

SAPPORO CONCERT HALL “KITARA”

SAPPORO, JAPAN
1997

NAGATA
ACOUSTICS

Acoustics Consultant:	NAGATA ACOUSTICS, Inc.
Architect:	Hokkaido Engineering Consultant Co., Ltd.
Owner:	City of Sapporo
Sound & Communications:	NAGATA ACOUSTICS, Inc.
Construction Cost:	¥16,500 Million JPY

The Sapporo Concert Hall, nicknamed "KITARA," has 2,008 seats and was opened on July 4, 1997. The hall was built specifically as a classical music concert hall and as home for the Sapporo Symphony Orchestra and the Pacific Music Festival, (an international educational music festival that was established by Leonard Bernstein). The hall features a vineyard-step seating arrangement designed to surround the stage on all sides, very much like the Philharmonie in Berlin and Suntory Hall in Tokyo.

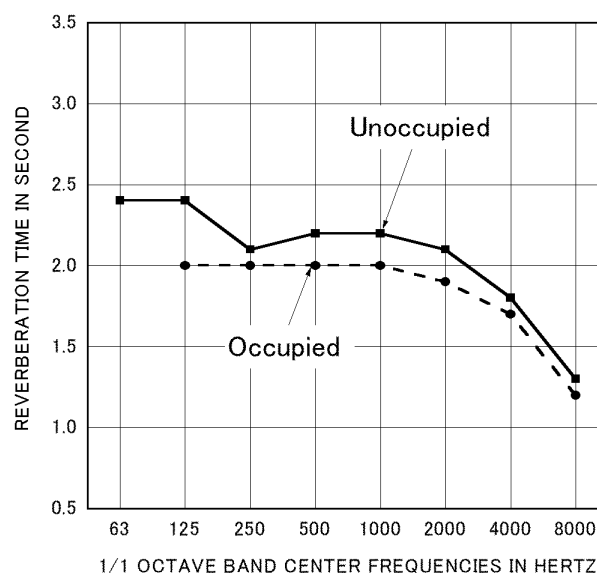
Important features of the room acoustical design were as follows:

1. The wall forming the vineyard steps were introduced into audience area and shaped such that they provide effective early reflections.
2. Large sound reflectors were suspended above the stage area to provide effective early reflections to the stage musicians and the audience closest to the stage.
3. The ceiling was constructed of massive, 150mm-thick concrete to support response at the low frequencies.

Sir Simon Rattle, visiting with the City of Birmingham Symphony Orchestra in May 1998, left this comment: "The best modern concert hall in the world!"

BUILDING DETAILS AND ACOUSTICS DATA

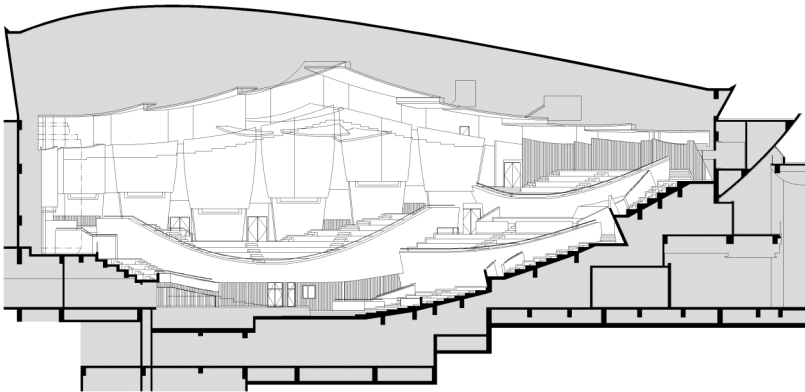
Location	1-15 Nakajimakoen, Chuo-ku Sapporo City 064-0931, Japan
Tel	011-520-2000
Seating Capacity	2,008
Room Volume	28,800 m ³
Surface Area	8,200 m ²
Stage Area	237 m ³
Reverberation Time (Mid-Frequency)	
Unoccupied	2.2 sec
Occupied	2.0 sec
Finishing Materials	
Ceiling	: 200 mm precast concrete
Wall	: 2 layers of gypsum board (12 mm x 2)
Floor	: 50 mm wooden board on concrete
Seat	: Upholstered
Miscellaneous	: Suspended ensemble reflectors with 4 layers of fiberglass reinforced gypsum board (12 mm x 4)
Pipe Organ	: 68 stops (Alfred Kern & Fils Manufacture D'Orgues, France)
Noise Level	: NC - 15
Other Facilities	: Chamber Hall (453 seats)
Total Cost	: ¥16,500 Million JPY
Total Floor Area	: 20,746 m ²



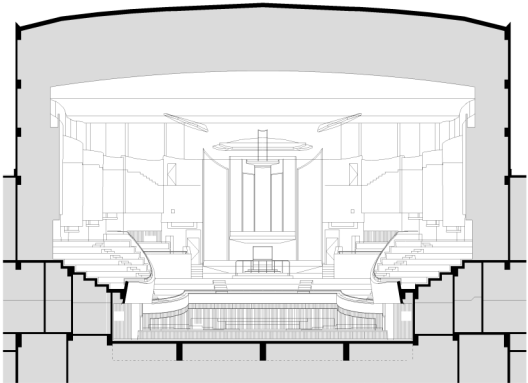
REVERBERATION TIME

SAPPORO CONCERT HALL “KITARA”
SAPPORO, JAPAN
1997

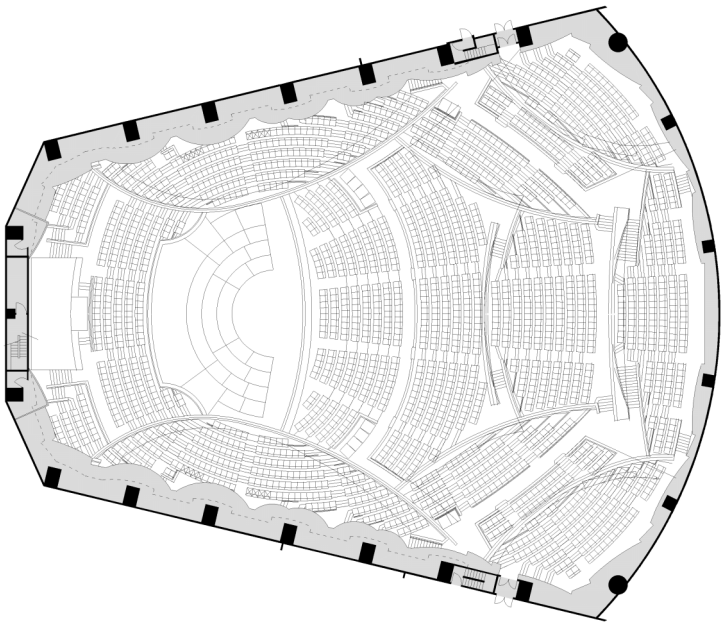
NAGATA
ACOUSTICS



LONGITUDINAL SECTION



TRANSVERSE SECTION



PLAN

