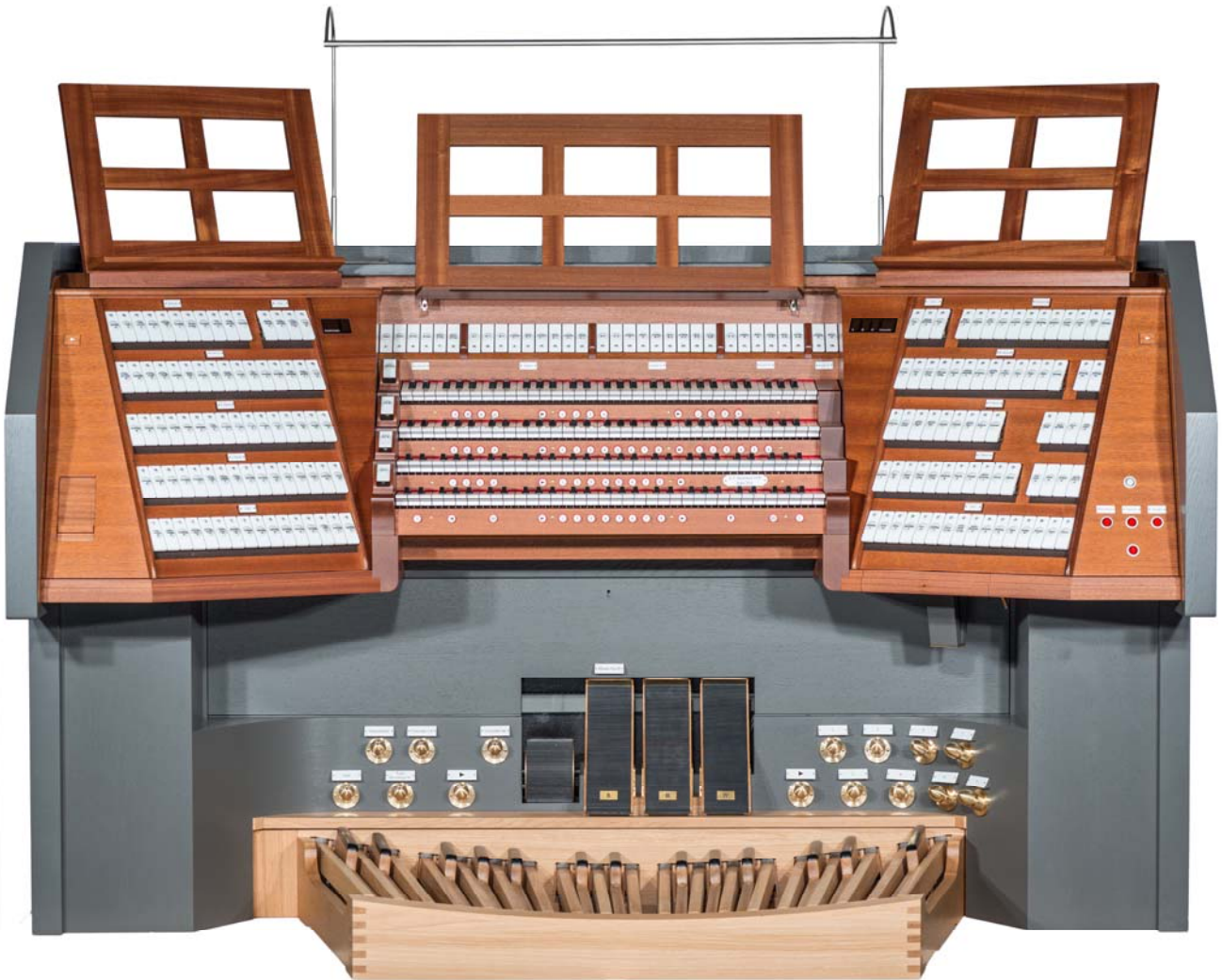


# Steinmeyer Organ in Nidarosdom, Trondheim / Norway

Built 1930 by Steinmeyer, Oettingen/Germany

Restored 2012-2014 by Kuhn Organ Builders Ltd., Männedorf/Switzerland



## Console

125 real stops, 2 special effect stops, 12 transmissions, 4 tremulants, 36 couplers, 10 special functions.  
Per organist 12 Generals, 4-8 Divisionals, Tutti, General Tutti, 999 sequencer combinations

## Touch screen

(in the drawer below right-hand stop jamb)

Incorporates many additional functions: numerical direct selection using keypad, marks for the beginnings of pieces, text entry; per user up to 999 further „Titles“ each with 999 sequencer combinations, search function using text entry; grouping of saved registrations to a „Programme“ for use in church services, concerts etc.; free definable couplers, transpose function, MIDI recorder, MIDI-in and MIDI-out, USB socket, automatic data backup, user administration; control system for the Choir organ.

125 real stops, 2 special effect stops, 12 transmissions, 4 tremulants, 36 couplers, 10 special functions

I. Manual	C - c <sup>4</sup>	II. Manual (enclosed)	C - c <sup>5</sup>	III. Manual (enclosed)	C - c <sup>5</sup>
33. Principal	16'	60. Nachthorn	16'	86. Geigenprincipal	16'
34. Bourdon	16'	61. Salicional	16'	87. Røhrfløite	16'
35. Principal 1	8'	62. Principal	8'	88. Principal major	8'
36. Principal 2	8'	63. Spissfløite	8'	89. Principal minor	8'
37. Principal 3	8'	64. Gedeckt	8'	90. Jubalfløite	8'
38. Flauto major	8'	65. Dulciana	8'	91. Wienerflöte	8'
39. Doppelgedeckt	8'	66. Unda maris	8'	92. Bourdon	8'
40. Violoncello	8'	67. Kvintaten	8'	93. Viola di Gamba	8'
41. Røhrfløite	8'	68. Principal	4'	94. Gamba celeste	8'
42. Gemshorn	8'	69. Fugara	4'	95. Aeoline	8'
43. Kvint	5 1/3'	70. Røhrfløite	4'	96. Voix céleste	8'
44. Oktav	4'	71. Kvint	2 2/3'	97. Prestant	4'
45. Principal	4'	72. Sifflöte	2'	98. Gambette	4'
46. Fløite	4'	73. Ters	1 3/5'	99. Flûte harmonique	4'
47. Gross Ters	3 1/5'	74. Larigot	1 1/3'	100. Kleingedeckt	4'
48. Kvint	2 2/3'	75. Septim	1 1/7'	101. Kvint	2 2/3'
49. Superoktav	2'	76. Sedecima	1'	102. Piccolo	2'
50. Ters	1 3/5'	77. Mixtur 4fag	2'	103. Ters	1 3/5'
51. Cornet 5fag	4'	78. Contra Fagott	16'	104. Cornet 5fag	8'
52. Mixtur 6fag	2'	79. Bassetthorn	8'	105. Plein jeu 5fag	2 2/3'
53. Cymbel 3fag	1'	80. Clarinett	8'	106. Trompet	16'
54. Bombarde	16'	81. Trompet	8'	107. Trompette harmonique	8'
55. Tromba	8'	82. French Horn	8'	108. Cornopean	8'
56. Trompet	8'	83. Euphone	4'	109. Orkesterobo	8'
57. Clairon harmonique	4'	84. Tremolo		110. Vox humana	8'
58. Celesta (49 notes: C-c <sup>3</sup> )				111. Clarin	4'
59. Chimes (26 notes: E, G-g <sup>1</sup> )				112. Harpe (from 58.)	8'
				113. Harpe (from 58.)	4'
				114. Tremolo	
Rückpositiv	C - c <sup>4</sup>	IV. Fjernverk (enclosed)	C - c <sup>5</sup>	P. Pedal (continued)	
135. Mildprincipal	8'	117. Bourdon	16'	10. Salicional (from 61.)	16'
136. Violfløite	8'	118. Viola	8'	11. Quintbass	10 2/3'
137. Cor de nuit	8'	119. Viola celeste	8'	12. Oktavbass	8'
138. Prestant	4'	120. Bourdon	8'	13. Principal (from 37.)	8'
139. Bachflöte	4'	121. Principalfloite	4'	14. Violoncello	8'
140. Nasat	2 2/3'	122. Flageolet	2'	15. Dulciana (from 65.)	8'
141. Blockflöte	2'	123. Mixtur 3fag	2 2/3'	16. Røhrfløite	8'
142. Nachthorn	1'	124. Trompet	8'	17. Fløitebass	8'
143. Cymbel 4fag	1 1/2'	125. Vox humana	8'	18. Kvint	5 1/3'
144. Ranket	16'	126. Pedalboudon (from 117.)	16'	19. Oktav	4'
145. Krummhorn	8'	127. Tremolo (Vox humana)		20. Bachflöte	4'
146. Tremolo				21. Ters	3 1/5'
				22. Waldflöte	2'
				23. Mixtur 5fag	5 1/3'
				24. Pedalcornet 5fag	2 2/3'
				25. Contra Bombarde	32'
				26. Bombarde	16'
				27. Basstuba (from 131.)	16'
				28. Fagot (from 78.)	16'
				29. Ranket (from 144.)	16'
				30. Trompet	8'
				31. Clarin	4'
				32. Chimes (from 59.)	
IV. Solo (enclosed)	C - c <sup>4</sup>	P. Pedal	C - g <sup>1</sup>		
128. Diapason Stentor	8'	1. Subbourdon	32'		
129. Geigenprincipal	8'	2. Contra Violone	32'		
130. Grossmixtur 5fag	4'	3. Majorbass	16'		
131. Tuba	16'	4. Principalbass 1	16'		
132. Tuba	8'	5. Principalbass 2 (from 33.)	16'		
133. Trompette orchestrale	8'	6. Contra Bass	16'		
134. Tuba	4'	7. Harmonikabass	16'		
		8. Subbass	16'		
		9. Bourdon (from 34.)	16'		

Built 1930 by Steinmeyer, Oettingen/Germany

Restored 2012-2014 by Kuhn Organ Builders, Männedorf/Switzerland

Pedal	I. Manual	II. Manual	III. Manual	IV. Manual
1. I-Ped.	7. II-I	16. III-II	25. IV-III	31. Suboktav IV
2. II-Ped.	8. III-I	17. IV-II	26. Suboktav III	32. Oktav IV
3. III-Ped.	9. IV-I	18. Suboktav II	27. Oktav III	
4. IV-Ped.	10. Suboktav II-I	19. Oktav II	28. Suboktav IV-III	<b>Rückpositiv</b>
5. Oktav II-Ped.	11. Oktav II-I	20. Suboktav III-II	29. Oktav IV-III	in the keyboard cheek
6. Oktav III-Ped.	12. Suboktav III-I	21. Oktav III-II	30. Unison III off	bass side
	13. Oktav III-I	22. Suboktav VI-II		R.P.-Ped.
	14. Suboktav IV-I	23. Oktav IV-II		R.P.-III
	15. Oktav IV-I	24. Unison II off		R.P.-II
				R.P.-I

**Stop tabs with special functions** (right-hand stop jamb, outer right)

115. Fjernverk inn	Echo organ on Manual IV, the Solo is then switched off
116. Kororgel inn	Choir organ on, manual assignment according to the setting on the touch screen. The Swell of the Choir organ is always controlled by the swell pedal of Manual IV.
85. Master Swell	Swell pedal II controls all enclosed divisions
Pedal ex Cresc.	Crescendo has no influence on the pedal stops
Komb. av	All buttons for generals and divisionals are switched off
Svelllucker av	Bottom row of the swell shutters Manual II and III stay closed
Suboktav ut	All sub-octave couplers are switched off
Oktav ut	All super-octave couplers are switched off
Tungest. ut	All reeds are switched off
Man. 16' & Ped. 32' ut	All 16' manual and 32' pedal stops are switched off

The stop tabs of the special functions without numbers are not incorporated when setting in the combinations.

Pressing the plate with the name of the division above the corresponding stop tabs turns off all stops and couplers of the respective division.

**Left-hand display:** digital display showing the current combination (3-digit plus 4<sup>th</sup> digit available for the possibility of adding sub-combinations). If the decimal point is lit up then there exist sub-combinations under this main combination.

**Right-hand display:** swell position for manuals II, III and IV, crescendo display (2-digit) and red indicator lamp for „crescendo on“.

**Outer edges of the stop jambs:** Sequencer button forwards for registrant; under sliding cover: USB, MIDI-in, MIDI-out sockets; light switch; blower switch for the main organ, Solo, Fjernverk; general off „0“.

**Buttons on the mouldings beneath the manuals** (G = Generals, D = Divisionals)

IV. Manual	G 9-12	►	D Solo 1-4	►	D Fjernverk 1-4
III. Manual	G 5-8	►	D III 1-8	►	D Rückpositiv 1-6
II. Manual	G 1-4	►	D II 1-8	►	
I. Manual	S ◀ INS	►	D I 1-8	►	DEL ▼ C

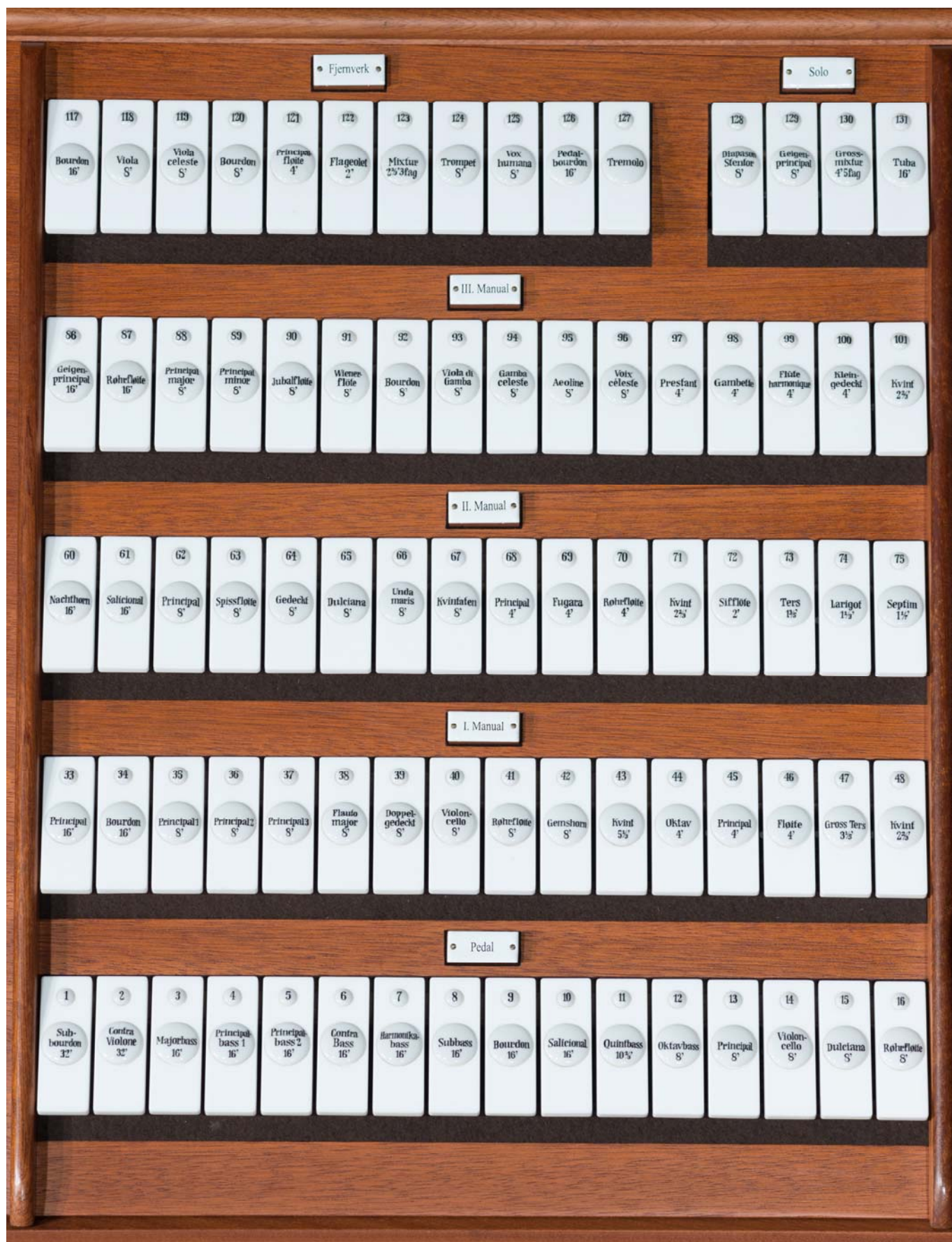
**Pistons left** upper row General Tutti, Crescendo select button, Crescendo on  
lower row Tutti, Pedal Hovedorgel av\*, ►

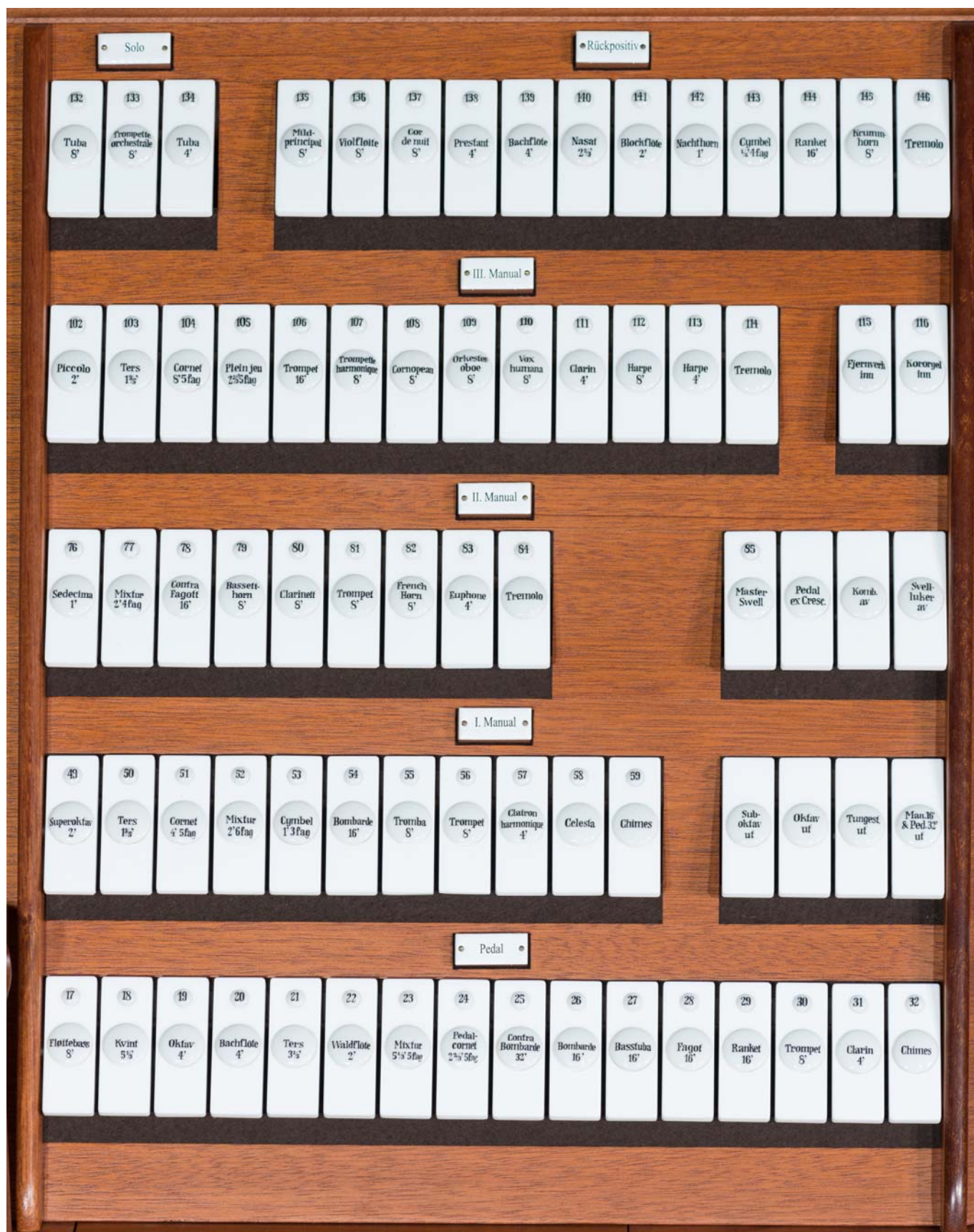
**Roller, 3 Swell pedals** for Manual II (also Master Swell), III and IV

**Pistons right** upper row D Pedal 1,3,5,7  
lower row ► D Pedal 2, 4, 6, 8

**Pedal radiating**, double curved, adjustable c<sup>1</sup> to c<sup>#</sup> resp. d<sup>#1</sup> to d<sup>#</sup> – Organ bench adjustable in height

\* ventil for Pedal stops of the main organ (Fjernverk and Choir organ remain active)







### Crescendo

Roller for general crescendo with  $1\frac{3}{4}$  turns, 99 positions, direction of effect through „pulling“, four different crescendo available with selection button (piston) or over the touch screen. Selected crescendo is shown by colours on the selection button:

[dark]	Crescendo 1
red	Crescendo 2
green	Crescendo 3
blue	Crescendo 4

The function of Crescendo, ventils, Tutti and General Tutti is visible in the stop jambs. The incumbent organist can change this function to be invisible for individual users, corresponding to the situation of 1930.

### Use of the organ without log-in

As long as an organist is not logged in three stars \*\*\* appear in the digital display. The complete manual registration of the organ can be used except combinations, sequencer and touch screen functions.

### Conventional use of the organ with log-in

After logging in on the touch screen, an organist working conventionally, i.e. using only the functions on the console, has at his disposal his individual 12 Generals, all Divisionals, user-programmable Tutti and General Tutti as well as 999 Sequencer combinations.

For the sequencer combinations the usual operation elements stand at the player's disposal: setter button (S), general cancel (C), sequencer forwards and backwards (►, ◄), Recall (▼), Insert (INS) and Delete (DEL). The recall button activates – for example after the use of Tutti, General Tutti, Generals or Divisionals – the previously selected sequencer combination. It is also used for setting into the combination shown on the display.



### Sequencer combination functions on the touch screen

All of the Sequencer combination functions discussed above are available on the touch screen, but also additional features: numerical direct selection of a combination by use of the key-pad; marking of the beginnings of pieces („Sub-title”) so that a piece can be found at the push of a button; entering of short texts for individual combinations, whether for the purpose of documentation or as an aid to registrants; copying or deleting of sequences of combinations.

Particular attention was paid to making sure that information once notated on sheet music retains its validity. Thus, besides the widely used logic for the insert and delete functions (i.e. the insertion or deletion of main combinations) the system also supports in particular the logic with sub-combinations (i.e. the main combinations remain unaltered). Consequently deleted combinations are jumped over with the Sequencer buttons. The incumbent organist can set the favoured system for other organists.

### Enlarged functions on the touch screen

Deserving particular mention is the fact that the incumbent organist can allocate additional „Titles” to other organists, up to 999 in total. Each Title has the capacity for a further 999 combinations. A Title can be marked with four lines of text and can be located again either by its number or by the text.

A selection of Titles or Sub-titles can be easily organised into a Programme for church services, concerts or other purposes. The pieces are then called up in the order of the Programme, at the press of a button. Each piece begins on its usual combination number.

Further functions are the „coupler assistant” which enables the user to define couplers as he wishes – at 8' pitch or at a particular interval – and the interval coupler in which more notes in the form of a coupler are made available. The 10 individual couplers and the 5 interval couplers can also be saved in the capture system and are available per Title.

Also important to mention are the „Transpositeur” which transposes the whole organ by +/- 6 semitones, the MIDI-recorder, sockets for MIDI-in and MIDI-out, USB for individual saving of combinations and settings. In addition the system is equipped with an automatic data protection function.

The incumbent organist has at his disposal many useful setting possibilities in the background. In the user administration he can allocate for up to 100 users a name, a code, the number of „Titles“ and the preferred language of Norwegian, English, German or French. In addition he can switch the Crescendo, vents, Tutti and General Tutti to be visible or invisible in the stop jamb and activate the desired insert/delete logic with main combinations or with sub-combinations.

For all organists together he can set the functioning direction of the roller and the assignment of stops in the crescendo. It was a conscious decision not to make these last settings available to all organists.

In the background the organ builder also has at his disposal a variety of settings which considerably facilitate the setting-up and care of the whole instrument and its systems.

### **Playing the Choir organ from the Steinmeyer organ**

During the course of 2015 the company Br. Torkildsen Orgelbyggeri AS, Åsen/Norway will build a new Choir organ with 31 stops. The two-manual console has already been constructed at the same time as that of the Steinmeyer organ.

The stops for the Choir organ are grouped on one page of the touch screen. Its manual divisions can be assigned to any chosen manual of the Steinmeyer organ. A suboctave coupler is available. When switching on the wind for the Choir organ the Choir organ is in standby mode. The chosen stops are activated through pressing the stop tab „Kororgel inn“ (No. 116); the red indicator lamp „Kororgel inn“ is situated on the front of the touch screen drawer. The stops selected for the Choir organ on the touch screen are saved in the combinations regardless of the position of the „Kororgel inn“ switch.

### **Playing together with the Choir organ**

In order to play the Steinmeyer and Choir organs together, various basic settings can be selected in advance by the incumbent organist, for example from which console the Solo or Fjernverk are to be played when performing on both instruments together, or whether they should function alternately.

At the console of the Choir organ which, for the most part, is fitted with the same operating features and touch screen as the Steinmeyer organ, the Solo and Fjernverk of the Steinmeyer organ can be operated directly using the stop tabs. The remaining divisions of the Steinmeyer organ are controlled using the touch screen. The assignment of the divisions to a particular manual of the Choir organ also takes place here.



The complete organ system including Solo, Fjernverk and Choir organ is fitted with a MIDI-based key holding system.

### Design of the organ's control system

The complete electric and electronic system, including the console, was designed, planned, installed and brought into service by the company Aug. Laukhuff GmbH & Co. KG, Weikersheim/Germany.

The layout and user design for the touch screen was developed in close collaboration between the project committee, Kuhn Organ Builders and Laukhuff, the starting point for which being a standard product and designed by Laukhuff and earlier realised projects by Kuhn/Laukhuff. Of particular value was the professional expertise of Prof. Bjørn Boysen.

In particular the design of the Title administration, the grouping of Titles/Sub-titles into Programmes and the guidance of the user are based on the guidelines of the undersigned. These features were based on a concept of intuitive and simple use. For organists who regularly work at the same organ the system can be seen as truly progressive. Kuhn Organ Builders permit the unrestricted use of the new developments to customers of Laukhuff, as they have done in the past when involved in the design of specialist functions of electronic capture systems.

Männedorf, 17<sup>th</sup> February 2014



**Kuhn Organ Builders Ltd.**

Dieter Utz, Managing Director