

Korundi – The new home for the Lapland chamber orchestra

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The Korundi hall, the new home for the Lapland chamber orchestra, was opened in the spring of 2011. The hall is a part of the Korundi Cultural centre which also houses the Artmuseum of Rovaniemi. The center housed in the old post bus depot, one of the few pre-second world war still standing in Rovaniemi. The hall is the first purpose build concert hall in Finnish Lapland. This paper will present the hall, describe the design process and present acoustic measurements from the hall.

1 Introduction

The Chamber Orchestra of Lapland is the descendant of the Rovaniemi Orchestra founded in 1972 and renamed the Rovaniemi City Orchestra in 1982. It currently has 18 players and its Artistic Director since autumn 1996 has been conductor John Storgårds.

The most northerly professional orchestra in the European Union, the Chamber Orchestra of Lapland is a regional orchestra based on the town of Rovaniemi and giving performances both in the Province of Lapland and all over the arctic region and Finland. It is frequently invited to festivals, such as the Tampere Biennale, Viitasaari Time of Music, the Kaustinen Chamber Music Week, the North Norway Festival, the Lieksa Brass Weeks and the LuostoClassic Festivals. [1]

The orchestra has received noticeable international recognition, in particular with its current artistic director and has premiered works by a number of leading contemporary composers, such as Aulis Sallinen, Paavo Heininen, Pehr Henrik Nordgren ja József Sári.

Traditionally, the orchestra primary performance spaces has been the Lappia House (an Alvar Aalto designed house with rather poor acoustics) and the Rovaniemi church (where recordings and concerts was disturbed by very poor sound isolation of traffic noise, mainly from the fire station next door)

So in 2007, it was decided that a dedicated performance space was needed to ensure the positive development of the orchestra.

2 Start of the project

The old post bus depot, originally build in 1933, is one of the few buildings in Rovaniemi which survived the second world war.

In 1983, the trustees of the Jenny and Antti Wihuri Foundation decided to donate an art collection to the city of Rovaniemi. The donation was made on the condition that the city would provide appropriate exhibition and storage facilities for the collection. The north section of the post bus depot was selected as the location of the museum.

When the discussion of the place for the concert hall started, it was decided to place it in connection with the Rovaniemi Art Museo in the old depot.



Figure 1: Panoramic view of the court yard of the Korundi Cultural Centre. The concert hall is in the box in the middle.

The first versions of the concert hall were placed inside the southern section of the depot. Soon it however became clear that the best solution was to place the concert hall in a new building, in the courtyard of the depot.

3 Description of the hall

The brief for the hall was for a concert hall optimized for the Lapland Chamber Orchestra. The seat count was specified as “more than 300”. However some degree of multi functionality was required, both for conference use as well as for some contemporary chamber music, requiring a shorter reverberation time. But as the budget was limited, only the curtains required for chamber music use and a limited AV-system was installed. The first versions of the hall had rear and side balcony, but these were dropped to reduce cost.

Table 1: Strategic measures of the hall

Width	13,5 m
Height	12,3 m
Length	24 m
Volume	3400 m ³
Stage height	0,7 m
Stage depth	6,5 m (5 m)
Row spacing	1 m
Seats	320
Rows	17

The architectural concept for the concert hall was a minimalist , rectangular “music box”. The main part of the interior surfaces are wood veneer on 12-26 mm thick boards, with the exceptions of the bottom of the “diffuser structures” on the lower part of the side walls, which are painted single or double layer plaster board. There are glass reflector shelves on the side walls, to enhance lateral reflections, and glass plates hanging from the ceiling, to provide reflections back to the stage.

The stage is 45 mm hard pine wood and the floor in the auditorium is parquet fixed directly to the concrete. The seats are lightly upholstered and fold-up when not in use.



Figure 2: View towards the rear of the hall
(picture courtesy Arto Liiti)

4 Acoustic measurements in the hall

Figure 3 shows the reverberation of the hall. As can be seen the reverberation time is quite long by European standards, however quite normal for Finnish halls [4] and seems to be appreciated in Finland. It should however be noted that the seats are lightly up holstered and therefore the effect of audience is likely to be on the high side.

Figure 4 shows the reverberation time measured before the seats were installed and the reverberation time in the empty hall. These are not 100% compatible as the measurements without seats are done while some works were still in process, and with some items in the hall.

As can be expected clarity are quite low, average at mid frequencies is -2,0 dB and rises to about 0 dB when all the curtains are exposed.

Table 2: Measured acoustic parameters

G (500 – 1 kHz)	11 dB
EDT (500 - 1 kHz)	2,0 s
C ₈₀ (500 – 1 kHz)	-2,0 dB
LF ₈₀ (125 – 1 kHz)	26%
EDTP (500 – 1 k Hz)	1,9 s
ST _{early} (250 – 2 kHz)	9 dB

The acoustic parameters seen in table in general are more like a traditional concert hall than a hall intended for chamber music. However they are well in line with parameters measured in the best liked other Finnish halls of the same size [2] [3] [4]

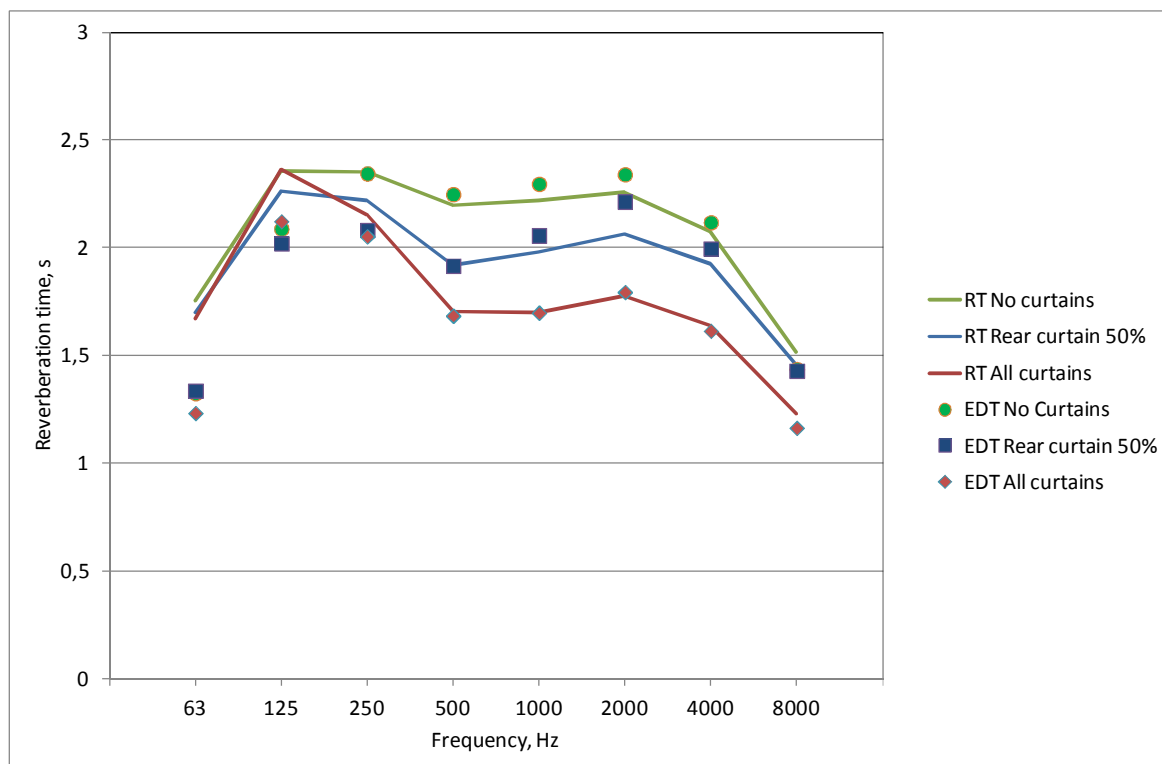


Figure 3: Measured reverberation time

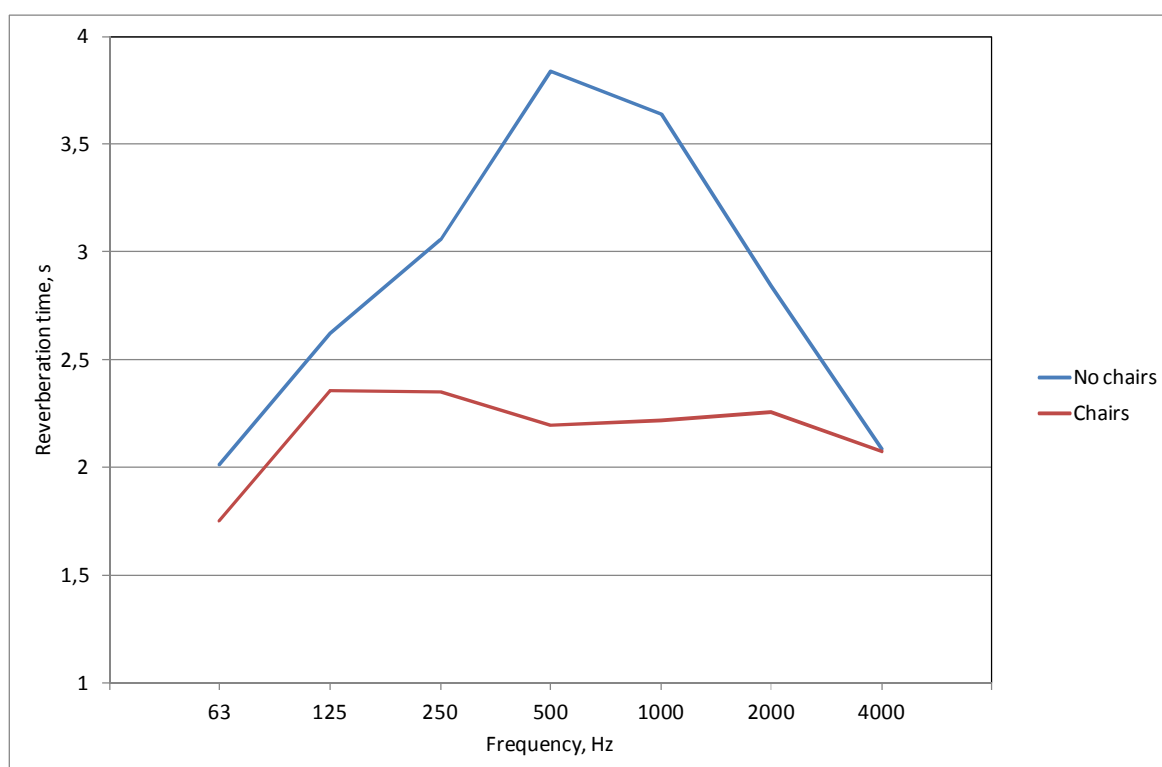


Figure 4: Comparison between measured reverberation time in hall without chairs and finished hall

5 Comments about the hall

The hall has been well received, both by the orchestra, in the media and by the audience. The concerts during the first year of operation have had a significantly larger audience than previous concerts. After opening night, the hall were reviewed in the major Helsinki newspapers and received very positive reviews.

It has taken some trial and error for the orchestra to get used the new stage, in the instruments placed in the rear of the orchestra, as the limited stage depth places them quite close to the backwall.

The main criticism has been that the hall is not adaptable enough for other performances, in particular for reinforced music, and that the AV –systems were inadequate. This criticism was anticipated, as the budget did not allow for an extensive AV-system and because the amount of curtains was reduced. Therefore more curtain, including stage curtains, and an expansion of the Av-systems are currently planned.



Figure 4: View from the rear of the hall towards the stage, with Lapland Chamber Orchestra (picture courtesy Arto Liiti)

Acknowledgement

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