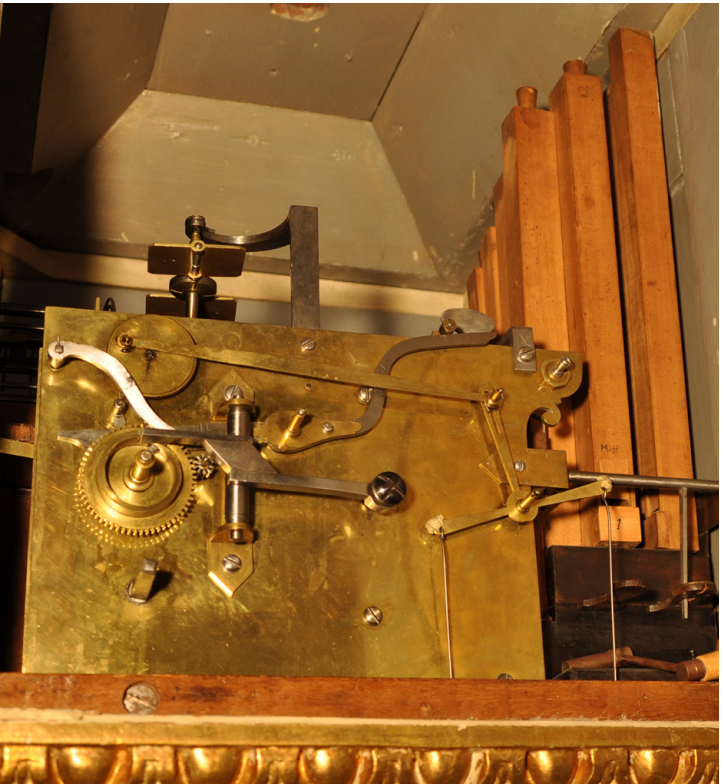
Flute Clocks in the Nydahl Collection

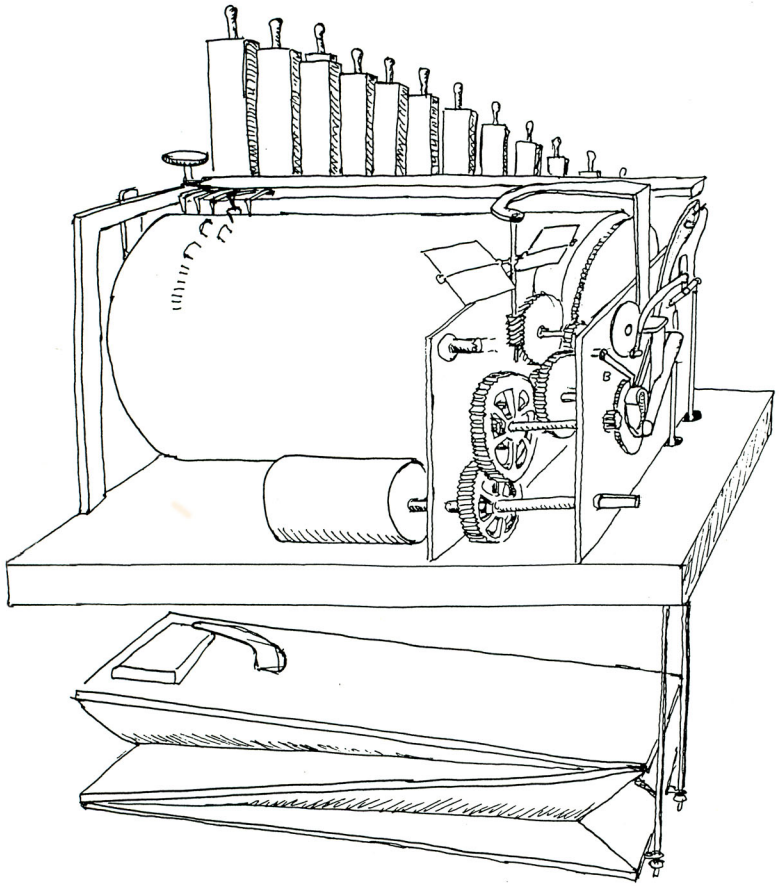
MEK012

MEK001



This recording is comprised of 17 tracks of roughly three and a half minutes each played by two different instruments in the Nydahl Collection. In this case the music is not originally composed for a mechanical instrument, however, adapted to fit the shorter length and limited compass of the instruments: D - g', a' (The MEK012 of the Nydahl Collection has one wooden stop and the MEK001, built by Strand, has one stopped and one open stop).

The history of the flute clock, which is related to the barrel organ and serinette, is not easily traced. The first mention of a mechanical instrument is from Rouen 1321 where a clock is said to have played the medieval hymn *Conditor alme siderum*. From the mid 16th century there is mention of the Hornwerk clock in Salzburg with its mechanical organ. During the 18th century the flute clocks developed to a high level of sophistication.



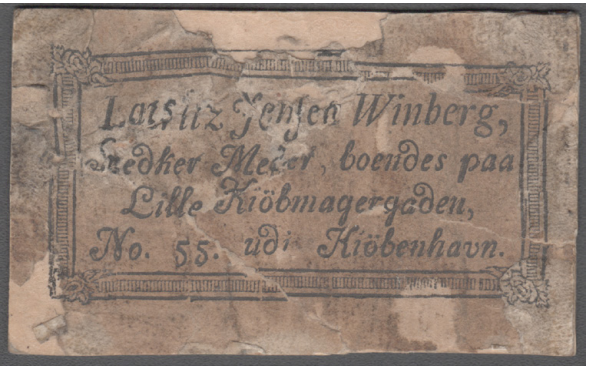
MEK001. Drawing by Andreas Kilström, appears in Flöjtur, Kilström (1983), left: interior of MEK001

The heart of the flute clock is the wooden barrel which has a multitude of metal pins and staples that transmit the tone impulses to the pipes via levers and pallets. A heavy lead weight, quite separate from the weight running the clockwork, sets the barrel in motion. The pins are arranged in spiral tracks on the barrel so several revolutions are utilized. Two bellows pumped by the mechanism feed one reservoir bellows. The sounding section resembles a small organ with one or two stops that can be switched on and off from a separate track on the barrel.

Barrel of MEK001, track 5

The mechanisms were originally made to a high perfection, but over the years they have been subject to wear. Gears and pinions are worn, some barrel pins have become bent and some staples sagging. Also, the bellows are not completely airtight, hence, the mechanisms have to be run at near full speed to provide enough air. Nevertheless, these are valuable contemporary recordings from the 18th century. Occasional "grace" notes have not been

edited out as can be heard for instance at the beginning of track 5 in bar 10. See also the score and spectrogram in the appendix.



The mark of the MEK012 showing the case builder's name: Winberg

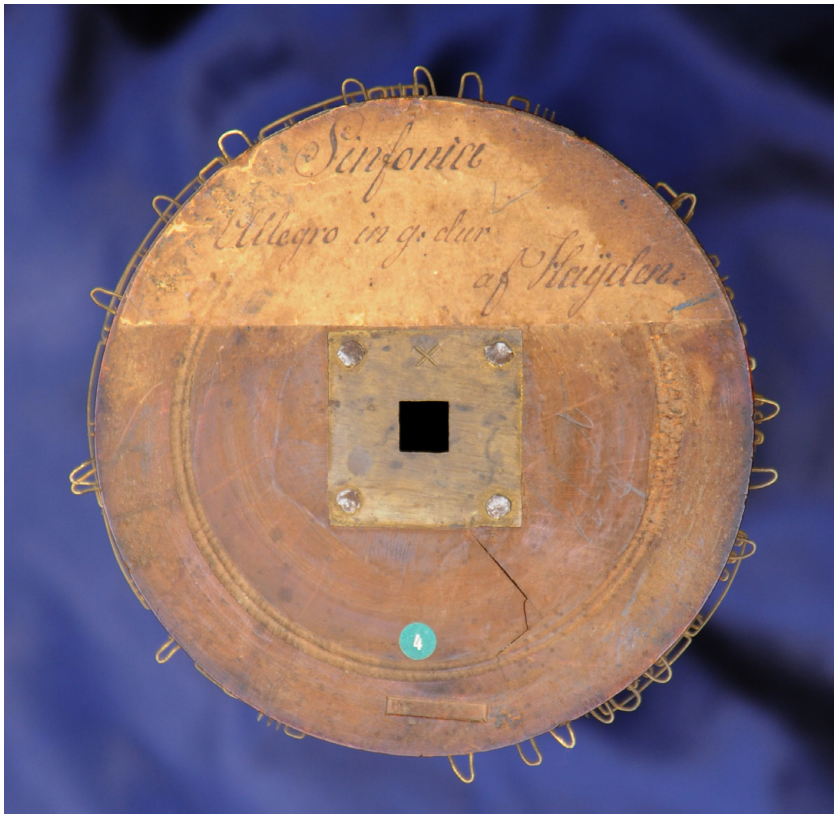
MEK012 plays on tracks 1-4
The builder of this instrument has not been determined. However, the case is built by Lars Jensen Winberg in Copenhagen, possibly between 1764 and 1780. The music is also anonymous apart from track 1, composed by Graun (1704 - 1759).

MEK001 plays on tracks 5-17
Pehr Strand (1756-1826) was a wood carver, organ builder and maker of musical clocks. It is not yet clear where Strand learnt his skills, but his work resembles his contemporary colleagues like Olof Schwan (1744-1812), Jonas Ekengren (1736-1793) and Pehr Niclas Forsberg (1733-1798). In 1791 Strand was granted a royal privilege for the manufacturing of musical clocks and organs. The musical clocks by Strand are all of very fine craftsmanship. The repertoire playable on these Swedish clocks consists to a large extent of music arranged for keyboard, and was published by Olof Åhlström in the periodical "Musikaliskt Tidsfördrif". These mechanical organs were most often built into clocks drawn by famous interior designers like Louis Masreliez. Sometimes they could also be built into tables, cupboards or other furniture. There appears to be around 50 of these Strand instruments preserved today, which indicates a rather large production.

Some of Strand's full size organs are also preserved like the one in Forsmark Church, Uppland. In 1824 the workshop was taken over by his son Pehr Zacharias Strand (1797-1844), who after studies in Germany became one of the most important organ builders of his time in Sweden. Pehr Zacharias is also said to have been a good organist, and it could be probable that he helped his father with the programming of the barrels for the musical clocks. The casing has the typical Gustavian white, blue and gold finish and it is presumably built in 1795.

The Nydahl Collection
The founder, Rudolf Nydahl (1882-1973), studied music at the Paris Conservatory around 1900. In 1917 he took over a wine shop in Stockholm owned by his family. When the Swedish state a few years later monopolised the trading of alcoholic beverages, the Nydahl wine shop was also expropriated. The proceeds allowed Rudolf Nydahl to found Stiftelsen Musikkulturens Främjande (The Foundation for the Furthering of Music Culture, or better known as The Nydahl Collection) in 1920.

The original intention of the founder was to create a music conservatory in the French tradition with an attached museum of old musical instruments and manuscripts. During numerous trips abroad in the 1920:s and 1930:s, Nydahl managed to collect around 550 musical instruments, 2000 autograph music manuscripts of many famous composers, as well as some 6000 letters.



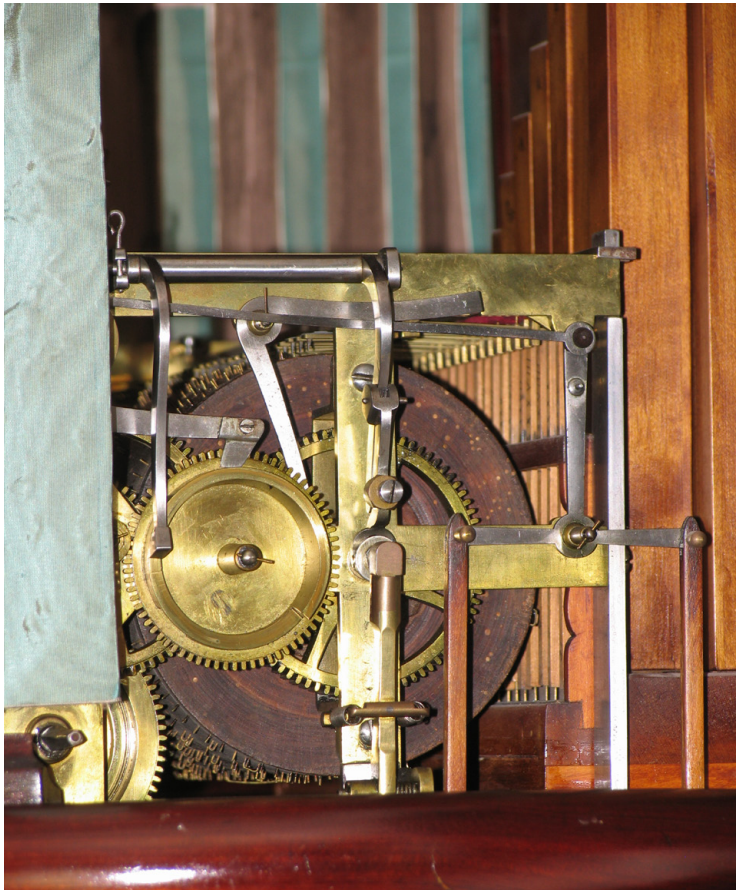
Barrel, track 8
MEK001

The collection is today available in a permanent exhibition open to the public at Riddargatan 35 in Stockholm. Further information about the collection can be obtained at: www.nydahlcoll.se

Robert Holmin Ljud&Bild would like to thank and acknowledge the Nydahl Collection for making this recording possible. Also Andreas Kilström's publication *Flöjtur* has been most valuable in preparing this recording.

Reference:

Kilström, A. (1983) Flöjtur - Äldre mekaniska musikinstrument och deras uppförandepraxis, Uppsala: Musikvetenskap.
Norrback, J. & Ling, J. (2013) Flöjturet och tiden, Särtryck ur: Årsbok 2013 KVHAA, Stockholm (isbn 978-91-7402-422-7, issn 0083-6796)



MEK012

Contents

1. Carl Heinrich Graun: From the Opera Britannico
2. Anonymus: Fantasia 1
3. Anonymus: Fantasia 2
4. Anonymus: Presto
5. Christoph Willibald Gluck: Iphigénie en Aulide - Ouverture
6. Georg Joseph Vogler: From the opera Gustaf Adolph - Ouverture
7. Ignace Pleyel: Andante con Variazione
8. Joseph Haydn: Sinfonia - Allegro in G-Major
9. Johann Friedrich Grenser: Alla Polacca con Trio
10. Olof Åhlström/Johann Friedrich Grenser: Visa - Andante
11. Johann Friedrich Grenser: Operetten Masqueraden, Ouverture - Poco Andante
12. Giovanni Mane Giornovichi: Rondo Russo - Allegretto
13. Joseph Haydn: Sinfonia in D-Sharp Major - Allegro
14. Johann Friedrich Grenser: Tillfälle ger Tiufven - Ouverture
15. Joseph Schuster: Rondo alla Polacca
16. Peter von Winter: Rondo con Variazione
17. Georg Joseph Vogler: l'Ordre des Seraphims en Suède, Marche de Chevaliers - Maestoso

Total playing time 59:47 Tracks 1-4: MEK012, tracks 5-17: MEK01

RHLB11

Digital recording, mastering and graphic design: Robert Holmin
Made in Sweden/Estonia
All rights reserverd © 2014 Robert Holmin Ljud&Bild

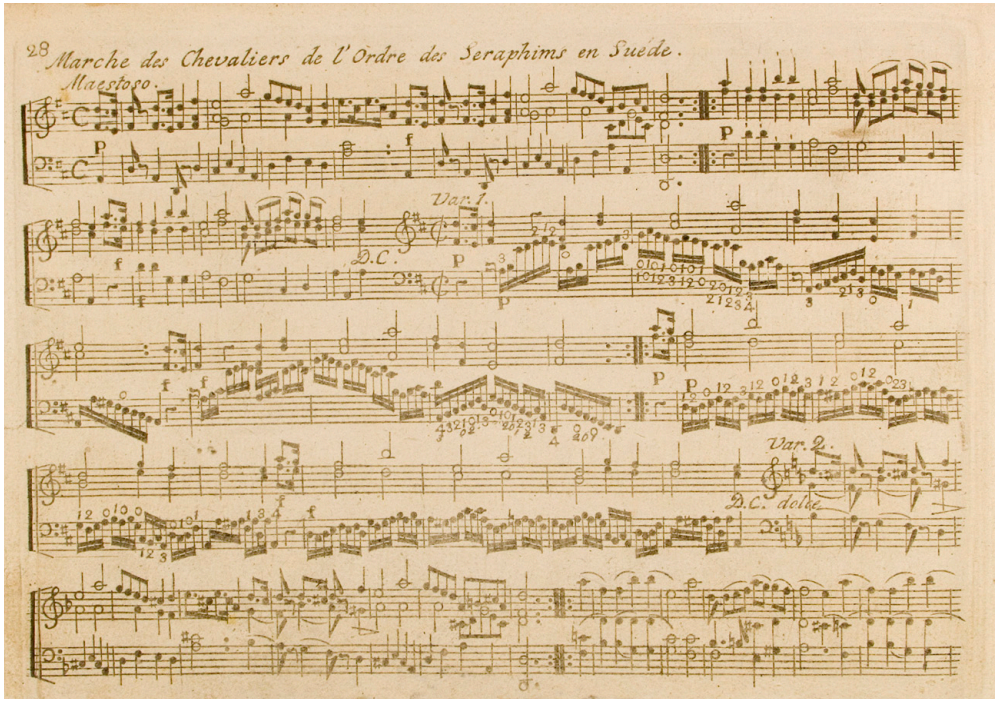
www.soundspheres.com

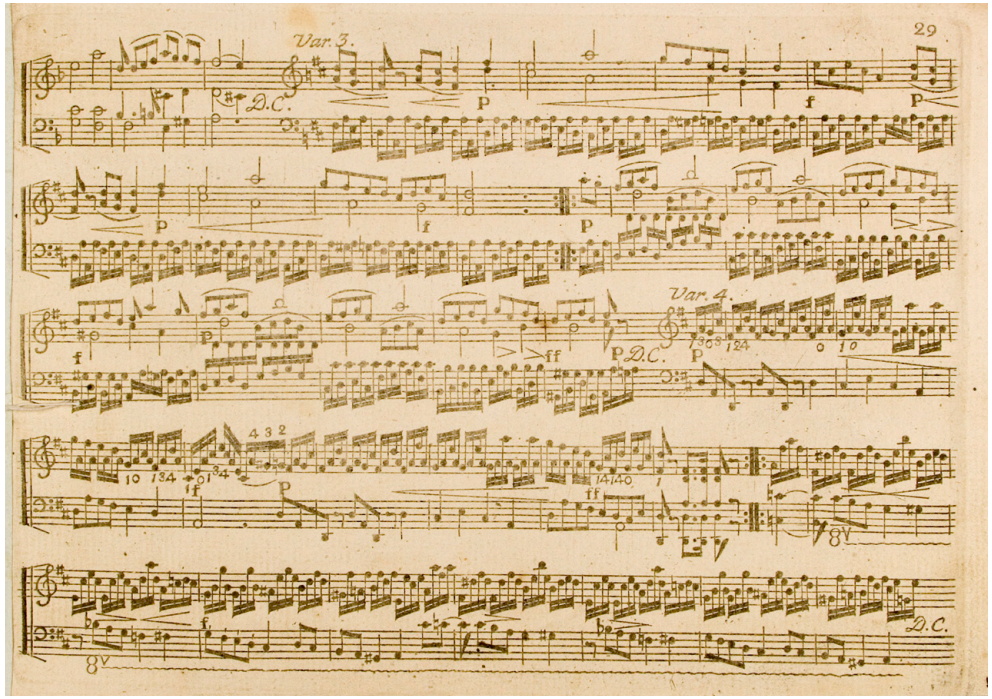
Appendix

About this recording

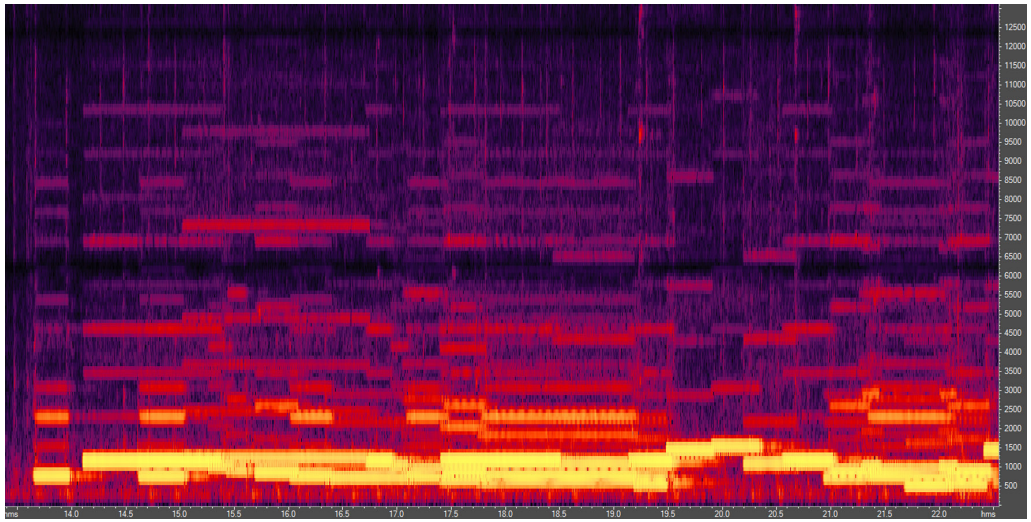
Our ambition with this recording has been to capture the musicality of these over 200 year old mechanical instruments. In the process of making a commercial recording it has also been possible to document these from a museum point of view. The original *wav* files are archived as is without adjustments. However, the CD has been carefully processed in two aspects: filtering and reverb. The filtering has consisted in using a high pass filter at 180 Hz, which is under the tone of the lowest organ pipe. This has eliminated some traffic sounds from outside the museum and also some non-musical noise from the mechanism. A sharp FFT filter has been applied at 6200 Hz and on the octave of this at 12400 Hz to reduce a pernicious squeak in MEK001. Being well over the first and second overtones of the pipes this filtering has not to any audible extent altered the sound of the pipes but made the listening experience more pleasant. See the spectrogram from the beginning of track 5 below. To compensate for the proximity of the microphones a very slight reverb has been added in the mastering. The recording was made with two Neumann TLM103 microphones at 80 cm distance and a Sound Devices 722 recorder.

Track 17 - Georg Joseph Vogler: l'Ordre des Seraphims en Suède, Marche de Chevaliers - Maestoso. Printed in Pieces de Clavecin Faciles, Stockholm

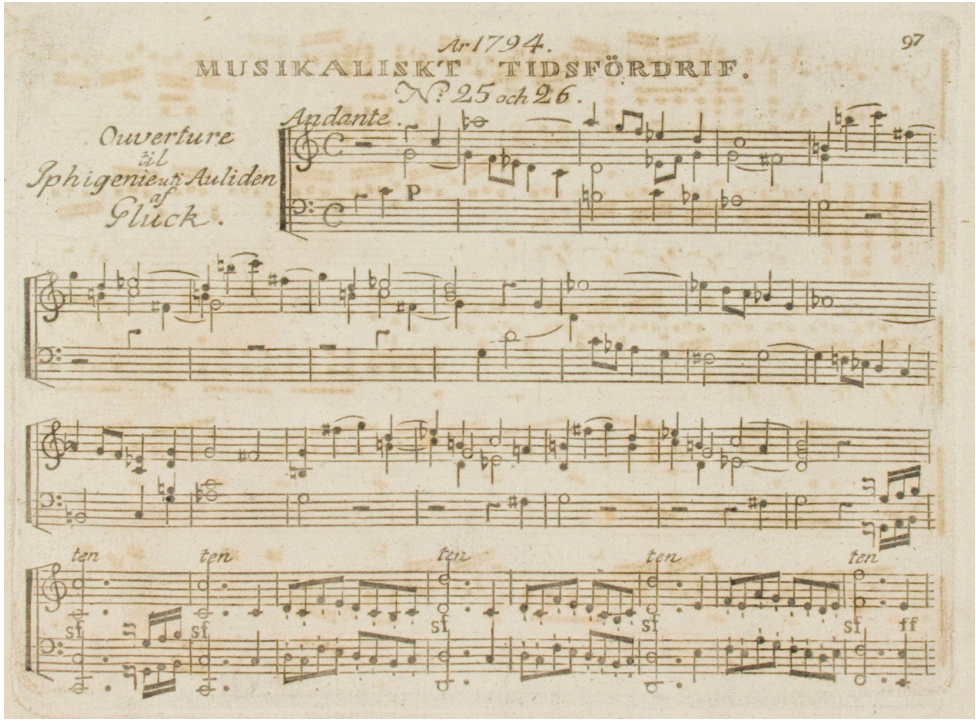


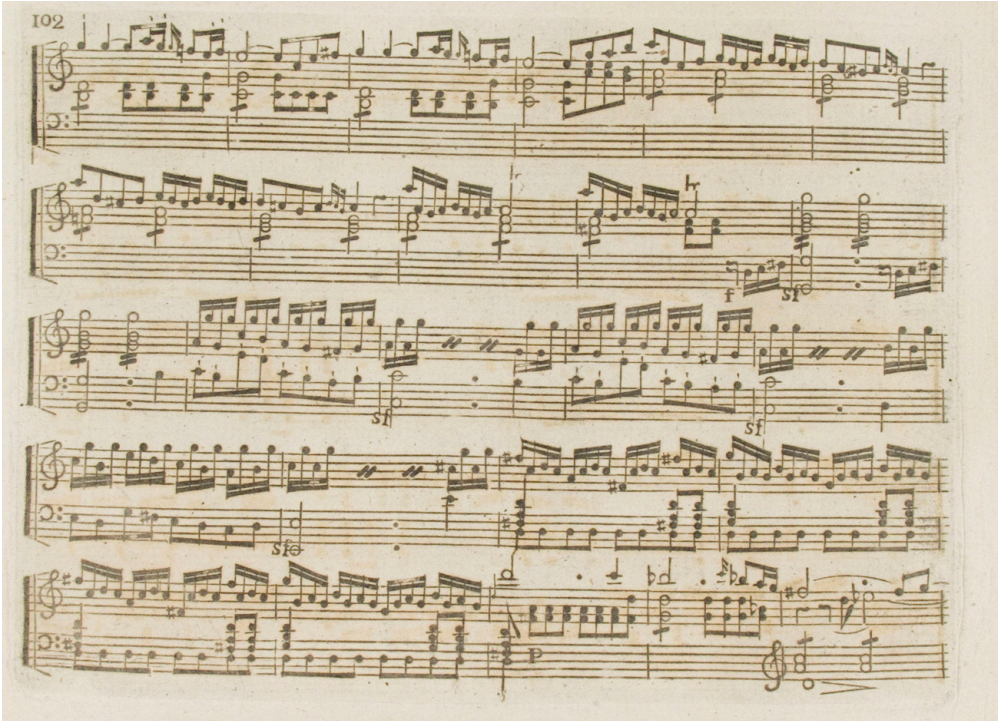


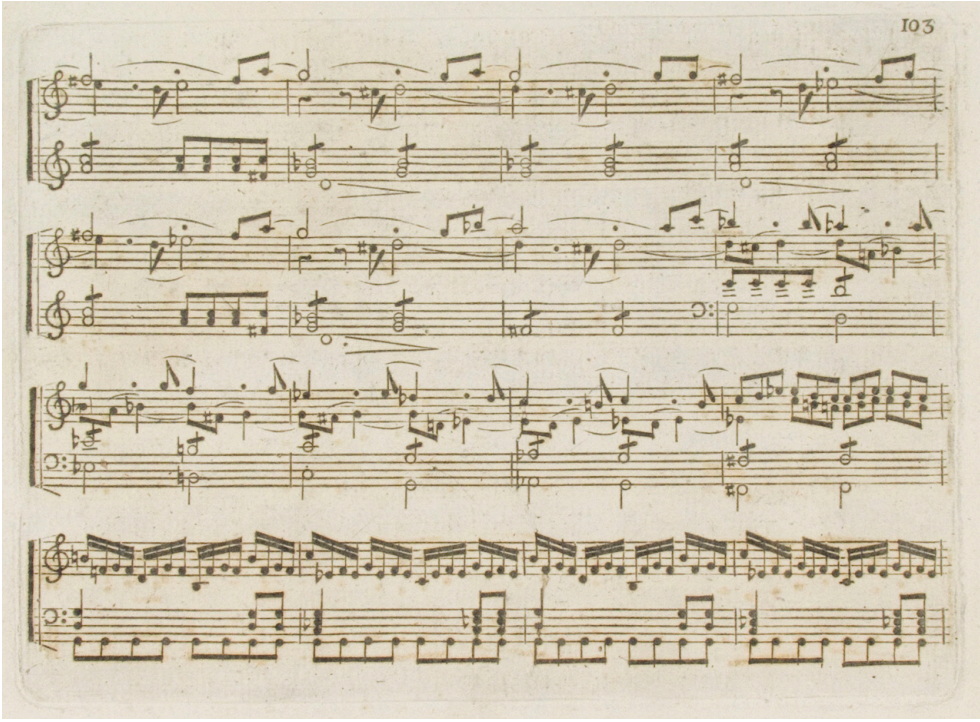
Portrait of C. W. Gluck and score below from the periodical Musikaliskt Tids-fördrif - with the courtesy of The Nydahl Collection.

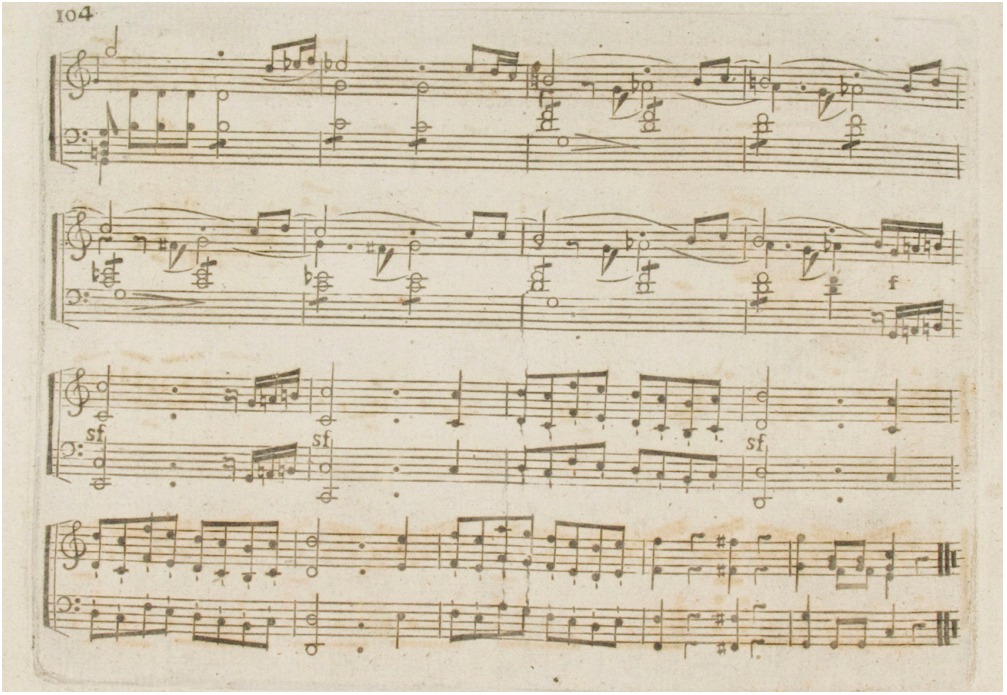


The first 6 bars of track 5: Christoph Willibald Gluck: Iphigénie en Aulide - Ouverture. Here one can see the filtered frequency bands at 6200 and 12400 Hz as dark stripes. Note the cut on pages 102-103.









www.soundspheres.com