(LEMS 8045)

J.S. BACH
THE COMPLETE KEYBOARD TRIO SONATAS PERFORMED ON 2 LAUTENWERKECKE
By Shawn Leopard and John Paul

NOTES FROM THE INSTUMENT'S BUILDER, ANDEN HOUBEN

The Lautenwerck or lute-harpsichord differs from the harpsichord in several important respects. While historical references indicate differing approaches to design, there is general agreement that the use of gut strings is of primary importance. Harpsichords are designed to
be strung in metal, and for a number of reasons, simple replacement of their strings with gut will not give satisfactory results. Generally, a gut string requires a longer scale (or length at a given pitch) than a metal string. One might assume this infers a larger instrument, but this is rarely the case. Due to a rapid foreshortening of this longer scale (as one finds on the lute), Lautenwercke are often smaller than their metal strung relatives. This reduces the tension a Lautenwerck must bear in comparison to a harpsichord. Lighter construction is made possible by reduced tension, enabling a Lautenwerck to better respond to the less energetic gut string. This is especially true of the soundboards, which can be half the thickness normally found in harpsichords.

Gut stringing has other implications for Lautenwerck design. As gut strings have more internal friction than their metal counterparts, they generally have less sustain. This
allows one to dispense with dampers to a large degree. Individual instruments will dictate where dampers are needed (and how effective they need be), but one rarely finds

Lautenwercke fitted with dampers on every string. Any resulting "over-ring" is likely to enhance the lute-like effect.

The Lautenwercke also demands special attention concerning string layout. Thick gut strings vibrate more vigorously than thin metal ones at higher tension. This requires more space be given between adjacent strings to avoid interference. This consideration encourages the builder to keep his design simple. Two choirs of gut strings seems to be the practical maximum, though a third choir in metal is sometimes found. Harpsichords normally have one dedicated jack per string. Lautenwercke often have more than one jack serving the same string in order to achieve tonal and dynamic variation. This is most often true of instruments with more than one manual. Problems associated adding more strings are avoided, and resonate construction maintained.

It was in the early Seventies that I discovered historical descriptions of the Lautenwercke in Frank Hubbard's Three Centuries of Harpsichord Making. The concept of this instrument, a lute controlled by a keyboard appealed immediately to me. It didn't take long to discover there were no surviving examples. I remember working at the drafting table trying to work out a practical instrument from the scant information available. Technical problems and lack of experience would delay construction for the next twenty years.

Since the beginning my primary inspiration has been the writing of Jakob Adlung in Musica mechanica organoedi. His description of lute-harpsichords made by J.N. Bach, a cousin of J. S. Bach, offers more detail than other writings available. The instruments he writes about are a major departure from harpsichord building practice. The stringing is based on the actual lute. Most Lautenwercke seemed to have taken the harpsichord as a starting point, adjusting various perimeters for the use of gut strings. Adlung's literal "transcription" of the lute into a keyboard instrument results in an instrument where the string diameters, lengths of strings for a given pitch, and plucking points are very lute-like indeed. The appearance of the soundboard can be confusing until one realizes it is a logical analog of a lute's fretboard, and the motions of a lutinist's left hand in stopping the strings against the frets. Strings get progressively shorter while ascending a scale until one arrives at the next full-length, "open string" in the lute's tuning.

The two instruments used in this recording, like the lute are primarily double strung. The first choir of strings is at eight foot pitch and is maintained for the full range of the keyboard, GG-d'''. The second choir, like that of some lutes is at four foot pitch in the bass changing to eight foot pitch between B and f#'. From g' to the highest note d''', the second choir is absent as the lute is always single strung in this range. On the single manual instrument (1995) the second partial choir can be engaged selectively by means of a knee lever allowing a certain amount of dynamic and tonal control. The double manual instrument (1999) is strung in the manner above, but has five sets of jacks (one for dampers alone) and offers more variety in terms of tonal color brought about by plucking the strings at different points and using differing plectrum materials. This includes (not heard in this recording) a stop in soft leather capable of substantial dynamic control.

Both instruments use tied bridges that carry the full tension of the strings directly to the soundboard. This is perhaps the most radical departure from normal keyboard building practice where string tension is diverted to the case rim. Again, this is inspired by the lute bridge itself. It is only by following the example of low tension lute stringing that it is possible to build an instrument in this fashion which is able to withstand the pull of over ninety strings. This construction requires an overall lightness to better respond to the less energetic strings. Soundboard thickness is half that of most harpsichords and cases are constructed with lightness and resonance in mind.

TRACKS
Trio Sonata in E Minor,
BWV 528
Adagio-Vivace 2:40
Andante 4:36
Allegro 2:35

Trio Sonata in G Major,
BWV 530
Vivace 4:05
Lento 4:47
Allegro 4:04
Trio Sonata in C Minor,
BWV 526
Vivace 4:23
Largo 3:15
Allegro 4:29

Trio Sonata in E-Flat Major,
BWV 525
Allegro 3:16
Andante 4:15
Allegro 4:12
Trio Sonata in D Minor,
BWV 527
Andante 4:58
Adagio e dolce 3:15
Vivace 4:27

Trio Sonata in C Major,
BWV 529
Allegro 5:22
Largo 4:50
Allegro 3:55

CREDITS
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