Capture for MultiSystem II
Operation Guide
CFMII

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Introduction

This organ is equipped with a powerful but easy to use capture system from Solid State called Capture for MultiSystem II.
There are a variety of CFM systems each offering different features for different styles of instruments. This manual covers all the features available but some of the more specialised ones are in separate sections to avoid confusion. The system is designed to cover a huge range of different instruments and is very flexible so if a feature is listed in this manual but you don't seem to have it on this console please ask your organ builder.
Additionally there are manuals on the Organ Recorder (RFMII) and the Organist Palette which uses an iPad to extend the range of controls for the organ.
More copies of this manual are available from us or on our website at www.ssosystems.com

The main control panel for the CFM may be arranged as a group as shown below or a series of separate panels, some of which may be in a drawer. The larger panel controls memory level, crescendo and also shows the last General piston position. The smaller panels are used to control specific features on the console and are detailed in the following manual.

Memory Functions

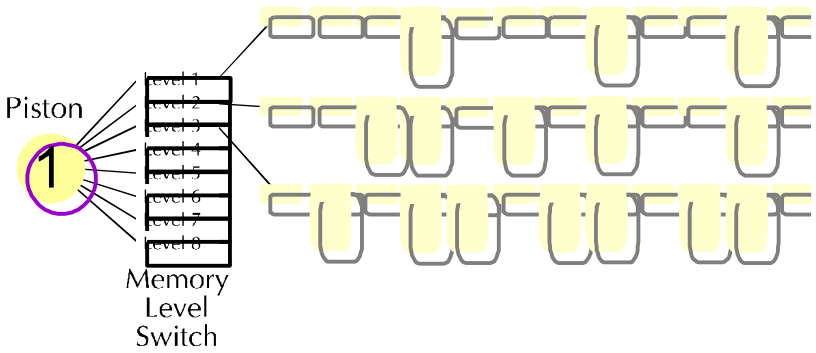
The CFMII memory system like most systems today is divided into levels accessible from a control panel on the console. Small instruments may be fitted with a rotary control with 10 positions but most will have a digital display.

Some instruments have different versions of this panel hardware but the digital display should remain the same. Often the control panel buttons are replaced with pistons leaving a small display.

The display is divided into two sections with red digits on the left and green on the right. The red digits show the current memory level, the two buttons next to the red digits change the level up and down. If there are no buttons the console will have engraved pistons for this.

European instruments may have an additional control for divisional piston memory.

The memory level control allows each piston to be reusable for each level selected. Each level contains a completely independent setting for each of the pistons.



Control Panels

In addition to changing memory levels if the console has crescendo there will be a panel to select one of the four built in Crescedii. A small set-up panel is also used to clear and copy memories and other funcions described below. These panels may be hidden in a drawer.

Each panel has push buttons and lamps to report the status. Normally these push buttons act like reversers, the first push will light the lamp and the second extinguish it. Some functions require set to be held for safety reasons.

Functions of the set-up panel.

The set-up panel has four push buttons to control the set-up of the console. These controls are not normally required during playing but are invaluable when setting up the console prior to a performance. The status of each button or function is shown by a small red indicator next to it.

Blind Check

This control allows you to check blind functions on the console. A blind function is a stop or group of stops that will sound in the organ independently of the stops being drawn on the console. Typical examples being crescendo and tuttis, less obviously the blind check can also be used to show blind cancels such as ventils. See page 8.

When the blind check function is engaged the lamp will light. In this mode all blind stops will move on the console to display their function, thus allowing you to check them.
Blind Check will stay engaged until the push button is operated again to extinguish the lamp.

Crescendo Adjust

To program a Crescendo you need to turn on Crescendo Adjust. Crescendo Adjust is only available for Crescendos A, B & C.
Please turn to page 9 to read more on crescendo settings

Clear

The clear function allows you to return a memory level to its default setting. This setting is normally commissioned by the organ builder with all pistons empty but it may have some default registrations for tuttis etc. There are two clear indicators on the system. The red light on this panel and also in case this panel is not fitted or fitted in a drawer the current memory level has a C at the left in red if the level is clear.

Clearing a Level

If the piston registrations on a level are no longer required, and you wish to use the level with completely different registrations then it may be appropriate to clear the level.
Clearing a level removes all of the piston registrations but the piston Scopes are unaffected as are the settings of blind functions (ventils, tuttis etc.).
A level may be cleared using the following procedure.

1. Select the level to be cleared
2. Hold in Set and press the Clear button
3. The Clear lamp will light to indicate the level has been cleared

The pistons on a locked level may be used, but they may not be cleared.

Restoring the Default Level

If the piston Scopes on a level have been changed (See Scope section) and are no longer required, it may be appropriate to restore the default level.
The default piston Scopes are restored including the default settings of blind functions (ventils, tuttis etc.) However restoring the default level removes all of the piston settings.
The default level may be restored using the following procedure.

1. Select the level to be cleared
2. Hold in Set and press the Clear button twice, release Set
3. The pistons will now be returned to their default state with default scopes and default registrations (which may be empty depending on commissioning). The blind functions will be returned to their default settings. The pistons may be cleared of their registrations (but retaining their default Scopes) by clearing the level.

Copy

To those of you used to our earlier systems the copy function is new. As the name suggests this control allows you to copy from one setting to another. It is possible to copy piston memories and crescendos.

Sometimes it is helpful to copy an entire memory level and paste it into a new one. This can save a lot of time by avoiding the need to create a level from nothing and it may also be used to move piston memories to a new place.

The copy button is used to copy and paste memories between levels much like a copy and paste function on a computer.

The Copy lamp shows if there is a memory ready to paste. The system will only copy if the lamp is off and paste if the lamp is on. The copy button must be used with Set. If you press Copy without Set it will delete the paste memory and the lamp will go out.

- The copy process begins with the lamp off. Press Copy by itself if the lamp is on to abandon the current contents.
- Navigate to the level you want to copy.
- Hold Set and press Copy; the Copy Lamp lights.
- Navigate to the destination level. Hold Set and press Copy.
- The copy lamp remains lit until the process completes and then goes out. A level copy takes about 5 seconds

Blind Functions

CFMII supports numerous blind functions, all of which are programmable. Blind functions are those which operate stops at the organ without moving them at the console. Blind functions include:-

- Ventils
- Tuttis, Sforzandos & Full Organ
- Crescendo

Blind function pistons may be programmed to operate as desired. An explanation of the setting procedure is given below.

Blind Check

Blind check allows the registration and Scope of blind functions to be viewed and changed. The Blind Check switch is a reversible which switches the CFMII in and out of blind check mode. The Blind Check lamp will light when the system is in blind check mode.

When the system is in Blind Check mode, all of the blind functions act as ordinary pistons. This allows the Scope and registration of blind functions to be changed in much the same way as that of normal pistons.

IMPORTANT NOTE:
When the system is in blind check mode, all pistons act as general pistons. This is necessary for correctly viewing the stops set on blind functions. This also includes reversers.

Tuttis

The CFM has two types of tuttis inclusive and exclusive and the type is set up by the organbuilder.

An inclusive tutti will add to the current registration so if the Zimblestern is on it will stay on when the tutti is engaged. An Exclusive tutti will always sound the same, any stops on will be switched off but stay drawn.

With Blind Check on pressing a tutti piston will reveal its setting on the console. An exclusive tutti will also be able to switch stops off so if you are unsure if the tutti controls a

stop and it is not showing in the tutti turn it on and then press the tutti. If it goes off then this is an exclusive tutti and it is set to go off.

Ventils

If ventils are fitted to the console they will typically be used in functions such as "Reeds Off" and are not normally changed but they are a function of the CFM system and can be edited if required with the scope function.

Editing a tutti

Although each new level has the tutti already set to the default the settings are easily changed and only affect the current level.
In Blind check set the tutti like and General piston.

It is certainly possible to change a tutti from inclusive the exclusive or vice versa. Please refer to the section on Scope.

Crescendo Adjust

CFMII has 3 programmable Crescendos and one pre-programmed Crescendo. Crescendo Standard is set by the organ builder and Crescendo A, B and C are settable by the organist. The crescendo covers all memory levels in a Library once set it will be available on any level.

Crescendo Displays

Each Crescendo has 60 stages. The current stage of the Crescendo is displayed in green on the right of the master control panel whenever the Crescendo is active. This is shown above on the control panel group with C for crescendo followed by position 1. This display can also show the last General Piston in which case there is no C just the number of the piston.
An optional bargraph display is also available to give a graphical indication of the shoe position.

The Crescendo selector panel has 4 buttons with associated lamps. Crescendo Standard has been pre-programmed by the organ builder. Crescendos A, B & C are fully programmable.

To select a Crescendo press the relevant button and the lamp will light. To disable the Crescendo press the button of the current Crescendo and the lamp will go out. This way it is

possible to have no crescendo. Crescendo Standard will be enabled by default when the organ is first turned on.

Set a Crescendo

Setting or editing Crescendo A, B or C is best done using the right two buttons on the control panel, it is very hard to move the shoe with enough precision to find an individual position.

To edit a crescendo first select the A, B or C memory and then hold Set and press Crescendo Adjust on the control panel. The Cres Adj lamp will light as shown in the picture above.

If the Crescendo is empty the clear lamp will light. If the Crescendo already contains a setting the blind check lamp will light.

Blind check is best used when editing an existing crescendo so you can see the current settings. Blind check can be switch on and off while setting a crescendo as required without affecting the settings.

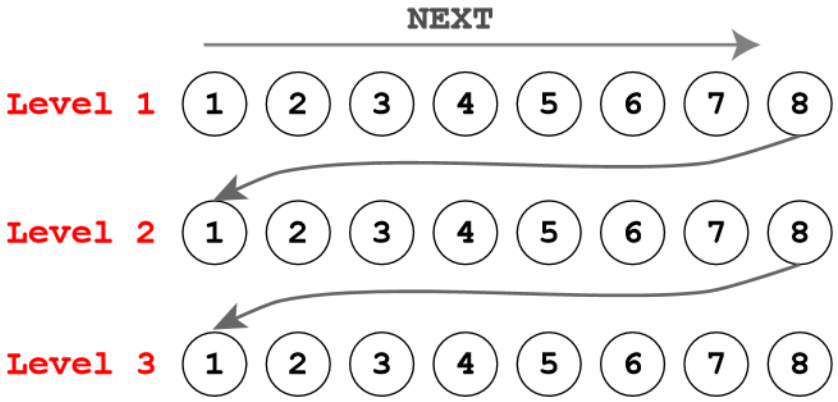
It is now possible to set the Crescendo pattern. Using the up button on the right of the memory control panel select the first crescendo position. The display will show C 1 as above. Choose the stops for position 1 and press set, the crescendo will advance to position 2 add more stops and press set.
Continue with this procedure until you have all 60 stages set. While it is not necessary to set every stage it is better to do so as the crescendo will not be smooth throughout the travel of the pedal if you don't.

The Piston Sequencer

The new sequencer included with CFMII is usable at various levels of complexity to suite your personal style and mood at the time.
We have retained the European style sequencer or stepper that steps through the General pistons on each level and added optional features to it. This way you can use the same system at different levels and also add features to a sequence as required without having to exit to another set of memories.

The Basic Sequencer

The basic core of the sequencer steps through the General pistons in order and automatically changes memory level at either end of the available pistons. For example with 8 Generals the sequencer would operate like this.



Once a sequence is built it is sometimes necessary to edit it and move up to a more sophisticated version. We offer an iPad based control surface called the Organist Palette

which gives an easy and intuitive way to do this and it can be added to any existing CFMII system.

Sequence Editor

The Editor Screen

Tap the menu button when you want to change screens.

Tapping the Home button takes you straight to the *Home Screen*

Tap the Library display to choose which Library to work from. The default library (Public) is accessible to anybody. Other libraries may be protected by a PIN.

Each Book allows you to store a number of related Sequences. Tap the Book display to select the Book you want to work with or choose Add Book.

Tap on the sequence display to choose the Sequence you want to use. If you want to create a new sequence choose Add Sequence.
Start and Stop are the Memory Levels where the Pistons will reside. Each level contains the same number of general Pistons as you have on the console. The sequence will start with the first piston on the Start Memory Level and can continue up to the last piston on the Stop Memory Level. Start and Stop can be adjusted by tapping their display.

The memory display is a duplicate of the console display and shows the current memory level and the last piston that was used.

The Piston Selector carousel allows you to activate any piston in the sequence. Tap on the piston and the stops will move on the console. Spin the carousel left or right to access pistons that are not visible. There is a blue progress bar underneath to show you where you are in

the sequence. As you play and press Next the carousel will rotate keeping the current piston in view. Each piston shows both the piston number and the memory level.

The Next and Previous buttons allow you to step through the pistons in the sequence. These buttons are duplicates of the Next and Previous pistons on the console.

We have provided a local setter. Don't hold this set button in though, just tap Set, then a piston to store the stops in the piston. Tap set each time you need to use it. The border of the Set piston will glow to show it is active.

Tap Insert to insert a new piston in the Sequence:

The inserted piston can be set using the palette and will move the stops when stepping through the sequence. It is not accessible directly from the console as it does not have a physical piston.

The Delete button can be used to remove pistons from the sequence. If an inserted piston is deleted (e.g. 12a) it will be removed completely. If a normal piston is deleted then it will be bypassed when using Next and Previous. The piston will be greyed out on the carousel.

Tapping Cancel will turn off all the stops and reset the sequencer to 1.

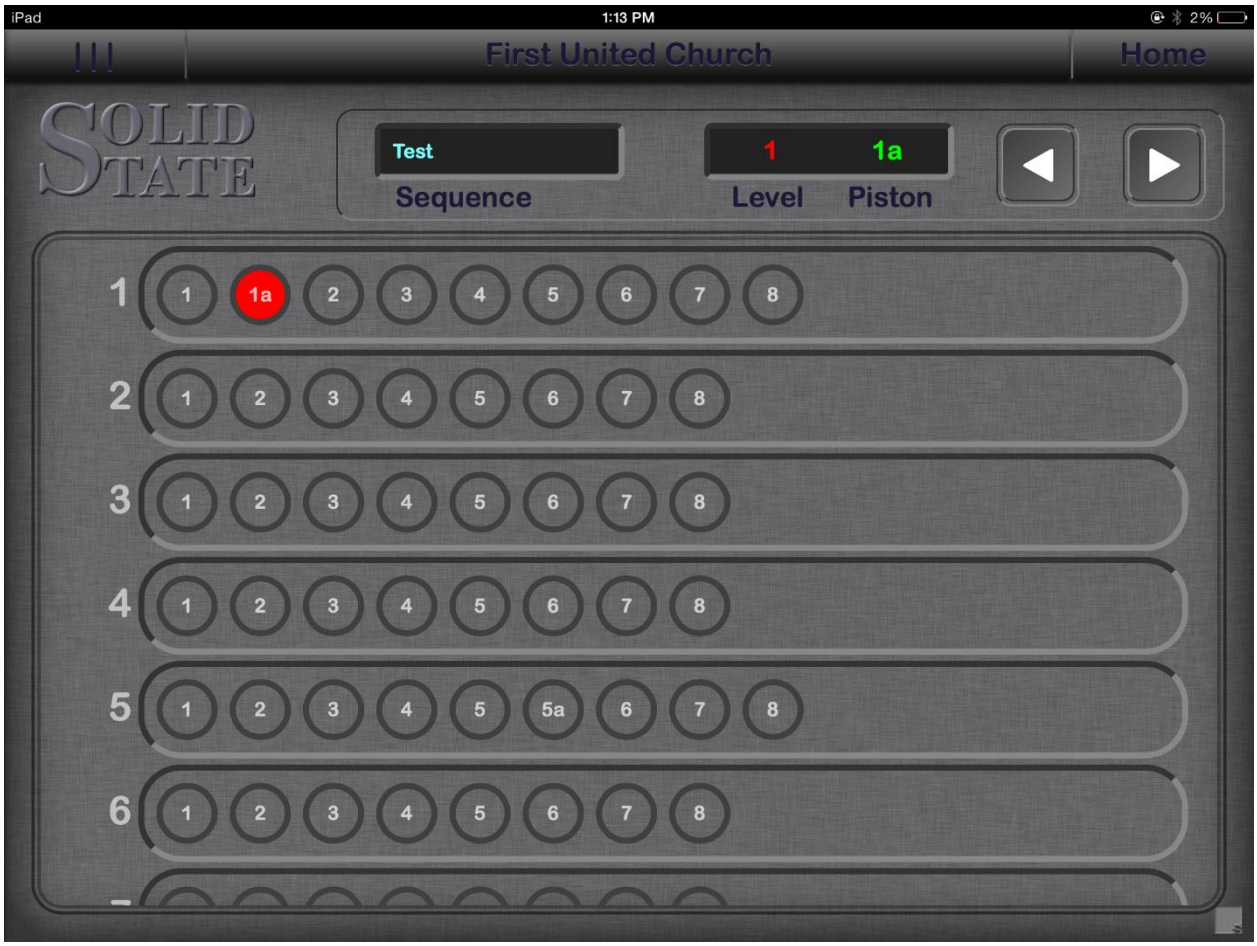
The Pad allows you to save piston settings for use in other parts of the Sequence.

- Select the Piston that has the registration you want to save
- Tap the Store button
- Press OK or type a description into the text box that appears and press OK

To use the registration in another piston:

- Make sure the piston is visible
- Tap the Paste button
- Tap the piston where you wish to store the registration

Sequencer Matrix Screen



The Sequence Matrix Screen gives you quick access to any point in the current sequence. This can be useful when working with an orchestra and you need to rapidly access a point in the sequence.

You can choose a sequence by tapping on the Sequence display. There are also Next and Previous buttons so you can step through the sequence.

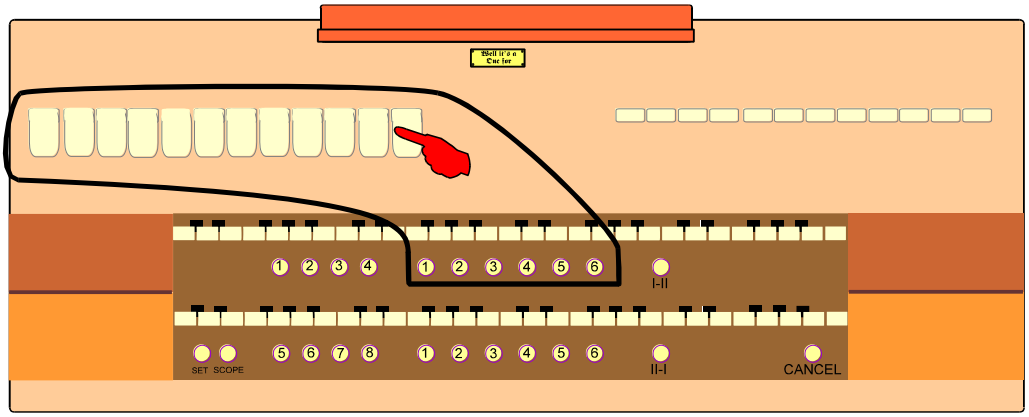
If a long sequence doesn't fit on the screen then use two fingers to scroll the screen up and down.

Sequencer View Screen

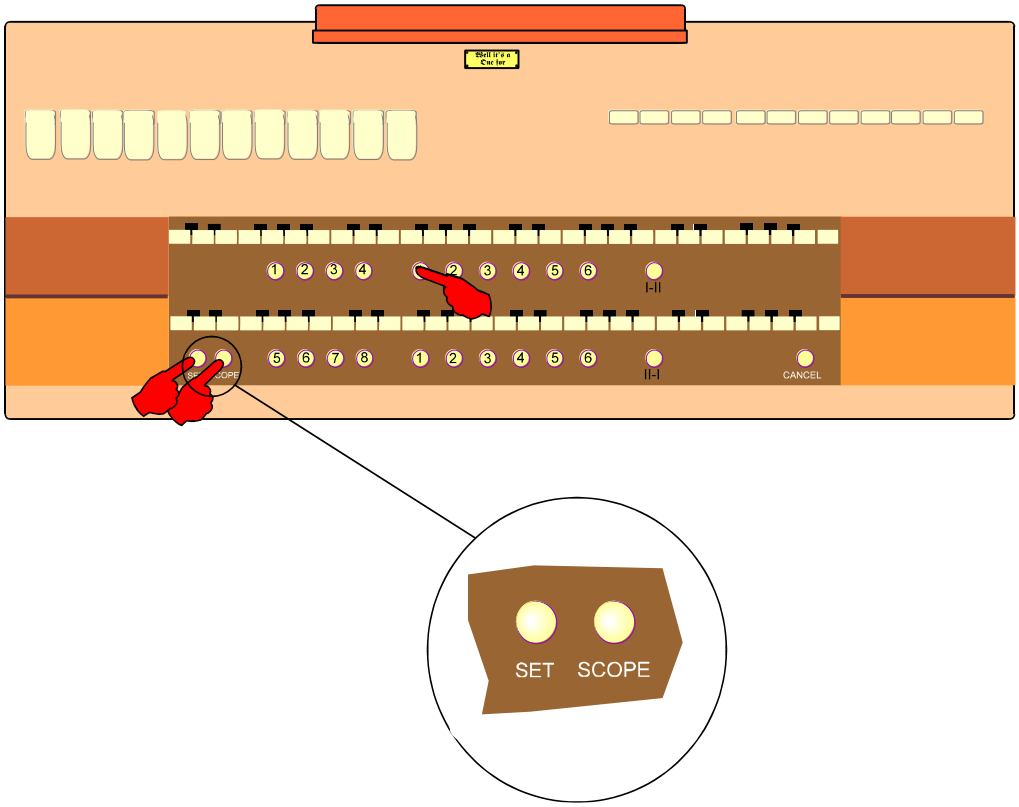
The Sequence View Screen shows you all your books and sequences and allows you to rename and delete them.
To rename a book or sequence tap the name and an editor will pop up.
To delete a book or sequence tap the name and in the editor delete all the letters. Click OK. You will be asked if you want to delete the book/sequence.
If you delete a book then all the sequences within that book will also be deleted.
When you delete books and sequences the pistons still retain their settings. If you wish to also delete the settings then this has to be done one level at a time using the clear button on the console.

Scope

Scope is a special feature available on all CFM systems but is not normally included on the console. If it is there may be either a Scope piston near the Set piston or a switch hidden. When a piston is pushed, only the stops that the piston has control over are moved. Using Scope it is possible to adjust the piston to control a different number of stops.
In short, you can 'teach' the piston its range of control, or if you prefer, the Scope of its operation!
In the console diagram below pistons 1-6 under the top manual have been allocated to the 12 stops of the Swell Division. Those pistons therefore have their Scope set to the Swell Division.
Your instrument's pistons will already have their Scope set by your organ builder. If you wish, you can adjust this quickly and simply with the following procedures.



The Scope of the 6 pistons on the top manual needs to be set to cover the 12 stops shown. This will allow the 6 pistons to have a Scope of operation limited to the 12 stops selected.



To change a piston's Scope do the following:

1. A good check is to always push General Cancel first to clear any unnoticed stops
2. Draw all stops which are to be affected by the piston. In this case the 12 stops shown as on the top manual
3. Hold in both the set and the Scope pistons
4. Press the piston(s) whose Scope you wish to set
5. Release the Set and Scope pistons

Now, only those stops which are within the Scope of the piston can be set onto the piston.

Viewing the Scope of a Piston

To view a piston's Scope, i.e. those stops which will be affected by the piston:

1. Hold in the Scope piston
2. Press the piston whose Scope you wish to view
3. The stops which move on are those which are within the Scope of the piston

Making a Piston a Reverser

Any piston can be configured to become reversible for any single stop. This is made possible by the Scope facility.
Setting a piston as a reverser is similar to setting the Scope of a piston.

1. A good check is to always push General Cancel first to clear any unnoticed stops
2. Select the stop that is to become reversible
3. Hold in both the Set and the Scope pistons
4. Press the piston you want to operate as the reversible
5. Release the Set and Scope pistons

Using the Scope feature in this way, any piston with a Scope of only one stop automatically becomes a reverser. It is also possible to create inter-cancelling reversers. Where the 16 and 4 cancel when the 8' goes off for example.

1. Turn on Blind Check
2. Turn ON the stops that need to cancel.
3. Hold Set and press the reversible piston.
4. Turn off Blind Check

Changing blind piston types

The blind pistons may be configured as ventils, inclusive tuttis (sforzandos, full organ) or exclusive tuttis. The piston type will usually have been configured by your organ builder during commissioning.
An Inclusive Tutti adds stops to the registration. An Exclusive Tutti adds stops to the registration while turning other stops off. A Ventil turns stops off.
To select which type of function a blind piston will perform please carry out the following steps:

1. Turn on Blind Check.
2. Turn on some stops (2 or more).
3. Set the Scope of the blind piston or switch.
4. Turn off some stops as follows:
    - If it is an exclusive tutti turn off one or more (but not all) stops.
    - If it is an inclusive tutti leave the stops on.
    - If it is a ventil turn all of the stops off.
5. Set the blind piston or switch.
6. Turn off Blind Check.
7. Hold in Set and Scope and press the blind piston or switch.

This last step will compare the stored registration to the stored Scope in order to determine the piston type. It only makes a comparison and doesn't change the Scope or registration. It

will mark the piston as inclusive, exclusive or ventil base on this. This is the only way to change the operation type of a blind piston and ensures consistent operation during normal use.
Following this you should set the scope/registration of the blind function with Blind Check on:

- For an Exclusive Tutti the scope and the registration should both be set. Stops that are in the Scope but not in the registration will be inhibited when the tutti is used. Stops that are in the registration will come on when the tutti is used.
- For an Inclusive Tutti the Scope is ignored, only the registration needs to be set. Stops that are in the registration will come on when the tutti is used. All other stops will operate as normal.
- For a Ventil the Scope will limit the stops which can be affected by the ventil. It is recommended that all stops are set into the Scope to allow any stop to be set on the Ventil. If you wish to limit a Ventil to only ever be allowed to affect, say, the Swell division then set all of the Swell stops into the Scope of the Ventil.
  Set the registration of the Ventil with the stops which are to be turned off. Stops that are in Scope and which are set in the registration will be inhibited when the Ventil is used. All other stops will operate as normal.

Returning to the Standard Scope

The CFM has a standard setup stored by the organbuilder. When you are finished with a memory level it can be cleared by holding in the Set piston and pressing Clear on the control panel. However if you continue and press Clear a second time without releasing the Set piston the scopes will also be returned to the standard setting.