t Bb t F t C t G t D t A t E t B t F# t C#

The G# can be camouflaged by "a little pause, or straightforward diminution, a little touching, a little run, a little ripple, or flourishes, in the discant". Those who recommend that A-flat be sacrificed for G# astonish Schlick. "...so to weaken the music and take away its proper characteristics, such as sweetness of good and strange concords, which without these semitones cannot be so well made and formed after the other, as they must confess". Organ builders suggest tuning in the summer rather than winter to avoid the problems of heating the pipes with the hands and having moisture freeze when one blows into the pipes.

IX Windchests

The windchest should be made of good oak, "riven"/split radially from the trunk with wedge and ax; pallets are best made of firwood. There should be plenty of room for the pipes, sliders, trackers and rollers and also enough room in the windchest to permit repairs to springs, pallets, and bourssettes. The instrument must be protected from rats and mice. The shutters protecting the organ should be lightweight and move smoothly.

X Wind

The wind should be plentiful and steady. Schlick recommends five or six bellows for the moderate instrument described in chapter two. Pine wood is better than fir or oak; supple cowhide for the bellows. The bellows should not waver or surge. "To test this, hold a chord on the entire instrument, six or seven keys in manual and pedal together, as long as a man may fitly pray two or three *Paternosters*; you will then hear whether the wind is steady and sufficient, etc.". Some build a bellows chamber to keep out rats. Others believe that if the bellows are unenclosed, the rats will be less attracted to them and do no damage. The bellows should be treated with a vermin repellent. "And idleness is not beneficial, as some think to spare the instruments by not playing them, so that they are long lasting. But rather, to use them hard every day and not to spare to play them really preserves them better..."

Reprints/Translations: A facsimile with english translation and notes by Elizabeth Berry Barber was published 1980 by Frits Knuf in Buren in the Bibliotheca organologica series as vol.113.