

JOHANNUS

Studio 150

User Manual

Studio 150

A true Johannus
to fit any music room!

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1 SAFETY

1.1 Safety instructions



- To reduce the risk of fire or electric shock, do not expose the organ to liquids, rain or moisture.
- Position the organ on a stable, horizontal surface.
- When power cord plug has an earth-pin, connect the organ to a grounded power socket.
- Turn off the organ when it is not in use.
- 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 authorized by Global Organ Group B.V. The organ contains static-sensitive components.
- The warranty is void if the organ is opened by a non-authorized person.

NOTICE:

1. Read these instructions.
 2. Keep these instructions.
 3. Heed all warnings.
 4. Follow all instructions.
 5. Do not use this apparatus near water.
 6. Clean only with a dry cloth.
 7. Do not block any of the ventilation openings.
- Install in accordance with the manufacturers instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
 9. When power cord plug has an earth-pin: Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
 10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
 11. Only use attachments/accessories specified by the manufacturer.
 12. Unplug this apparatus during lightning storms or when unused for long periods of time.
 13. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

1.2 Symbols on the organ

 **CAUTION**
RISK OF ELECTRIC SHOCK
DO NOT OPEN 

注意
感電の恐れがあります キャビネットをあけないでください

警告
为了避免触电, 请勿自行拆开机壳, 内部无用户自行维修的机件。请交乐兰公司指定维修点进行维修事宜。

경고 전기쇼크위험 - 열지 마시오.

ATTENTION: RISQUE DE CHOC ELECTRIQUE NE PAS OUVRIR

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

AVERTISSEMENT: POUR RÉDUIRE LE RISQUE D'INCENDIE OU DE CHOC ÉLECTRIQUE, N'EXPOSEZ PAS CET APPAREIL À LA PLUIE OU À L'HUMIDITÉ.



- Laite on liitettävä suojamaadoituskoskettimilla varus ettuun pistorasiaan.
- Apparätets stikprop skal tisluttes en stikkontakt med jord, som giver forbindelse til stikproppens jord
- Apparätet må tilkoples jordet stikkontakt.
- Apparaten skall anslutas till jordat uttag.

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRABLE OPERATION.

CAN ICES-3(B)/NMB-3(B)

仅适用于非热带气候条件下安全使用
仅适用于海拔2000m以下地区安全使用



Warning: The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



Warning for static-sensitive components. To prevent damage to electronic parts from static electricity, be sure to discharge any static electricity from your own body before handling / touching the instrument.

1.3 Symbols in this manual



Caution, Warning or important information



Do not, or forbidden to do



Note

1.4 Transport, storage and cleaning

Pay attention to the following during transport and storage:

- Remove the music desk and the pedal board from the organ, before transport.
- Store in an area with 40% to 60% relative humidity. Do not store in area's e.g. baths, washrooms, on wet floors, expose to steam or smoke, salt, humid, rain, moisture, dusty or sandy locations.
- Minimum temperature within the storage area: 0°C
- **Do not expose the Organ to direct sunlight (UV)**, do not place it near devices that radiate heat, or otherwise subject to temperature extremes. Also, do not allow lighting devices that normally are used while their light source is very close to the Organ (such as a piano light), or powerful spotlights to shine upon the same area of the Organ for extended periods of time. Excessive heat can deform or discolor the Organ.
- **Do not allow rubber, vinyl or similar materials to remain on this Organ for long periods of time.** Such objects can discolor or otherwise harmfully affect the finish.
- **Do not paste stickers, decals, or the like to this instrument.** Peeling such matter off the instrument may damage and or discolor the exterior finish.
- Do not bend the power cord or place heavy objects on it.
- **Don't allow foreign objects or liquids to enter Organ; Never place containers with liquid on Organ;** Do not put anything that contains water on this Organ. Also, avoid the use of insecticides, perfumes, alcohol, nail polish, spray cans, etc., near the Organ. Swiftly wipe away any liquid that spills on the Organ using a dry, soft cloth. Never use benzene, thinners, alcohol or solvents of any kind, to avoid the possibility of discoloration and/or deformation.
- **Unplug the power cord from the outlet before cleaning.** Before cleaning the Organ, turn it off and unplug the power cord from the outlet. To clean the Organ, use a dry, soft cloth; or one that is slightly dampened. Try to wipe the entire surface using an equal amount of strength, moving the cloth along with the grain of the wood. Rubbing too hard in the same area can damage the finish.
- **Do not open. Do not disassemble or modify by yourself**
- **Avoid climbing on top of the Organ, or placing heavy objects on it, nor on top of the keyboard nor pedal board. This can lead to dangerous situations** - such as tilting / tipping over - shearing / falling off of heavy objects. This can also lead to malfunctions - such as keys ceasing to produce sound.
- **Do not bend, drop, strong shock or vibration.**
- Never strike or apply strong pressure to the display.
- **Cautions when moving this Organ:** Since this product is very heavy, you must make sure that a sufficient number of people are on hand to help, so you can lift and move it safely, without causing strain. Make sure to have a firm grip, to protect yourself from injury and the instrument from damage. If you need to move the instrument, consult with your retailer, or Global Organ Group B.V.



1.5 Cautions and important notes

Indoor use only.

Connect the power cord to an outlet of the correct voltage. The Organ should be connected to a power supply only of the type described as marked under the keyboard deck of Organ.



Connect mains plug of this model to a mains socket outlet with a earthing connection, for Power cords with an earth-pin.



Do not connect or disconnect the power cord with wet hands. Never handle the power cord or its plugs with wet hands when plugging into, or unplugging from, an outlet.



Turn off the Organ if an abnormality or malfunction occurs. Immediately turn the Organ off, remove the power cord from the outlet, and request servicing by your retailer, or Global Organ Group B.V., when:



- The power-supply cord or the plug has been damaged; or
- If smoke or unusual odor occurs; or
- Objects have fallen into, or liquid has been spilled onto the Organ; or
- The Organ has been exposed to rain (or otherwise has become wet); or
- The Organ does not appear to operate normally or exhibits a marked change in performance.

Do not use overseas, foreign countries. Before using the Organ in a foreign country, consult with your retailer, or Global Organ Group B.V.



Presence of children. For their safety, adults should make sure that children under the age of 16 use the instrument properly and that the organ is in a stable position. An adult should always be present to supervise and guide any use by a child. Due to the weight of the instrument, it is recommended that it be securely fixed to the wall or floor by a professional to prevent tipping over. This is despite the fact that all safety precautions have been taken to avoid accidents. See also chapter 2. [Installation and connection](#).



Do not connect this Organ to same electrical outlet that is being used by an electrical appliance that is controlled by an inverter or a motor (such as a refrigerator, washing machine, microwave oven, or air conditioner). Depending on the way in which the electrical appliance is used, power supply noise may cause this Organ to malfunction or may produce audible noise. If it is not practical to use a separate electrical outlet, connect a power supply noise filter between this Organ and the electrical outlet.



Do not share an outlet with an unreasonable number of other devices. Do not force the Organ's power-supply cord to share an outlet with an unreasonable number of other devices. Be especially careful when using extension cords—the total power used by all devices you have connected to the extension cord's outlet must never exceed the power rating (watts/amperes) for the extension cord. Excessive loads can cause the insulation on the cord to heat up and eventually melt through - therefore always completely unwind an extension cord.



To prevent malfunction and equipment failure, always make sure to turn off the power on all your equipment before you make any connections.



Although the LCD and LEDs are switched off when the Organ is turned off, this does not mean that the Organ has been completely disconnected from the source of power. If you need to turn off the power completely, first turn off the Organ's switch, then unplug the power cord from the power outlet. For this reason, the outlet into which you choose to connect the power cord's plug should be one that is within easy reach and readily accessible.



If there is a possibility of lightning strike, disconnect the power cord from the outlet. Whenever you suspect the possibility of lightning in your area, pull the plug on the power cord out of the outlet.



Periodically clean the power cord's plug. At regular intervals, you should unplug the power plug and clean it by using a dry cloth to wipe all dust and other accumulations away from its prongs. Also, disconnect the power plug from the power outlet whenever the Organ is to remain unused for an extended period of time. Any accumulation of dust between the power plug and the power outlet can result in poor insulation and lead to fire.



The settings you were editing will be lost when the Organ is turned off. If you want to keep your settings, you must save your settings before turning the Organ off.



Place in a well ventilated location. The Organ should be located so that its location or position does not interfere with its proper ventilation.



Manage cables for safety. Try to prevent cords and cables from becoming entangled. Also, all cords and cables should be placed so they are out of the reach of children.



Grasp the plug when connecting or disconnecting the power cord. Always grasp only the plug on the power-supply cord when plugging into, or unplugging from, an outlet.



Precautions concerning use of bench.

When using the bench, please observe the following points:

- Maximum load on the bench is 160 kg, 352 lbs.
- Do not allow two or more persons to sit on the bench.
- Do not adjust the height while sitting on the bench.



Do not remove the speaker grille and speaker. Do not remove the speaker grille and speaker by any means. Speaker not user replaceable. Shock hazardous voltages and currents are present inside the enclosure.



Disconnecting power from AC mains. To completely disconnect this apparatus from the AC mains, disconnect the power supply cord plug from the AC receptacle.



The power supply cord and/or main power switch must be accessible. The mains plug of the power supply cord shall remain readily accessible. Or, the power switch must be accessible. The main power switch is the main power disconnect device for this Organ. Therefore, the power switch shall be readily accessible.



1.6 Placement

- Using the Organ near power amplifiers (or other equipment containing large power transformers) may induce hum. To alleviate the problem, change the orientation of this Organ; or move it farther away from the source of interference.
- This device may interfere with radio and television reception. Do not use this device in the vicinity of such receivers.
- Noise may be produced if wireless communications devices, such as cell phones, are operated in the vicinity of this Organ. Such noise could occur when receiving or initiating a call, or while conversing. Should you experience such problems, you should relocate such wireless devices so they are at a greater distance from this Organ, or switch them off.
- **Do not expose the Organ to direct sunlight**, place it near devices that radiate heat, or otherwise subject it to temperature extremes. Also, do not allow lighting devices that normally are used while their light source is very close to the Organ (such as a piano light), or powerful spotlights to shine upon the same area of the Organ for extended periods of time. Excessive heat can deform or discolor the Organ.
- **Do not allow rubber, vinyl, or similar materials to remain on this Organ for long periods of time.** Such objects can discolor or otherwise harmfully affect the finish.
- **Do not allow objects to remain on top of the keyboard or pedal board.** This can be the cause of malfunction, such as keys ceasing to produce sound.
- **Do not paste stickers, decals, or the like to this instrument.** Peeling such matter off the instrument may damage the exterior finish.
- **Do not put anything that contains water on this Organ.** Also, avoid the use of insecticides, perfumes, alcohol, nail polish, spray cans, etc., near the Organ. Swiftly wipe away any liquid that spills on the Organ using a dry, soft cloth.
- Due to the weight of the instrument, it is recommended to attach the instrument securely to the wall or floor by a professional, to avoid tipping. This, although all safety measures have been taken to avoid any accident.
See chapter 2. [Installation and connection](#).







1.7 Repairs and data

Please be aware that all data contained in the Organ's memory may be lost when the Organ is sent for repairs. Important data should always be stored (see '[Datadump](#)' [chapter 4.11.1](#)), or written down on paper (when possible).



During repairs, due care is taken to avoid the loss of data. However, in certain cases (such as when circuitry related to memory itself is out of order), we regret that it may not be possible to restore the data, and Global Organ Group B.V. assumes no liability concerning such loss of data.

1.8 Additional precautions

- Please be aware that the contents of memory can be irretrievably lost as a result of a malfunction, or the improper operation of the Organ. To protect yourself against the risk of losing important data, we recommend that you periodically write down important setting data, see chapter '[Datadump](#)' 4.11.1, or on paper (when possible). 
- Unfortunately, it may be impossible to restore the contents of data that was stored in the Organ's memory once it has been lost. Global Organ Group B.V. assumes no liability concerning such loss of data. 
- Use a reasonable amount of care when using the Organ's buttons, sliders, or other controls; and when using its jacks and connectors. Rough handling can lead to malfunctions. 
- Never strike or apply strong pressure to the display.
- A small amount of heat will radiate from the Organ during normal operation.
- To prevent possible hearing damage, do not listen at high volume levels for long periods. This Organ, either alone or in combination with an amplifier and headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level, or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should immediately stop using the Organ, and consult an audiologist. 
- To avoid disturbing others nearby, try to keep the Organ's volume at reasonable levels. You may prefer to use headphones, so you do not need to be concerned about those around you.
- When you need to transport the Organ, pack it in shock-absorbent material. Transporting the Organ without doing so can cause it to become scratched or damaged, and could lead to malfunction.
- Do not apply undue force to the music stand while it is in use.
- Some connection cables contain resistors. Do not use cables that incorporate resistors for connecting to this Organ. The use of such cables can cause the sound level to be extremely low, or impossible to hear. For information on cable specifications, contact the manufacturer of the cable.
- Due to the structural design of this instrument, small pets or other animals could end up getting trapped inside it. If such a situation is encountered, you must immediately turn off the Organ and disconnect the power cord from the outlet. You should then consult with the retailer from whom the instrument was purchased, or contact Global Organ Group B.V.
- The explanations in this manual include illustrations that depict what should typically be shown by the display.

Note, however, that your Organ may incorporate a newer, enhanced version of the system (e.g., includes newer sounds), so what you actually see in the display may not always match what appears in the manual.

2 INSTALLATION

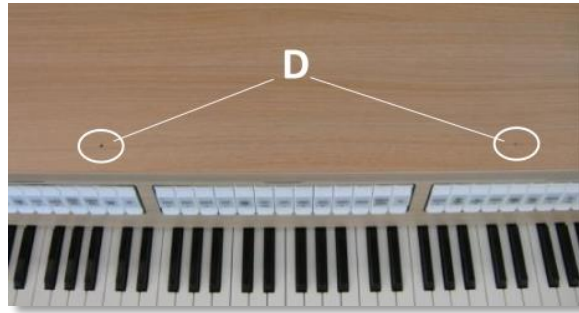
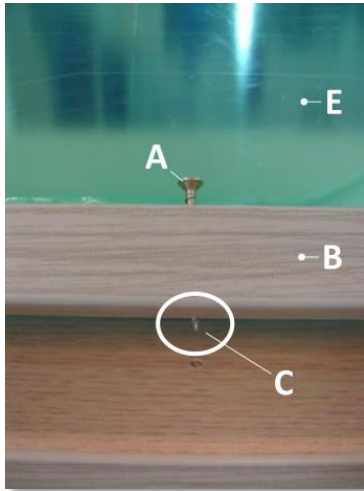
2.1 Installation and connection

2.1.1 Installation organ



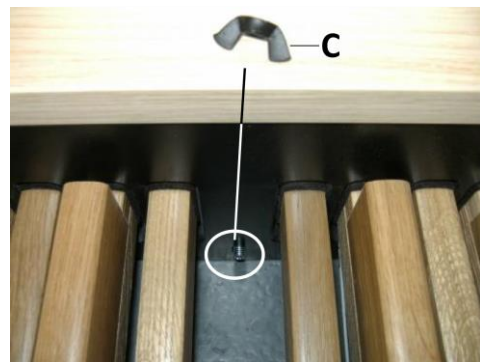
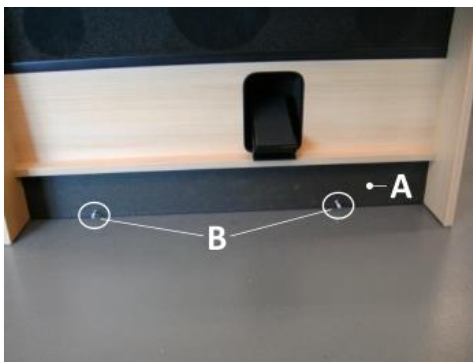
1. Position the organ on a stable, horizontal surface.
2. Install the music desk (A) on top of the organ, see § 2.1.2.
3. Install the pedal board (D), see § 2.1.3.
4. Place the organ bench (C) over the pedal.
5. Make sure the voltage of the organ matches the voltage of the mains. See the serial plate (B).
6. When power cord plug has an earth-pin: 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. Electric screw driver is not recommended.
4. Remove green protection foils (E) from plexiglas part of the music desk.

2.1.3 Installation pedal board



1. Shift pedal board against black pedal front cover (A). Pedal bolts (B) will stick out 5 mm.
2. For security reasons mount pedal board to organ with wing nuts (C).



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
--

Studio Mem: 1 Tr: 0/440 Exp:Sw

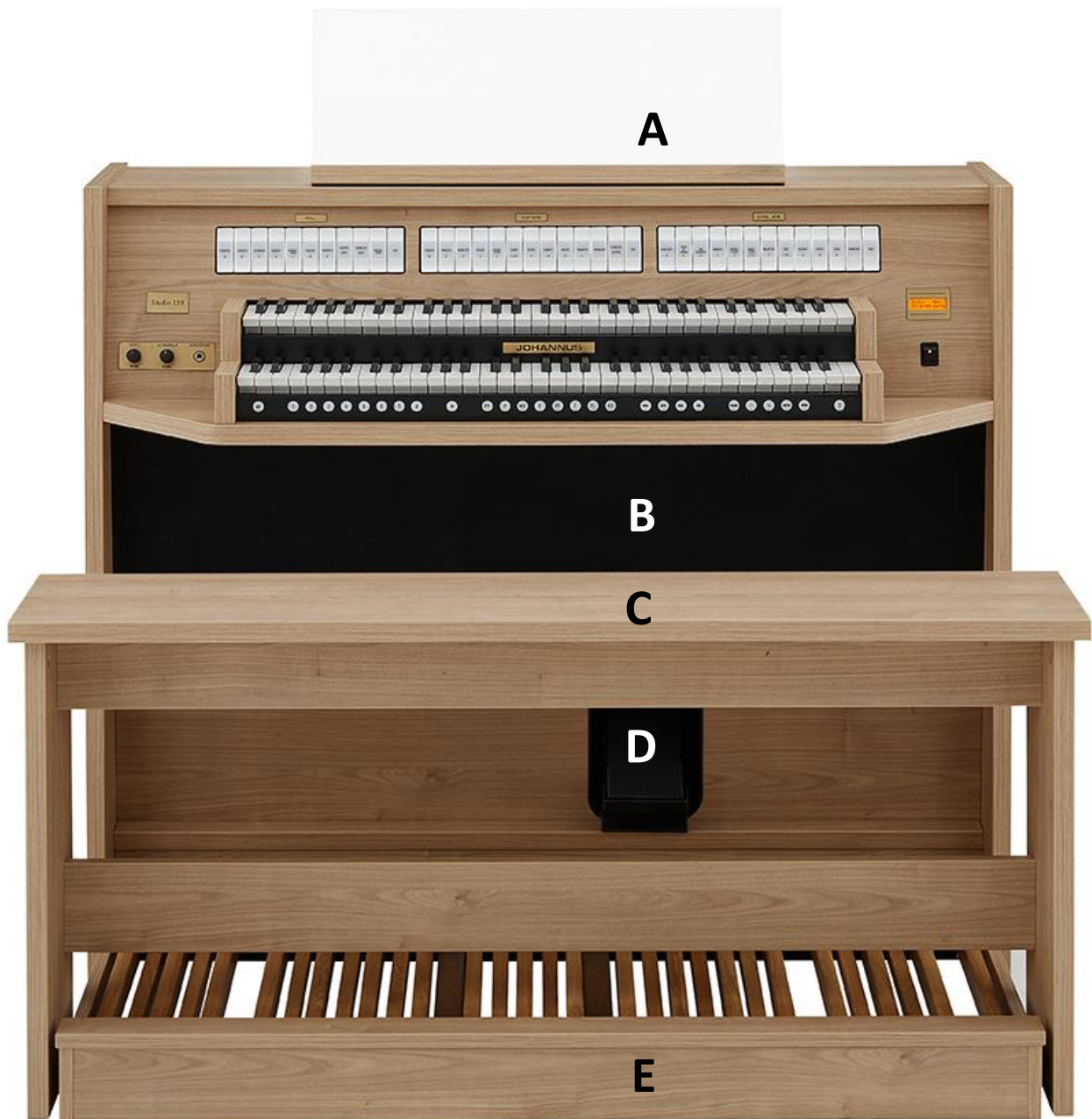
2.3 Transport and storage

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%.

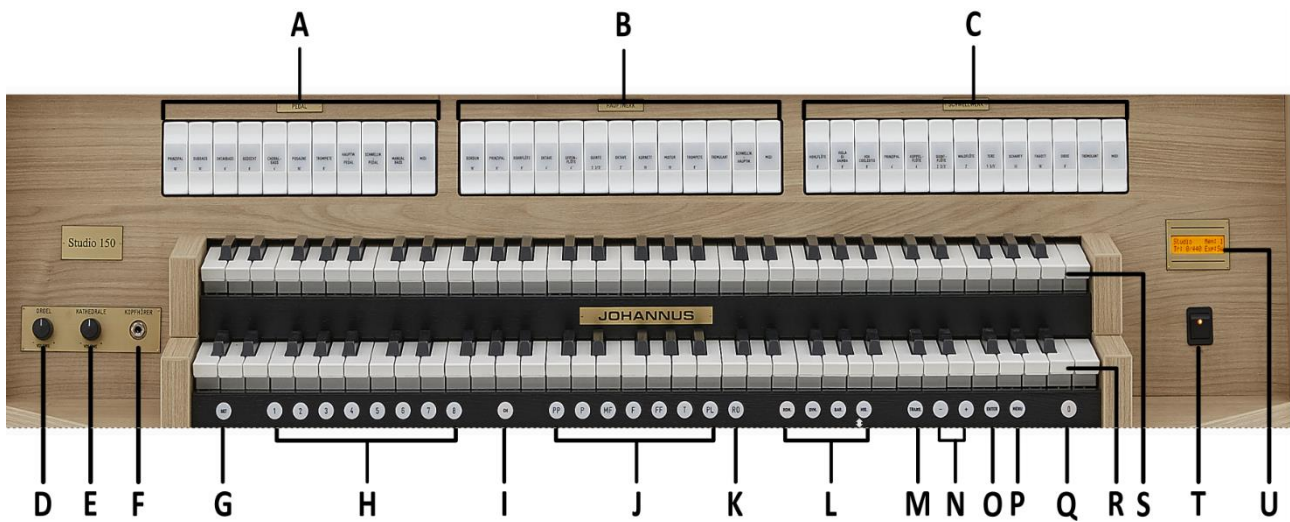
3 DESCRIPTION OF THE ORGAN

3.1 Overview of the main components



- A Music desk
- B Loudspeakers
- C Organ bench
- D Expression pedal
- E Pedal board

3.2 Overview of controls



- | | |
|--|----------------------------|
| A Pedal stops | L Intonation styles |
| B Great stops | M Transposer |
| C Swell stops | N - and + pistons |
| D Volume control organ | O ENTER |
| E Volume control cathedral | P MENU |
| F Phones | Q 0: Recall / Reset |
| G SET: programming capture system | R Manual Great |
| H Capture memory locations | S Manual Swell |
| I CH: Chorus | T On/Off |
| J Pre-programmed memory locations | U Display |
| K RO: Reeds Off | |

3.3 Connect and switch on the peripherals

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

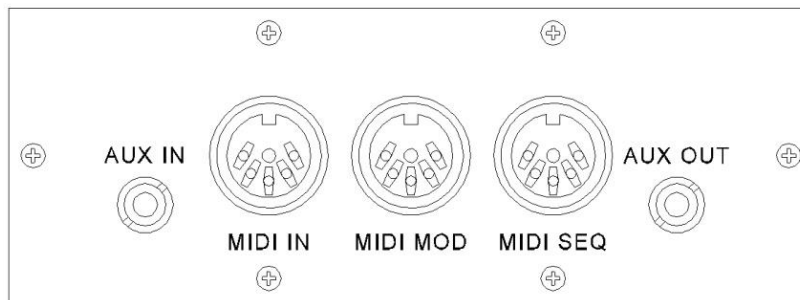


Follow the instructions provided in the documentation for the accessory.

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 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 pedal

With the expression pedal the volume of the Swell or the entire organ can be changed. By default the expression pedal functions for the Swell only. This is indicated on the display with `Exp : Sw`.

Studio	Mem: 1
Tr: 0/440	Exp:Sw

Using the Johannes Menu the expression pedal can also be set as a general swell for the entire organ, see § 4.11.4. If the expression pedal is set as general swell, this is indicated on the display with `Exp : GS`.

Studio	Mem: 1
Tr: 0/440	Exp:GS

Using the expression pedal also changes the timbre of the Swell stops. By this the effect of a swell box 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 Johannes Menu. See § 4.11.9. The length can be set for each intonation style.

The following 12 reverb types can be selected for each intonation style in the Johannes 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 § 4.11.9 for assigning a reverb to an intonation style.

4.4 Intonation styles

The organ has four intonation styles:

Romantic (ROM), Symphonic (SYM), Baroque (BAR) en Historic (HIS).

Select an intonation style by pressing the ROM, SYM, BAR or HIS piston.

4.5 Stops

The stops are activated via rocker switches, pre-programmed memory locations or capture memory locations.

The lamp in the rocker switch lights when the associated stop is active.

The stops are divided into three groups:

Pedal: Activates the stops associated with the Pedal.

Great: Activates the stops associated with the Great.

Swell: Activates the stops associated with the Swell.

4.6 Couplers

Manual coupler:

SWELL - GREAT: Fully couples all keys of the Swell to the Great.

Pedal couplers:

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:

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.

Activate the Manual Bass with the MANUAL BASS stop.

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. This should prevent the bass keys from "jumping".

4.7 Accessories

Chorus (CH):

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.

Reeds Off (RO):

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.

Recall / Reset function (0):

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.

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 (1-75) can be seen on the display (Mem: ...). Each level has eight memory locations (selectable with 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. Keep the SET piston pressed.
4. Press the desired memory location, by pressing one of the pistons 1-8.
5. Release the SET piston.

Studio	Mem: 1-75
Tr: 0/440	Exp:Sw

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 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 info:
Datadump	§ 4.11.1
Demo Songs	§ 4.11.2
Display Contrast	§ 4.11.3
Expression Pedal	§ 4.11.4
Keyboard Config	§ 4.11.5
Key Volumes	§ 4.11.6
MIDI Config	§ 4.11.7
Reset Procedures	§ 4.11.8
Reverb Settings	§ 4.11.9
Startup Settings	§ 4.11.10
Temperaments	§ 4.11.11
Tuning	§ 4.11.12
Version	§ 4.11.13

4.11.1 Datadump

The Datadump function sends settings from the organ to a storage medium (a sequencer, for example) through the MIDI SEQ output. See § 3.4.

1. Press the MENU piston.
2. Use the - and + pistons to select the Datadump function on the display.
3. Press the ENTER piston. The `Press ENTER` text appears on the display.
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.

Johannus Menu:
Datadump

Datadump
Press ENTER

Datadump
Sending data...



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

- If the data dump is complete, the main menu appears on the display.

Johannus Menu:
Datadump

- Press the MENU piston to exit the Johannus Menu.

Studio Mem: 1
Tr: 0/440 Exp:Sw

4.11.2 Demo Songs

The Demo Songs function plays four different demo songs.

- Press the MENU piston.
- Use the - and + pistons to select the Demo Songs function on the display.
- Press the ENTER piston. The title of the first demo song appears on the display.

Johannus Menu:
Demo Songs

- Use the - and + pistons to select one of the four demo songs.
- Press the ENTER piston to select the demo song.
- 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`).
- Press the ENTER piston to start playing the selected demo song(s). The title and composer of the demo song appears on the display.

Demo Songs
Almachtige...

Almachtige...
Play one demo

Almachtige...
A. van Vliet



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

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

- Press the MENU piston after having played the demo song(s) to return to the main menu.
- Press the MENU piston to exit the Johannus Menu.

Johannus Menu:
Demo Songs

Studio Mem: 1
Tr: 0/440 Exp:Sw

4.11.3 Display Contrast

The Display Contrast function adjusts the display contrast.

- Press the MENU piston.
- Use the - and + pistons to select the Display Contrast function on the display.
- Press the ENTER piston. The current contrast level appears on the display.

Johannus Menu:
Display Contrast

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.

Studio Mem: 1
Tr: 0/440 Exp:Sw

4.11.4 Expression Pedal

The Expression Pedal function determines the operation of the expression pedal.

1. Press the MENU piston.
2. Use the - and + pistons to select the Expression Pedal function on the display.
3. Press the ENTER piston. The current setting appears on the display. *Swell on Swell*: expression pedal for the Swell only. *General Swell*: expression pedal as a general swell for the entire organ.
4. Use the - and + pistons to select the desired operation.
5. Press the ENTER piston to confirm and to return to the main menu.

Johannus Menu:
Expression Pedal

Expression Pedal
Swell on Swell

6. Press the MENU piston to exit the Johannus Menu.

Johannus Menu:
Expression Pedal

Studio Mem: 1
Tr: 0/440 Exp:Sw

4.11.5 Keyboard Config

The Keyboard Config function sets the operation of the keys.

1. Press the MENU piston.
2. Use the - and + pistons to select the Keyboard Config function on the display.
3. Press the ENTER piston. The display shows the current setting of one of the manuals.
4. Use the - and + pistons to select the manual the setting of which must be changed.
5. Press the ENTER piston. The cursor moves to the second line of the display.
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, 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 force-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.

Johannus Menu:
Keyboard Config

>Great
Automatic

Great
>Automatic

>Great
Automatic

- Press the MENU piston to return to the main menu.

Johannus Menu:
Keyboard Config

- Press the MENU piston to exit the Johannus Menu.

Studio Mem: 1
Tr: 0/440 Exp:Sw

4.11.6 Key Volumes

The Key Volumes function consists of the following sub functions:

- Adjust
- Reset one stop
- Reset ALL stops

Adjust

The Adjust function sets the volume per key, stop and intonation style.

- Switch off all stops.
- Select an intonation style.
- Press the MENU piston.
- Use the - and + pistons to select the Key Volumes function on the display.

Johannus Menu:
Key Volumes

- Press the ENTER piston.
- Use the - and + pistons to select the Adjust function on the display.

Key Volumes
Adjust

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

Select a stop
to adjust

- Activate one stop. A question to press a key appears on the display.

Key: press a key
Vol: -/+

- 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 -/+

- Use the - and + pistons to set the desired volume.

- 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

- Press the ENTER piston for confirmation.
- Press the MENU piston to return to the main menu.

Johannus Menu:
Key Volumes

- If the changes have not been saved, the display will show *Discard changes?*. If no changes have to be saved use the - and + pistons to select *Yes* and press the ENTER piston.

Discard changes?
No/Yes

16. If the changes have to be saved use the - and + pistons to select **No** and press the ENTER piston.

Key: press a key
Vol: -/+

17. Press the ENTER piston. The display requests confirmation.

Save changes?
No/Yes

18. Use the - and + pistons to select **Yes**. Press the ENTER piston for confirmation.

19. Press the MENU piston to return to the main menu.

Johannus Menu:
Key Volumes

20. Press the MENU piston to exit the Johannus Menu.

Studio Mem: 1
Tr: 0/440 Exp:Sw



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

Reset one stop

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

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

Johannus Menu:
Key Volumes

5. Press the ENTER piston.
6. Use the - and + pistons to select the Reset one stop 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.
9. The display requests confirmation. Use the - or + 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 piston to return to the main menu.

Johannus Menu:
Key Volumes

12. Press the MENU piston to exit the Johannus Menu.

Studio Mem: 1
Tr: 0/440 Exp:Sw

Reset ALL stops

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

1. Select an intonation style.
2. Press the MENU piston.
3. Use the - and + pistons to select the Key Volumes function on the display.
4. Press the ENTER piston.
5. Use the - and + pistons to select the Reset ALL stops function on the display.
6. Press the ENTER piston.
7. The display requests confirmation. 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 to return to the main menu.
10. Press the MENU piston to exit the Johannus Menu.

Johannus Menu:
Key Volumes

Key Volumes
Reset ALL stops

Reset ALL stops?
No/Yes

Key Volumes
Reset ALL stops

Johannus Menu:
Key Volumes

Studio Mem: 1
Tr: 0/440 Exp:Sw

4.11.7 MIDI Config

MIDI is a protocol for communication between the organ and other devices, such as PC, 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.

Johannus Menu:
MIDI Config

Select a MIDI
Stop to config

Swell Channel
2 0 0 1

6. Press the ENTER piston. The display shows:
Swell Msb.

Swell Msb
2 0 0 1
7. If needed, use the - and + pistons to select the desired Msb setting.
8. Press the ENTER piston. The display shows:
Swell Lsb.

Swell Lsb
2 0 0 1
9. If needed, use the - and + pistons to select the desired Lsb setting.
10. Press the ENTER piston. The display shows:
Swell Voice.

Swell Voice
2 0 0 1
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.

Swell Channel
2 0 0 1
13. Press the MENU piston to return to the main menu.

Johannus Menu:
MIDI Config
14. Press the MENU piston to exit the Johannus Menu.

Studio Mem: 1
Tr: 0/440 Exp:Sw

4.11.8 Reset Procedures

The Reset Procedures function is 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.

Johannus Menu:
Reset Procedures
3. Press the ENTER piston. The first option of the Reset Procedures appears on the display.

Reset Procedures
Memory default
4. Use the - and + pistons to select the desired reset procedure:
 - **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. The display requests confirmation.

Memory default
No/Yes
6. Use the - and + pistons to select No or Yes.
7. Press the SET piston for confirmation and to return to the Reset Procedures menu.

Reset Procedures
Memory default
8. Press the MENU piston to return to the main menu.

Johannus Menu:
Reset Procedures

9. Press the MENU piston to exit the Johannus Menu.

Studio Mem: 1 Tr: 0/440 Exp:Sw

4.11.9 Reverb Settings

The Reverb Settings function is used to change reverb settings per intonation style.

1. Use the ROM, SYM, BAR or HIS pistons to activate the intonation style the reverberation of which must be changed.
2. Press the MENU piston.
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`.

6. Press the ENTER piston to confirm. The activated intonation style appears on the first line of the display. The setting of the selected reverb function appears on the second line of the display.

Romantic Town Church

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 Reverb Program

9. Press the MENU piston to return to the main menu.

Johannus Menu: Reverb Settings

10. Press the MENU piston to exit the Johannus Menu.

Studio Mem: 1 Tr: 0/440 Exp:Sw

4.11.10 Startup Settings

The Startup Settings function is used to select the startup defaults for Chorus and intonation style.

1. Press the MENU piston.
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 option of the Startup Settings appears on the display.

Startup Settings Chorus On/Off

4. Use the - and + pistons to select the desired start up setting which has to be changed. The following options are available: `Chorus On/Off` and `Default Into`.

5. Press the ENTER piston.
6. Use the - and + pistons to select the desired setting.
 - Under **Chorus On/Off** there is choice for on or off.
 - Under **Default Into** there is choice for one of the four intonation styles: Romantic, Symphonic, Baroque or Historic.
7. Press the ENTER piston to confirm and to return to the Startup Settings menu.

Startup Settings
Chorus On/Off
8. Press the MENU piston to return to the main menu.

Johannus Menu:
Startup Settings
9. Press the MENU piston to exit the Johannus Menu.

Studio Mem: 1
Tr: 0/440 Exp:Sw

4.11.11 Temperaments

The Temperaments function sets the temperament.



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

1. Press the MENU piston.
2. Use the - and + pistons to select the Temperaments function on the display.

Johannus Menu:
Temperaments
3. Press the ENTER piston. The current temperament appears on the display.

Temperaments
Equal
4. Use the - and + pistons to select the desired 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
5. Press the MENU piston to return to the main menu.

Johannus Menu:
Temperaments
6. Press the MENU piston to exit the Johannus Menu.

Studio Mem: 1
Tr: 0/440 Exp:Sw

4.11.12 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.
2. Use the - and + pistons to select the Tuning function on the display.
3. Press the ENTER piston. The current tuning setting appears on the display.
4. Use the - and + pistons to select the desired pitch.
5. Press the ENTER piston to store the selected setting in the memory and to return to the main menu.
6. Press the MENU piston to exit the Johannus Menu.

Johannus Menu:
Tuning

Tuning
440 Hz

Johannus Menu:
Tuning

Studio Mem: 1
Tr: 0/440

4.11.13 Version

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

1. Press the MENU piston.
2. Use the - and + pistons to select the Version function on the display.
3. Press the ENTER piston. The data of the software of the organ appears on the display.
4. Press the MENU piston to return to the main menu.
5. Press the MENU piston to exit the Johannus Menu.

Johannus Menu:
Version

JH0XXXX
OC XXXX

Johannus Menu:
Version

Studio Mem: 1
Tr: 0/440 Exp:Sw

5 MAINTENANCE, TROUBLESHOOTING AND WARRANTY

5.1 Maintenance

Overview

Component	Maintenance	Frequency
Cabinet	Cleaning. See § 5.1.1	As required
Manuals	Cleaning and removing scratches. See § 5.1.2	As required

5.1.1 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.

5.1.2 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.

5.2 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. See § 2.1.3
Organ functions do not work properly	When power cord plug has an earth-pin and the organ is not earthed.	Connect the organ to a grounded power socket.

5.3 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 Global Organ Group b.v.

6 MIDI IMPLEMENTATIONS

6.1 MIDI Implementation Chart

JOHANNUS Organs

MIDI Implementation card

Date: September 2008
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: OMNI ON, POLY
Mode 3: OMNI OFF, POLY

Mode 2: OMNI ON, MONO
Mode 4: OMNI OFF, MONO

Y=YES
N=NO

6.2 MIDI Specifications

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

Default basic channels (transmitted/recognized)

- 1: Great
- 2: Swell
- 3: Pedal
- 12: Stops

Basic channel changes (transmitted)

Can be programmed through the MIDI Config. See § 4.11.7.

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 § 4.11.7.

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: FO 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.

For the USA: This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules as documented for identified product above. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off- and then on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This equipment referenced in this declaration is identical to the Organ tested and found acceptable with the standards. The technical records maintained by the responsible party continue to reflect the equipment being produced under this Declaration of Conformity within the variation that can be expected due to quantity production and testing on a statistical basis.

This equipment requires shielded interface cables in order to meet FCC class B limit. Any unauthorized changes or modifications not expressly approved by the party responsible for compliance could void the user authority to operate the equipment.

For Canada: **NOTICE.** This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

AVIS. *Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.*

For C.A. US (Proposition 65): **WARNING.** This product contains chemicals known to cause cancer, birth defects and other reproductive harm, including lead.

For China:

有关产品中所含有害物质的说明

本资料就本公司产品中所含的特定有害物质及其安全性予以说明。

本资料适用于 2007 年 3 月 1 日以后本公司所制造的产品。

环保使用期限



此标志适用于在中国国内销售的电子信息产品，表示环保使用期限的年数。所谓环保使用期限是指在自制造日起的规定的期限内，产品中所含的有害物质不致引起环境污染，不会对人身、财产造成严重的不良影响。环保使用期限仅在遵照产品使用说明书，正确使用产品的条件下才有效。不当的使用，将会导致有害物质泄漏的危险。

产品中有毒有害物质或元素的名称及含量

部件名称	有毒有害物质或元素					
	铅(Pb)	汞(Hg)	镉(Cd)	六价铬(Cr(VI))	多溴联苯(PBB)	多溴二苯醚(PBDE)
外壳(壳体)	×	○	○	○	○	○
电子部件(印刷电路板等)	×	○	×	○	○	○
附件(电源线、交流适配器等)	×	○	○	○	○	○

○：表示该有毒有害物质在该部件所有均质材料中的含量均在 SJ/T11363-2006 标准规定的限量要求以下。
 ×：表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 SJ/T11363-2006 标准规定的限量要求。
 因根据现有的技术水平，还没有什么物质能够代替它。

For EU:

For EU Countries



- UK** This symbol indicates that in EU countries, this product must be collected separately from household waste, as defined in each region. Products bearing this symbol must not be discarded together with household waste.
- DE** Dieses Symbol bedeutet, dass dieses Produkt in EU-Ländern getrennt vom Hausmüll gesammelt werden muss gemäß den regionalen Bestimmungen. Mit diesem Symbol gekennzeichnete Produkte dürfen nicht zusammen mit den Hausmüll entsorgt werden.
- FR** Ce symbole indique que dans les pays de l'Union européenne, ce produit doit être collecté séparément des ordures ménagères selon les directives en vigueur dans chacun de ces pays. Les produits portant ce symbole ne doivent pas être mis au rebut avec les ordures ménagères.
- IT** Questo simbolo indica che nei paesi della Comunità europea questo prodotto deve essere smaltito separatamente dai normali rifiuti domestici, secondo la legislazione in vigore in ciascun paese. I prodotti che riportano questo simbolo non devono essere smaltiti insieme ai rifiuti domestici. Ai sensi dell'art. 13 del D.Lgs. 25 luglio 2005 n. 151.
- ES** Este símbolo indica que en los países de la Unión Europea este producto debe recogerse aparte de los residuos domésticos, tal como esté regulado en cada zona. Los productos con este símbolo no se deben depositar con los residuos domésticos.
- PT** Este símbolo indica que nos países da UE, a recolha deste produto deverá ser feita separadamente do lixo doméstico, de acordo com os regulamentos de cada região. Os produtos que apresentem este símbolo não deverão ser eliminados juntamente com o lixo doméstico.
- NL** Dit symbool geeft aan dat in landen van de EU dit product gescheiden van huishoudelijk afval moet worden aangeboden, zoals bepaald per gemeente of regio. Producten die van dit symbool zijn voorzien, mogen niet samen met huishoudelijk afval worden verwijderd.
- DK** Dette symbol angiver, at i EU-lande skal dette produkt opsamlles adskilt fra husholdningsaffald, som defineret i hver enkelt region. Produkter med dette symbol må ikke smides ud sammen med husholdningsaffald.
- NO** Dette symbolet indikerer at produktet må behandles som spesialavfall i EU-land, iht. til retningslinjer for den enkelte regionen, og ikke kastes sammen med vanlig husholdningsavfall. Produkter som er merket med dette symbolet, må ikke kastes sammen med vanlig husholdningsavfall. Apparatet må tilkoples jordnet stikkontakt.

- SE** Symbolen anger att i EU-länder måste den här produkten kasseras separat från hushållsavfall, i enlighet med varje regions bestämmelser. Produkter med den här symbolen får inte kasseras tillsammans med hushållsavfall. Apparatet skall anslutas till jordat uttag.
- FI** Tämä merkintä ilmaisee, että tuote on EU-maissa kerättävä erillään kotitalousjätteistä kunkin alueen voimassa olevien määräysten mukaisesti. Tällä merkinnällä varustettuja tuotteita ei saa hävittää kotitalousjätteiden mukana. Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan.
- HU** Ez a szimbólum azt jelenti, hogy az Európai Unióban ezt a terméket a háztartási hulladéktól elkülönítve, az adott régióban érvényes szabályozás szerint kell gyűjteni. Az ezzel a szimbóllummal ellátott termékeket nem szabad a háztartási hulladék közé dobni.
- PL** Symbol oznacza, że zgodnie z regulacjami w odpowiednim regionie, w krajach UE produktu nie należy wyrzucać z odpadami domowymi. Produktów opatrzonych tym symbolem nie można utylizować razem z odpadami domowymi.
- CZ** Tento symbol udává, že v zemích EU musí být tento výrobek sbírán odděleně od domácího odpadu, jak je určeno pro každý region. Výrobky nesoucí tento symbol se nesmí vyhazovat spolu s domácím odpadem.
- SK** Tento symbol vyjadruje, že v krajinách EÚ sa musí zber tohto produktu vykonávať oddelene od domového odpadu, podľa nariadení platných v konkrétnej krajine. Produkty s týmto symbolom sa nesmú vyhazovať spolu s domovým odpadom.
- EE** See sümbol näitab, et EL-i maades tuleb see toode olemprügist eraldi koguda, nii nagu on iga piirkonnas määratletud. Selle sümboliga märgitud tooteid ei tohi ära visata koos olmeprügiga.
- LT** Šis simbolis rodo, kad ES šalyse šis produktas turi būti surenkamas atskirai nuo buitinių atliekų, kaip nustatyta kiekvienoje regione. Šiuo simboliu paženklinoti produktai neturi būti išmetami kartu su buitiniams atliekomis.
- LV** Šis simbols norāda, ka ES valstīs šo produktu jāievāc atsevišķi no mājsaimniecības atkritumiem, kā noteikts katrā reģionā. Produkts ar šo simbolu nedrīkst izmest kopā ar mājsaimniecības atkritumiem.
- SI** Ta simbol označuje, da je treba proizvod in državah EU zbirati ločeno od gospodinskih odpadkov, tako kot je določeno v vsaki regiji. Proizvoda s tem znakom ni dovoljeno odlagati skupaj z gospodinskimi odpadki.
- GR** Το σύμβολο αυτό υποδηλώνει ότι στις χώρες της Ε.Ε. το συγκεκριμένο προϊόν πρέπει να συλλέγεται χωριστά από τα υπόλοιπα οικιακά απορρίμματα, σύμφωνα με όσα προβλέπονται σε κάθε περιοχή. Τα προϊόντα που φέρουν το συγκεκριμένο σύμβολο δεν πρέπει να απορρίπτονται μαζί με τα οικιακά απορρίμματα.

CE This product complies with the requirements of EMC 2014/30/EU, LVD 2014/35/EU and Electromagnetic Compatibility Regulations 2016, Electrical Equipment (Safety) Regulations 2016.



