JOHANNUS

Opus

250 / 350

User Manual

Opus

Our best selling organ
worldwide for 40 years

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CONTENTS

1 SAFETY

1.1 Safety instructions

- Position the organ on a stable, horizontal surface.
- Connect the organ to a grounded power socket.
- Turn off the organ when it is not in use.
- Do not place the organ in a damp area.
- Do not expose the organ to liquids.
- Follow the instructions and precautionary measures in this user manual.
- Keep this user manual with the organ.
- The organ may only be opened by a technician authorised by Johannus Orgelbouw b.v. The organ contains static-sensitive components. The warranty is void if the organ is opened by a non-authorised person.

1.2 Symbols on the organ

 Warning

 Warning for electric shock

 Warning for static-sensitive components

1.3 Symbols in this manual

 Warning or important information

 Note

1.4 Transport and storage

Pay attention to the following during transport and storage:

1. Remove the music desk and the pedal board from the organ.
2. Relative humidity within the storage area: 40 to 60%.

2 INSTALLATION

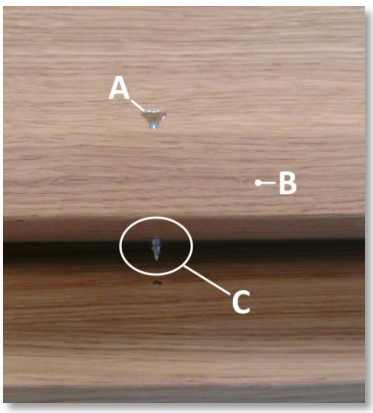
2.1 Installation and connection

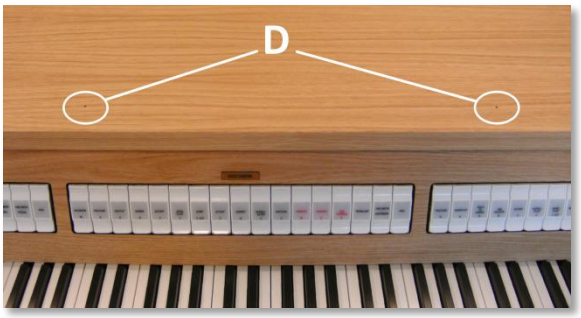
2.1.1 Installation organ

Shown model: Opus 250

1. Position the organ on a stable, horizontal surface.
2. Install the music desk (A) on top of the organ, see § 2.1.2.
3. Lean the organ slightly backward.
4. Slide the pedal board (D) against the organ.
5. Set the organ upright.
6. Place the organ bench (C) over het pedal board.
7. Make sure the voltage of the organ matches the voltage of the main. See the serial plate (B).
8. Connect the organ to a grounded power socket.

2.1.2 Installation music desk





1. Turn countersunk brass screws (A) into music desk slat (B) by hand till screws stick out 2 mm (C).
2. Place music desk at the right position, with screw points into the pre-drilled holes (D).
3. Tight music desk with screw driver. The use of an electric screw driver is not recommended.

2.2 Switch on

Switch on the organ with the on/off piston at the right, next to the manuals. Wait several seconds. Starting the control functions and the settings will take some time.
The lamps of the 0 piston and the as standard set functions light up. The settings appear on the display.

```
Initializing...
Please wait
```

```
Opus 250   Mem: 1
Tr: 0/440  Cr:--
```

3 DESCRIPTION OF THE ORGAN

3.1 Overview of the main components

3.1.1 Opus 250

A Music desk

B Loudspeakers

C Surround loudspeakers

D Organ bench

E Swell pedal

F Crescendo pedal

G Pedal board

3.1.2 Opus 350

A Music desk

B Loudspeakers

C Surround loudspeakers

D Organ bench

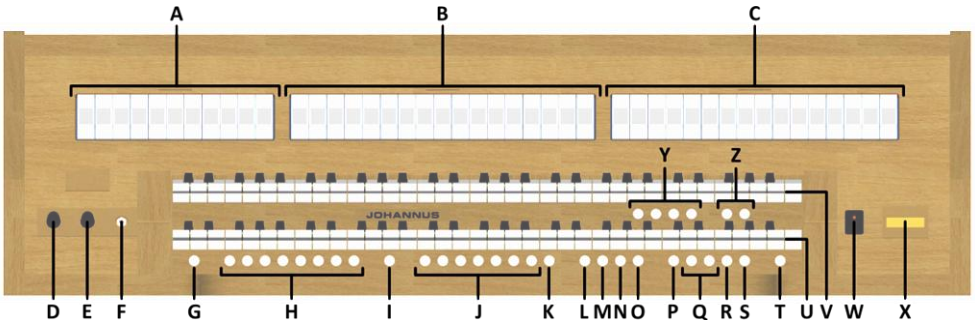
E Swell pedal

F Crescendo pedal

G Pedal board

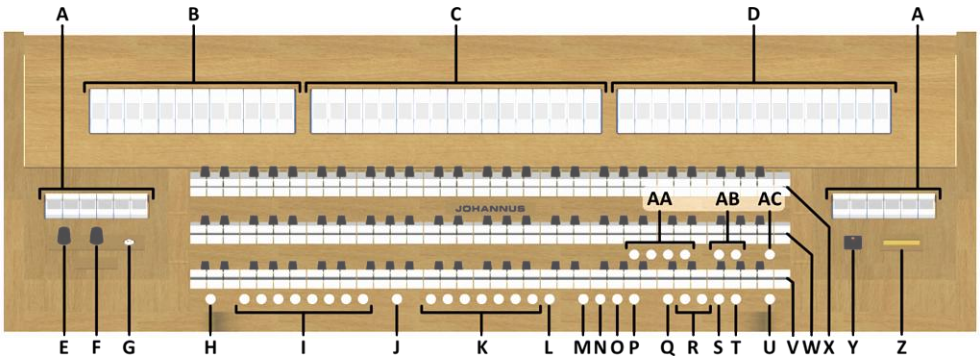
3.2 Overview of controls

3.2.1 Opus 250



A	Pedal stops, § 4.5	**N**	MB: Manual Bass, § 4.6
B	Great stops, § 4.5	**O**	CF: Cantus Firmus, § 4.6
C	Swell stops, § 4.5	**P**	TRANS.: Transposer, § 4.10
D	Volume control Organ, § 4.1	**Q**	- and + pistons, § 5
E	Volume control Cathedral, § 4.1	**R**	ENTER, § 5
F	Phones, § 3.4	**S**	MENU, § 5
G	SET (programming capture), § 4.9	**T**	0: Recall / Reset, § 4.7
H	Capture memory locations, § 4.9	**U**	Manual Great
I	CH: Chorus, § 4.7	**V**	Manual Swell
J	Pre-programmed memory locations, § 4.8	**W**	On/Off pistons, § 2.2
K	RO: Reeds Off, § 4.7	**X**	Display, § 5
L	S/S: All Swells to Swell, § 4.7	**Y**	Intonation styles, § 4.4
M	CR: Crescendo, § 4.11	**Z**	Intonation variations, § 4.4

3.2.2 Opus 350



A Pedal stops, § 4.5
B Positif stops, § 4.5
C Great stops, § 4.5
D Swell stops, § 4.5
E Volume control Organ, § 4.1
F Volume control Cathedral, § 4.1
G Phones, § 3.4
H SET (programming capture), § 4.9
I Capture memory locations, § 4.9
J CH: Chorus, § 4.7
K Pre-programmed memory locations, § 4.8
L RO: Reeds Off, § 4.7
M S/S: All Swells to Swell, § 4.7
N CR: Crescendo, § 4.11
O MB: Manual Bass, § 4.6
P CF: Cantus Firmus, § 4.6
Q TRANS.: Transposer, § 4.10
R - and + pistons, § 5
S ENTER, § 5
T MENU, § 5
U 0: Recall / Reset, § 4.7
V Manual Positif
W Manual Great
X Manual Swell
Y On/Off pistons, § 2.2
Z Display, § 5
AA Intonation styles, § 4.4
AB Intonation variations, § 4.4
AC KT: Keyboard Transfer, § 4.7

3.3 Connect and switch on the peripherals

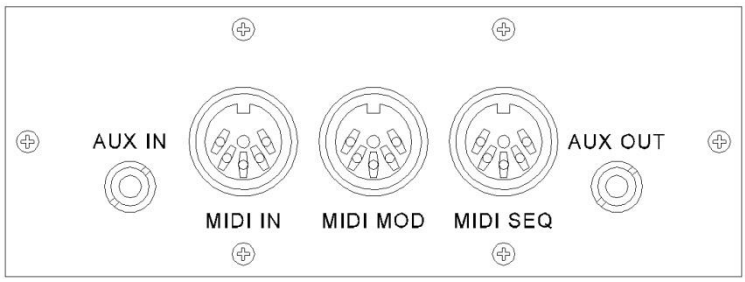
You can connect accessories (for example, a MIDI device) to the organ.

Follow the instructions provided in the documentation for the accessory.

1. Switch off the organ and the accessory.
2. Connect the accessory to the organ.
3. Switch on the accessory.
4. Switch on the organ

3.4 External connections

The external connections are on the left under the console.



MIDI IN: An input for receiving MIDI codes from other devices.

MIDI MOD: A programmable MIDI output for connecting a sound module or expander, for example.

MIDI SEQ: A non-programmable MIDI output for connecting a Johannus Sequencer+ or PC (with the optional Johannus Intonat program), for example.

AUX IN: A stereo audio input for playing the sound of an external device through the amplifiers of the organ. For example, an expander connected to the organ through the MIDI MOD can be played through the instrument's loudspeakers.

AUX OUT: A stereo audio output for connecting an external device (amplifier or recording device, for example).

Phones:
The phones connection is at the left next to the manuals.
This connection for a (stereo) headphone is suited for a headphone with an impedance of 30 Ω or more (see headphone specifications).

When the headphone is used, the loudspeakers of the organ are switched off automatically.

4 OPERATION

4.1 Volume controls

Organ: You can adjust the volume of the organ with the ORGAN volume control.

Cathedral: The reverb volume can be adjusted smoothly with the CATHEDRAL volume control.

4.2 Expression pedals

The organ has two expression pedals. One is configured as a swell pedal for the Swell, and one is configured as a crescendo pedal. With use of the Johannus Menu, the function of the expression pedals can be changed, see § 5.5 Expression Pedals.

Using an expression pedal which is set as a swell pedal will next to the volume also changes the timbre of the stops. By this the effect of the swell box shutters of a pipe organ is simulated.

4.3 Adaptive Surround Reverb ASR 12

The ASR 12 reverb system produces a digital acoustic effect. This effect provides a spatial reproduction of the organ sound that can be adjusted continuously.

Turn the volume control CATHEDRAL to adjust the reverb volume.

The reverb length can be set using the Johannus Menu. See § 5.10 Reverb Settings. The length can be set for each intonation style.

The following 12 reverb types can be selected for each intonation style in the Johannus Menu:

- Abbey Church
- Basilica
- City Cathedral
- Concert Hall
- Hill Church
- Marble Church
- Marble Room
- Music Room
- Palace Hall
- Royal Auditorium
- Town Church
- Village Chapel

See § 5.10 Reverb Settings for assigning a reverb to an intonation style.

4.4 Intonations

The organ has 12 intonations, divided in four styles: Romantic (ROM), Symphonic (SYM), Baroque (BAR) and Historic (HIS) and three variation per style: Standard, Solo (SOLO) and Trio (TRIO).

Select an intonation style by pressing the ROM, SYM, BAR or HIS piston. Select an intonation variation by pressing the SOLO or TRIO piston. If no variation piston is selected, Standard is selected automatically.

4.5 Stops

The stops are activated via stop switches, pre-programmed memory locations, capture memory locations or the crescendo pedal.
The lamp in the stop switch lights when the associated stop is active.

The stops are divided into three groups:
Pedal: Activates the stops associated with the Pedal.
Positif: Activates the stops associated with the Positif *(Opus 350 only).*
Great: Activates the stops associated with the Great.
Swell: Activates the stops associated with the Swell.

4.6 Couplers

Manual couplers:
POSITIF - GREAT *(Opus 350 only)*:
Fully couples all keys of the Positif to the Great.
SWELL - GREAT:
Fully couples all keys of the Swell to the Great.
SWELL - POSITIF *(Opus 350 only)*:
Fully couples all keys of the Swell to the Positif.

Pedal couplers:
POSITIF - PEDAL *(Opus 350 only)*:
Fully couples all keys of the Positif to the Pedal.
GREAT - PEDAL:
Fully couples all keys of the Great to the Pedal.
SWELL - PEDAL:
Fully couples all keys of the Swell to the Pedal.

Manual Bass (MB):
Couples the Pedal monophonic to the Great. Only the lowest key that is played on the Great is coupled from the Pedal to the Great.
If only the lowest key of a chord is released, the pedal key activated by the Manual Bass function is dropped until a new lowest key is played.
Activate the Manual Bass with the MB piston.


It is advisable not to use the Manual Bass while playing the pedal board to avoid double bass tones.

Cantus Firmus (CF):
Cantus firmus: Latin for 'fixed voice' or in organs 'solo voice' or 'melody coupler'. Couples the Swell monophonic to the Great. Only the highest key that is played on the Great is coupled from the Swell to the Great.
With use of a solo registration on the Swell in this way a solo is heard while playing only on the Great.
If only the highest key of a chord is released, the key activated by the Cantus Firmus function is dropped until a new highest key is played.
Activate the Cantus Firmus with the CF piston.


It is advisable not to use the Cantus Firmus in combination with the coupler SWELL - GREAT because this overrules the solo function of the Cantus Firmus.

4.7 Accessories

CH: Chorus
Chorus is a function for lightly detuning the organ stops to give it a broader and livelier sound. Use the CH piston to activate the Chorus.

RO: Reeds Off
Reeds off is a function to switch off all reed stops simultaneously. As long as this piston is pressed, no reed stops can be activated. When this function is switched off, the reed stops that were on are activated again. Use the RO piston to activate the Reeds Off function.

S/S: All swells to swell
All Swells to Swell transforms the swell pedal for the Swell to a swell pedal for the whole organ.


If no expression pedal is configured as a swell pedal for the Swell, the S/S piston cannot be activated.

0: Recall / Reset function
The 0 piston cancels registration in two ways:
1. A short press on the 0 piston: Only the last change is cancelled.
2. A long press on the 0 piston: All registrations are cancelled.

KT: Keyboard Transfer *(Opus 350 only)***:**
Keyboard Transfer is a function to switch the manuals of the Positif and the Great. When Keyboard Transfer is active manual 1 is the Great manual and manual 2 is the Positif manual. Activate the Keyboard Transfer with the KT piston.

4.8 Pre-programmed memory locations

Pre-programmed memory locations are available by operating pistons PP to T and PL. These seven memory locations have factory settings (presets) appropriate for the quiet pianissimo to the loud tutti and the classic plenum.

Calling up a pre-programmed memory location:
Press a pre-programmed memory location (PP-T or PL). The active stops light up.

Programming a pre-programmed memory location:

The current setting of the pre-programmed memory location will be lost.

Although it is possible to store any registration under a piston of a pre-programmed memory location it is advisable to select a registration matching the text of the piston.

1. Select the desired stops.
2. Press the SET piston. Hold in the piston.
3. Press the desired pre-programmed memory location (PP-T or PL).
4. Release the SET piston.

4.9 Capture memory:

Through use of the capture memory, a registration can be made active with just one piston.
The capture memory consists of 75 levels.
These levels can be seen on the display (Mem:…). Each level has eight memory locations (pistons 1-8). The 600 capture memory locations are not pre-programmed and can be programmed by the musician.

Programming a capture memory location:

The current setting of the capture memory location will be lost.

1. Select the desired stops.
2. Use the - and + pistons to select a level (1-75) on the display.
3. Press the SET piston. Hold in the piston.
4. Press the desired memory location (1-8).
5. Release the SET piston.

Calling up a capture memory location:
1. Use the - and + pistons to select the desired level (1-75) on the display.
2. Press the desired memory location (1-8). The active stops light up.

4.10 Transposer

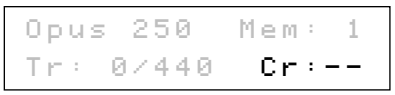
The Transposer function shifts the pitch by half-tone increments (from -8 to +8).
The transposer setting can be read on the display (Tr: …).

1. Press the TRANS piston.
2. Use the - and + pistons to set the pitch.
3. When the transposer change needs to be saved, press the ENTER piston in the time the TRANS. piston is lit.

4.11 Crescendo pedal

The crescendo pedal can be used to activate 20 registrations step-by-step. These registrations start with very quiet (pianissimo) to very loud (tutti).
The default registrations of the 20 steps can be changed. See § 5.1 Crescendo.

Activating the crescendo pedal
If the crescendo pedal is not activated it is indicated on the displays with `Cr:--`.



Use the CR piston to activate the crescendo pedal. The display indicates the actual step.

Crescendo pedal as additional swell pedal
The crescendo pedal can also be configured as a swell pedal. See § 5.5 Expression Pedals.
If the crescendo pedal is set as additional swell pedal, all functions of the crescendo pedal are deactivated.

4.12 Quick Access

Quick Access is a function to quickly access certain function of the organ.

4.12.1 Programming mode crescendo pedal


This function is not available if no expression pedal is set as crescendo pedal.

Pressing the ENTER and CR piston simultaneously enters the programming mode of the crescendo pedal. See § 5.1 Crescendo, sub 4 for next steps.

5 JOHANNUS MENU

In the Johannus Menu several functions of the organ can be set.
Press the MENU piston to activate the Johannus Menu on the display.
Navigating the menu is done with the - and + pistons.
Confirmation of a choice is done with the ENTER piston.
Cancel or step back in the menu is done with the MENU piston.

The Johannus Menu consists of the following functions:

Function	More information
Crescendo	§ 5.1
Datadump	§ 5.2
Demo Songs	§ 5.3
Display Contrast	§ 5.4
Expr. Pedals	§ 5.5
Keyboard Config	§ 5.6
Key Volumes	§ 5.7
MIDI Config	§ 5.8
Reset Procedures	§ 5.9
Reverb Settings	§ 5.10
Startup Settings	§ 5.11
Temperaments	§ 5.12
Tuning	§ 5.13
Version	§ 5.14

5.1 Crescendo

The crescendo pedal contains 20 pre-programmed registrations. These registrations start with very quiet (pianissimo) to very loud (tutti). These pre-programmed registrations can be changed.

Step 0 of the crescendo pedal cannot be changed.

1.	Press the MENU piston.	Johannus Menu: Crescendo
2.	Use the - and + pistons to select the `Crescendo` function on the display.	Johannus Menu: Crescendo
3.	Press the ENTER piston. The first step of the crescendo pedal appears on the display.	Crescendo Cres. step: 0
4.	Use the - and + pistons to select the step which has to be changed (for example step 5).	Crescendo Cres. step: 5
5.	Change the registration and press the ENTER piston to save the new registration in the memory of the organ.	
6.	Repeat steps 4 and 5 if more crescendo pedal steps has to be changed.	

7. Press the MENU piston 3x to exit the Johannus Menu.	Opus 250 Mem: 1 Tr: 0/440 Cr: 0

5.2 Datadump

The Datadump function sends several settings from the organ to a storage medium (the Johannus Sequencer+, for example) through the MIDI SEQ output. See § 3.4 External connections.
The settings to sent are: the content of all capture memory locations and all settings which can be set via the Johannus Menu, except Key Volumes. Key Volumes settings is a part of the intonation data. These data can be received with the optional Johannus Intonat software.

a. Sending data from the organ	
1. Press the MENU piston.	Johannus Menu: Crescendo
2. Use the - and + pistons to select the `Datadump` functions on the display.	Johannus Menu: Datadump
3. Press the ENTER piston. The `Press ENTER` text appears on the display.	Datadump Press ENTER
4. Make sure the desired storage medium is properly connected.	
5. Press the ENTER piston. When data is being sent, `Sending data...` appears on the display. Sending data will take some time.	Datadump Sending data...


Do not use the organ when the `Sending data...` text is on the display.

6. If the data dump is complete, the main menu appears on the display.	Johannus Menu: Datadump
7. Press the MENU piston to exit the Johannus Menu.	Opus 250 Mem: 1 Tr: 0/440 Cr:--

b. Uploading data to the organ


Receiving a data file has no relation to the Johannus Menu and can be done on every moment the organ is switched on, except when playing a Demo Song.


Make sure to upload only data files which are recorded from the instrument concerned. Uploading a data file from another instrument may jeopardize the functioning of your instrument.

1.	Make sure the storage medium, the Johannus Sequencer+ for example, with a previous recorded data file is properly connected.	
3.	Start sending the data file on the sequencer. A message that a data file is being received appears on the display of the organ.	Uploading stored data
4.	When the upload is completed the main screen of the display appears automatically.	Opus 250 Mem: 1 Tr: 0/440 Cr:--

5.3 Demo Songs

The Demo Songs function plays twelve different demo songs.

1.	Press the MENU piston.	Johannus Menu: Crescendo
2.	Use the - and + pistons to select the `Demo Songs` function on the display.	Johannus Menu: Demo Songs
3.	Press the ENTER piston. The title of the first demo song appears on the display.	Demo Songs [title]
4.	Use the - and + pistons to select one of the twelve demo songs.	
5.	Press the ENTER piston to select the demo song.	[title] Play one demo
6.	Use the - and + pistons to choose whether to play only the selected demo song (`play one demo`) or all demo songs (`play all demo's`).	
7.	Press the ENTER piston to start playing the selected demo song(s). The title and composer of the demo song appears on the display.	[title] [composer] ♫

While playing a demo song, the operating functions of the organ are disabled except the following functions:

a. **0 piston:** stop playing the demo song('s).
b. **Organ volume control:** adjust the volume of the organ.
c. **Cathedral volume control:** adjust the volume of the reverb.

8.	Press the MENU piston 2x after having played the demo song(s) to exit the Johannus Menu.	Opus 250 Mem: 1 Tr: 0/440 Cr:--

5.4 Display Contrast

The Display Contrast function adjusts the display contrast.

1.	Press the MENU piston.	Johannus Menu: Crescendo
2.	Use the - and + pistons to select the `Display Contrast` function on the display.	Johannus Menu: Display Contrast
3.	Press the ENTER piston. The current contrast level appears on the display.	Display Contrast Level: 9
4.	Use the - and + pistons to select the desired contrast level.	
5.	Press the ENTER piston to confirm and to return to the main menu.	Johannus Menu: Display Contrast
6.	Press the MENU piston to exit the Johannus Menu.	Opus 250 Mem: 1 Tr: 0/440 Cr:--

5.5 Expression Pedals

The organ is equipped with PEPC™ (Programmable Expression Pedal Configuration). This function makes it possible to configure each expression pedal to one's own discretion.

We distinguish two types of expression pedals:

Swell pedal:	dynamics by increase or decrease of volume. In a pipe organ this is achieved by closing or opening the swell shutters of a swell box. See also § 4.2 Expression pedals.
Crescendo pedal:	dynamics by increase or decrease the amount of stops. See also § 4.11 Crescendo pedal.

a. An expression pedal can be configured as a swell pedal for several divisions at the same time.
b. A division can only be connected to one expression pedal at the same time.
c. An expression pedal cannot be configured as a swell pedal and a crescendo pedal at the same time.

1.	Press the MENU piston.	Johannus Menu: Crescendo
2.	Use the - and + pistons to select the `Expr. Pedals` function on the display.	Johannus Menu: Expr. Pedals
3.	Press the ENTER piston. The first expression pedal appears on the display.	Expr. Pedals Expr. Pedal 1

4.	Use the - and + pistons to select the expression pedal which has to be changed. Expression pedal 2, for example.	Expr. Pedals Expr. Pedal 2
5.	Press the ENTER piston. The first possibility for the expression pedal appears on the display. The possibilities are: - Ch: swell pedal for Positif *(Opus 350 only)* - Gt/Pd: swell pedal for Great and Pedal - Sw: swell pedal for Swell - Cresc: crescendo pedal	Expr. Pedal 2 > Gt/Pd: No
6.	Use the - and + pistons to select the desired possibility, Sw for example.	Expr. Pedal 2 > Sw : Yes
7.	Press the ENTER piston. The cursor jumps to the actual setting.	Expr. Pedal 2 Sw : >Yes
8.	Use the - and + to select the desired setting, No for example.	Expr. Pedal 2 Sw : >No
9.	Press the ENTER piston to confirm. The cursor jumps back.	Expr. Pedal 2 > Sw : No
10.	If necessary, repeat steps 6 to 9 to change other possibilities of press the MENU piston to return to the Expression Pedal menu.	Expr. Pedals Expr. Pedal 2
11.	If necessary, repeat steps 4 to 10 for another expression pedal of press the MENU piston 2x to exit the Johannus Menu.	Opus 250 Mem: 1 Tr: 0/440 Cr:--

5.6 Keyboard Config

The Keyboard Config function sets the operation of the keys.

1.	Press the MENU piston.	Johannus Menu: Crescendo
2.	Use the - and + pistons to select the Keyboard Config function on the display.	Johannus Menu: Keyboard Config
3.	Press the ENTER piston. The actual setting of the first manual appears on the display.	>Great Automatic
4.	Use the - and + pistons to select the manual the setting of which must be changed: Choir (Positif) *(Opus 350 only),* Great, or Swell	
5.	Press the ENTER piston. The cursor moves to the second line of the display.	Great >Automatic

6.	Use the - and + pistons to select a setting for the operation of the keys. - `Automatic`: The manual has been set to High. When activating a programmable MIDI stop or optional solo- or orchestral voice, the manual will be set to Velocity automatically. - `High`: The keys respond when touched very lightly. - `Low`: The keys respond when pressed further. - `Velocity`: The keys are touch-sensitive.	
7.	Press the ENTER piston. The manual setting is now saved in the memory and the cursor moves back to the first line of the display.	>Great Automatic
8.	Repeat steps 4 to 7 to change the setting of another manual or press the MENU piston 2x to exit the Johannus Menu.	Opus 250 Mem: 1 Tr: 0/440 Cr:--

5.7 Key Volumes

The Key Volumes function makes it possible to adjust the key volumes of each stop.
The Key Volumes function consists of the following sub functions:

- Adjust
- Reset one stop
- Reset ALL stops

a. Adjust		
The Adjust function sets the volume per key, stop and intonation style.		
1.	Switch off all stops.	
2.	Select an intonation style or variation.	
3.	Press the MENU piston.	Johannus Menu: Crescendo
4.	Use the - and + pistons to select the `Key Volumes` function on the display.	Johannus Menu: Key Volumes
5.	Press the ENTER piston. The first sub function of the Key Volumes menu appears on the display.	Key Volumes Adjust

If you are asked to enter a code, the Key Volumes function has been secured at the request of the owner. Contact the owner or dealer to retrieve the code. Enter the code using the pistons of the capture memory locations and press the ENTER piston.

Enter code:
_ _ _ _

6.	Press the ENTER piston. A question to select a stop to adjust appears on the display.	Select a stop to adjust

7.	Activate one stop. A question to press a key appears on the display.	Key: press a key Vol: -/+
8.	Press one key on the corresponding division and hold the key. The display will now show following `Key:` the key indicator and following `Vol:` the volume.	Key: 3 C Vol: 83 -/+
9.	Use the - and + pistons to set the desired volume.	
10.	Press the ENTER piston to save the change. The display requests confirmation. Use the - and + pistons to select `No` or `Yes`.	Save changes? No/Yes
11.	Press the ENTER piston to confirm.	Key: press a key Vol: -/+
12.	Press the MENU piston to return to the Key Volume menu.	Key Volumes Adjust
13.	If the changes have not been saved, the display will show `Discard changes?`. Use the - and + pistons to select `Yes` for discarding and press the ENTER piston. Go to step 17.	Discard changes? No/Yes
14.	Use the - and + pistons to select `No` if the changes still has to be saved and press the ENTER piston.	Key: press a key Vol: -/+
15.	Press the ENTER piston. The display requests confirmation.	Save changes? No/Yes
16.	Use the - and + pistons to select `Yes`. Press the ENTER piston for confirmation.	Key: press a key Vol: -/+
17.	Press the MENU piston 3x to exit the Johannus Menu.	Opus 250 Mem: 1 Tr: 0/440 Cr:--

More key volumes can be changed by pressing another key or by selecting another stop.

b. Reset one stop

The Reset one stop sub function resets the key volumes for one stop in one intonation or variation to the factory setting.

1.	Switch off all stops	
2.	Select an intonation style or variation	
3.	Press the MENU piston.	Johannus Menu: Crescendo
4.	Use the - and + pistons to select the `Key Volumes` function on the display.	Johannus Menu: Key Volumes

5. Press the ENTER piston. The first sub function of the Key Volumes menu appears on the display.	Key Volumes Adjust

If you are asked to enter a code, the Key Volumes function has been secured at the request of the owner. Contact the owner or dealer to retrieve the code. Enter the code using the pistons of the capture memory locations and press the ENTER piston.

Enter code:
_ _ _ _

6. Use the - and + pistons to select the `Reset one stop` sub function on the display.	Key Volumes Reset one stop
7. Press the ENTER piston. A question to select a stop to reset appears on the display.	Select a stop to reset
8. Activate one stop. A question to confirm appears on the display.	Reset this stop? No/Yes
9. Use the - and + pistons to select `No` or `Yes`.	Reset this stop? No/Yes
10. Press the ENTER piston to confirm and to return to the Key Volumes menu.	Key Volumes Reset one stop
11. Press the MENU pistons 2x to exit the Johannus Menu.	Opus 250 Mem: 1 Tr: 0/440 Cr:--

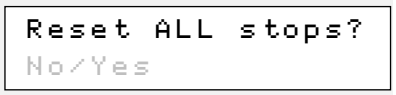
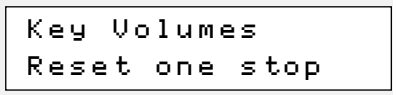
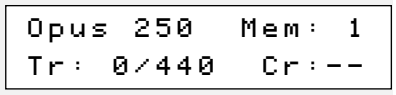
c. Reset ALL stops

The Reset ALL stops function resets the key volumes of all stops in one intonation style or variation to the factory setting.

1. Select an intonation style or variation.	
2. Press the MENU piston.	Johannus Menu: Crescendo
3. Use the - and + pistons to select the `Key Volumes` function on the display.	Johannus Menu: Key Volumes
4. Press the ENTER piston. The first sub function of the Key Volumes menu appears on the display.	Key Volumes Adjust

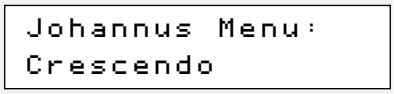
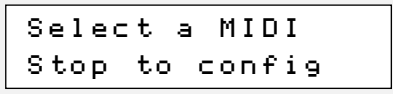
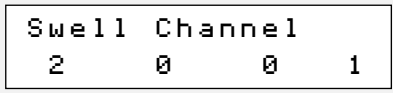
If you are asked to enter a code, the Key Volumes function has been secured at the request of the owner. Contact the owner or dealer to retrieve the code. Enter the code using the pistons of the capture memory locations and press the ENTER piston.

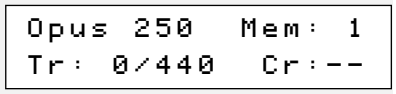
Enter code:
_ _ _ _

5.	Use the - and + pistons to select the `Reset ALL stops` sub function on the display.	
6.	Press the ENTER piston. A question to confirm appears on the display.	
7.	Use the - and + pistons to select `No` or `Yes`.	
8.	Press the ENTER piston to confirm and to return to the Key Volumes menu.	
9.	Press the MENU piston 2x to exit the Johannus Menu.	

5.8 MIDI Config

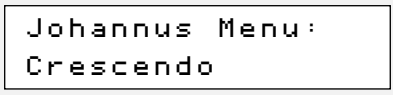
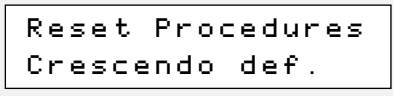
MIDI is a protocol for communication between the organ and other devices, such as PC, Johannus Sequencer+ or other musical instruments.
The programmable MIDI stops allow you to control any module voice through any MIDI channel (1-16).
The four parts of the programmable MIDI code are: Channel, Msb, Lsb en Voice.

1.	Press the MENU piston	
2.	Use the - and + pistons to select the `MIDI Config` function on the display.	
3.	Press the ENTER piston. A question to select a MIDI stop to configure appears on the display.	
4.	Activate the MIDI stop which has to be configured (MIDI from the Swell, for example). The display shows on the first line: `Swell Channel` (the selected MIDI stop and the first part of the MIDI code) and on the second line the settings of all four parts: Channel, Msb, Lsb en Voice.	
5.	Use the - and + pistons to select the desired MIDI-channel.	
6.	Press the ENTER piston. The display shows: `Swell Msb`.	
7.	If needed, use the - and + pistons to select the desired Msb setting.	

8.	Press the ENTER piston. The display shows: `Swell Lsb`.	
9.	If needed, use the - and + pistons to select the desired Lsb setting.	
10.	Press the ENTER piston. The display shows: `Swell Voice`.	
11.	Use the - and + pistons to select the desired Voice setting.	
12.	Press the ENTER piston. The selected configuration is now stored in memory. The first of the four parts of the programmable MIDI code appears on the display.	
13.	Press the MENU piston 2x to exit the Johannus Menu.	

5.9 Reset Procedures

The Reset Procedures function can be used to reset a number of settings to the factory settings.

1.	Press the MENU piston.	
2.	Use the - and + pistons to select the `Reset Procedures` function on the display.	
3.	Press the ENTER piston. The first option of the Reset Procedures appears on the display.	
4.	Use the - and + pistons to select the desired reset procedure: - `Crescendo def.`: Resets the factory settings of the 20 steps of the crescendo pedal. - `Expr. Pedals`: Resets the factory setting of the expression pedals. - `Memory default`: Clears the entire capture memory. - `MIDI default`: Resets the factory settings of the MIDI stops. - `Preset default`: Resets the factory settings of the pre-programmed memory locations. - `Reverb default`: Resets the factory settings of the reverb.	
5.	Press the ENTER piston. A question to confirm appears on the display.	
6.	Use the - and + pistons to select `No` or `Yes`. Press the ENTER piston to confirm and to return to the Reset Procedures menu.	

7.	Press the MENU piston 2x to exit the Johannus Menu.	Opus 250 Mem: 1 Tr: 0/440 Cr:--

5.10 Reverb Settings

The Opus 250 is equipped with the Adaptive Surround Reverb ASR-12 system. With this system it is possible to choose a matching reverb for each intonation style and variation. The length of the reverb can be changed and a 3D Surround effect can be enabled.

1.	Use the intonation style and variation pistons to activate an intonation style or variation the reverberation of which has to be changed.	
2.	Press the MENU piston.	Johannus Menu: Crescendo
3.	Use the - and + pistons to select the `Reverb Settings` function on the display.	Johannus Menu: Reverb Settings
4.	Press the ENTER piston. The first function of the Reverb Settings appears on the display.	Reverb Settings Reverb Program
5.	Use the - and + pistons to select the desired reverb function which has to be changed. The following functions are available: `Reverb Program`, `Reverb Length` and `Reverb 3D Surround`.	Reverb Settings Rev. 3D Surround
6.	Press the ENTER piston to confirm. The activated intonation style or variation appears on the first line of the display. The setting of the selected reverb function appears on the second line of the display.	Romantic 3D Surround: On
7.	Use the - and + pistons to change the setting of the selected reverb function.	
8.	Press the ENTER piston to confirm and to return to the Reverb Settings menu.	Reverb Settings Rev. 3D Surround
9.	Press the MENU piston 2x to exit the Johannus Menu.	Opus 250 Mem: 1 Tr: 0/440 Cr:--

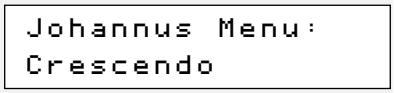
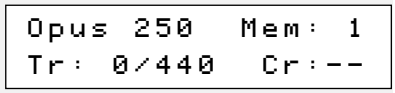
5.11 Startup Settings

The Startup Settings can be used to select the startup defaults for the following functions:

a. Chorus On/Off
b. Default Intonation
c. Side Speakers volume

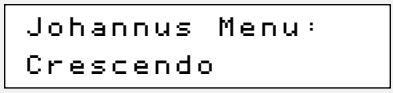
a. Chorus On/Off

Startup Setting Chorus On/Off determines whether the Chorus function is switched on at startup of the organ.

1. Press the MENU piston.	
2. Use the - and + pistons to select the `Startup Settings` function on the display.	
3. Press the ENTER piston. The first item of the Startup Settings appears on the display: `Chorus On/Off`.	
4. Press the ENTER piston. The actual setting appears on the display. The default setting is `On`.	
5. Use the - and + pistons to select the desired setting, for example `Off`.	
6. Press the ENTER piston to confirm and to return to the Startup Settings menu.	
7. Press the MENU piston 2x to exit the Johannus Menu.	

b. Default Intonation

Startup Setting Default Intonation determines which intonation style is selected at startup of the organ.

1. Press the MENU piston.	
2. Use the - and + pistons to select the `Startup Settings` function on the display.	
3. Press the ENTER piston. The first item of the Startup Settings appears on the display.	
4. Use the - and + pistons to select the `Default Into.` function.	
5. Press the ENTER piston. The actual setting appears on the display.	
6. Use the - and + pistons to select the desired intonation style, for example `Symphonic`.	
7. Press the ENTER piston to confirm and to return to the Startup Settings menu.	

8. Press the MENU piston 2x to exit the Johannus Menu.	Opus 250 Mem: 1 Tr: 0/440 Cr:--

c. Side Speakers

Startup Setting Side Speakers determines the volume level of the Surround Loudspeakers at startup of the organ.

1. Press the MENU piston.	Johannus Menu: Crescendo
2. Use the - and + pistons to select the `Startup Settings` function on the display.	Johannus Menu: Startup Settings
3. Press the ENTER piston. The first item of the Startup Settings appears on the display.	Startup Settings Chorus On/Off
4. Use the - and + pistons to select the `Side Speakers` function on the display.	Johannus Menu: Side Speakers
5. Press the ENTER piston. The actual settings for the left and the right side speaker appear on the display.	>Level left: 30 Level right: 30
6. Use the - and + pistons to select side the level has to be changed, for example the right side.	Level left: 30 >Level right: 30
7. Press the ENTER piston. The pointer jumps to the set level.	Level left: 30 Level right:>30
8. Use the - and + pistons to select the desired level, for example `25`.	Level left: 30 Level right:>25
9. Press the ENTER piston to confirm and to return to the Side Speakers menu.	Level left: 30 >Level right: 25

For a proper balance of the Surround sound it is advisable to keep both sides on an equal level. Use only unequal levels to correct different volumes caused by, for example, reflective surfaces on one side of the organ.

10. Press the MENU piston 3x to exit the Johannus Menu.	Opus 250 Mem: 1 Tr: 0/440 Cr:--

5.12 Temperaments

The Temperaments function sets the temperament.
There is choice out of eleven different temperaments:

- Equal (normal temperament)

- Young II
- Vallotti
- Kirnberger III
- Kirnberger II
- Neidhardt III
- Werckmeister III
- 1/6 Meantone (1/6 comma meantone)
- 1/5 Meantone (1/5 comma meantone)
- 1/4 Meantone (1/4 comma meantone)
- Pythagorean

1.	Press the MENU piston.	Johannus Menu: Crescendo
2.	Use the - and + pistons to select the `Temperaments` function on the display.	Johannus Menu: Temperaments
3.	Press the ENTER piston. The actual temperament appears on the display.	Temperaments Equal
4.	Use the - and + pistons to select the desired temperament, for example `Kirnberger III`.	Temperaments Kirnberger III
5.	Press the MENU piston 2x to exit the Johannus Menu.	Opus 250 Mem: 1 Tr: 0/440 Cr:--

This setting cannot be saved. When the organ is switched off and on again, it is set to Equal automatically.

5.13 Tuning

The Tuning function shifts the pitch in steps of 1 Hz from 426 Hz to 454 Hz (standard pitch is a = 440 Hz).
The set pitch can be read on the display directly behind the transposer setting.

1.	Press the MENU piston.	Johannus Menu: Crescendo
2.	Use the - and + pistons to select the `Tuning` function on the display.	Johannus Menu: Tuning
3.	Press the ENTER piston. The actual Tuning setting appears on the display.	Tuning 440 Hz
4.	Use the - and + pistons to select the desired tuning, for example `442 Hz`.	Tuning 442 Hz

5.	Press the ENTER piston to program the new setting and to return to the Johannus Menu.	Johannus Menu: Tuning
6.	Press the MENU piston to exit the Johannus Menu.	Opus 250 Mem: 1 Tr: 0/442 Cr:--

5.14 Version

The Version function shows the version number of the software of the organ.

1.	Press the MENU piston.	Johannus Menu: Crescendo
2.	Use the - and + pistons to select the function `Version` on the display.	Johannus Menu: Version
3.	Press the ENTER piston. The data of the software of the organ appears on the display.	JHOXXXX OC XXXX
4.	Press the MENU piston 2x to exit the Johannus Menu.	Opus 250 Mem: 1 Tr: 0/442 Cr:--

6 MAINTENANCE, TROUBLESHOOTING AND WARRANTY

6.1 Maintenance

Overview

Component	Maintenance	Frequency
Cabinet	Cleaning. See § 6.1.1	As required
Manuals	Cleaning and removing scratches. See § 6.1.2	As required

6.1.1 Maintenance of the cabinet

Do not use furniture polish or teak oil to clean the organ cabinet.
Direct sunlight may discolour the organ cabinet.

1. Clean the cabinet with a damp cloth.
2. Rub the cabinet dry with a lint-free cloth.

6.1.2 Maintenance of the manuals

The manuals are plastic.

Do not use aggressive cleaning agents such as paint thinner or acetone to remove dirt.

1. Clean the manuals with a damp cloth.
2. Rub the manuals dry with a lint-free cloth.
3. Remove any scratches with car polish.

6.2 Problems

Overview

Problem	Cause	Solution
Pedal board does not work properly	The pedal magnet is making poor contact with the magnetic switch at the rear of the pedal front cover.	Reposition the pedal board.
Organ functions do not work properly	The organ is not earthed.	Connect the organ to a grounded power socket.

6.3 Warranty

The conditions are specified in the warranty certificate. The warranty is void if changes or repairs are made to the organ by persons or organizations that are not authorized by Johannus Orgelbouw b.v.

7 MIDI IMPLEMENTATIONS

7.1 MIDI Implementation Chart

JOHANNUS Organs — Date: September 2008

MIDI Implementation card — Version 1.00

Functions		**Transmitted**	**Recognized**	**Remarks**
Basic Channel	Default Changes	See MIDI Specs See MIDI Specs	See MIDI Specs Y[1]	See MIDI Specs
Mode	Default Messages Altered	Mode 3 N * * * * * * * *	Mode 3 N N	
Note Number	True Voice	36 - 96 * * * * * * * *		
Velocity	Note ON Note OFF	9nH v=1 - 127 9nH (v=64) 9nH (v=0)	9nH v=1 - 127 9nH v=1 - 127 9nH v=0, 8nH v=*	Velocity ON Velocity OFF *=irrelevant
After Touch	Keys Channels	N N		
Pitch Bend		N		
Control Change	7 11 100/101/6 100/101/6	Y Y Y Y		General Volume Expr. pedals Pitch Transposer
Program Change	: True#	See MIDI Specs * * * * * * * *	See MIDI Specs See MIDI Specs	See MIDI Specs See MIDI Specs
System Exclusive		See MIDI Specs	See MIDI Specs	See MIDI Specs
Common	: Song Pos : Song Sel : Tune	N N N	N N N	
System Real Time	: Clock : Commands	N N	N N	
Aux	: Reset All Contr. : Local ON/OFF : All Notes OFF : Active Sense : Reset	N N Y N N	N N Y N N	
Notes		[1] Depends on number of divisions		

Mode 1: OMNY ON, POLY — Mode 2: OMNY ON, MONO — Y=YES

Mode 3: OMNY OFF, POLY — Mode 4: OMNY OFF, MONO — N=NO

7.2 MIDI Specifications

This paragraph describes the specifications on the MIDI Implementation Chart in more detail.

Default basic channels (transmitted/recognized)

Opus 250:	1:	Great	Opus 350:	1:	Positif
	2:	Swell		2:	Great
	3:	Pedal		3:	Swell
	12:	Stops		4:	Pedal
				12:	Stops

Basic channel changes (transmitted)
Can be programmed through the MIDI Config. See § 5.8 MIDI Config.

Control changes (transmitted)

Controller 7 (07h)	General volume, with volume values 40 (28h) - 127 (7Fh).
Controller 11 (0Bh)	Expression pedal, with volume values 55 (37h) - 127 (7Fh).
Controller 6 (06h)	Pitch, with pitch values 28 (1Ch) - 99 (63h).
	Pitch value 64 (40h) = A = 440Hz.
	The following applies to the pitch:
	LSB 100 (64h) 1 (01h) and the MSB 101 (65h) 0(00h).
	Transposer, with transposer values 56 (38h) - 72 (48h).
	Transposer value 64 (40h) = a = 440Hz.
	The following applies to the transposer:
	LSB 100 (64h) 2 (02H) and the MSB 101 (65h) 0(00h).

Control changes (recognized)

Controller 7 (07h)	General volume, with volume values 0 (00h) - 127 (7Fh).
	Volume values less than 40 (28h) are treated as 40 (28h).
Controller 11 (0Bh)	Expression Pedal, with volume values 0 (00h) - 127 (7Fh).
	Volume values less than 55 (37h) are treated as 55 (37h).

Program changes (transmitted/recognized)
Organ stops: Depends on the number of stops and the sequence of stops.
MIDI stops (programmable): 1-128. See § 5.8 MIDI Config.

System exclusive messages (transmitted/recognized)
Each ‘sys ex’ (system exclusive) message largely looks the same. The first 7 bytes and the last byte are always the same. Only the value of the 8th byte varies. This is the ‘sys ex message’ that Johannus generally uses: F0 00 4A 4F 48 41 53 XX F7 (hexadecimal). The ‘sys ex messages’ described below only indicates the value of the 8th byte (XX) and the output from which it is transmitted.

All stops off
The ‘all stops off’ sys ex code is 7F. This sys ex code is transmitted through the MIDI SEQ. output when the 0 piston is pressed for a longer time. When an ‘all stops off’ sys ex code is received, all stops on the instrument are switched off.

Pushbutton values
When a piston is pressed, a sys ex code is transmitted with the value of the piston that is pressed (for example PP = 00 P = 01) through the MIDI MOD. output.
These sys ex codes are only important when the Johannus sound module CSM 128 is connected to your instrument.

Other MIDI codes (transmitted)
Press the 0 piston to transmit the sys ex code, 'all stops off' and all volume settings through the MIDI SEQ. output.