USER MANUAL JOHANNUS

MONARKE

Manufacturer	Johannus Orgelbouw b.v.
Address	Keplerlaan 2 6716 BS EDE
Country	The Netherlands
Telephone	+31 (0)318 63 74 03
Fax	+31 (0)318 62 22 38
E-mail	inform@johannus.com
Website	www.johannus.com
Version	1.0
Date	May 2008

TABLE OF CONTENTS

1 SAFETY 5
1.1 Safety precautions 5
1.2 Symbols on the organ 5
1.3 Symbols in the manual 5

2 INSTALLATION 6
2.1 Placement and connection 6
2.2 Switching on 7
2.3 Position of the key switch 7
2.4 Transport and storage 7

3 DESCRIPTION OF THE ORGAN 8
3.1 Overview of organ controls 8
3.2 Overview of expression pedals and toe studs 9
3.3 Connecting and switching on the accessories 9
3.4 External connections 10
3.5 External loudspeaker output 11

4 OPERATION 12
4.1 Expression pedals 12
4.2 Acoustics ASR12 12
4.3 Stops 12
4.4 Couplers 13
4.5 Accessories 14
4.6 Changing the registration 14
4.7 Memory lock 14
4.8 Preprogrammed memory locations 15
4.9 Easy Menu 16
4.9.1 Capture memory 16
4.9.2 General Volume 17
4.9.3 Transposer 17
4.9.4 Tuning Mode 18
4.9.5 Temperaments 18
4.9.6 Keyboard Mode 19
4.9.7 Reset Procedures 20
4.9.8 Data Dump Mode 20
4.9.9 Standard Intonation 21
4.9.10 General Crescendo 22
4.9.11 Programming MIDI stops 23

5 MAINTENANCE, PROBLEMS AND WARRANTY 25
5.1 Maintenance 25
5.1.1 Cabinet maintenance 25
5.1.2 Maintenance of the manuals 25
5.2 Problems 26
5.2.1 Repositioning the pedal 26
5.3 Warranty 26

6 MIDI IMPLEMENTATIONS 27
6.1 MIDI Implementation Chart 27
6.2 MIDI specifications 28
6.2.1 Default basic channels (transmitted/recognized) 28
6.2.2 Basic channel changes (transmitted) 28
6.2.3 Control changes (transmitted) 28
6.2.4 Control changes (recognized) 29
6.2.5 Program changes (transmitted/recognized) 29
6.2.6 System exclusive messages (transmitted/recognized) 29

INDEX 31

1 SAFETY

1.1 Safety precautions

- Place the organ on a stable, horizontal surface.
- Connect the organ to an electrical outlet with an earth connection.
- Switch the organ off 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 becomes null and 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

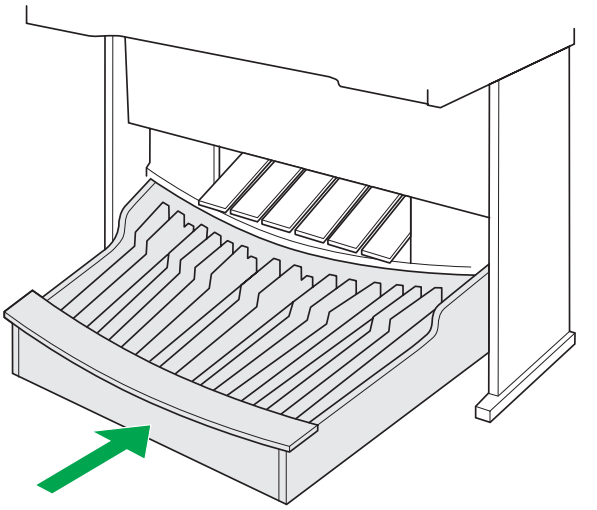
1.3 Symbols in the manual

Warning or important information

Note

2 INSTALLATION

2.1 Placement and connection

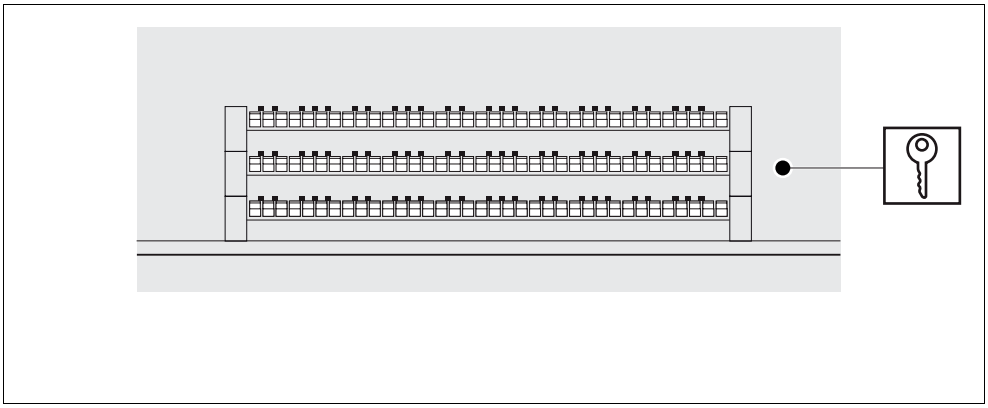


1. Place the organ on a stable, horizontal surface.
2. Lean the organ slightly backward.
3. Slide the pedalboard (A) against the organ (B).
4. Set the organ upright.
5. Place the organ bench over the pedalboard.
6. Make sure the voltage of the organ matches the voltage of the mains. See the serial plate (C).
7. Connect the organ to an electrical outlet with an earth connection.

2.2 Switching on

Switch on the organ with the on/off switch. Depending on the chosen switch, it can be a regular or key switch.
Wait several seconds. Starting the control functions and the settings takes some time.
The lamps of the on/off and 0 pistons light and the settings appear on the display.

2.3 Position of the key switch



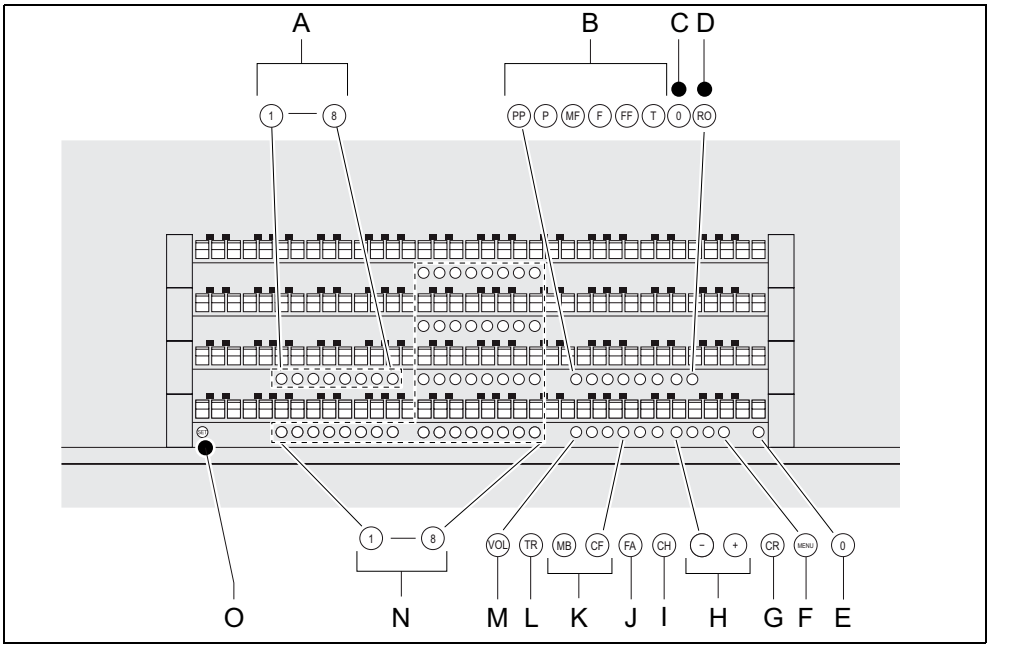
2.4 Transport and storage

Pay attention to the following during transport and storage:

- Remove the music desk and the pedalboard from the organ.
- Relative humidity within the storage area: 10 to 90%.

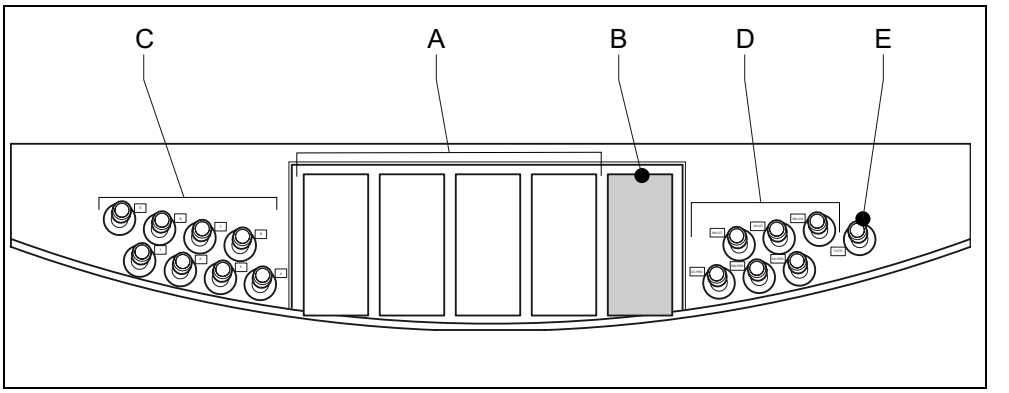
3 DESCRIPTION OF THE ORGAN

3.1 Overview of organ controls



A	Capture memory (Generals)	I	Chorus (CH)
B	Preprogrammed memory	J	Fixed Accessories (FA)
C	0-piston	K	Manual Bass and Cantus Firmus couplers
D	Reeds Off	L	Transposer
E	Cancel	M	Volume
F	MENU	N	Capture memory (Divisionals)
G	General Crescendo (CR)	O	SET/Enter
H	- and + pistons		

3.2 Overview of expression pedals and toe studs



A	Expression pedals	C	Generals (8 x)
B	General Crescendo	D	Reversible couplers (6 x)
		E	Tutti (1 x)

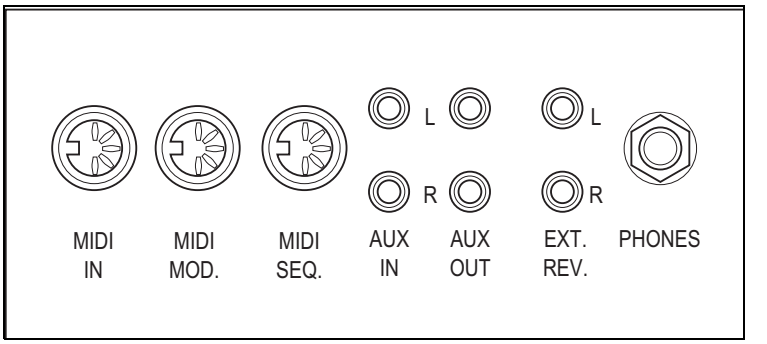
3.3 Connecting and switching on the accessories

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 the accessory on.
4. Switch the organ on.

3.4 External connections



- **MIDI IN**: This is an input for receiving MIDI codes from other devices.
- **MIDI MOD.**: This is a programmable MIDI output for connecting a module or expander, for example.
- **MIDI SEQ.**: This is a non-programmable MIDI output for connecting a sequencer or PC (with the optional Johannus Intonat program), for example.
- **AUX IN**: This is a (stereo) input for playing the sound of an external device through the amplifiers of the organ. For example, an expander that is connected to the organ through the MIDI MOD. can be played through the instrument's loudspeakers.

The volume of the device that is connected through the AUX IN cannot be adjusted with the general volume or the expression pedals. However, this is possible if the volume setting of the external device is controlled by means of MIDI codes through the MIDI MOD. connection of the instrument.

- **AUX OUT**: This is an output for connecting an external (stereo) amplifier.
- **EXT. REV.**: This is an output for connecting Johannus external acoustics. This is a system that imitates the spatial effect of a concert hall or cathedral.

Do not use this output for other purposes.

- **PHONES**: This connection for a (stereo) headphone is suited for a headphone with an impedance of 30 Ω or higher (see headphone specifications).

When the headphone is used, the internal and/or external loudspeakers of the organ are automatically switched off.

3.5 External loudspeaker output

The external loudspeaker output (8 Ω) is situated at the rear of the organ. The loudspeaker connector board provides the possibility to connect external loudspeaker boxes to the organ. The number of connectors vary, depending on the type of organ. Connect the loudspeaker cables to the connectors of the loudspeaker output.

4 OPERATION

4.1 Expression pedals

Expression pedals adjust the “volumes” of the different stops (per division). For example the expression shoe indicated Swell will affect the Swell division stops.
The level indicators in the display show how far the expression pedals are opened or closed.

4.2 Acoustics ASR12

The acoustics rotary controls produce a digital acoustic effect. This effect provides a spatial reproduction of the organ sound that can be adjusted smoothly.

- Turn the left-hand rotary control for the reverb volume adjustment.
- Turn the right-hand rotary control for the reverb length adjustment.

Programming the ASR12:
12 different reverberant rooms can be selected and programmed throughout the menu. Select the room of your preference and confirm with SET.

4.3 Stops

The stops are activated by means of draw stops, rocker switches or through the capture memory. See § 4.9.1. The power LED in the draw stop is lit when the associated stop is active.
The stops are divided into five groups:

- **Pedal stops**: Activates the stops associated with the pedalboard.
- **Great stops**: Activates the stops associated with the Great.
- **Swell stops**: Activates the stops associated with the Swell.
- **Choir stops**: Activates the stops associated with the Choir.
- **Solo stops**: Activates the stops associated with the Solo.

4.4 Couplers

- **Manual coupler**: Couples a manual to another manual. Activate the manual couplers through the following stops:
  - Swell - Great
  - Choir - Great
  - Swell - Choir
  - Choir - Solo
  - Great - Solo
  - Swell - Solo
- **Pedal coupler**: Couples a manual to the pedal manual. Activate the pedal couplers through the following stops:
  - Great - Pedal
  - Swell - Pedal
  - Choir - Pedal
  - Solo - Pedal
- **Sub couplers**: Couples the keys of a manual to another manual (or the same), but plays the keys an octave lower. Activate the sub couplers through the following stops:
  - Choir - Choir 16'
  - Swell - Great 16'
  - Swell - Swell 16'
  - Swell - Choir 16'
  - Choir - Great 16'
- **Super couplers**: Couples the keys of a manual fully to another manual (or the same), but plays the keys an octave higher. Activate the super couplers through the following stops:
  - Pedal - Pedal 4'
  - Great - Great 4'
  - Swell - Choir 4'
  - Swell - Swell 4'
  - Swell - Great 4'
  - Choir - Great 4'
  - Choir - Choir 4'
- **Unison Off**: Switches the pressed keys within the own division off. The Unison Off is always being used in combination with the sub and super couplers.
  - Unison Off Pedal - Switches off the Pedal keys
  - Unison Off Choir - Switches off the Choir keys
  - Unison Off Great - Switches off the Great keys
  - Unison Off Swell - Switches off the Swell keys

- **Manual Bass (MB)**: Couplers the Pedal division to the Great division. Only the lowest played key on the Great will be coupled from the Pedal up to the Great. Activate the Manual Bass through the MB-button
- **Cantus Firmus (CF)**: Couples the Swell division to the Great division. Only the highest played key on the Great will be coupled from the Swell down to the Great. Activate the Cantus Firmus through the CF-button.

4.5 Accessories

- **Chorus (CH)**: 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.
- **Fix Accessories (FA)**: This is a function for fixing accessories. As long as this piston is switched on, the couplers and tremulants can only be swiched on and off manually.
- **Reeds Off (RO)**: This is a function to switch all reeds off in one go. As long as this piston is switched on, no reeds can be swiched on. When this function is switched off, the reeds that were on are switched on again. Use the RO piston to activate the Reeds Off function.
- **General Crescendo (CR)** (option): This is a function for switching the General Crescendo on and off. See § 4.9.10.

4.6 Changing the registration

The 0-piston cancels registrations in two ways:

- A short press on the 0-piston: Only the last change is cancelled.
- A long press on the 0-piston: All registrations are cancelled.

4.7 Memory lock

The memory lock protects your settings.

1. Turn the key switch to the right to set the memory to ‘open’. The SET piston lights.
2. Turn the key switch to the left to set the memory to ‘closed’. The SET piston goes out.

As long as the memory lock is closed, it is not possible to save new settings in the memory.

4.8 Preprogrammed memory locations

Preprogrammed memory locations are available by operating pistons PP to T. These six memory locations have factory settings (presets) appropriate for the quiet pianissimo to the loud tutti.

Calling up a preprogrammed memory location

1. Press a preprogrammed memory location (PP-T) in. The active stops light up.

Programming a preprogrammed memory location

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

The programming of a preprogrammed memory location is limited to the text on the piston. For example, it is not advisable to program a pianissimo registration under the tutti piston.

1. Check that the key switch is to the right.
2. Select the desired stops.
3. Push the SET piston in. Hold the piston down.
4. Press the desired preprogrammed memory location (PP-T) in.
5. Release the preprogrammed memory location piston (PP-T).
6. Release the SET piston.

4.9 Easy Menu

The Easy Menu is an operating system whose settings can be read on the display. The Easy Menu is operated with the - and + pistons, the SET and the MENU pistons.

The functions in the Easy Menu can only be selected when the memory lock is open. This can be seen on the SET piston. If this is not lit, the memory lock is closed.

The Easy Menu consists of the following functions:

- Capture memory
- General volume
- Transposer
- Tuning Mode
- Temperaments
- Keyboard Mode
- Reset Procedures
- Data Dump
- Standard Intonation
- General Crescendo (option)
- Programming MIDI stops

4.9.1 Capture memory

By using the capture memory, a registration can be activated with just one piston. The capture memory consists of 200 levels. Each level has eight memory locations. These levels can be seen on the display (`Mem:.`). The capture memory locations are empty at the start and can be programmed by the musician.
There is a capture memory option for the entire organ (General) and for each separate division (Divisionals). You can call up 1600 capture memory locations per division.

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 (`1-200`) on the display.
3. Push the SET piston in. Hold the piston down.
4. Push the desired memory location (1-8) in.
5. Release the SET piston.

Calling up a capture memory location

1. Use the - and + pistons to select the desired level (`1-200`) on the display.
2. Push the desired memory location (1-8) in. The active stops light up.

4.9.2 General Volume

The set volume can be read on the display (`Vol:..`).

The volume can only be programmed when the VOL. piston is lit.

1. Push the VOL piston in.
2. Use the - and + pistons to set the volume.
3. Press the SET piston to save the volume in the memory.

The volume change is in the memory. When the organ is switched on again, the programmed volume will be active.

4.9.3 Transposer

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

The pitch can only be programmed when the TRANS. piston is lit.

Changing the transposer

1. Push the TRANS piston in.
2. Use the - and + pistons to set the pitch.

The pitch shift is not stored in memory. When the organ is switched on again, the most recently programmed pitch will be active.

Programming the transposer

1. Push the TRANS piston in.
2. Use the - and + pistons to set the pitch.
3. Push the SET piston in.

The pitch shift is stored in memory.. When the organ is switched on again, the programmed pitch will be active.

4.9.4 Tuning Mode

The Tuning Mode function shifts the pitch in fourteen steps of 1 Hz (from 426 Hz to 454 Hz). The set pitch can be read on the display.

Programming the Tuning Mode

1. Push the MENU piston in.
2. Use the - and + pistons to select the `Tuning Mode` function on the display.
3. Push the SET piston in. The display shows the current tuning settings (`Adjust Tune: ...Hz`).
4. Use the - and + pistons to set the desired pitch.
5. Push the SET piston in. The selected settings are stored in the memory and you return automatically to the main menu.
6. Press the MENU piston in to exit the Easy Menu.

4.9.5 Temperaments

The Temperaments function sets the temperament.

This setting cannot be saved. When the organ is switched on again, this is automatically at Equal.

1. Press the MENU piston.
2. Use the - and + pistons to select the `Temperaments` function on the display.
3. Press the SET piston. The display shows the current temperament.
4. Use the - and + pistons to select the desired temperament.

You can choose from twelve temperaments:

- **Equal**: Normal or equal temperament
- **Young II**
- **Vallotti**
- **Kirnberger II**
- **Kirnberger III**
- **Neidhardt III**
- **Werckmeister III**
- ⅙ **Meantone**: Meantone temperament
- ⅕ **Meantone**: Meantone temperament
- ¼ **Meantone**: Meantone temperament
- **Pythagorean**
- **Custom**

5. Press the MENU piston to return to the main menu.
6. Press the MENU piston again to exit the Easy Menu.

4.9.6 Keyboard Mode

The Keyboard Mode function sets the operation of the keys.

1. Push the MENU piston in.
2. Use the - and + pistons to select the `Keyboard Mode` function on the display.
3. Push the SET piston in. The display shows the current manual settings of one of the manuals.
4. Use the - and + pistons to select the manual whose settings must be changed.

- **Great**: Great stops
- **Swell**: Swell stops
- **Choir**: Choir stops
- **Solo**: Solo stops

5. Push the SET piston in.
6. Use the - and + pistons to select a setting for the operation of the keys.

- **High**: The keys respond when they are touched very lightly.
- **Low**: The keys respond when they are pressed further.
- **Velocity**: The keys are force-sensitive.
- **Automatic**: Default setting is high, and selects Velocity when a MIDI switch is activated.

7. Push the SET piston in. The manual adjustments are now stored in memory.
8. Press the MENU piston in to return to the main menu.
9. Press the MENU piston in again to exit the Easy Menu.

4.9.7 Reset Procedures

The Reset Procedures function is used to delete the capture memory, or to reset a number of settings to the factory settings.

1. Push the MENU piston in.
2. Use the - and + pistons to select the `Reset Procedures` function on the display.
3. Push the SET piston in. The display shows the menu for the Reset Procedures.
4. Use the - and + pistons to select the desired procedure.

- **Memory**: Clear the entire capture memory.
- **MIDI**: Resets the factory settings of the MIDI stops.
- **Preset**: Resets the factory settings of the fixed combinations.
- **Crescendo** (option): Resets the factory settings of the General Crescendo.

5. Push the SET piston in. The display requests confirmation.
6. Use the - and + pistons for `No` or `Yes`.
7. Push the SET piston in for confirmation.
8. Press the MENU piston in to return to the main menu.
9. Press the MENU piston in again to exit the Easy Menu.

4.9.8 Data Dump Mode

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

1. Push the MENU piston in.
2. Use the - and + pistons to select the `Data Dump Mode` function on the display.
3. Push the SET piston in. The `Press Set piston` text appears on the display.
4. Make sure the desired storage medium is properly connected.
5. Push the SET piston in again. When data is being sent, `Sending data` appears on the display.

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

6. Press the MENU piston in to return to the main menu.
7. Press the MENU piston in again to exit the Easy Menu.

4.9.9 Standard Intonation

When selected in the menu, the `Chorus ON/ OFF` option appears on the display.

1. Use the - and + pistons to select if the Chorus (CH) accessory is switched on or off when the organ is switched on.
2. Press the SET piston. The selected setting is stored in the memory. It is only necessary to change the settings of this option if the organ is equipped with a Surround 2.1 system.
   a Use the - and + pistons to select ON or OFF to switch the Surroundsystem on or off. Select OFF to exit the `Std. Intonation` function. Select ON to go to the volume settings of the Surround system.
   b Use the - and + pistons to select the volume for the left channel.
   c Press the SET piston. The selected volume is stored in the memory.
   d Use the - and + pistons to select the volume for the right channel.
   e Press the SET piston. The selected volume is stored in the memory. You return automatically to the main menu.

3. Press the MENU piston to exit the Easy Menu.

4.9.10 General Crescendo

If the organ has a General Crescendo, different registrations can be switched on in steps. These registrations start with very quiet (pianissimo) to very loud (tutti).

Activating the General Crescendo

When the General Crescendo is not activated, the `CR:--` message is on the display.

1. Press the CR piston to activate the General Crescendo. The display indicates which step is set.

Changing the General Crescendo

The standard set stop combinations of the crescendo steps can be changed and stored in the memory.

 Only step 0 cannot be changed.

1. First press the CR piston in and then the MENU piston.
2. Use the - and + pistons to select the step to be changed.
3. Set the desired registration for the step.
4. Push the SET piston in.
5. Select another step to be changed, if desired.
6. Press the MENU piston in to switch the programming function off.
7. Press the CR piston in to switch the General Crescendo function off.

4.9.11 Programming MIDI stops

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

- PC
- Sound Module
- Other musical instruments

With the programmable MIDI stops, you can control any module voice through any MIDI channel.

Connecting external device

1. Connect the cable of the external device to the connector MIDI MOD.
2. Put the output cables into AUX IN to hear the MIDI voices through the organ.

Selecting programmable MIDI stop

1. Open the memory lock by turning the key. The SET piston lightens up.
2. Press the desired MIDI stop piston.
3. Use the - and + pistons to select a Memory bank.
4. Press the SET piston.
5. Press the piston of the desired memory location (Generals, Divisionals or Hand Combination).

The selected MIDI stop is programmed into the memory bank of the memory location. Now you can program a MIDI voice on the selected MIDI stop for the PGM.

Programming voice on MIDI stops

1. Press the MENU piston. `MIDI Program` appears on the display.
2. Press the SET piston to activate the program mode. The selected MIDI stop appears on the display. (For example: MIDI: Swell stops)
3. Use the - and + pistons to select the desired MIDI channel (`Channel:..`).
4. Press the SET piston.

Use the MSB and LSB numbers if the external device has the possibility of more than one voice bank.
You can find the combination of MSB, LSB and voice numbers in the reference manual of the external device.
Use zero as standard value if the external device does not have this kind of possibility.

5. Use the - and + pistons to select the desired MSB number (MSB:..)
6. Press the SET piston.
7. Use the - and + pistons to select the desired LSB number (LSB:..).
8. Press the SET piston.
9. Use the - and + pistons to select the desired MIDI voice number (`Voice:..`).
10. Press the SET piston. The selected adjustments are now stored in memory.
11. Select another MIDI stop to be programmed, if desired.
12. Press the MENU piston to return to the main menu.
13. Press the MENU piston again to exit the Easy Menu.

5 MAINTENANCE, PROBLEMS 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 Cabinet maintenance

The cabinet is made of solid wood and wood veneer.

- 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 made of 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 does not work properly	The pedal magnet is making poor contact with the magnetic switch at the rear of the pedalboard.	Reposition the pedal. See § 5.2.1.
Organ functions do not work properly	The organ is not earthed.	Connect the organ to an electrical outlet with an earth connection.

5.2.1 Repositioning the pedal

1. Make sure the organ is placed on a stable, horizontal surface.
2. Lean the organ slightly backward.
3. Slide the pedal against the pedalboard
4. Set the organ upright.
5. Make sure the pedalboard works properly.
6. Contact your dealer if the pedalboard does not work properly.

5.3 Warranty

The conditions are specified in the warranty certificate. The warranty becomes null and void if changes or repairs are made to the organ by persons or organisations that are not authorised by Johannus Orgelbouw b.v.

6 MIDI IMPLEMENTATIONS

6.1 MIDI Implementation Chart

JOHANNUS Organs
MIDI Implementation Chart
MIDI Implementation Chart

Date: April 2005
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	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 RealTime	: 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

6.2 MIDI specifications

This paragraph contains more details about the specifications in the MIDI Implementation Chart.

6.2.1 Default basic channels (transmitted/recognized)

4-manual instrument (with standard keyboard layout):

- 1: Choir stops
- 2: Great stops
- 3: Swell stops
- 4: Solo stops
- 5: Pedal stops
- 12: Stops

6.2.2 Basic channel changes (transmitted)

Can be programmed with the MIDI program.

6.2.3 Control changes (transmitted)

Controller 7 (07h)	General volume, with volume values 40 (28h) - 127 (7Fh).
Controller 11 (0Bh)	Expression pedals, with volume values 63 (3Fh) - 127 (7Fh).
Controller 6 (06h)	Pitch, with pitch values 33 (21h) - 95 (5Fh). 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 61 (3Dh) - 67 (43h). Transposer value 64 (40h) = A = 440Hz. The following applies to the transposer: LSB 100(64h) 2(01h) and the MSB 101(65h) 0(00h).

6.2.4 Control changes (recognized)

Controller 7 (07h)	General volume, transposer 0 (00h) - 127 (7Fh).
Controller 11 (0Bh)	Expression pedals, transposer 0 (00Fh) - 127 (7Fh).

6.2.5 Program changes (transmitted/recognized)

Organ stops: This depends on the number of stops and the sequence of stops.
MIDI stops (programmable): 1-128.

6.2.6 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).
Therefore, with the 'sys ex messages' described below, only the value of the 8th byte (XX) is given, and from which output 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 long time.
When an 'all stops off' sys ex code is received, all stops on the instrument are switched off.

Thumb piston 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.

Sys ex code stops (Program Changes)

When a MIDI stop is switched on and off, besides the usual Program Change, an extra Program Change code (preceded by the sys ex code 3F) is transmitted through the MIDI SEQ. output. This is to distiguish between a 'normal' organ stop and a MIDI stop before transmitting a module.
When a stop is switched on and off, the following codes are transmitted:

Organ stop:	Through MIDI SEQ. : CB XX
MIDI stop:	Through MIDI MOD. : CX XX
	Through MIDI SEQ. : CB XX and 3F CX XX

INDEX

A
Accessories 9, 14
Acoustics 12
Acoustics ASR12 12

C
Cantus Firmus 14
Capture memory bank 16
  calling up 17
  rogramming 16
CF 14
CH 14
Chorus 14
Connection 6
Controls 8
Couplers 13

E
Easy Menu 16
Expression pedals 12
External connections 10
External loudspeaker output 11

F
FA 14
Fix Accessories 14

G
General Crescendo 14
  activating 22
  changing 22
General Volume 17

M
Manual Bass 14
MB 14
Memory lock 14
MIDI programming 23

P
Placement 6
Preprogrammed memory locations . . 15
  calling up 15
  programming 15
Problems 26

R
Reeds Off 14
RO 14

S
Safety 5
Stops 12
Storage 7
Switching on 7

T
Temperaments 18
Toe studs
  overview 9
Transport 7
Transposer 17
  changing 17
  programming 17
Tuning Mode 18

W
Warranty 26