

User's manual

JOHANNUS


Monarke

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Preface

Congratulations on your decision to purchase a new JOHANNUS Monarke organ. JOHANNUS appreciates your patronage and welcomes you to our family of customers.

You have now become the owner of an instrument with a tremendous sonority and unknown possibilities.

We, the builders of this instrument, would be pleased to help you explore these properties.

Since a JOHANNUS Monarke instrument is usually built to owner's specifications, identical instruments are few and far between.

Because of this great diversity in Monarkes, it is, as you will understand, hardly possible to make a manual that fits your specific instrument.

To enable you to get to know all the possibilities of your instrument, we have decided to write a manual describing all the functions a Monarke may have.

Therefore it is possible that you will not find all the functions mentioned in this manual in your instrument.

It is also possible that descriptions of certain functions show little discrepancies compared to the controls of your instrument.

Usually this pertains to functions which you, the client, commissioned to have altered.

As Monarke instruments are continually being developed as a result of new wishes of clients, a manual like this cannot possibly keep up with this and you may look for the description of a certain function in vain.

Should this happen, you can always contact us, so that we may supplement this.

This user's manual contains all kinds of useful information. We will first explore the instrument, after that we will put it into use and finally we will go through all the possibilities.

In a number of chapters we will enter at length into selecting an intonation, usage of the capture system, the application of MIDI, etc.

Table of contents

An overview	1
Monarke models	1
Monarke models "Van Rhijn" and "Gothique"	1
Monarke model "Positief"	1
Monarke-model "Van Eyck"	1
Monarke model "Vermeer"	2
Monarke model "Van Gogh"	2
Monarke Custom	2
Type of wood	2
The organ bench	3
The keyboards	3
Synthetic keyboards	3
Wooden keyboards	3
The pedalboard	3
The music desk	4
Fixed music desk	4
Solid music desk with spare	4
Hinged music desk	4
Tilting music desk	4
Horizontally adjustable music desk	5
Horizontally and vertically adjustable music desk	5
Locking up	6
The rolltop cover	6
Top lid with glass doors	6
Stops	8
Wooden drawstops	8
Lighted drawstops	8
Lighted rocker tabs	9
Moving drawstops	9
Set up	10
Connecting the organ	10
Switching on	10
Pedalboard lighting and music desk lighting	11
The console in detail	12
Standards	12
Order of Stops	12
Standards	12
Available space and symmetry	12
Position of accessories	14
Order of Stops	14
Order of expression pedals	15

Thumb pistons	16
0 (lighted thumb piston)	17
0 (non-lighted thumb piston)	17
1 – 8	17
– and +	18
CF = Cantus Firmus	18
CH = Chorus	18
Couplers	18
CR = General Crescendo	18
FA = Fix Accessories	18
HR = Hand registration (lighted thumb piston)	19
HR (non-lighted thumb piston)	20
HR+ = Hand registration + fixed or free combination	20
INT2 = Intonation 2	20
KT = Keyboard transfer	20
M1 – M4	20
MB = Manual Bass	20
MIDI's	20
MT = Mean-tone	21
PG = Programming General crescendo	21
PGM = Programming General crescendo and MIDI-stops	21
PP – T	21
RO = Reeds off	21
SEQ– and SEQ+	21
SET	22
S/S	22
TRANS. = Transposer	23
Tremulants	23
TUNE = Pitch	23
VOL. = Volume	23
WS = Wind pressure stabilization	23
WM = Werckmeister	23
Couplers	23
Manual couplers	24
Pedal couplers	24
Sub and super couplers	24
Cantus Firmus	25
Manual Bass	25
Tremulants	25
Other accessories	26
Chorus	26
Intonation 2	26
Mean-tone	26
MIDI-stops	26
Werckmeister III	27
Wind pressure stabilization	27
Toe pistons	28
COUPLER pistons	28
TUTTI piston	28
CAPTURE pistons	28
SEQ pistons	28
(32')-stop pistons	28

Displays	28
7-segment display	28
LCD-display	29
Expression pedal indicators	30
Memory lock	31
Volume controls	31
Expression pedals	31
Rotary controls keyboard volume	31
General volume	32
Volume acoustics	33
Pitch settings	33
Fine tuning	33
Transposer	35
Acoustics	36
Acoustics (volume)	36
Acoustics (length)	36
External connections	37
MIDI IN	37
MIDI THRU	37
MIDI OUT	37
MIDI MOD	37
MIDI SEQ	37
AUX IN	38
AUX OUT	38
EXT. REV.	38
PHONES	38
LS	38
Choice of temperament	40
Equal temperament	40
Werckmeister III temperament	40
Mean-tone temperament	40
Using the capture system	41
What are capture combinations?	41
Programming capture combinations	41
Non-lighted capture system	41
Lighted capture system with 7-segment display	42
Lighted capture system with LCD	43
Recalling capture combinations	43
Non-lighted capture system	44
Lighted capture system with 7-segment display	44
Lighted capture system with LCD	44
Using the general crescendo	45
Switching on general crescendo	45
Non-programmable general crescendo	45
Programmable general crescendo	45
Changing stop combinations general crescendo	46
General crescendo system with 7-segment display	46
General-crescendosystem with LCD	47
Resetting standard stop combinations general crescendo	48
General crescendo system with 7-segment display	48
General crescendo system with LCD	49

Application of MIDI	50
What is MIDI?	50
How and what to connect?	50
Programmable MIDI	51
Programming (Hand registration)	51
Programming MIDI-stops with 7-segment display	52
Programming MIDI-stops with LCD	53
Programming (into the capture system)	55
Programming MIDI-stops with 7-segment display	55
Programming MIDI-stops with LCD	57
Programming several MIDI-stops into the capture system	58
Sound reproduction systems	60
Internal single reproduction system	60
Internal double reproduction system	60
External single reproduction system	60
External double reproduction system	60
Internal with external reproduction system	61
Antiphonal	61
Maintenance	62
Cabinet	62
Keyboards	62
Pipes	62
Warranty	63
Information	63
MIDI Implementation chart	64
MIDI specs	65
Default basic channels (transmitted/recognized)	65
Basic channel changes (transmitted)	65
Program changes (transmitted)	65
Program changes (recognized)	65
Registration	66
Flues	66
Principals	66
Flues	66
Strings	66
Reeds	66

An overview

Monarke models

There are several Monarke models which may have been the basic model to the development of your particular instrument.

Below follows a brief description of these basic models.

In this user's manual we may refer back to one of these basic models when describing certain controls.

Monarke models "Van Rhijn" and "Gothique"

This 1- or 2-manual instrument is designed as a cabinet consisting of two or three parts.

All the controls functions are concealed behind the music desk.

The stops are designed as wooden drawstops. Alternatively the drawstops may be lighted or movable.

The instrument may be fitted with loudspeakers reflecting forwards as well as backwards. The front loudspeaker panel is finished with a pipe facade. This pipe front is divided three sections and is covered with triangular panels on the top and bottom.

Monarke model "Positief"

This 2- or 3-manual instrument consists of one or two parts.

All the controls are concealed behind the pedalboard light cover and / or behind the light cover of the music desk.

The stops are designed as wooden drawstops. Alternatively the drawstops may be lighted or movable.

The instrument is fitted with loudspeakers reflecting up(wards).

Monarke-model "Van Eyck"

This 2- or 3-manual instrument consists of a main cabinet topped by five loudspeaker boxes.

All the controls are concealed behind the pedalboard light cover and / or behind the light cover of the music desk.

The stops are designed as wooden drawstops. Alternatively the drawstops may be lighted or movable.

The instrument may be fitted with loudspeakers reflecting forwards as well as backwards.

The five loudspeaker boxes are finished with pipes or with wooden slats. The five loudspeaker boxes on the main cabinet make up a front consisting of five sections. These sections are covered with round arches at the top.

Monarke model "Vermeer"

This 2- or 3-manual instrument consists of a console of the model "Vermeer" and a separate loudspeaker front, possibly in combination with a number of monitor loudspeakers built in the console.

The stops are designed as lighted or movable drawstops. Often the accessories are designed as rocker tabs which are located under the music desk .

The console can be locked with a rolltop cover.

The loudspeaker front is usually designed in consultation with the client. It may be one of the standard fronts from the JOHANNUS Orgelbouw range (UL; SP; or AD system) or a front appropriate to the interior of the building, designed by the client in consultation with audio technicians of JOHANNUS Orgelbouw.

Monarke model "Van Gogh"

This instrument consists of a 3-, 4- or 5-manual console model "Van Gogh" and a separate loudspeaker front, possibly in combination with a number of monitor loudspeakers built in the console.

The stops are designed as lighted or movable drawstops. Often the accessories are designed as rocker tabs which are located under the music desk .

The console can be locked with a top lid and glass doors.

The loudspeaker front is usually designed in consultation with the client. It may be one of the standard fronts from the JOHANNUS Orgelbouw range (UL; SP; or AD system) or a front appropriate to the interior of the building, designed by the client in consultation with audio technicians of JOHANNUS Orgelbouw.

Monarke Custom

A Monarke Custom instrument has not been derived from one of the above-mentioned basic models. The entire cabinet (or console with loudspeaker front) is designed by you, the client, in consultation with JOHANNUS Orgelbouw.

As all the controls described in this manual may occur in a Monarke Custom, this model will not be referred to in this manual.

Type of wood

A Monarke instrument is normally finished in dark or light oak, partly with veneer and partly with solid wood.

Depending on your choice, your instrument may have another colour or be another type of wood.

The organ bench

Your instrument comes standard with an organ bench. Possibilities are:

- Standard bench with music spare and open front.
- Standard bench with music spare, top lid and closed front.
- Bench in the style of the cabinet.
- Bench with adjustable height.

The bench is supplied in the same type of wood as the cabinet.

The keyboards

Synthetic keyboards

Standard, the keyboards are finished with synthetic key surfaces. These keyboards are designed with a mechanical toggle touch (tracker action) system to attain a church organ touch.

Wooden keyboards

Depending on your choice, your instrument may be fitted with wooden keyboards. The wooden keyboards are equipped with a patented magnetic toggle touch (tracker action) system to attain a church organ touch.

The pedalboard

Depending on your choice, the pedalboard of your instrument may be a:

- 30-note straight pedalboard
- 30-note concave pedalboard
- 32-note straight pedalboard
- 32-note concave pedalboard
- 32-note AGO pedalboard

The pedalboard is removable. At the front of each pedal key is a magnet. This magnet normally sits in close proximity to a reed switch, which is invisibly mounted behind the front panel at the bottom of the console. When you depress a pedal key, the reed switch is activated by the magnet at the end of the key.

In placing the pedalboard, please note the following:

1. Make certain the surface, on which the instrument together with the pedalboard is placed, is flat.
2. To fit the pedalboard well, it may be necessary to tilt the instrument a little backward.
3. Shift the pedalboard as close as possible against the black pedalboard panel

Instruments with an AGO pedalboard allow the pedalboard to be fixed to the cabinet with two brass pins supplied.

The music desk

Dependent on the model, your instrument is fitted with one of the music desks described below.

Fixed music desk

This type of music desk is supplied only with the Monarke model "Van Eyck".

This music desk rests partly between the stop consoles of the main cabinet and the two outer loudspeaker boxes. To enable the main cabinet and the loudspeaker boxes to form a unit, the music desk must be fixed.

Solid music desk with spare

The Monarke model "Positief" comes with solid music desk.

There is a spare behind this music desk.

This spare can be used as a music spare. It can also be used to store accessories purchased separately, such as an acoustic system, an expander and / or a sequencer. Turn the music desk up to get to the spare. Turn the music rest of the music desk simultaneously upwards and towards you.

Hinged music desk

All the controls of the Monarke models "Van Rhijn" and "Gothique" (often functions which need to be set up only once) are concealed behind a hinged music desk.

The top of the music desk is fastened to the music desk panel with two hinges.

The controls can be reached by hinging the music desk up. This can be done by turning the music rest of the music desk simultaneously upwards and towards you.

Tilting music desk

The Monarke models "Vermeer" and "Van Gogh" may be supplied with various types of music desk.

The simplest type of music desk is a separate music desk .

On the left and right between the two stop consoles two supports with grooves have been fitted. The music desk with the two wooden pins can be inserted into the grooves. The top of the music desk rests against the front of the rolltop cover.

Because the music desk of these consoles (depending on the number of keyboards) often rises above the console, it must be turned down until it rests on the keyboard cheeks, before the rolltop cover or the top lid can be closed.

Horizontally adjustable music desk

Another music desk, coming with the Monarke model "Van Gogh", is the horizontally adjustable music desk .

Two horizontally movable supports with grooves are located on the left and right between the two stop consoles. The music desk with the two wooden pins can be inserted into the grooves. The top of the music desk rests against the front of the rolltop cover.

This music desk can be horizontally adjusted by pulling it towards you or pushing it away. In either case the music desk is automatically blocked at the tips.

When pushing the music desk forwards or backwards, care should be taken that the music desk is moved on both sides at the same time. This will prevent the music desk from slanting, which may jam it.

As the music desk (depending on the number of keyboards) of these consoles often rises above the console, the music desk should be turned down until it rests on the keyboard cheeks, before the top lid can be closed.

Horizontally and vertically adjustable music desk

Another music desk featured by the Monarke models "Vermeer" and "Van Gogh" is a both horizontally and vertically adjustable one.

This music desk can be horizontally adjusted by pulling it towards you or pushing it away. In either case the music desk is automatically blocked at the tips. When pushing the music desk forwards or backwards, care should be taken that the music desk is moved on both sides at the same time. This will prevent the music desk from slanting, which may jam it.

The music desk can be vertically adjusted by tweaking the grips left and right behind the music desk simultaneously and moving the music desk up or down with the grips tweaked. After the music desk has been adjusted to the right height, it can be locked by first releasing the grips and only then the music desk itself. In either case the music desk is automatically blocked at the tips.

When moving the music desk vertically, care should be taken that the music desk is moved up and down on both sides at the same time. This will prevent the music desk from slanting, which may jam it.

As the music desk (depending on the number of keyboards) of these consoles often rises above the console, the music desk should be put in the lowest position, before the rolltop cover or the top lid can be closed.

Locking up

The Monarke models "Vermeer" and "Van Gogh" have a lockable console.

Warning

You **can** lock the organ without using of the key. However, the key is necessary to open the organ. Therefore, always take care that the key is not left within the console before depressing the lock!

The rolltop cover

The "Vermeer" console is lockable with a wooden rolltop cover with a lock. The rolltop cover lock is located on top of the instrument, behind the music desk. The lock comes with a key.

Open the instrument as follows:

1. Insert the key in the rolltop cover lock.
2. Turn the key a quarter of a turn to the left; this brings the lock up.
3. Push the rolltop cover up.

Close the instrument as follows:

1. Make certain that the key is not in the lockable space (see warning).
2. Check whether the music desk is in its lowest position or has been turned down on the keyboard cheeks.
3. Pull the rolltop cover towards you.
4. Push the rolltop cover lock.

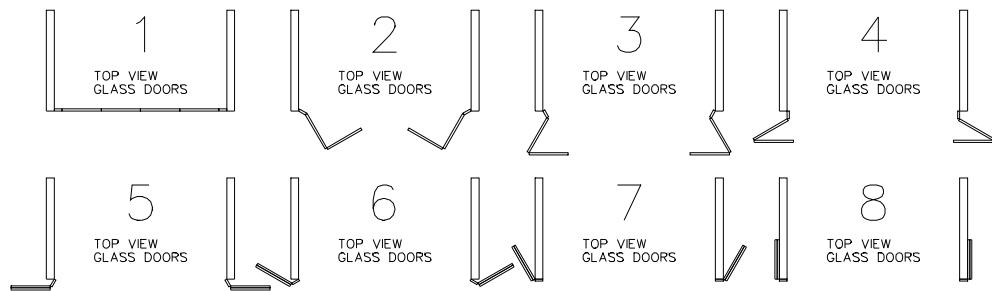
Top lid with glass doors

The "Van Gogh" console is lockable with a wooden top lid with glass doors. One of the glass doors has a lock on the front. The lock comes with a key.

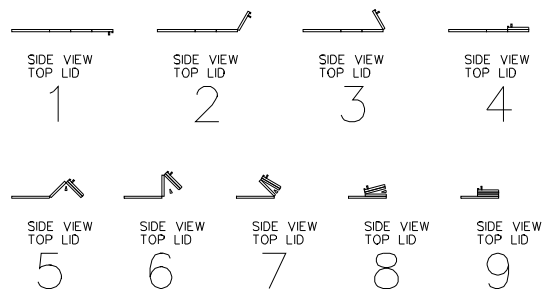
Open the instrument as follows:

1. Insert the key in the cover lock.
2. Turn the key a quarter of a turn to the left; this brings the lock forward.

- Turn the front part of the top lid, consisting of several parts, entirely to the back so that this part comes to rest on the middle part. The glass doors are now accessible. Next fold the glass doors open, pushing them against the side panels of the console.



- Push the back and middle parts of the top lid upwards, from underneath, near the hinge. The back and middle parts of the top lid can be folded together and simultaneously be put carefully on the top of the console. While doing this, hold the middle part together with the front part of the top lid with one hand. At the same time with the other hand, hold the back and middle parts, by keeping your hand between the back and middle parts. Now carefully put the back part on the top of the console. Pull your hand from between the two parts and now put the middle part with the front part on the back part.



Close the instrument as follows:

- Make certain that the key is not in the lockable space (see warning).
- Check whether the music desk is in its lowest position or has been turned down on the keyboard cheeks.
- Lift the front part with the middle part of the top lid to so far, that you can keep your other hand between the middle and back parts. Now carefully pull the entire top lid to the front.

4. Unfold the glass doors, one by one, turning them in front of the console.
5. Turn the front part of the top lid forward, carefully placing it over the glass doors, so that the glass doors are kept in place by the front part of the top lid.
6. Push the cover lock.

Stops

The instrument may be fitted with one (or a combination) of the types of stops mentioned below.

- Wooden drawstop
- Lighted drawstop
- Lighted rocker tab
- Movable drawstop

Wooden drawstops

The Monarke models "Van Rhijn", "Gothique", "Positief" and "Van Eyck" are usually fitted with wooden drawstops.

A stop can be turned on (activated) by pulling a stop. A stop can be turned off (deactivated) by pushing in a stop.

The position of a stop shows if a stop is activated or deactivated. An exception to this is formed by instruments featuring, besides wooden drawstops, a capture system and / or a general crescendo pedal.

The position of a stop on instruments with a capture system shows if a stop is on or off, only when the HR-piston is activated.

As soon as a fixed combination (one of the thumb pistons from PP to T inclusive) or a free combination (one of the pistons from 1 to 8 inclusive) is used, the registration is taken over by the capture system and the position of the stops no longer shows which stops are activated or deactivated.

On instruments with a general crescendo pedal, hand registration is taken over by the general crescendo function, when the general crescendo pedal is used and the position of the stops no longer shows which stops are activated or deactivated.

Lighted drawstops

The Monarke models "Vermeer" and "Van Gogh" are usually fitted with lighted drawstops. After activating or deactivating a stop, a lighted drawstop springs back to the central position. For that reason each stop has a little lamp which lights up as soon as the stop is activated. This stop lighting also functions when fixed combinations (one of the thumb pistons from PP to T inclusive) and free combinations (one of the pistons from 1 to 8 inclusive) and the general crescendo pedal are used.

Lighted rocker tabs

On the Monarke models "Vermeer" and "Van Gogh" the accessories may be designed as lighted rocker tabs.

After activating or deactivating a stop, a lighted rocker tab springs back to the central position. For that reason each stop has a little lamp which lights up as soon as the stop is activated. This stop lighting also functions when fixed combinations (one of the thumb pistons from PP to T inclusive) and free combinations (one of the pistons from 1 to 8 inclusive) and the general crescendo pedal are used.

Moving drawstops

The Monarke models "Vermeer" and "Van Gogh" may be designed with (automatically) moving drawstops.

A stop can be turned on (activated) by pulling a stop. A stop can be turned off (deactivated) by pushing in a stop.

The position of a stop shows if a stop is activated or deactivated.

When on an instrument with this type of stops and a capture system, a fixed combination (one of the thumb pistons from PP to T inclusive) or a free combination (one of the pistons from 1 to 8 inclusive) is used, all the stops belonging to this combination are automatically pushed out (activated). All the other stops are automatically "pulled in" (deactivated).

On instruments with this type of stops and a general crescendo pedal, hand registration is taken over by the general crescendo function when the general crescendo pedal is used and the position of the stops no longer shows which stops are activated or deactivated

Set up

Connecting the organ

Pay close attention to the following points when you connect your instrument:

1. Check whether the mains voltage, as indicated on the serial number plate, matches the voltage of the mains to which the instrument is to be connected. The serial number plate is located left under the keyboards.
2. Connect the instrument to an earthed outlet. If this is not observed, there is a possibility that certain functions of the instrument will not operate optimally.
3. The speaker boxes of instruments with a separate loudspeaker front (Monarke models "Vermeer" and "Van Gogh") should be connected only with the appropriate loudspeaker cables.
In many cases a separate loudspeaker front will be connected at installation by technicians of JOHANNUS Orgelbouw.

Be sure that, when you connect the front yourself, the instrument is switched off. Switch on the instrument only after all the loudspeaker cables have been connected. Loose loudspeaker cables may cause a short circuit which may result in breaking down of the power amplifiers of the instrument.

Switching on

The instrument can be switched on with the mains switch. Location of the mains switch depends on your choice or the type of instrument:

- Behind the hinged music desk (Monarke models "Van Rhijn" and "Gothique").
- Behind the pedalboard light cover (Monarke models "Positief" and "Van Eyck").
- Behind the music desk light cover (Monarke models "Positief" and "Van Eyck")
- Right next to the keyboards, under or next to one of the stop groups (Monarke models "Vermeer" and "Van Gogh").

After switching on, it will take a few seconds before all the controls of the instrument are working. The various electronic circuits need this time to attain the correct settings (initializing).

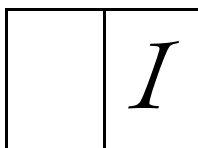
The mains switch on your instrument may be designed as a push button with an pilot lamp or as a key switch.

When the mains switch on your instrument is designed as a push button, the instrument can be switched on by pressing the mains switch. The pilot lamp in this type of mains switch shows whether the instrument is switched on or off.

When the mains switch on your instrument is designed as a key switch, the instrument can be switched on by turning the key switch a quarter of a turn to the right. The position of the key switch shows whether the instrument is switched on or off.

Please note: On instruments with a key switch the mains switch is of the same type as the memory lock. The memory lock is indicated by the nameplate "MEMORY LOCK". Make certain that you do not mistake the two switches.

When your instrument is fitted with a 7-segment display, this display will show the figure one when the instrument is switched on.



If your instrument is fitted with an LCD display, this display will show the following text when the instrument is switched on:

Mem :	1	Vol :	12	Tune :	440
Trans :	0	Crescendo :	Off		

Depending on the programmed settings programmed by yourself (see further on in this manual) the grey marked settings can have a different value.

If you have an instrument with lighted thumb pistons, the 0-piston will light up when the instrument is switched on.

If your instrument is fitted with expression pedal indicators, they will indicate the current expression pedal positions when the instrument is switched on.

Pedalboard lighting and music desk lighting

Your instrument may be fitted with pedalboard lighting and / or music desk lighting.

Usually the pedalboard lighting and / or the music desk lighting is switched on or off when the instrument is switched on or off.

Your instrument may, however, have been fitted with a separate on / off switch for the pedalboard lighting and / or music desk lighting.

The console in detail

Standards

When building your instrument the existing, accepted standards in organ building are taken into account, wherever possible. The two most important standards are:

1. The BDO standard.
BDO stands for **B**und **D**eutscher **O**rgelbaumeister. Instruments for the European continent are usually built according to this standard.
2. The AGO standard.
AGO stands for **A**merican **G**uild of **O**rganists. Instruments for the Anglo-Saxon countries and the USA are usually built according to this AGO standard.

The most striking characteristic of AGO instruments is the design of the pedalboard. In contrast to the BDO instruments, AGO instruments do not know a straight or concave pedalboard but have always a concave pedalboard whose keys fan out to the front (radial).

Another striking difference between BDO and AGO instruments is the order of stops.

Order of Stops

In making the order of stops, a number of factors have to be taken into account:

- The organ building standards
- The available space on the stop jambs
- The symmetry between the left and the right stop jambs.
- The position of the accessories
- Determining the position of the stop groups belonging to a division (keyboard)
- Determining the order of stops per division, the footage of a stop and the family to which a stop / accessory belongs must be taken into account.

Standards

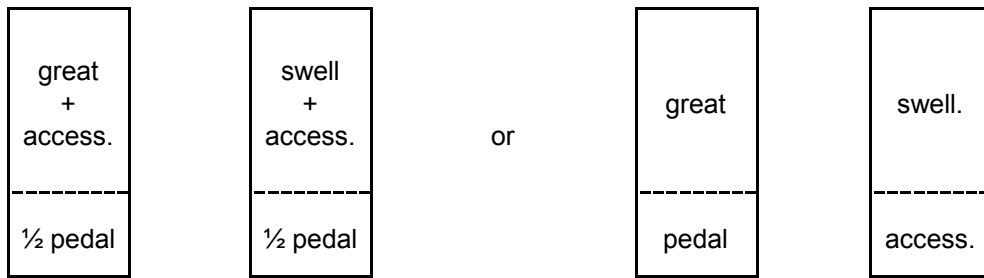
The order of stops will have been made, as much as possible, according to the standards applicable to your instrument.

Available space and symmetry

The available space is especially important for the Monarke models "Van Rhijn", "Gothique", "Positief" and "Van Eyck". On these instruments the stops have to be placed relatively far apart due to add name plates, and for ease of operation.

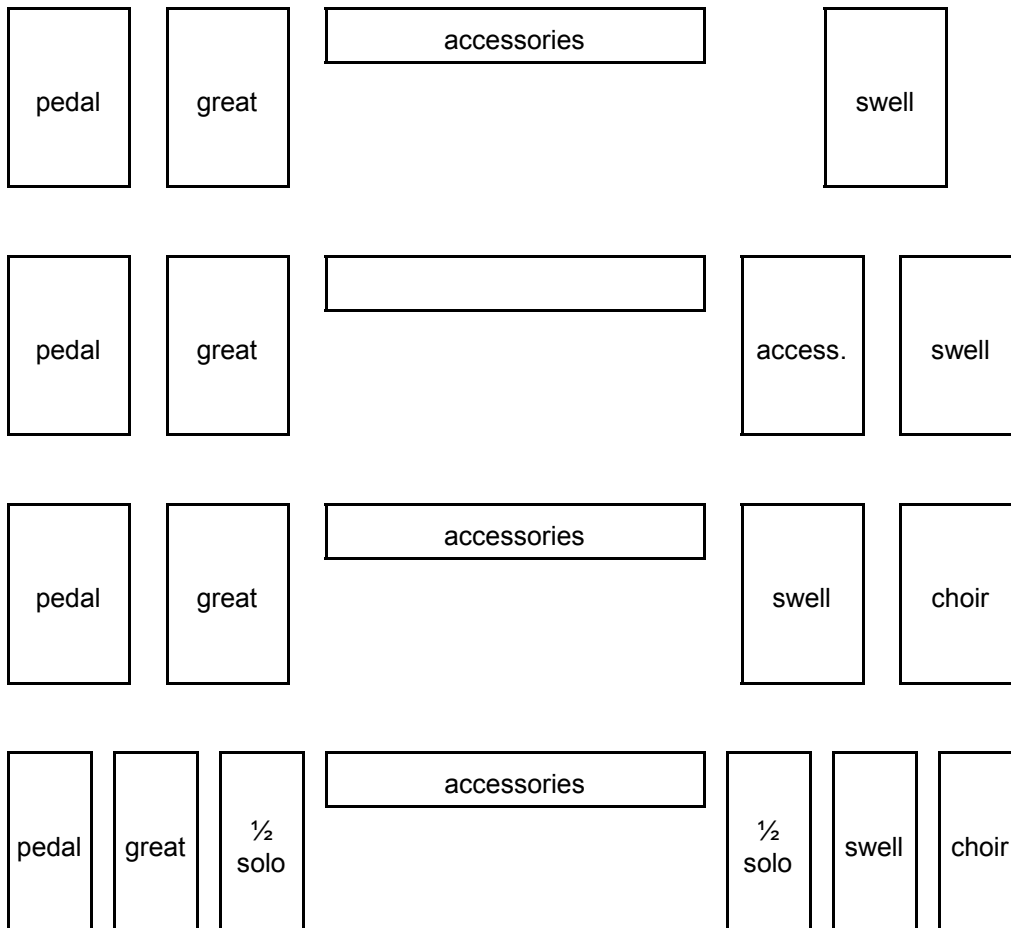
These models have no space to place the accessories as a separate group of stops under the music desk.

To achieve a good symmetry between the left and right stop console and utilizing the space optimally, the Monarke models "Van Rhijn", "Gothique", "Positief" and "Van Eyck" are fitted with one of the (BDO) order of stops as shown in the diagram on the next page:



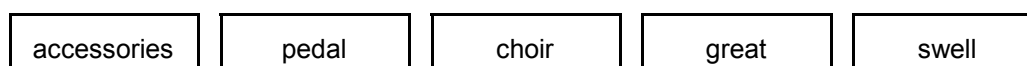
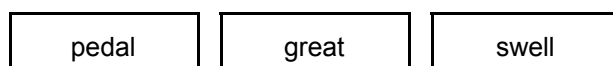
On AGO instruments, the stops of the Swell are located on the left of the keyboards and the stops of the Great on the right.

If the number of stops left and right is not the same, the two stop jambs can be made symmetric by adding one or several non-speaking stops (tacet stops). Possibly your instrument can be extended later by replacing these stops with speaking stops. The Monarke models "Vermeer" and "Van Gogh" know great variation in order of stops. Below some examples.



On AGO instruments the stops of the Swell division have to be placed on the left of the keyboards and the stops of the Great division on the right.

On Monarke models with only rocker tabs over the keyboards, you may find the following order.



Position of accessories

The above examples show that the position of the accessories may vary quite a bit.

In order to create more space for the speaking stops (Monarke models "Van Rhijn", "Gothique", "Positief" and "Van Eyck") certain accessories such as couplers and tremulants may be designed as pistons, which are located under the keyboards.

Order of Stops

The order of stops for each division is established on the basis of certain standards. For instance, an order of stops can be opted for which places the so-called labial stops (flues, prestants etc.) with the greatest footage (32' or 16') at the bottom and the stops with the smaller footage on top of them.

Over the labial stops are the mixture (compound) stops (Mixture, Scharff, Cornet, etc.) and above these again the reeds (Trumpet, Oboe, Schalmey etc.).

The couplers are then located under the speaking stops of the division concerned, whereas the tremulant is usually to be found over the speaking stops of the division in question.

When there are more than two (vertical) rows of stops, the labial stops of one family are put together in one row as much as possible. Some families are: principals, flues and strings.

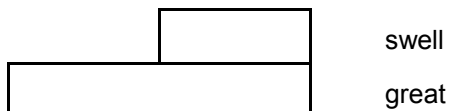
We try, as much as possible, to position stops with the same footage (from bottom to top) from loud to soft (principal-flute-string).

It is not always possible to realize an order of stops which, often also within a limited size of stop consoles, meets all the standards described above. However, we work towards applying the standards as much as possible.

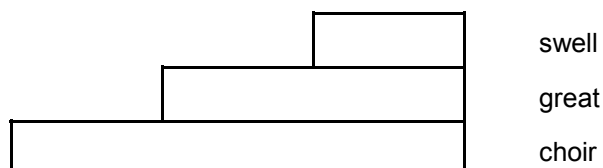
Order of keyboards

Just like the stops, the keyboards (divisions) are arranged according to certain standards. These standards may vary, not only as a standard, but even from country to country. Below some examples of keyboard order:

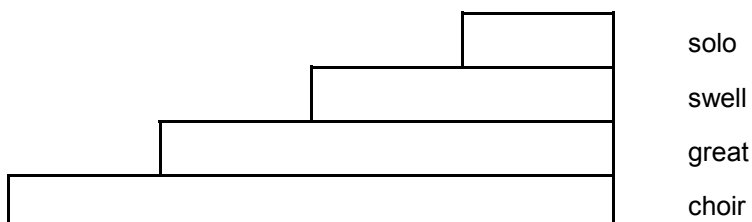
2-manual instrument



3-manual instrument

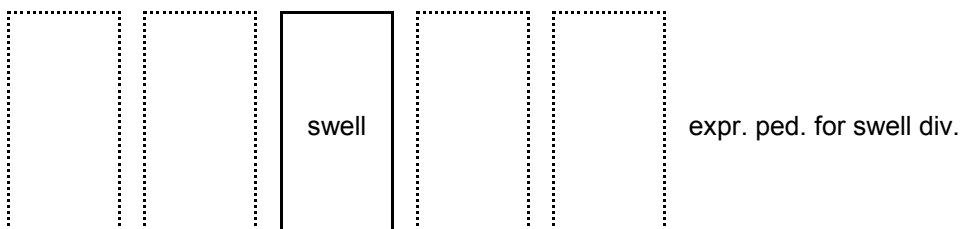


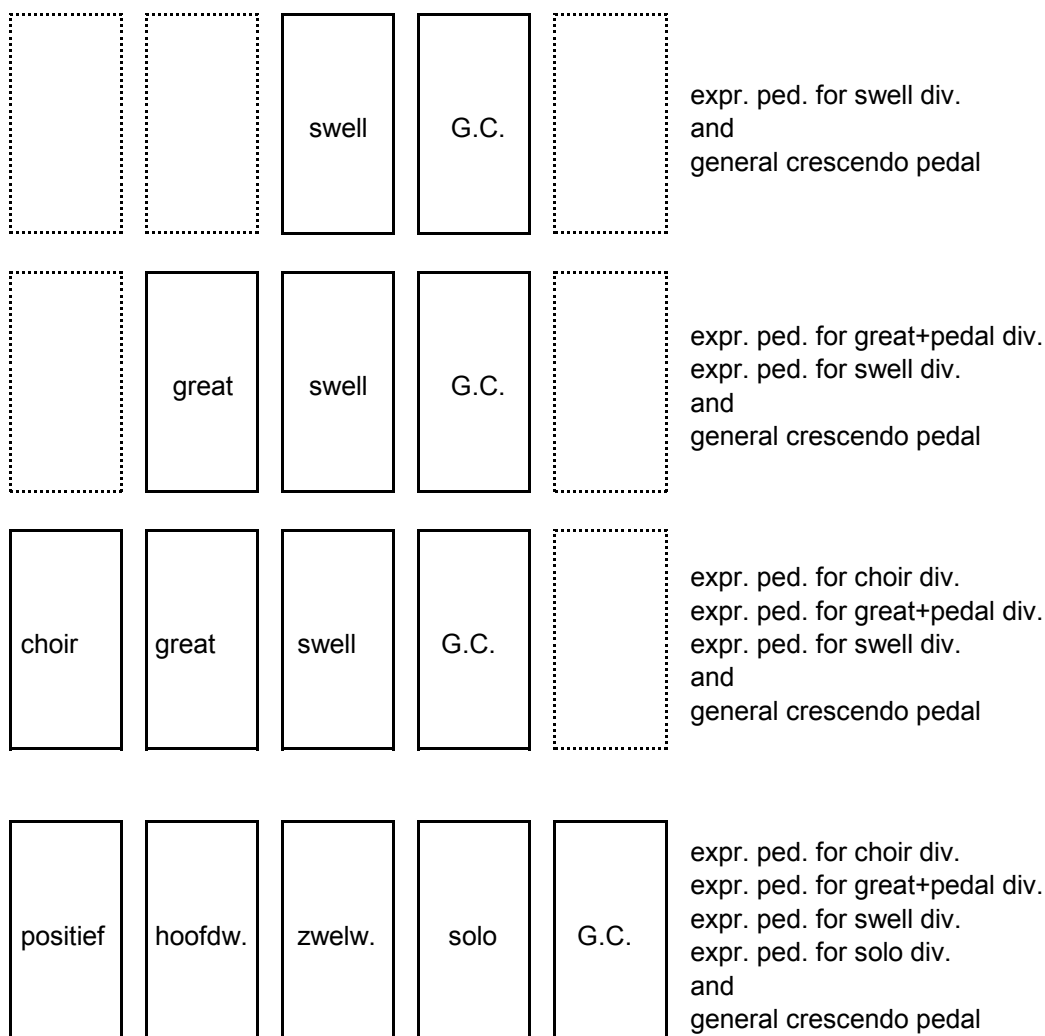
4-manual instrument



Order of expression pedals

The positions of the expression pedals have also been laid down in the BDO- and AGO-standards. Here are some examples of the order of expression pedals.





The horizontal position of the expression pedals may also vary from type to type (of instrument).

For the sake of symmetry, on instruments with panels left and right of the expression pedals, the expression pedals are mostly placed exactly in the centre, whereas according to BDO- and AGO-standards the expression pedals are not placed in the centre.

Thumb pistons

Depending on the design, you may come across a number of (lighted) thumb pistons under the keyboards, under, behind or above the music desk.

The thumb pistons come in two versions:

Lighted thumb pistons

Lighted thumb pistons are finished as switches which spring back to the central position after switching on or off. In each thumb piston a lamp has been fitted that comes on as soon as it is activated.

Non-lighted thumb pistons

Non-lighted thumb pistons comes in two types:

- Thumb pistons that stay on (in) or out. The position of these thumb pistons indicates whether they are switched on or off. (e.g. RO, WM and MT).
- Thumb pistons that spring back to the central position. These are usually the fixed (preset) and free (capture) combination thumb pistons. When these thumb pistons are used, the stops indicates which stops have been switched on or off by the fixed or free combination thumb piston.

Now follows (in alphabetical order) a description of the thumb pistons that may occur on your instrument. Further on in this manual the function of a thumb piston may, where necessary, be dealt with more extensively.

0 (lighted thumb piston)

The 0-piston has a double function. You may have selected a fixed (preset) combination or manually switched on a stop, but this is not what you meant. Pressing the 0-piston briefly will undo the latter change.

Example

You are playing with the registration FLUTE 8', FLUTE 4' and FLUTE 2'. After some time you add PRINCIPAL 8' and PRINCIPAL 4'. Obviously it takes some time (perhaps a very short time) to switch on PRINCIPAL 8' and PRINCIPAL 4'.

Pressing the 0-piston briefly, will cause PRINCIPAL 4' to be switched off (undo latter change). So PRINCIPAL 8' is not switched off as well (from the organist's point of view this would namely be part of the preceding registration). The instrument considers, as it were, the registration FLUTE 8', FLUTE 4', FLUTE 2', PRINCIPAL 8' the preceding choice, whereas the organist sees the registration FLUTE 8', FLUTE 4', FLUTE 2' as the previous choice.

Pressing the 0-piston longer causes - with a few exceptions - all the activated stops to be switched off in one go. Exceptions are the couplers and the tremulants if the FA-piston is pressed, and the stops Chorus, Intonation 2 and the MIDI-stops.

N.B. On instruments with wooden drawstops (Monarke models "Van Rhijn", "Gothique", "Positief" and "Van Eyck") the 0-piston has the same function as the HR-piston. The description of the HR-piston can be found further on in this chapter.

0 (non-lighted thumb piston)

By pressing the 0-piston on an instrument with non-lighted thumb pistons, you switch over from a free (capture) combination to a fixed (preset) combination or hand registration, depending on whether a fixed combination piston has been pressed or the HR-piston.

1 – 8

Pistons with which a personal registration is stored into the capture memory by giving them a number (from 1 to 8 inclusive) within a memory group. These pistons are needed again to recall the registrations stored into the capture memory.

An instrument may have one or several groups of pistons from 1 to 8 inclusive. If an instrument has several groups of pistons from 1 to 8 inclusive you have free (capture) combinations at your disposal which may be programmed for the entire instrument (generals), but also for each division separately (separates).

See also at "Using the capture system".

– and +

Pistons with which (if present on your instrument):

- To select a memory group (Memory from 1 to 8 inclusive) of the capture system.
See also at "Using the capture system".
- To select a programmable general crescendo step.
See also at "Using the general crescendo".
- To set Volume, Tune and Transposer.
See also the description of "General volume", "Fine tuning" and "Transposer".
- To program MIDI-stops.
See also the description of "Programmable MIDI".

When you hold the – or the + piston, it continues counting down or up automatically.

CF = Cantus Firmus

A thumb piston which switches the coupler Cantus Firmus on or off.

See also at "Cantus Firmus".

CH = Chorus

A thumb piston which switches the chorus effect on or off.

See also at "Chorus".

Couplers

When the coupler stops have been fitted under the music desk (Monarke models "Vermeer" and "Van Gogh"), they have been designed as rocker tabs.

When the coupler stops are placed at the stop jambs of the concerned divisions, the same type of stops are used for the speaking stops as well as the coupler stops.

If there is not enough space on the stop consoles or under the music desk (Monarke models "Van Rhijn", "Gothique", "Positief" and "Van Eyck") the coupler stops can also be (lighted) thumb pistons located under the keyboards.

See also at "Couplers".

Coupler stops can be designed as normal stops, as well as (lighted) thumb pistons (and as toe pistons). In this way a coupler can be operated in two or three ways: with a stop, with a thumb piston under the keyboards and / or with a toe piston.

If a coupler stop has been designed twofold or threefold, the coupler stop can be switched on or off with each of the two or three controls. In other words, if a coupler is switched off, the coupler concerned can be switched on with each of the two or three controls, and vice versa.

CR = General Crescendo

A thumb piston which switches the function of the general crescendo on or off.

See also at "Using the general crescendo".

FA = Fix Accessories

When the couplers and the tremulants are used in the fixed (preset) combinations or free (capture) combinations or when the 0-piston is used, they will change with it. This can be prevented by pressing the FA-piston. As long as this thumb piston is on, the couplers and the tremulants can only be switched on or off manually.

HR = Hand registration (lighted thumb piston)

The HR-piston is found only on instruments with wooden drawstops (Monarke models "Van Rhijn", "Gothique", "Positief" and "Van Eyck").

By pressing this thumb piston, you change from a fixed (preset) or a free (capture) combination to hand registration. As soon as the HR-piston is pressed, only the manually switched on (drawn) stops will sound. As long as the HR-piston is on, stops can be switched on or off manually.

When you have selected a fixed (preset) or a free (capture) combination and you switch a stop manually on or off, the selected fixed or free combination plus hand registration (HR+-function) will be activated at once. This will be illustrated with a couple of examples.

Example 1

1. The fixed combination PP (with e.g. the stops SUBBASS 16' pedal, ROHRFLUTE 8' great and STOPPED FLUTE 8' swell) has been selected.
2. The HR-piston is not on.

When you play the swell division only, the stop STOPPED FLUTE 8' will sound.

Manual switching on of e.g. FLUTE 4' of the swell division will make both the stop STOPPED FLUTE 8' (PP) and the stop FLUTE 4' (HR) sound.

Both thumb pistons PP and HR (and the 0-piston) will be lit.

Example 2

1. The stop Octave 4' of the swell has been drawn.
2. The fixed combination PP (with e.g. the stops SUBBASS 16' pedal, ROHRFLUTE 8' great and STOPPED FLUTE 8' swell) is selected.
3. The HR-piston is not on.

When you play the swell division, only the stop STOPPED FLUTE 8' will sound.

Manual switching on of e.g. the OCTAVE 2' of the swell will make both the stop STOPPED FLUTE 8' (PP) and the stops OCTAVE 4' and OCTAVE 2' (HR) sounding.

Both thumb pistons PP and HR (and the 0-piston) will be lit.

Example 3

1. The stops OCTAVE 4' of the swell and the coupler SWELL-GREAT are on.
2. The fixed combination PP (with e.g. the stops SUBBASS 16' pedal, ROHRFLUTE 8' great and STOPPED FLUTE 8' swell) is selected.
3. The HR-piston is not on.

When you now play the great division, only the stop ROHRFLUTE 8' will sound.

Because the coupler stop is now switched on, manual switching on e.g. the OCTAVE 2' of the swell, will make both the stop ROHRFLUTE 8' (PP) and the stops OCTAVE 4' and OCTAVE 2' (HR) sounding.

Both thumb pistons PP and HR (and the 0-piston) will be lit.

When you have switched on a fixed combination together with HR (or a free combination together with HR), stops of the fixed or free combination cannot be manually switched off. In the above examples manual switching off of the STOPPED FLUTE 8' will have no effect, because the fixed combination thumb piston PP retains it. In other words: the fixed and free combinations take precedence over hand registration.

HR (non-lighted thumb piston)

The HR-piston is only found on instruments with wooden drawstops (Monarke models "Van Rhijn", "Gothique", "Positief" and "Van Eyck").

By pressing this thumb piston, you change from a fixed (preset) or a free (capture) combination to hand registration. As soon as you press the HR-piston, only the manually switched on (drawn) stops will sound. As long as the HR-piston is on, stops can be manually switched on or off.

HR+ = Hand registration + fixed or free combination

Just like the HR-piston, the thumb piston HR+ is only found on instruments with wooden drawstops (Monarke models "Van Rhijn", "Gothique", "Positief" and "Van Eyck").

By switching on this thumb piston, the manually drawn stops are added to the selected fixed (preset) combination. As long as the thumb piston HR+ remains pressed, stops can be switched on or off manually.

When a fixed (capture) combination together with thumb piston HR+ is activated, stops activated by means of the fixed combination piston, cannot be manually switched off. In other words: the fixed combinations have precedence over hand registration.

Suppose you have selected the fixed combination PP (with e.g. the stops SUBBASS 16' pedal, ROHRFLUTE 8' great and STOPPED FLUTE 8' swell). In that case switching off manually ROHRFLUTE 8' will have no effect, if the thumb piston HR+ is on.

INT2 = Intonation 2

Thumb piston for selecting another intonation.

See also at "Intonation 2" and at "Choice of temperament".

KT = Keyboard transfer

By pressing this thumb piston, two (always the same) keyboards can be interchanged.

When the keyboard transfer is activated, the functions belonging to a certain division remain with that division.

Using keyboard transfer may simplify playing certain music.

Example:

Usually the order of keyboards on a 3-manual instrument (from bottom to top) is choir-great-swell. French organs, however, often have a different order of keyboards (great-choir-swell). The music notation of French composers has taken this (French) keyboard order into account. With the KT-piston the great and choir keyboards can be simply interchanged.

M1 – M4

Thumb pistons with which a selected registration can be stored into a memory group (from M1 to M4 inclusive). These thumb pistons are needed again to recall the registrations stored into the memory.

See also at "Using the capture system".

MB = Manual Bass

Thumb piston for switching the coupler Manual Bass on or off.

See also at "Couplers".

MIDI's

The MIDI-stops (or switches) form a separate group of accessories.

See for their use the chapters "Application of MIDI" and "Programmable MIDI".

MT = Mean-tone

Thumb piston for selecting the Mean-tone temperament.
See also at "Mean-tone" and at "Choice of temperament".

PG = Programming General crescendo

Thumb piston enabling the stop combinations of the general crescendo to be changed.
See also at "Using the general crescendo".

PGM = Programming General crescendo and MIDI-stops

Thumb piston enabling the stop combinations of the general crescendo to be changed or the MIDI-stops (or switches) to be programmed.
See also at "Using the general crescendo" and at "Programmable MIDI".

PP – T

The fixed combinations (presets) are groups of stops, set up according to fixed musical standards, starting from PP (pianissimo: very soft) to T (tutti: very loud) inclusive.

The working of the T-piston is twofold. When you are playing with a registration of your own or with a fixed combination (from PP to T inclusive), you will get the full organ by pressing the T-piston; the normal effect of this thumb piston. However, by pressing this thumb piston again, you will recover the preceding registration.

These fixed combinations have been established during construction of the instrument and cannot be changed by the user.

On instruments with lighted stops, pressing one of the preset pistons shows which stops are switched on.

On instruments with moving drawstops, pressing one of the preset pistons shows which stops are switched on (by their position).

It is also possible to manually switch stops on or off within a fixed combination.

RO = Reeds off

On the far right of the fixed combinations is the thumb piston RO (Reeds Off). Pressing this thumb piston switches off all the reeds in one go. As long as the RO-piston is pressed, no reeds can be switched on.

SEQ– and SEQ+

If your instrument has been fitted with these, 32, 64, 128 or 256 registrations of your own choice can be stored into the memory of the capture system. These registrations can be recalled at any given moment.

A capture system is always composed of a number of memory groups (4, 8, 16 or 32 to be selected with the thumb pistons – and + or from M1 to M4 inclusive). Each memory group has eight locations (pistons from 1 to 8 inclusive). A registration of your own choice can be stored at any place.

So recalling a stored capture combination always has to be done by means of two pistons. By means of the sequence pistons the entire memory can be run through consecutively. With the SEQ– to lower memory locations and with the SEQ+ to a higher memory location.

The following diagram gives the sequence numbers of all the memory locations of a capture system with 16 memory groups and 8 memory locations per group.

	memory group 1	memory group 2	memory group 3	memory group 4	memory group 5	memory group 6	memory group 7	memory group 8	memory group 9	memory group 10	memory group 11	memory group 12	memory group 13	memory group 14	memory group 15	memory group 16
memory location 1	1	9	17	25	33	41	49	57	65	73	81	89	97	105	113	121
memory location 2	2	10	18	26	34	42	50	58	66	74	82	90	98	106	114	122
memory location 3	3	11	19	27	35	43	51	59	67	75	83	91	99	107	115	123
memory location 4	4	12	20	28	36	44	52	60	68	76	84	92	100	108	116	124
memory location 5	5	13	21	29	37	45	53	61	69	77	85	93	101	109	117	125
memory location 6	6	14	22	30	38	46	54	62	70	78	86	94	102	110	118	126
memory location 7	7	15	23	31	39	47	55	63	71	79	87	95	103	111	119	127
memory location 8	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128

In this way a concert may be prepared by programming 128 registrations for the entire concert in succession into the capture memory.

TIP: Using the SEQ- and SEQ-functions, you will not program another registration at each memory location, but rather pay more attention to the registrations as they succeed one another in time during a concert. It is very well possible that exactly the same registration occurs in several memory locations, because the same registration may occur more than once during the concert. However, this will not be a problem considering the large number of memory locations.

SET

This is a thumb piston for programming:

- Free (capture) combinations.
See also at "Using the capture system".
- Stop combinations of the general crescendo.
See also at "Using the general crescendo".
- Volume, Tune and Transposer settings.
See also at "General volume", "Fine tuning" and "Transposer".
- MIDI-stops.
See also at "Programmable MIDI".

S/S

An instrument with three or more expression pedals may be fitted with a thumb piston S/S. On instruments with two expression pedals, it is still possible to operate two expression pedals at the same time with one foot by placing it on both expression pedals simultaneously. Instruments with more than two expression pedals do not allow this. With the S/S-piston all the expression pedals can be coupled to the expression pedal of the swell division. By pressing this thumb piston, the volume of all the divisions can be set simultaneously with one expression pedal, the swell division expression pedal.

TRANS. = Transposer

Thumb piston for setting and storing the transposer setting.

See also at "Transposer".

Tremulants

When the tremulant stops have been fitted under the music desk (Monarke models "Vermeer" and "Van Gogh"), they have been designed as rocker tabs.

When the tremulant stops are placed at the stop jambs of the concerned divisions, the same type of stops are used for speaking stops as well as the tremulant stops.

If there is not enough space on the stop consoles or under the music desk (Monarke models "Van Rhijn", "Gothique", "Positief" and "Van Eyck") the tremulant stops casalso be (lighted) thumb pistons located under the keyboards.

The tremulant pistons bear the legend TREM. CH, TREM. GR, TREM. SW and TREM. SL for respectively choir, great, swell and solo.

TUNE = Pitch

Thumb piston for setting and storing the pitch setting.

See also at "Fine tuning".

VOL. = Volume

Thumb piston for setting and storing the volume setting.

See also at "General volume".

WS = Wind pressure stabilization

Thumb piston for switching on or off the wind pressure stabilization.

See also at "Wind pressure stabilization".

WM = Werckmeister III

Thumb piston for selecting the Werckmeister III temperament.

See also at "Werckmeister III" and at "Choice of temperament".

Couplers

One or several couplers are standard on instruments with 2 of more manuals.

Unless otherwise stated, all the couplers are full, that is to say, that all the keys which are pressed are coupled.

A coupler may be designed as a stop or as a piston.

The coupler stops may be designed as stops, and as (lighted) thumb pistons (and as toe pistons). Hence a coupler can be operated in two or three ways: with a stop, with a thumb piston under the keyboards and / or with a toe piston.

If a coupler stop has been designed twofold or threefold, the coupler stop can always be switched on or off with each of the two or three controls. In other words, if a coupler is switched off, the coupler in question can be switched on again with each of the two or three controls and vice versa.

Manual couplers

With a manual coupler, a manual can be coupled to another manual. If, e.g. the coupler SWELL - GREAT is switched on, the coupled key of the swell will also sound, as soon as a key of the great is pressed. In this way the stops of the great can be supplemented with the stops of the swell.

Your instrument may be designed with the following manual couplers:

- SWELL - GREAT (instrument with 2 or more manuals)
- CHOIR - GREAT (instrument with 3 or more manuals)
- SWELL - GREAT (instrument with 3 or more manuals)
- SOLO - GREAT (instrument with 4 manuals)
- SOLO - CHOIR (instrument with 4 manuals)

Instruments with more than 4 manuals may have a larger number of manual couplers.

Pedal couplers

With a pedal coupler a manual can be coupled to the pedal. If, e.g. the coupler GREAT - PEDAL is switched on, the coupled key of the great will also sound, as soon as a pedal key is pressed. In this way the stops of the pedal can be supplemented with the stops of the great.

Your instrument may be designed with the following pedal couplers:

- GREAT - PEDAL (instrument with 2 or more manuals)
- SWELL - PEDAL (instrument with 2 or more manuals)
- CHOIR - PEDAL (instrument with 3 or more manuals)
- SOLO - PEDAL (instrument with 4 or more manuals)

Instruments with more than 4 manuals may have a larger number of pedal couplers

Sub and super couplers

Apart from the usual manual and pedal couplers, sub and super couplers may be added to your instrument.

When one manual is coupled to another manual (pedal), the usual couplers will make the stops that are coupled to the other manual (pedal) sound at their own, true footage pitch.

When a sub coupler is switched on, the stops that are coupled to the other manual (pedal) will sound an octave lower.

When a super coupler is switched on, the stops that are coupled to the other manual (pedal) will sound an octave higher.

Apart from the sub and super couplers between the manuals, sub and super couplers functioning within the same manual (intramanual couplers) may be fitted.

When an instrument has sub and super couplers besides the usual couplers, the difference between the various couplers will be marked with a footage indication..

A normal coupler will be indicated as 8', a sub coupler as 16' and a super coupler as 4' e.g.:

- SWELL - GREAT 4' (super coupler swell to great)
- SWELL - GREAT 8' (normal coupler swell to great)
- SWELL - GREAT 16' (sub coupler swell to great)
- SWELL - SWELL 4' (super coupler for the swell)
- SWELL - SWELL 16' (sub coupler for the swell)

Cantus Firmus

Switching on the stop (or the thumb piston) Cantus Firmus (CF), couples the swell to the great. This coupler is a so-called monophonic coupler. That means that only one key at a time is coupled from the swell to the great. When a chord is played on the great, the highest tone of that chord is coupled from the swell to the great. In this way the effect of a solo stop is achieved. When the coupler "SWELL - GREAT" is used Cantus Firmus function has no effect.

On your instrument this coupler may be designed as a stop or as a thumb piston.

Manual Bass

By switching on the stop (or the thumb piston) Manual Bass (MB), the pedal can be coupled to the great. This coupler is a so-called monophonic coupler. That means that one key at a time is coupled from the pedal to the great. When a chord is played on the great, the lowest tone of that chord is coupled from the pedal to the great.

On your instrument this coupler may be designed as a stop or as a thumb piston.

Tremulants

Tremulants are meant to vibrate the sound of the organ especially with slow or soft music. Each division may have its own tremulant.

Normally, the tremulants are designed as stops. If there is not enough space on the stop consoles or under the music desk (Monarke models "Van Rhijn", "Gothique", "Positief" and "Van Eyck") tremulant stops may also be (lighted) thumb pistons placed under the keyboards.

When the couplers and / or the stop Cantus Firmus (CF) are used, the tremulants of the concerning divisions are coupled as well.

When one of the divisions of your instrument has been supplemented with the stop "TIBIA ORGAN" or "GOSPEL ORGAN" (module voice), this stop has its own particular tremulant stop "Tremolo".

Other accessories

Your instrument may be fitted with one or more of the following accessories.

Chorus

To avoid the instrument sounding too sterile, the organ has been designed in such a way that various stops are slightly detuned in relation to each other. This gives the instrument a "broader", more "lively" character. When your instrument has the accessory CHORUS, this effect can be strengthened by switching on this accessory.

On your instrument this accessory may be designed as a stop or as a thumb piston.

Intonation 2

Intonation determines the timbre of the instrument. In pipe organ building, tuning (voicing) is a very important aspect of the trade. Every pipe organ is adjusted, stop by stop, to the area where the instrument is installed.

The accessory INTONATION 2 occurs on instruments which are fitted with two intonations, one romantic, one baroque. If your instrument has two intonations, you can switch between one intonation and the other with the accessory INTONATION 2 (INT2). In general, a romantic instrument sounds somewhat "rounder", whereas the timbre of an instrument with a baroque intonation is slightly brighter. See also at "Choice of temperament".

On your instrument this accessory may be designed as a stop or as a thumb piston.

Mean-tone

Normally your instrument has Equal temperament (normal temperament). By switching on the accessory Mean-tone (MT), Mean-tone temperament is selected. As soon as this temperament is switched on, the Werckmeister III temperament will automatically be switched off, if it is on. See also at "Choice of temperament".

On your instrument this accessory may be designed as a stop or as a thumb piston.

MIDI-stops

The MIDI-stops (or switches) form a separate group of accessories. See for its usage at "Application of MIDI" and "Programmable MIDI".

On your instrument these accessories may be designed as stops or as thumb pistons.

Unisono off

On an instrument with sub and / or super couplers, the accessory UNISONO OFF may be found. With this stop the real footage of a stop is switched off, so that only the footage of the sub or super coupler is heard. An example:

When the sub coupler SWELL-SWELL 16' and the super coupler SWELL-SWELL 4' of the swell is switched on, and the stop UNISONO OFF is not on, pressing a key will produce three tones. The original tone, a tone sounding an octave lower and a tone sounding an octave higher.

When the sub coupler SWELL-SWELL 16' and the super coupler SWELL-SWELL 4' of the swell is switched on, and the stop UNISONO OFF is on, pressing a key will produce only two tones. The tone sounding an octave lower and the tone sounding an octave higher. (the original tone has been switched off with the stop UNISONO OFF).

Werckmeister III

Normally your instrument has Equal temperament (normal temperament).

By switching on the accessory WERCKMEISTER III (WM), Werckmeister III temperament is selected.

As soon as this temperament is switched on, the Mean-tone temperament will automatically be switched off, if it is on.

See also at "Choice of temperament".

On your instrument this accessory may be designed as a stop or as a thumb piston.

Wind pressure stabilization

Stop or thumb piston for switching on or off the wind pressure stabilization.

The wind supply of pipe organs is never ideal. Ideally the wind pressure in the wind chest would always be constant. Whenever a valve under a pipe is opened (on a pipe organ), the wind pressure will go down a little for a moment, because the wind chest develops a "leak", so to speak. Depending on the number of valves that is opened at one time (number of stops and keys) and the size of the pipes, the variation in wind pressure may be larger or smaller. These variations in wind pressure influence the pitch of the pipes sounding at that moment. These changes in pitch may liven up the tone of your instrument, if they are not too great. Very large changes in pitch, however, will be found annoying. Instruments with this deficiency are known as "prone to windsag".

With the accessory wind pressure stabilization (WS) this effect can be switched on or off. Switching off the accessory, deactivates the wind pressure stabilizer. The effect of the wind pressure variations is then more or less audible, depending on the number of stops, the kind of stops and the number of keys.

Switching on the accessory, activates the wind pressure stabilizer. This means that no wind pressure variations will occur.

On your instrument this accessory may be designed as a stop or as a thumb piston.

Toe pistons

Besides having thumb pistons under the keyboards, your instrument may be fitted with a number of toe pistons (foot switches). Now follows a description of the usual functions of toe pistons.

Coupler pistons

With these toe pistons the couplers can be operated. When a coupler is switched off, it can be switched on again with the accompanying toe piston and vice versa.

TUTTI piston

This toe piston has the same function as the thumb piston T(utti) of the fixed (preset) combinations.

Capture pistons

These toe pistons have the same functions as the thumb pistons from 1 to 8 inclusive (generals) of the capture system.

SEQ pistons

These toe pistons have the same function as the thumb pistons SEQ– and SEQ+ under the keyboards.

(32')-stop -pistons

With the 32'-stop toe pistons, 32'-stops can be operated. When a 32'-stop is switched off, it can be switched on again with the appropriate toe piston and vice versa.

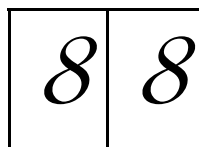
Besides 32'-stops, other, special stops can be assigned to toe pistons, such as, e.g. a high pressure stop like the Tuba, or a reed with a special character.

Displays

Your instrument may be fitted with one of the following displays.

7-segment display

A 7-segment display is a 2-digit display. Each of the two digits consists of 7 segments (hence: 7-segment display).



The display has various functions:

- When the GC-piston is not pressed, the display will show the selected memory group of the capture system.
See also at "Using the capture system".
- When the GC-piston is pressed, the display will show to which step the general crescendo pedal is pressed down.
See also at "Using the general crescendo".
- When the thumb pistons GC and PG(M) are pressed, the display will show which step of the general crescendo can be programmed.
See also at "Using the general crescendo".
- When the PGM-piston is pressed and a MIDI-stop is switched on, the display will show which channel / module voice number (patch number) is assigned to the concerned MIDI-stop.
See also at "Programmable MIDI"

LCD-display

This type of display (LCD stands for Liquid Crystal Display) will show various settings:

- Selected capture memory group (Memory from 1 to 8 inclusive).
See also at "Using the capture system".

```
Mem : 1  Vol : 12  Tune : 440  
Trans : 0  Crescendo : Off
```

- Volume setting (Volume from 1 to 25 inclusive).
See also at "General volume".

```
Mem : 1  Vol : 12  Tune : 440  
Trans : 0  Crescendo : Off
```

- Pitch setting (Tune from 426Hz to 454Hz inclusive).
See also at "Fine tuning".

```
Mem : 1  Vol : 12  Tune : 440  
Trans : 0  Crescendo : Off
```

- Transposer setting (Transposer from -3 to +3 inclusive half tones).
See also at "Transposer".

```
Mem : 1  Vol : 12  Tune : 440  
Trans : 0  Crescendo : Off
```

- General crescendo setting.
When the general crescendo is not switched on, the display indicates this with the text Off.

```
Mem : 1  Vol : 12  Tune : 440
Trans : 0  Crescendo : Off
```

When the general crescendo is switched on, the display indicates to which step the general crescendo pedal is pressed down (from step 1 to 20 inclusive).
See also at "Using the general crescendo".

```
Mem : 1  Vol : 12  Tune : 440
Trans : 0  Crescendo : 5
```

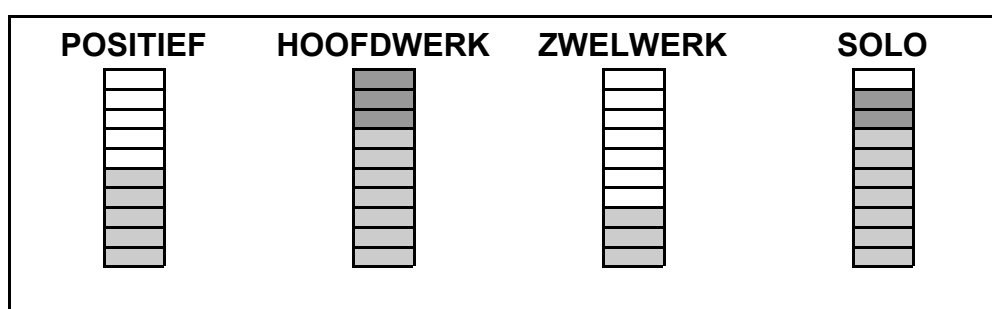
- Programmable MIDI-settings.
See also at "Programmable MIDI".

```
Midi Program      Swell
Voice : 40        Channel : 6
```

Expression pedal indicators

With the expression pedal indicators, the position of the various expression pedals can be viewed at one glance. Each expression pedal indicator consists of a row of 10 LED's placed on top of each other. The expression pedal indicators reflect the current position of each expression pedal in ten steps . The lower (bottom) seven LEDs will light up green whereas the top three LEDs will light up red to indicate that the expression pedal in question is nearing, or has reached, its maximum.

In the example below, the expression pedal for the choir is at position 5, the expression pedal for great + pedal at position 10, the expression pedal for the swell at position 3 and the expression pedal for the solo at position 9.



Memory lock

In order to store personal registrations, altered general crescendo steps, volume, tune and transposer settings and MIDI-stop settings, the memory has to be "opened" with key switch MEMORY LOCK . As soon as the memory is "opened" with the key switch the lamp in the SET-piston will light up.

See also at "Using the capture system", "Using the general crescendo", "General volume", "Fine tuning", "Transposer" and "Programmable MIDI".

Volume controls

Your instrument may be fitted with one or several of these volume controls.

Expression pedals

Depending on the number of manuals, one or several expression pedals may be found on your instrument. Usually each division is assigned its own expression pedal, so that the volume of the various divisions can be adjusted independently (of each other).

The pedalboard has no expression pedal of its own. Usually the volume of the pedalboard can be adjusted together with the volume of the great division.

The number of expression pedals can be reduced by adjusting the volumes of the swell division along with the choir division with one expression pedal.

If your instrument (with more than two expression pedals) has been fitted with a thumb piston S/S, all the expression pedals can be coupled to the expression pedal of the swell division. By pressing this thumb piston, the volume of all the divisions can be adjusted simultaneously with one expression pedal, (the one of the swell division).

If your instrument has been fitted with expression pedal indicators, the position of the various expression pedals can be viewed at one glance.

Rotary controls keyboard volume

For technical reasons most pipe organs have (even if they have an expression pedal) an expression pedal for the swell division only. The name swell indicates this in fact.

Just like a pipe organ (Monarke models "Van Rhijn", "Gothique", "Positief" and "Van Eyck") the instrument can be fitted with one expression pedal for the swell division.

Still, it may be desirable that the volume of the other divisions can be adjusted.

To realize this, the "missing" expression pedals are fitted as rotary controls and added to the other (rotary) controls on the console.

The expression pedals (or the rotary controls) work independently of the general volume setting.

See also at "General volume".

General volume

Depending on the design of your instrument, the general volume of the instrument can be adjusted with a rotary control or by means of the thumb pistons VOL, SET, – and +.

Volume (rotary control)

The general volume is adjusted with the control VOLUME, independent of the position of the expression pedals. This control affects all the divisions.

VOL. (thumb piston, programmable)

Independent of the position of the expression pedals, the general volume of your instrument can be adjusted with the thumb piston VOL. in combination with the thumb pistons – and +.

A general volume setting can be stored into the memory. When the instrument is switched on, the programmed volume setting will automatically be selected from the memory. A programmed volume setting can be changed later.

The memory in which the volume setting is stored is protected so that it cannot be erased when you switch off the organ or when you unplug the organ from the main power.

The volume can be adjusted from 1 to 25 inclusive. The selected volume setting can be read on the display:

Mem : 1	Vol : 12	Tune : 440
Trans : 0	Crescendo : Off	

The volume can be adjusted as follows:

1. Press thumb piston VOL.. As long as the lamp in thumb piston VOL. keeps on burning the volume setting can be changed.
2. Adjust the required volume by pressing the – or the + piston once or several times.
3. After a few seconds, the lamps of both thumb pistons VOL. and the – or the + piston will go off automatically.

The volume setting is not stored into the memory now and will be lost as soon as the instrument is switched off .

A volume setting can be programmed as follows:

1. 'Open' the memory by turning key switch MEMORY LOCK a quarter of a turn to the right. The SET-piston will now light up as a sign that the memory is 'open'.
2. Press thumb piston VOL.. As long as the lamp in thumb piston VOL. keeps on burning the volume setting can be changed
3. Adjust the required volume by pressing the – or the + piston once or several times.

4. Just press the SET-piston when the correct volume is adjusted. The display will briefly show the letter P, as a sign that the chosen volume setting is being programmed into the memory.

Mem : P 6	Vol : 12	Tune : 440
Trans : 0	Crescendo : Off	

Storing into the memory is only possible as long as the lamp in thumb piston VOL. is on. After a few seconds the lamps of both thumb pistons VOL. and the – or the + piston will go off automatically.

5. Close the memory by turning key switch MEMORY LOCK a quarter of a turn to the left (taking the key from the switch, if necessary). The lamp in the SET-piston will now go off, as a sign that the memory is 'closed' again.

The volume setting is now stored into the memory. When the instrument is switched on again, the volume setting programmed into the memory, will be automatically selected.

Volume acoustics

The built-in digital acoustic effect provide a spacial reverberation of the organ sound. With the rotary control KATHEDRAL the volume of this acoustic effect can be adjusted continuously. To switch off the acoustic effect entirely, the control must be turned completely to the left.

Pitch settings

The standard pitch of musical instruments is 440Hz.

Depending on the type of instrument, the pitch of your instrument can be adjusted in one of the following ways:

- A rotary control PITCH (fine tuning) in combination with a selector switch TRANSPOSER.
- Thumb piston TUNE (fine tuning) in combination with the thumb piston TRANS. (transposer).

Fine tuning

The fine tuning can be adjusted continuously with the rotary control PITCH or be in steps of 1Hz by means of e.g. thumb pistons TUNE, SET, – and + .

PITCH (rotary control)

With de rotary control PITCH, the pitch of your instrument can be adjusted continuously a quarter of a tone lower or higher. This rotary control has a central position indication. This means that this control noticable snaps into the central position when turning. This central position is meant to set the instrument (with the selector switch "TRANSPOSER" in position 0) at A=440 Hz.

TUNE (thumb piston, programmable)

The pitch of the instrument can be adjusted with the thumb piston TUNE, in combination with the thumb pistons – and +, in steps of 1Hz from 426Hz (a quarter of a tone below the standard pitch) to 454Hz (a quarter of a tone above the standard pitch).

A pitch setting can be stored into the memory. When the instrument is switched on, the programmed pitch setting will automatically be selected from the memory. A programmed pitch setting can be changed later.

The memory in which the pitch setting is stored is protected so that it cannot be erased when you switch off the organ or when you unplug the organ from the main power.

The selected pitch setting is shown on the display:

Mem: 1	Vol: 12	Tune: 440
Trans: 0	Crescendo: Off	

The pitch can be adjusted as follows:

1. Press thumb piston TUNE. As long as the lamp in thumb piston TUNE keeps on burning, the pitch setting can be changed.
2. Adjust the required pitch by pressing the – or the + piston once or several times.
3. After a few seconds the lamps of both thumb pistons TUNE and the – or the + piston will go off automatically.

The pitch setting is not stored into the memory now and will be lost as soon as the instrument is switched off.

A pitch setting can be programmed as follows:

1. 'Open' the memory by turning key switch MEMORY LOCK a quarter of a turn to the right. The SET-piston will light up as a sign that the memory is 'open'.
2. Press thumb piston TUNE. As long as the lamp in thumb piston TUNE keeps on burning the pitch setting can be changed.
3. Adjust the required pitch by pressing the – or the + piston once or several times.
4. Just press the SET-piston when the correct pitch is adjusted. The display will briefly show the letter P, as a sign that the selected pitch setting is being programmed into the memory.

Mem: P 6	Vol: 12	Tune: 440
Trans: 0	Crescendo: Off	

Storing into the memory is possible only as long as the lamp in thumb piston TUNE is on. After a few seconds the lamps of both thumb pistons TUNE and the – or the + piston will go off automatically.

5. 'Close' the memory by turning key switch MEMORY LOCK a quarter of a turn to the left (taking the key from the switch, if necessary). The lamp in the SET-piston will now go off, as a sign that the memory is 'closed' again.

The pitch setting is now stored into the memory. When the instrument is switched on again, the pitch setting programmed into the memory will be automatically selected.

Transposer

With the selector switch TRANSPOSER or by means of the thumb pistons TRANS., SET, – and +, the instrument can be transposed. This means that the instrument can be tuned a number of fixed half tones higher or lower.

TRANSPOSER (selector switch)

With this selector switch the instrument can be set (tuned) 1, 2 or 3 fixed half tones lower or higher. If the selector is in position 0, the instrument is at normal pitch A=440 Hz, provided the PITCH control is in the central position.

By using the TRANSPOSER, in combination with the PITCH control, the instrument can be tuned three half tones higher or lower continuously.

TRANS. (thumb piston, programmable)

With the thumb piston TRANS. in combination with the thumb pistons – and +, the instrument can be set 1, 2 or 3 fixed half tones lower or higher. A transposer setting can be stored into the memory. When the instrument is switched on, the programmed transposer setting will automatically be selected from the memory. A programmed transposer setting can be changed later.

The memory in which the transposer setting is stored is protected so that it not can be erased when you switch off the organ or when unplug the organ from the main power.

The selected transposer setting is shown on the display:

Mem: I	Vol: 12	Tune: 440
Trans: -2	Crescendo: Off	

The transposer can be set as follows:

1. Press thumb piston TRANS.. As long as the lamp in thumb piston TRANS. keeps on burning the transposer setting can be changed.
2. Select the required transposer setting by pressing the – or the + piston once or several times.
3. After a few seconds the lamps of both thumb pistons TRANS. and the – or the + piston will go off automatically.

The transposer setting is not stored into the memory now and will be lost as soon as the instrument is switched off.

A transposer setting can be programmed as follows:

1. 'Open' the memory by turning key switch MEMORY LOCK a quarter of a turn to the right. The SET-piston will light up as a sign that the memory is 'open'
2. Press thumb piston TRANS.. As long as the lamp in thumb piston TRANS. keeps burning the transposer setting can be changed.
3. Select the required transposer setting by pressing the – or the + piston once or several times.
4. Just press the SET-piston when the correct transposer setting is selected. The display will briefly show the letter P, as a sign that the selected transposer setting is being programmed into the memory.

Mem : P 6	Vol : I 2	Tune : 4 4 0
Trans : - 2	Crescendo : Off	

Storing into the memory is possible only as long as the lamp in thumb piston TRANS is on. After a few seconds, the lamps of both thumb pistons TRANS and the – or the + piston will go off automatically.

5. 'Close' the memory by turning key switch MEMORY LOCK a quarter of a turn to the left (taking the key from the switch, if necessary). The lamp in the SET-piston will now go off, as a sign that the memory is 'closed' again.

The transposer setting is now stored into the memory. When the organ is switched on again, the transposer setting programmed into the memory, will be automatically selected.

Using the TRANSPOSER setting in combination with the TUNE setting, the instrument can be tuned three half tones higher or lower continuously.

Acoustics

Your instrument has a built-in digital acoustic effect. This effect provides a special reverberation of the organ sound.

The acoustic effect can be adjusted with two controls.

Acoustics (volume)

The volume of the acoustic effect can be adjusted continuously with the rotary control.

To switch off the acoustic effect entirely, the control must be turned completely to the left

Acoustics (length)

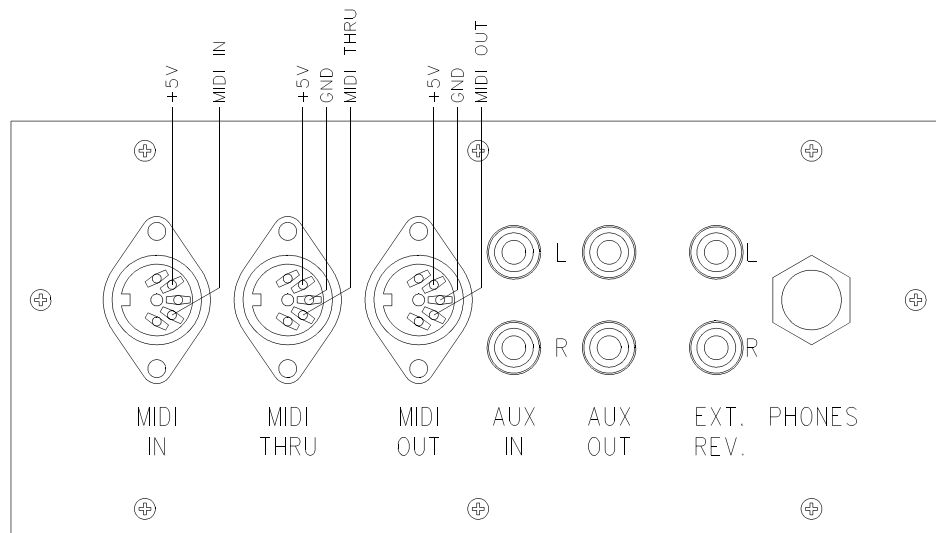
A selection from three different acoustic lengths can be made with the selector switch.

External connections

Your instrument may be fitted with a number of external connections. Depending on your preference, these connections can be found:

- On the left under the keyboard.
- At the back of the instrument.
- Inside the instrument.

Now follows the standard plan for external connections.



The usual connections are:

MIDI IN

For receiving MIDI-codes from other devices.

MIDI THRU

For passing on incoming MIDI-codes from other devices.

MIDI OUT

For sending MIDI-codes to other devices.

MIDI MOD

When your instrument is fitted with programmable MIDI, the MIDI THRU is changed into a MIDI MOD output (MIDI output for connecting a module).

MIDI SEQ

When your instrument is fitted with programmable MIDI, the MIDI OUT is changed into a MIDI SEQ output (MIDI output for connecting a sequencer).

AUX IN

This input is meant to reproduce the sound of an external device via the amplifiers of the instrument. For example, an expander which is controlled via the MIDI OUT of the instrument, can be played via the loudspeakers of the instrument.

The volume of the device that is connected via the AUX IN, cannot be adjusted with the general volume setting or with the expression pedals (except when the external device is controlled via the MIDI OUT of the instrument).

AUX OUT

This output is meant for connecting an external amplifier (stereo).

EXT. REV.

The EXTERN REVERB connector is especially meant for connecting a JOHANNUS external acoustics. This is a system that, with four separate loudspeaker boxes, imitates the spacial effect of a concert hall or a cathedral in the space where the instrument is placed. Using this output for other purposes is advised against.

PHONES

This connection for the headphones (stereo) is suitable for headphones with an impedance to 2000 Ω . When using so-called low-impedance headphones (8 Ω) the volume is possibly too high. This can be adjusted with the general volume setting.

When using the headphones, the internal and / or external loudspeakers of the instrument are automatically switched off. The various loudspeaker channels are now evenly spread over two headphone channels.

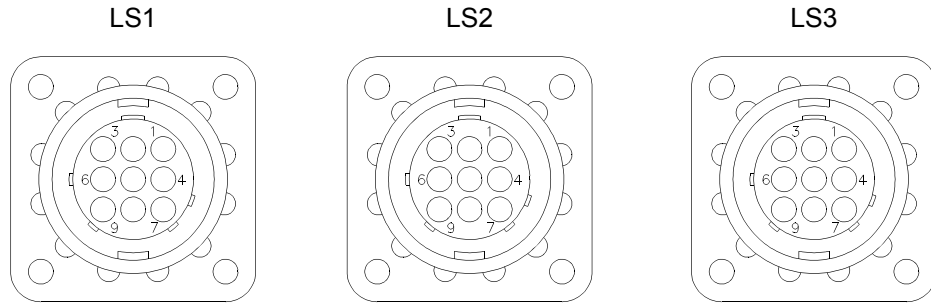
LS

If your instrument is designed to be connected to an external reproduction system in the form of e.g. a pipe facade behind which there are various loudspeakers, the instrument has one or several loudspeaker connectors. By means of a special cable, the external reproduction system can be coupled to your instrument via these connections.

A maximum of 4 loudspeakers can be connected to each loudspeaker connector.

The pins of a loudspeaker connector are always connected according to a fixed pattern:
The minus (–)-connection is always connected to the odd pin numbers.
The plus (+)-connection is always connected to the even pin numbers.
The channels from 1 to 4 inclusive are always connected to LS1, the channels from 5 to 8 inclusive to LS2 , etc.

An example of the connections of a 12-channel instrument is to be found on the next page.



Pin number	Channel number	Pin number	Channel number	Pin number	Channel number
LS1-1	minus (-) ch. 1	LS2-1	minus (-) ch. 5	LS3-1	minus (-) kan. 9
LS1-2	plus (+) ch. 1	LS2-2	plus (+) ch. 5	LS3-2	plus (+) kan. 9
LS1-3	minus (-) ch. 2	LS2-3	minus (-) ch. 6	LS3-3	minus (-) kan. 10
LS1-4	plus (+) ch. 2	LS2-4	plus (+) ch. 6	LS3-4	plus (+) kan. 10
LS1-5	minus (-) ch. 3	LS2-5	minus (-) ch. 7	LS3-5	minus (-) kan. 11
LS1-6	plus (+) ch. 3	LS2-6	plus (+) ch. 7	LS3-6	plus (+) kan. 11
LS1-7	minus (-) ch. 4	LS2-7	minus (-) ch. 8	LS3-7	minus (-) kan. 12
LS1-8	plus (+) ch. 4	LS2-8	plus (+) ch. 8	LS3-8	plus (+) kan. 12

On large instruments each division may have its own set of loudspeaker connectors. With this, not all the loudspeaker connectors have to be connected fully. On e.g. an instrument with six amplifiers per division, it is possible that for each division 1½ loudspeaker connector is used.

Choice of temperament

Temperament or temperature is the arrangement of tones within an octave. In the course of time, this arrangement has continually changed and has been adapted to changing tastes or to other and newer instruments.

Your instrument may allow you to choose from the following temperaments:

- Equal temperament
- Werckmeister III-temperament
- Mean-tone temperament

Equal temperament

At present, the usual and generally accepted temperament is 'equal' temperament. This is a tuning system based on the division of the octave into 12 equal semitones. The equality of semitones means that all other intervals are tempered, as compared with their frequency ratios. This is the normal tuning of your instrument. Moreover, if the instrument has two intonations, you have a choice of a romantic intonation and a baroque intonation. On an instrument tuned according to this principle music can be played in all the major and minor keys.

Werckmeister III temperament

Andreas Werckmeister introduced his temperament in Germany about 1691. In this temperament the usual thirds are relatively pure. Each key has its own specific character. This was especially exploited during the Baroque period, and also in later days. Johann Mattheson wrote in 1713 that e.g. "f-minor is used to express resigned, deep, despair and fear of death". In his opinion "C-major is impertinent, but not unsuited to express feelings of joy as well". This temperament comes out well when the thumb piston WM is pressed, and the baroque intonation is selected.

Mean-tone temperament

With mean-tone temperament the most widely used major thirds are tuned pure (e.g. c-e, d-fis, etc). Because pure thirds in chords with fifths and thirds determine whether the chord sounds pure or not, chords with pure thirds in this mean-tone temperament are experienced as very restful. When a chromatic scale is played in a mean-tone temperament, distinct differences between these halves become quite clear. With the mean-tone temperament it is impossible to realize pure major triads on the tones A flat, F sharp, G sharp and B.

This mean-tone temperament was (with a few adaptations) in general use until about 1650. Music, written at this time, started from this temperament, made the most of the possibilities, and steered clear of the impossibilities. Because the half tones are different, chromatic passages sound vehement; this possibility was exploited a lot if violent emotions in the audience had to be summoned. For the 'more out of tune' the chord, the more vehement the emotions.

In the music from the period of about 1550-1650 many examples can be found in which the less pure harmonies were used for expressive reasons. Composers working at the time were, among others, Michael Praetorius (1571-1621) and Jan Pieterszoon Sweelinck (1562-1621).

This repertoire needs, in fact, a mean-tone temperament, which adds an extra dimension. In our equal temperament this repertoire sounds a lot shallower and an essential dimension is lost.

This temperament comes out well when the thumb piston MT is pressed, and the baroque intonation is selected.

Using the capture system

What are capture combinations?

Capture combinations or free combinations are a special form of fixed (preset) combinations. The combination of stops in the fixed combinations has been laid down. The capture combinations allow registrations to be composed, stored into the capture memory and recalling again. This is especially useful when many different registrations occur when playing a piece of music. It makes registration assistants unnecessary.

The memory in which the capture combinations are stored is protected so that it cannot be erased when you switch off the organ or when you unplug the organ from the main power.

Parts of the capture system are (depending on the type of instrument):

- Key switch MEMORY LOCK
- Thumb pistons from M1 to M4 inclusive
- Thumb pistons – and +
- Display
- SET-Piston
- Pistons from 1 to 8 inclusive

With the capture system, a number of personal registrations can be stored into a memory (programmed). These registrations can be recalled at any given moment.

The capture system is built up from a number of memory groups. Each memory group has eight memory locations (pistons from 1 to 8 inclusive). At each of these, a registration of your own choice can be stored. Normally, the accessories CHORUS and INTONATION 2 cannot be stored into the capture system.

When your instrument has no programmable MIDI-stops, the MIDI-stops cannot be stored into the capture system either.

When your instrument does have programmable MIDI-stops, they can be stored into the capture system.

Programming capture combinations

Programming a capture combination may differ from type to type (of capture system). Your instrument may be fitted with one of the following capture systems:

- Non-lighted capture system
- Lighted capture system with 7-segment display
- Lighted capture system with LCD

Now follow the descriptions for programming each of the three kinds of capture systems.

Non-lighted capture system

A non-lighted capture system is programmed as follows:

1. 'Open' the memory by turning key switch MEMORY LOCK a quarter of a turn to the right.
2. Select the required registration to be stored into the memory.
3. Select a memory group (e.g. M2).
4. Press SET (hold it) and next select the memory location (press e.g. piston 3).

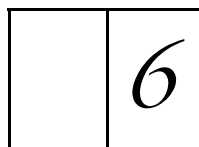
5. First release the piston for the memory location (in this example 3) and only then the SET-piston.
6. 'Close' the memory by turning key switch MEMORY LOCK a quarter of a turn to the left (taking the key from the switch, if necessary).
7. Write the just programmed capture combination (e.g. M2-3) on the piece of music in which this registration is to be used.

Your personal registration is now stored in memory group 2 at location 3.

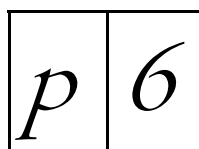
Lighted capture system with 7-segment display

A lighted capture system with 7-segment display is programmed as follows:

1. If you have an instrument with a programmable general crescendo pedal and / or programmable MIDI, first make certain that the thumb pistons GC and PG(M) are not pressed. This is to avoid accidentally changing a general crescendo or a programmed MIDI-stop setting.
2. 'Open' the capture memory by turning key switch MEMORY LOCK a quarter of a turn to the right. The SET-piston will now light up as a sign that the capture memory is 'open'
3. Select the required registration to be stored into the capture memory.
4. Select a memory group (e.g. memory group M6) by pressing the – or the + piston once or several times until the display shows the correct memory group (in this example the number 6).



5. Press SET (hold it) and next select the memory location (press e.g. piston 3). The display will briefly show the letter P as a sign that the selected registration is being programmed into the capture memory.



6. First release the piston for the memory location (in this example 3) and only then the SET-piston.
7. 'Close' the capture memory by turning key switch MEMORY LOCK a quarter of a turn to the left (taking the key from the switch, if necessary). The lamp in the SET-piston will go off now, as a sign that the capture memory is 'closed' again.
8. Write the just programmed capture combination (e.g. M6-3) on the piece of music in which this registration is to be used.

Your personal registration is now stored into memory group 6 at place 3.

Lighted capture system with LCD

A lighted capture system with LCD is programmed as follows:

1. If you have an instrument with a programmable general crescendo pedal and / or programmable MIDI, first make certain that the thumb pistons GC and PG(M) are not pressed. This is to avoid accidentally changing a general crescendo or a programmed MIDI-stop setting.
2. 'Open' the capture memory by turning key switch MEMORY LOCK a quarter of a turn to the right. The SET-piston will now light up as a sign that the capture memory is 'open'.
3. Select the required registration to be stored into the capture memory.
4. Select a memory group (e.g. memory group M6) by pressing the – or the + piston once or several times until the display shows the correct memory group (in this example the number 6).

Mem : 6	Vol : 12	Tune : 440
Trans : 0	Crescendo : Off	

5. Press SET (hold it) and next select the memory location (press e.g. piston 3). The display will briefly show letter P before the selected memory group, as a sign that the selected registration is being programmed into the capture memory.

Mem : P 6	Vol : 12	Tune : 440
Trans : 0	Crescendo : Off	

6. First release the piston for the memory location (in this example 3) and only then the SET-piston.
7. 'Close' the capture memory by turning key switch MEMORY LOCK a quarter of a turn to the left (taking the key from the switch, if necessary). The lamp in the SET-piston will go off now, as a sign that the capture memory is 'closed' again.
8. Write the just programmed capture combination (e.g. M6-3) on the piece of music in which this registration is to be used.

Your personal registration is now stored into memory group 6 at place 3.

Recalling capture combinations

Recalling a personal registration may differ from type to type (of capture system). Your instrument may be fitted with one of the following capture systems:

- Non-lighted capture system
- Lighted capture system with 7-segment display
- Lighted capture system with LCD

Now follow the descriptions for recalling a capture combination for each of the three kinds of capture systems.

To recall a capture combination, it is not necessary to open the capture memory with key switch MEMORY LOCK.

Except on instruments with wooden drawstops, stops can be added or switched off manually in a recalled registration.

Non-lighted capture system

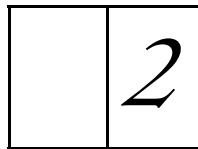
In a non-lighted capture system, a capture combination is recalled as follows:

1. Determine which capture combination has to be recalled (e.g. M2-3).
2. Select the memory group (e.g. M2).
3. Next select the memory location (press piston 3).

Lighted capture system with 7-segment display

In a lighted capture system with 7-segment display, a capture combination is recalled as follows:

1. Determine which capture combination has to be recalled (e.g. M2-3).
2. Select the required memory group with e.g. the – and the + pistons. The selected memory group is shown on the display.

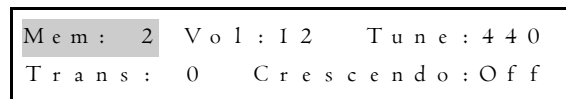


3. Next select the required memory location (press piston 3).

Lighted capture system with LCD

In a lighted capture system with LCD, a capture combination is recalled as follows:

1. Determine which capture combination has to be recalled (e.g. M2-3).
2. Select the required memory group with the – and the + pistons. The selected memory group is shown on the display.



3. Next select the required memory location (press piston 3).

Using the general crescendo

When your instrument has been fitted with a general crescendo pedal, you will be able to switch on stops, in 10 or 20 steps, ranging from very soft (pianissimo) to very loud (tutti), depending on the type of instrument. The steps of the general crescendo were set in advance, according to musical standards.

The general crescendo always takes precedence over hand registrations, fixed (preset) combinations and free (capture) combinations. Stops activated with the general crescendo cannot be switched off with the 0-piston. Except on instruments with wooden drawstops, stops can be added manually within a stop combination of the general crescendo pedal. Reeds that have been activated by the general crescendo, can be switched off with the RO-piston.

When your instrument has been fitted with a programmable general crescendo pedal (recognizable by the thumb pistons GC and PG or the thumb pistons GC and PGM) the standard set stop combinations of each general crescendo step - except 0 - can be changed and stored into the general crescendo memory.

The standard stop combinations of a programmable general crescendo pedal, set by the designer of the instrument, can always be reset in the general crescendo memory. However, this is only possible for all the general crescendo steps together. The personal stop combinations are then lost.

The general crescendo memory is protected so that it cannot be erased when you switch off the organ or when you unplug the organ from the main power.

Switching on general crescendo

Non-programmable general crescendo

On instruments with a non-programmable general crescendo pedal, no thumb piston needs to be pressed to switch on the general crescendo pedal. A non-programmable general crescendo pedal can always be used straightaway.

Programmable general crescendo

To use a programmable general crescendo pedal, the GC-piston must be pressed.

On instruments with a 7-segment display, the display will not show now a selected memory group of the capture system, but indicates to which step the general crescendo pedal is pressed down.

On instruments with an LCD, instead of the text Off, the display will now indicate to which step the general crescendo pedal is pressed.

```
Mem : 1 Vol : 12 Tune : 440
Trans : 0 Crescendo : Off
```

```
Mem : 1 Vol : 12 Tune : 440
Trans : 0 Crescendo : 12
```

Changing stop combinations general crescendo

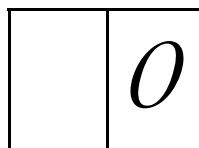
Items for programming the general crescendo are:

- Thumb pistons GC and PG(M)
- Display
- General crescendo pedal
- Key switch MEMORY LOCK
- Thumb pistons – and +
- SET-piston

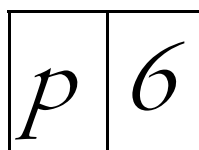
General crescendo system with 7-segment display

A stop combination of a general crescendo system with a 7-segment display can be changed as follows:

1. 'Open' the general crescendo memory by turning key switch MEMORY LOCK a quarter of a turn to the right. The SET-piston will now light up as a sign that the general crescendo memory is 'open'.
2. Press the thumb pistons GC and PG(M). The display will now show an 0 (step 0, or all the stops of the general crescendo off).



3. All the stops will now be switched off. Changing the position of the general crescendo pedal will have no effect.
4. Select the general crescendo step whose stop combination has to be changed by pressing the – or the + piston once or several times until the display shows the step that will be changed (e.g. step 5). The stops belonging to the stop combination of the general crescendo step in question will light up.
5. Set the required registration for the step (in this example step 5) of the general crescendo just as it has to be stored into the general crescendo memory.
6. Briefly press the SET-piston. The display will briefly show the letter P as a sign that the selected registration is being programmed into the general crescendo memory.



7. 'Close' the general crescendo memory by turning key switch MEMORY LOCK a quarter of a turn to the left (taking the key from the switch, if necessary). The lamp in the SET-piston will go off now as a sign that the general crescendo memory is 'closed' again.
8. Press again the PG(M)-piston. The general crescendo can again be used normally.

General-crescendosystem with LCD

A stop combination of a general crescendo system with LCD can be changed as follows

1. 'Open' the general crescendo memory by turning key switch MEMORY LOCK a quarter of a turn to the right. The SET-piston will now light up as a sign that the general crescendo memory is 'open'.
2. Press the thumb pistons GC and PG(M). The display will now show a 0 (step 0, or all the stops of the general crescendo off).

Mem : 1	Vol : 12	Tune : 440
Trans : 0	Crescendo : 0	

All the stops will now be switched off. Changing the position of the general crescendo pedal will have no effect.

3. Select the general crescendo step whose stop combination you wish to change by pressing once or several times the – or the + piston until the display shows the step to be changed (e.g. step 5).

Mem : 1	Vol : 12	Tune : 440
Trans : 0	Crescendo : 5	

The stops forming part of the stop combination of the general crescendo step concerned, will light up.

4. Set the required registration for the step in question (in this example step 5) of the general crescendo as you wish to store it into the general crescendo memory.
5. Briefly press the SET-piston. The display will, just for a second, show the letter P as a sign that the selected registration is being programmed into the general crescendo memory.

Mem : P6	Vol : 12	Tune : 440
Trans : 0	Crescendo : 5	

6. 'Close' the general crescendo memory by turning key switch MEMORY LOCK a quarter of a turn to the left (taking the key from the switch, if necessary). The lamp in the SET-piston will go off now as a sign that the general crescendo memory is 'closed' again.
7. Press again the PG(M)-piston. The general crescendo is ready for normal use again.

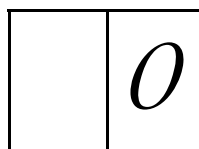
Resetting standard stop combinations general crescendo

It is always possible to restore the standard stop combinations of a programmable general crescendo pedal into the general crescendo memory. However, this is only possible for all the general crescendo steps together. The selected personal stop combinations will be lost.

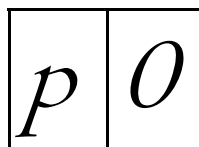
General crescendo system with 7-segment display

The standard stop combinations of a general crescendo system with 7-segment display can be restored as follows:

1. 'Open' the general crescendo memory by turning key switch MEMORY LOCK a quarter of a turn to the right. The SET-piston will light up, as a sign that the general crescendo memory is 'open'.
2. Press the thumb pistons GC and PG(M). The display will now show a 0 (step 0, or all the stops of the general crescendo off). All the stops will now be switched off. Changing the position of the general crescendo pedal will have no effect.



3. Press the 0-piston (keep pressing it) and then press the SET-piston. The display will briefly show the letter P, as a sign that the standard stop combinations are being restored (programmed) into the general crescendo memory.



4. First release the SET-piston and only then the 0-piston.
5. 'Close' the general crescendo memory by turning key switch MEMORY LOCK a quarter of a turn to the left (taking the key from the switch, if necessary). The lamp in the SET-piston will go off now, as a sign that the general crescendo memory is 'closed' again.
6. Again press the PG(M)-piston. The general crescendo is now ready for normal use again.

General crescendo system with LCD

The standard stop combinations of a general crescendo system with LCD can be restored as follows:

1. 'Open' the general crescendo memory by turning key switch MEMORY LOCK a quarter of a turn to the right. The SET-piston will now light up, as a sign that the general crescendo memory is 'open' again.
2. Press the thumb pistons GC and PG(M). The display will now show a 0 (step 0, or all the stops of the general crescendo off).

Mem : 1	Vol : 12	Tune : 440
Trans : 0	Crescendo : 0	

All the stops will be switched off. Changing the position of the general crescendo pedal will have no effect.

3. Press the 0-piston (keep pressing it) and then briefly press the SET-piston. The display will, for a second, show the letter P as a sign that the standard stop combinations are being restored (programmed) into the general crescendo memory.

Mem : P 6	Vol : 12	Tune : 440
Trans : 0	Crescendo : 0	

4. First release the SET-piston and only then the 0-piston.
5. 'Close' the general crescendo memory by turning key switch MEMORY LOCK a quarter of a turn to the left (taking the key from the switch, if necessary). The lamp in the SET-piston will go off now, as a sign that the general crescendo memory is 'closed' again.
6. Again press the PG(M)-piston. The general crescendo is now ready for normal use again.

Application of MIDI

What is MIDI?

MIDI is the abbreviation for Musical Instruments Digital Interface. With MIDI, musical instruments can be coupled to each other or to a computer. Thus, it is, e.g. possible to play simultaneously both your instrument and a synthesizer or expander. The MIDI-standard is partly based on hardware. In addition, it is a description of the way in which music and sound are translated and in which communication takes place between devices equipped with MIDI-functionality. The MIDI-codes which the Monarke instrument can transmit, tell e.g. which key has been pressed.

Components relevant to MIDI:

- MIDI-connections (MIDI IN, MIDI THRU, MIDI OUT) on instruments without programmable MIDI.
- MIDI-connections (MIDI IN, MIDI MOD, MIDI SEQ) on instruments with programmable MIDI.
- MIDI-stops (or switches).
- A device (e.g. synthesizer) you wish to control via MIDI.
- Connection cables.

The MIDI-stops may be designed as (lighted) thumb pistons, or as stops.

Each MIDI-stop has a number. For example, the stop MIDI GREAT on a 2-manual instrument has number 1 and on a 3-manual instrument, number 2. This number indicates the channel through which the key information is transmitted when you play on the great. The channel numbers going with a certain division are fixed on instruments with non-programmable MIDI. On instruments with a programmable MIDI-function they can be changed by the user (see at "Programmable MIDI").

MIDI has namely 16 channels through which information can be transmitted.

With the MIDI-stops, you determine from which keyboards you wish to transmit MIDI-signals with key information to other devices.

If your instrument has no MIDI-stops, key information is always transmitted from (of) all the keyboards.

How and what to connect?

Suppose, you wish to connect three expanders to a 2-manual instrument without programmable MIDI. You want to play one from the great keyboard, the second from the swell keyboard and the third from the pedal.

Follow this line of procedure:

1. Connect the expanders with the MIDI-cables (DIN-cables).
2. Switch on MIDI GREAT 1. The appropriate expander should be set in such a way that it receives only data via channel 1.
3. Switch on MIDI SWELL 2. Pay attention to the setting of the corresponding expander.
4. Switch on MIDI PEDAL 3. Pay attention to the setting of the corresponding expander.

Programmable MIDI

If your instrument has been fitted with programmable MIDI, the MIDI THRU is changed into a MIDI MOD output (MIDI output for connecting a module).

The MIDI MOD is a programmable MIDI output. It enables you to use, e.g. a module / expander optimally:

In case of a programmable MIDI, the "normal" MIDI OUT is changed into a MIDI SEQ output (MIDI output for connecting a sequencer, for example). The MIDI SEQ is a non-programmable MIDI output. This MIDI output gives a constant data output with all (for a sequencer) the necessary data (data dump). This means that channels of the MIDI SEQ output can not longer be switched on or off, in contrast with the "normal" MIDI OUT, with the MIDI-stops (switches)

On instruments with programmable MIDI, the function of thumb piston PG is extended. The thumb piston is used for both programming the general crescendo and for programming MIDI. Hence the thumb piston is given another name: PGM (Programming General crescendo and MIDI).

When using the Intonat programme, the MIDI SEQ output must be used to transmit data from the instrument to the PC (in fact a data dump).

With programmable MIDI, a random module voice (1-128) can be driven via a random channel (1-16), with the MIDI-stops (MIDI GREAT 1; MIDI SWELL 2; MIDI PEDAL 3, etc.) of the instrument.

If e.g. MIDI-stop MIDI GREAT 1 is programmed with patch No 7 and channel No 15, the key information will be transmitted via channel 15 and patch 7 will sound if you play on the great and stop MIDI GREAT 1 is on.

The memory has been protected so that it cannot be erased when you switch off the organ or when you unplug the organ from the main power.

Programming (Hand registration)

Items for programming the MIDI-stops (switches) are:

- Key switch MEMORY LOCK
- Thumb pistons – and +
- Display
- SET-piston
- PGM-piston
- MIDI-stops

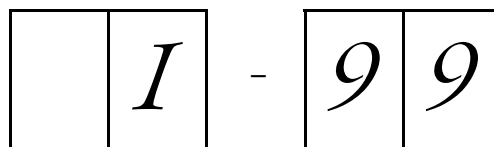
Programming MIDI-stops with 7-segment display

On instruments with a 7-segment display, a MIDI-stop can be programmed as follows:

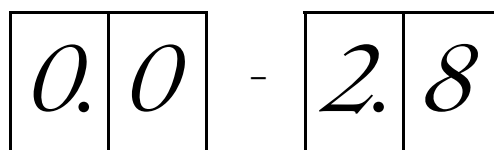
1. First of all press the 0-piston (long) or one of the preset pistons. Just to make certain that no MIDI-stop that already has been programmed into the memory, is changed by accident.
2. Make certain that the GC-piston has not been switched on. This prevents a general crescendo step from being changed by accident.
3. 'Open' the memory by turning key switch MEMORY LOCK a quarter of a turn to the right. The SET-piston will now light up as a sign that the memory is 'open' again.
4. Switch on the MIDI-stop you wish to program (e.g. MIDI SWELL 2).
5. Press the PGM-piston. The display will show now the current (latest programmed) channel number of the switched on MIDI-stop (in this example the channel number belonging to MIDI-stop MIDI SWELL 2).
6. By pressing once or several times the – or the + piston, now select the channel you wish to assign to the MIDI-stop to be programmed. The selected channel (from 1 to 16 inclusive) is shown on the display.
7. Just press the SET-piston when you have selected the required channel (e.g. channel 6). The selected channel has now been assigned to the MIDI-stop to be programmed. After pressing (and releasing) the SET-piston, the display will indicate the current patch number belonging to the MIDI-stop.

A patch number (1-128) is indicated as follows:

The numbers from 1 to 99 inclusive are shown in a normal way.

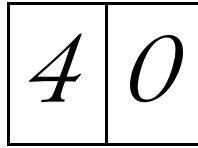


The numbers from 100 to 128 inclusive are shown with a dot between the two digits.



The dot indicates the hundred.

- By pressing once or several times the – or the + piston, now select the patch number you wish to assign to the MIDI-stop to be programmed. The selected patch number (e.g. 40) is shown on the display.

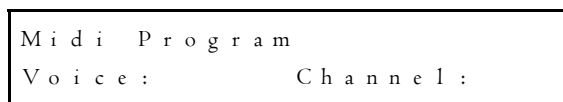


- After entering the correct patch number (e.g. number 40), just press the SET-piston. The display will briefly show the letter P, as a sign that the just set information (channel and patch) is being programmed. After this, the display will again show the channel number of the MIDI-stop concerned.
- MIDI-stop MIDI SWELL 2 has now been programmed with channel 6, patch number 40. This means that patch 40 of the module is activated when MIDI SWELL 2 is switched on and that key information of the swell is transmitted to the module via channel 6, when the swell is played.
- 'Close' the memory by turning key switch MEMORY LOCK a quarter of a turn to the left (taking the key from the switch, if necessary). The lamp in the SET-piston will go off now, as a sign that the memory is 'closed' again.
- After programming switch the PGM-piston off, by pressing it again.

Programming MIDI-stops with LCD

A MIDI-stop on instruments with an LCD can be programmed as follows:

- First of all, press the 0-piston (long) or one of the preset pistons. This is to make certain that no MIDI-stop (that has already been) programmed into the capture memory, is changed accidentally.
- Make certain that the GC-piston has not been switched on. This is to make certain that no general crescendo step is changed accidentally.
- 'Open' the memory by turning the key switch MEMORY LOCK a quarter of a turn to the right. The SET-piston will now light up as a sign that the memory is 'open' again.
- Press the PGM-piston. The display will show the text below:



- Switch on the MIDI-stop you wish to program (e.g. MIDI SWELL 2). The display will show the current (latest programmed) channel number of the switched on MIDI-stop (in this example the channel number belonging to MIDI-stop MIDI SWELL 2).

M i d i P r o g r a m	S w e l l
V o i c e :	C h a n n e l : 2

- By pressing the – or the + piston once or several times, select now the channel you wish to assign to the MIDI-stop to be programmed. The selected channel (from 1 to 16 inclusive) is shown on the display.
- After selecting the correct channel (e.g. channel 6), briefly press the SET-piston. The selected channel has now been assigned to the MIDI-stop to be programmed. The display will now show the current patch number belonging to the MIDI-stop.

M i d i P r o g r a m	S w e l l
V o i c e : 1	C h a n n e l : 6

- By pressing the – or the + piston once or several times, select now the patch number you wish to assign to the MIDI-stop to be programmed. The selected patch number (e.g. 40) is shown on the display.

M i d i P r o g r a m	S w e l l
V o i c e : 40	C h a n n e l : 6

- After selecting the correct patch number (e.g. 40), briefly press the SET-piston. The display will, for a second, show the letter P, as a sign that the just set information (channel and patch) is being programmed.

M i d i P r o g r a m	P S w e l l
V o i c e : 40	C h a n n e l : 6

- MIDI-stop MIDI SWELL 2 has now been programmed with channel 6, patch number 40. This means that patch 40 of the module is switched on when MIDI SWELL 2 is activated and that the key information of the swell is transmitted to the module via channel 6, when the swell is played.
- 'Close' the memory by turning key switch MEMORY LOCK a quarter of a turn to the left (taking the key from the switch, if necessary). The lamp in the SET-piston will go off now, as a sign that the memory is 'closed' again.
- After programming, switch the PGM-piston off, by pressing it again.

Programming (into the capture system)

What this, in fact, boils down to, is storing a patch into the capture memory of your instrument, whether or not in combination with a number of normal organ voices.

In programming MIDI-stops into the capture system, several channels / patch numbers can be assigned to one MIDI-stop by using several capture memory locations.

In this way a 3-manual instrument with an expanded capture system, for example, allows 129 different settings to be programmed **per** MIDI-stop (1 x hand registration; 64 x generals and 64 x separates). In all $4 \times 129 = 516$ different settings can be programmed for the whole (3-manual) instrument.

Items for programming the MIDI-stops are:

- Key switch MEMORY LOCK
- Thumb pistons – and +
- Pistons from 1 to 8 inclusive
- Display
- SET-piston
- PGM-piston
- MIDI-stops

Programming MIDI-stops with 7-segment display

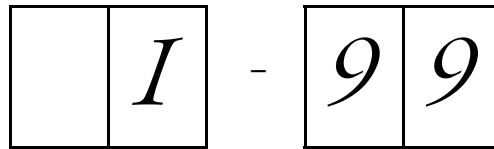
On instruments with a 7-segment display a MIDI-stop can be programmed into the capture system as follows:

1. Make certain that the GC-piston has not been switched on. This is to make certain that no general crescendo step is changed accidentally.
2. 'Open' the memory by turning key switch MEMORY LOCK a quarter of a turn to the right. The SET-piston will now light up as a sign that the memory is 'open'.
3. Switch on the MIDI-stop you wish to program (e.g. MIDI SWELL 2) together with (if required) a number of stops which have to be stored into the capture memory.
4. First store this registration into the required capture memory (see "Using of the capture system"). This can be both a capture memory of the generals and of the separates (if present).
Note:
 1. If the set registration is not stored into the capture memory first, the programmed hand registration of the MIDI-stop in question will (unintentional) be changed.
 2. Concerning the separates, MIDI-stops can obviously only be programmed into the accompanying separates. MIDI SWELL 2 can only programmed into the separates of the swell and not into the separates of the great, for instance.
5. Press the PGM-piston. The display will now show the current (latest programmed) channel number of the switched on MIDI-stop (in this example, the channel number belonging to MIDI-stop MIDI SWELL 2).
6. By pressing the – or the + piston once or several times, now select the channel that is to be assigned to the MIDI-stop to be programmed. The selected channel (from 1 to 16 inclusive) is shown on the display.

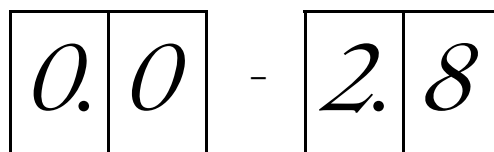
- After selecting the correct channel (e.g. channel 6), just press the SET-piston. The selected channel has now been assigned to the MIDI-stop to be programmed. After pressing (and releasing again) the SET-piston, the display will show the current patch number, belonging to the MIDI-stop.

A patch number (1-128) is indicated as follows:

The numbers from 1 to 99 inclusive are shown in a normal way.

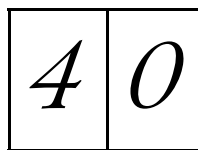


The numbers from 100 to 128 inclusive are shown with a dot between the two digits.



The dot indicates the hundred.

- By pressing the – or the + piston once or several times, select the patch number you wish to assign to the MIDI-stop to be programmed. The selected patch number (e.g. 40) is shown on the display.



- After entering the correct patch number (e.g. number 40), just press the SET-piston. The display will briefly show the letter P, as a sign that the just set information (channel and patch) is being programmed. After this, the display will indicate again the channel number of the MIDI-stop in question.
- MIDI-stop MIDI SWELL 2 has now been programmed with channel 6 and patch number 40. This means that activating the capture combination concerned will switch on patch 40 of the module and that the key information of the swell is transmitted to the module via channel 6, when the swell is played.
- 'Close' the memory by turning key switch MEMORY LOCK a quarter of a turn to the left (taking the key from the switch, if necessary). The lamp in the SET-piston will now go off, as a sign that the memory is 'closed' again.
- After programming, switch off the PGM-piston by pressing it again.

Programming MIDI-stops with LCD

A MIDI-stop on instruments with an LCD, can be programmed into the capture system as follows:

1. Make certain that the GC-piston has not been switched on. This is to make certain that no general crescendo step is changed inadvertently.
2. 'Open' the memory by turning key switch MEMORY LOCK a quarter of a turn to the right. The SET-piston will now light up as a sign that the memory is 'open'.
3. Switch on the MIDI-stop you wish to programme (e.g. MIDI SWELL 2) together with (if required) a number of stops that have to be stored into the capture memory.
4. First store this registration into the required capture memory (see "Using the capture system"). This can be both a capture memory of the generals and of the separates (if present).
Note: 1. If the set registration is not stored into the capture memory, the programmed hand registration of the MIDI-stop in question will be changed unintentionally.
2. Concerning the separates, the MIDI-stops can obviously only be programmed into the accompanying separates. MIDI SWELL 2 can only be programmed into the separates of the swell and not into the separates of the great, for instance.
5. Press the PGM-piston. The display will indicate which MIDI-stop has been switched on with its current channel.

```
Midi Program      Swell
Voice:           Channel: 2
```

6. By pressing the – or the + piston once or several times, now select the channel you wish to assign to the MIDI-stop to be programmed. The selected channel (from 1 to 16 inclusive) is indicated on the display.
7. After selecting the correct channel (e.g. channel 6), just press the SET-piston. The selected channel has now been assigned to the MIDI-stop to be programmed. The display will now indicate the current patch number belonging to the MIDI-stop.

```
Midi Program      Swell
Voice:           I   Channel: 6
```

8. By pressing the – or the + piston once or several times, now select the patch number that is to be assigned to the MIDI-stop to be programmed. The selected patch number (e.g. 40) is indicated on the display.

```
Midi Program      Swell
Voice:           40  Channel: 6
```

9. After selecting the correct patch number (e.g. 40), just press the SET-piston. The display will briefly show the letter P, as a sign that the set information (channel and patch) is now being programmed.

M i d i P r o g r a m	P	S w e l l
V o i c e : 4 0	C h a n n e l :	6

10. MIDI-stop MIDI SWELL 2 has now been programmed with channel 6 and patch 40. This means that activating the capture combination in question, switches on patch 40 of the module and that the key information of the swell is transmitted to the module via channel 6, when the swell is played.
11. 'Close' the memory by turning key switch MEMORY LOCK a quarter of a turn to the left (taking the key from the switch, if necessary). The lamp in the SET-piston will now go off, as a sign that the memory is 'closed' again.
12. After programming, switch off the PGM-piston by pressing it again.

Programming several MIDI-stops into the capture system

Several MIDI-stops (whether or not in combination with a number of organ voices) can be programmed into one capture memory.

When programming several MIDI-stops into one capture memory, you should start at the lowest numbered MIDI-stop.

Programming several (in this example 3: MIDI GREAT 1; MIDI SWELL 2 and MIDI PEDAL 3) MIDI-stops into one capture memory location goes as follows:

1. Switch on the three MIDI-switches (together with the organ voices).
2. First store this registration into the required capture memory (see "Using the capture system").
3. Press the PGM-piston.
4. Select with the thumb pistons – and + the channel for MIDI GREAT1 (MIDI-stop with the lowest number).
5. Briefly press the SET-piston.
6. Select with the thumb pistons – and + the patch number for MIDI GREAT 1.
7. Briefly press the SET-piston. The settings for MIDI GREAT 1 will now be programmed.
8. Now switch off the stop MIDI GREAT 1.
9. Select with the thumb pistons – and + the channel for MIDI SWELL 2 (this is now the MIDI-stop with the lowest number).
10. Briefly press the SET-piston.
11. Select with the thumb pistons – and + the patch number for MIDI SWELL 2.

12. Briefly press the SET-piston. The settings for MIDI SWELL 2 will now be programmed.
13. Now switch off stop MIDI SWELL 2.
14. Select with the thumb pistons – and + the channel for MIDI PEDAL 3 (this is now the MIDI-stop with the lowest number).
15. Briefly press the SET-piston.
16. Select with the thumb pistons – and + the patch number for MIDI PEDAL 3.
17. Briefly press the SET-piston. The settings for MIDI PEDAL 3 will now be programmed.
18. Switch PGM off.

Sound reproduction systems

Sound reproduction of your instrument may be realized in different ways. The usual ways will be briefly described below. Other combinations of sound reproduction systems required for a certain room or specific application are also possible.

Internal single reproduction system

In single internal sound reproduction all the loudspeakers are inside the instrument. Depending on the design, these loudspeakers may sound forward, upward or backward.

On instruments with separate divisions (each division having its own amplifiers / loudspeakers) it is possible to have the loudspeakers of the various divisions sounding to several directions. For example, the loudspeakers of the great and pedal divisions may be sounding forward and the loudspeakers of the swell division backward. In this way the effect of a direct sounding great and pedal division and an indirect sounding swell division can be realized.

Internal double reproduction system

For this system of reproduction all the (or nearly all the) channels / loudspeakers are designed double. One set of loudspeakers is sounding backward and one set forward. With a three-position switch the loudspeakers pointing forward can be entirely switched off, be allowed to join in softly, or to sound normal. This way you can choose between an instrument sounding more direct or less direct.

External single reproduction system

In single external sound reproduction, all the loudspeakers are in a front outside the instrument. Depending on the design, the various loudspeakers may be sounding forward, upward or backward.

On instruments with separate divisions (each division having its own amplifiers / loudspeakers) it is possible to have the loudspeakers of the various divisions sounding to several directions. For example, the loudspeakers of the great and pedal divisions may be sounding forward and the loudspeakers of the swell division backward. In this way the effect of a direct sounding great and pedal division and an indirect sounding swell division can be realized.

External double reproduction system

In this way of reproduction all the (or nearly all the) channels / loudspeakers are designed double. With a three-position switch you can choose between reproduction via the one, the other or both fronts.

Internal with external reproduction system

In a combination of an internal with an external reproduction system all the channels have been connected to a loudspeaker front.

The built-in loudspeakers / channels can be:

- Three monitor loudspeakers / channels.
- A number of channels equal to the external reproduction system (max. eight loudspeakers / channels).

Antiphonal

On an instrument with separate divisions (each division having its own amplifiers / loudspeakers) one or more divisions may be connected to a second front. The division concerned can be switched from the main front to e.g. a front behind the choir, by means of a stop or a switch ANTIPHONAL.

Maintenance

Cabinet

The cabinet is finished partly with wood veneer and partly with solid wood.

The cabinet can be wiped with an ordinary, moist cloth or chamois and polish with a dry non-fluffy cloth.

We advise against using teak oil, because this will damage the varnish. Direct sunlight may discolour the cabinet. This especially applies to natural wood.

Keyboards

When your instrument is fitted with synthetic keyboards, you can treat the keys as the cabinet. Tiny scratches on the keys, formed in the long run by playing the instrument, can be removed with the help of car polish. NEVER try to remove spots with corrosive fluids such as thinner, acetone, etc.. This will irrevocably damage the keyboards of your instrument.

Pipes

When your instrument has a pipe front, we advise you to touch the pipes never. The acid of human skin will corrode the pipes made of an alloy of tin and lead, irrevocably. The tin lead alloy is very soft material. Dusting the pipes, even if a soft cloth is used for this,, will irrevocably leave tiny scratches on the surface.

If the labia of the pipes are gold plated, they should not be touched dusted or sponged either. This will cause the thin layer of gold paint on the labia to be damaged irreparably.

Warranty

When you purchased your instrument, you were given a certificate of warranty. Read the terms carefully and mail the bottom part of the certificate to JOHANNUS Orgelbouw b.v. at Ede, The Netherlands as soon as possible. Again we wish to draw your attention to the fact that alterations made to the instrument or unexpert treatment may cause the warranty to be nullified.

It is possible to conclude a contract for periodical maintenance of your instrument. For further information, please contact JOHANNUS Orgelbouw b.v. at Ede.

Information

If you want more information about your instrument or on other products supplied by JOHANNUS Orgelbouw b.v. or for a service request, please contact, write, phone, fax or e-mail:

Johannus Orgelbouw b.v.,
Morsestraat 28,
6716 AH EDE.
(THE NETHERLANDS)

Tel.: + 31 318 63 74 03
Fax: + 31 318 62 22 38
E-mail: inform@johannus.com

Johannus has an interesting website with topical information about Johannus Orgelbouw, and their products. The website address is:

<http://www.johannus.com>

MIDI Implementation chart

JOHANNUS Organ
Monarke

MIDI Implementation Chart

Date: Nov. 1999
Version 1.00

Functions		Transmitted	Recognized	Remarks
Basic Channel	Default Changes ¹	See MIDI specs See MIDI specs	See MIDI specs N	See MIDI specs See MIDI specs
Mode	Default Messages Altered	Mode 3 N * * * * *	Mode 3 N N	
Note Number	True voice	36 - 96 * * * * *	36 - 96 36 - 96	
Velocity	Note ON Note OFF	9nH (v=64) 9nH (v=0)	9nH v=1 - 127 9nH v=0, 8nH v=*	*=irrelevant
After Touch	Keys Channels	N N	N N	
Pitch Bend		N	N	
Control Change	7 11 100/101/6 100/101/6	Y Y Y Y	Y Y N N	General volume Expression pedals Pitch Transposer
Program Change	:True#	See MIDI specs * * * * *	See MIDI specs See MIDI specs	See MIDI specs See MIDI specs
System Exclusive		Y	Y	All stops off
Common	:Song Pos :Song Sel :Tune	N N N	N N N	
System Real Time	:Clock :Commands	N N	N N	
Aux	:Reset All Controller :Local On/OFF :All Notes OFF :Active Sense :Reset	N N N N N	N N Y N N	
Notes		¹ Only note events can be changed		

Mode 1: OMNY ON, POLY
Mode 3: OMNY OFF, POLY

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

Y = YES
N = NO

MIDI specs

Default basic channels (transmitted/recognized)

1-manual instruments:

1 = great; 2 = pedal and 12 = stops.

2-manual instruments with standard keyboard order:

1 = great; 2 = swell; 3 = pedal and 12 = stops.

3-manual instruments with standard keyboard rocker order:

1 = choir; 2 = great; 3 = swell; 4 = pedal and 12 = stops.

4-manual instruments with standard keyboard rocker order:

1 = choir; 2 = great; 3 = swell; 4 = solo; 5 = pedal and 12 = stops.

5- (and more) manual instruments:

Depends on keyboard rocker order.

Basic channel changes (transmitted)

2-manual instruments with MIDI-stops and standard keyboard rocker order:

1 = great; 2 = swell and 3 = pedal.

2-manual instruments with MIDI-stops and standard keyboard rocker order:

1 = great; 2 = swell and 3 = pedal.

3-manual instruments with MIDI-stops and standard keyboard rocker order:

1 = choir; 2 = great; 3 = swell and 4 = pedal.

4-manual instruments with MIDI-stops and standard keyboard rocker order:

1 = choir; 2 = great; 3 = swell; 4 = solo and 5 = pedal.

5- (and more) manual instruments with MIDI-stops:

Depends on keyboard rocker order.

Instruments with programmable MIDI:

1 - 16

Program changes (transmitted)

Depends on number and order of stops for organs without programmable MIDI.

1-127 for organs with programmable MIDI.

Program changes (recognized)

Depends on number and order of stops for organs without programmable MIDI.

Registration

On a pipe organ, the sound of a rank of pipes is switched on or off with stops. By varying the stops, an organist can add dynamic and other nuances. This means that some knowledge of the traditional pipe organ is necessary to be able to registrate. Organists will have to be acquainted with the timbres of the different stops. Hence this short note about the types of organ stops.

The various stop names usually show the footage, e.g. 8 feet. This means that the tallest pipe (great octave-C) of this open stop measures 8 feet (about 243 cm). A stop with the indication 16 feet (486cm) sounds an octave lower.

Organ pipes can be divided into two main groups:

- labials
- reeds

Flues

The principle of tone generation with flues is the same as with the recorder. Flues occur in two versions: open or (semi) stopped. An example of a semi-stopped pipe is the Rohrflute. On the lid an (open) pipe (rohr) has been soldered. An example of an open flue is the Principal. The pipes of this stop are usually placed in the front of a pipe organ. Flue stops can be subdivided into the following families:

Principals

Prestant, Octave, Quint, Super Octave, Mixture, Scharff, Cymbel, Rauschpfeife and Sesquialtera, belong to the family of principals. These last five stops activates several pipes (of different pitch) per key. They are called mixtures (compounds).

Flues

Among others, Hohlflöte, Gedackt, Bourdon, Subbass, Nasard, Spitzflöte, Gemshorn and Rohrflute, belong to the flute stops, both open and stopped, metal or wooden.

Strings

The string stops such as: Viola di Gamba and Salicional belong to the family of the narrow-scaled, open labial pipes.

Reeds

In reeds the wind is driven through the foot-hole into the shallot; this causes the reed to vibrate. This vibration is amplified and 'coloured' by the air column into the 'resonator'. The Bassoon, Trumpet, Schalmey, etc. belong to the reeds with a long funnel-shaped resonator. Fagotto, Dulciana, Krummhorn, etc. belong to the group with a cylindrical resonator. Regal, Vox Humana and Rankett belong to the group with a short resonator, etc.