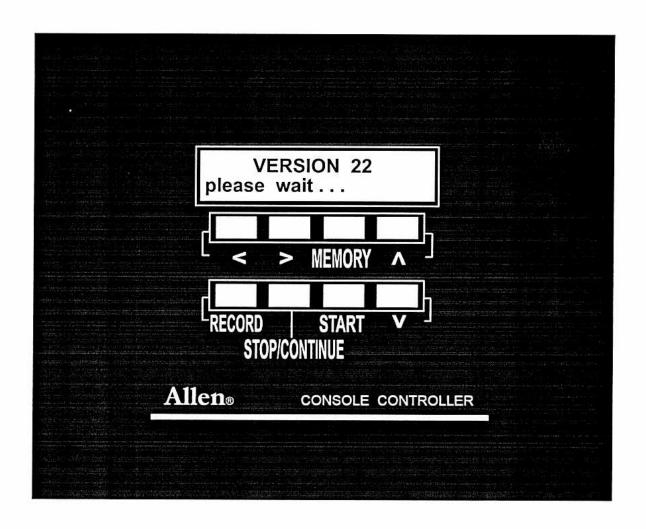


CONSOLE CONTROLLER™ AND MIDI GUIDE Version 22



CONSOLE CONTROLLER TM

VERSION 22

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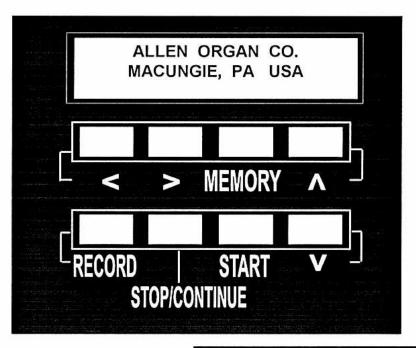
The Console ControllerTM is an interface that controls many organ functions and a variety of MIDI functions. The part of the Console ControllerTM that the organist uses is pictured on page 1. It includes a window that displays functions one at a time, and two rows of buttons used to make selections. Each window is described in this booklet.

A. BASIC OPERATION

1. START-UP SEQUENCE

Open the Console ControllerTM drawer, before you turn the organ on. Now turn on the organ's main power switch.

The window in the drawer will display:



Next it will display:

VERSION___ please wait...

(the number following version may vary)

Then finally the First Window is displayed:

MEM — 1 00:00:00 am P

The symbol "U", "P", or "N" in the window's lower right corner indicates the organ's mode (See Section C-2, Pg. 17).

WARNING: If a warning is displayed in this sequence, you should contact you Allen authorized representative immediately!

The Allen Organ has many self testing features. Here are examples of what WARNING displays might look like when veiwing the Console Controller™ display:

--- ERROR--NO CAGE Clock!

WARNING !!
Replace Battery

ADVANCING THROUGH THE WINDOWS

To advance the Console ControllerTM display to the next window, press and hold the SET piston. While holding SET, press the R piston. Each time you press and release R the display will advance to the next window.

PRESS and HOLD:



THEN PRESS:



RELEASE BOTH!

Repeat this to advance through all of the windows until the last window is displayed.

The Last Window will display:

UNLOCK ALL
CAPTURE MEMORIES

The displays only advance. To return to any previous window, you must return to the First Window and start the sequence over.

REMEMBER: To return to the *First Window* at any time, press and hold in the SET piston. While holding SET, press the CANCEL piston, then release both pistons.

PRESS and HOLD:



THEN PRESS:



RELEASE BOTH!

2. SELECTING THE CAPTURE MEMORIES

The First Window must be displayed (see previous page). Locate the two buttons marked "▲" and "▼" on the Console Controller™. Press one of these to move through the memories, forward or backward. The memories change sequentially from MEM 1, to MEM 2, to MEM 3, ...or MEM 1, to MEM 6, to MEM 5, etc. as you press either the "▲" or the "▼" button. The Console Controller™ features 6 or 4 capture memories.

The 6 or 4 memories allow you to save different registrations on each piston/toe piston 6 or 4 times. This means General Piston 1 on MEM-1, may be totally different from General Piston 1 on MEM-2, MEM-4,.... MEM-6,etc.

NOTE: On standard models a factory set of registration examples is stored on each piston of the last capture memory (Memory 4 or 6). You may change the last memory registrations; they can be restored to these original factory settings. Please see, RESTORING FACTORY SETTINGS in Section B-4 Pg. 15 of this manual.

3. SAVING REGISTRATIONS USING PISTONS AND TOE STUDS

A registration is any combination of stoptabs and/or drawknobs. These registrations can be stored (remembered) by the organ's capture memory system. The pistons and toe studs/toe pistons provide a way to make changes quickly from one registration to another.

General Pistons, affect all stops and drawknobs. These are located on the left side (sometimes centered), under the front of keyboards on the piston rails/fascia strips/key slips and numbered 1 through 10. (continued)

Divisional Pistons, affect only those stops associated with the particular manual above them. These are located in the center of the piston rails / keyboard fascia strips and numbered 1 through 6 or 1 through 10 on theatre models.

Located just above the pedalboard are **Toe Studs.** Those to the left of the expression shoes duplicate General Pistons (GEN-10, GEN-9, GEN-8, etc.). To the right of the shoes are pedal Divisional Pistons (PED-1, PED-2, PED-3, etc.).

To save a registration to a General Piston.

The First Window in the Console ControllerTM drawer must be displayed (See Section A-1, Pg. 1). Select any memory number (MEM-2, MEM-3, etc.); however, for this example use MEM-1. (Press the "▲" or "▼" buttons if necessary.)

Next, select the stops/drawknobs you want General Piston 1 to remember. Once the stops/drawknobs are drawn, press and hold the SET piston and while holding it, press and release General Piston 1.

Finally, release the **SET** piston. General Piston 1 will now store in memory the stops/drawknobs you selected.

NOTE: General Pistons are sometimes set gradually from a few stops to most. General 1 the softest and General 10 the loudest.

To save a registration to a Divisional Piston.

The First Window must be displayed, (See Section A-1, Pg. 1). Select a memory (MEM-1, MEM-2, etc.) using the "▲" and "▼" buttons. Select the division stops/drawknobs you want the associated Divisional piston to remember. While holding the SET piston, press and release the Divisional Piston (1 through 6) you want to save to. Finally release the SET piston. The Divisional Piston you pressed will now store the stops and/or drawknobs you selected.

Registering the Intermanual Couplers/Reversibles.

The intermanual couplers, (e.g., Swell to Great, Great to Pedal, Solo to Accomp, etc.) settings can be remembered only by the General Pistons, not the Divisional Pistons, that is unless, the Divisional Pistons are reconfigured. (See Section B-2, Pg.11).

Intermanual Couplers are also controlled by Reversible Pistons (Reversibles). These pistons reverse the condition of the related Intermanual Coupler. If an Intermanual Coupler is ON when the associated Reversible Piston is pressed, that coupler will turn OFF. If the coupler is OFF, when pressed it will turn ON.

To save registrations using Toe Studs/Toe Pistons.

Toe Studs/Toe Pistons can store registrations the same as other General or Divisional pistons. Toe Studs allow you to select stored registrations, using your feet instead of hands.

NOTE: Setting a General Toe Stud/Piston will change the registration for BOTH the toe stud and the corresponding hand piston. i.e., General Piston 10 is identical to General Toe Stud 10, while General Piston 6 is identical to General Toe Stud 6.

4. LOCKING CAPTURE MEMORIES

All memories except Memory 1 may be locked or unlocked individually to prevent unintentional or unauthorized changes to that memory's contents. Memory 1 remains unlocked as a convenience to visiting or substitute organists.

The Console ControllerTM must display the First Window in the drawer (See Section A-1, Pg. 1). Select the memory (2 to 6) you wish to lock by pressing " \blacktriangle " and " \blacktriangledown ".

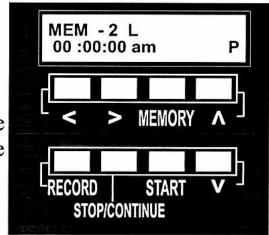
After registrations are stored to pistons, (See Section A- 2, Pg. 3) choose three digits you can easily remember (e.g., 1-2-3, 0-0-7, etc.). Any

combination of three numbers will do. Use General Piston 1 for the 1 digit and General Piston 10 for the zero digit. (MDS-8 can only use digits 1 to 5.)

Locate the button with MEMORY beneath it.

Press and hold this MEMORY button.

While holding in MEMORY, press the General Pistons that correspond to your three digit code, (GEN -10 = zero).



Release the MEMORY button; an "L" appear next to the MEM - number in the window, indicating this memory is now locked. While it remains locked, the piston registrations on that memory cannot be changed. Other organists will still be able to use these locked registrations. Again, it is important to choose an easy to remember three digit code.

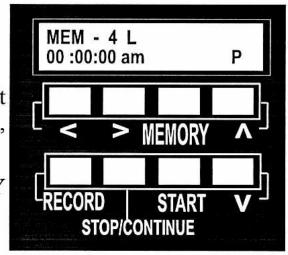
5. UNLOCKING MEMORIES USING YOUR CODE

The First Window must be displayed.

(See Section A-1, Pg. 1)

To unlock a memory using your three digit code, select the memory to be unlocked, using the "▲" and "▼" buttons.

Once selected, press and hold the MEMORY button on the Console ControllerTM.



While pressing MEMORY, enter the same three-digit code that was used to lock this memory (See Section A-4, Pg. 5), using General Pistons 1 through 10 (Piston 10 = zero).

Release the MEMORY button. The "L" will disappear, indicating that this memory is now unlocked.

MEM - 4 00:00:00 am P

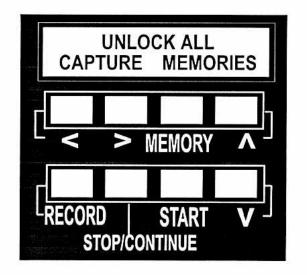
UNLOCKING ALL MEMORIES— EVEN IF YOU FORGET YOUR CODE

Advance to the Last Window It will display:

(see section A-1, Pg. 2).

Press and hold the MEMORY button on the Console ControllerTM and press General Pistons 2-5-5.

Release the MEMORY button, the window displays:



DONE!!

(The display automatically returns to the First Window.)

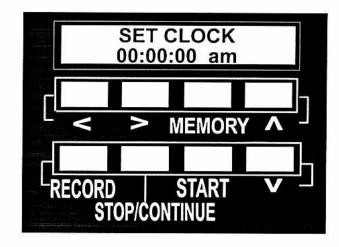
All capture memories are now unlocked, including those memories, other organists may have locked. Registrations remain unchanged.

6. SETTING THE CLOCK

Advance to the 14th Window. It will display:

Use the "▲" and "▼" buttons to change the digits and "<" and ">" to move between hours and minutes.

Press and hold the SET piston, now press and release the CANCEL piston to reset the clock.



NOTE: The clock always resets the seconds to zero when you use SET and CANCEL to leave this window.

7. STOP ACTION and CAPTURE SELF CHECK

This feature self-checks the capture system. It tests to insure each stop is functioning properly and controllable by the capture system.

Advance to the 13th

Window. It will display:

DEMO/SELF-CHECK (GT-1)

To start self-check, press Great Piston 1.

The stop tablets will move down and up consecutively (drawknobs out and in). If any stop does not move, notify your Allen service technician.

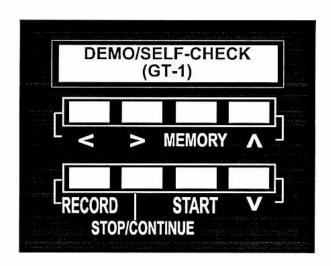
During this testing process you can interrupt and return to the First Window. Do so by pressing and holding SET, pressing the CANCEL piston and then releasing both.

PRESS and HOLD: SET THEN PRESS: CANCEL RELEASE BOTH!

8. MUSIC MEMORY™ DEMONSTRATION FEATURE CLASSICAL ORGANS ONLY, NOT ON THEATRE MODELS

ALLEN ORGAN'S Music MemoryTM is pre-recorded demonstration pieces using a variety of registrations and musical styles. These selections are found in most models.

Advance to the 13th window. It will display:



When this window has been selected demonstration pieces can be accessed using Swell Pistons 1 through 5. Each of these pistons starts a different musical selection when pressed. Swell Piston 6 acts as a Stop/Continue switch. Pressing Swell Piston 6 once will stop the selection in mid-play. Pressing Swell Piston 6 a second time will allow the selection to continue from where it was stopped. It is possible to skip from one demonstration piece to any other by simply pressing the piston of your choice during playback. To return to normal playing mode, hold in the SET piston, press and release the CANCEL piston. On the MDS-8 there are four demonstration pieces. They are accessed the same as above except there is no Stop/Continue piston. You must press SET and CANCEL to stop the demonstration piece.

NOTE: All expression pedals must be fully open when using Music MemoryTM, HOWEVER, DO NOT PUSH OPEN THE CRESCENDO PEDAL.

B. ADVANCED OPERATION

1. SELECTING AN ALTERNATE TUNING

Advance	to	the	Seco	nd
Window.	It	will	dis	play:

ALTERNATE TUNING		
=		

(The current Alternate Tuning will appear after =.)

Allen Organs offer several (exact number depends on model) *Alternate Tunings*, plus the standard Romantic tuning. These tunings are accessible from the Console ControllerTM.

Select an *Alternate Tuning* from the list, by pressing the "▲" and "▼" buttons on the Console Controller™. The organ's overall tuning will be changed to the selected *Alternate Tuning*, by pulling the drawknob, or turning on the stoptablet labeled ALTERNATE TUNING.

The selected tuning will remain the *Alternate Tuning* until: either another *Alternate Tuning* in the Console Controller™ window is selected, or the stop/drawknob is turned off. Any time the ALTERNATE TUNING stop is off, the organ is tuned to the standard general purpose Romantic tuning. The standard Romantic tuning is "warmer" than the CLASSIC and BAROQUE *Alternate Tunings*. These two alternate tunings are "tighter" than the Romantic tuning. In other words, most intervals are tuned slightly narrower than the intervals in the standard Romantic tuning.

NOTE: The remaining tunings are of historical interest; however, these tunings may be limited in their application to modern music. When selected, it is normal for some intervals to sound out of tune; music may sound strange when played in certain keys. ALTERNATE TUNINGS are not available on Theatre models.

2. CONFIGURING DIVISIONAL PISTONS and GENERAL PISTONS

This procedure enables pistons to control stops/drawknobs that are normally not controlled by those pistons. Separate piston configuration changes can be made on each capture memory.

E.g., (1) Divisional Pistons can be configured to respond like General Pistons. (2) Divisional Pistons normally *will not remember* the settings (on/off) of the Intermanual Couplers, (i. e., Swell to Great, Great to Pedal). Divisional Pistons can be configured such that, the Intermanual Couplers' settings *will be remembered* by the Divisional Pistons. (3) A Divisional Piston can be configured so that it will only affect the Tremulant stops in all divisions. (4) A General Piston can be configured to respond like a Divisional Piston.

NOTE: Changing the configuration of a piston will not affect the registrations previously remembered by that piston, prior to its reconfiguration.

EXAMPLES:

Configuring Divisional Pistons to become additional General Pistons:

Advance to the Ninth window. It will display:

CONFIGURE PISTONS

Select *all* of the stops and drawknobs. Any stops/drawknobs not engaged, will not be able to be registered later. While holding in the SET piston, press the Divisional piston that you want to respond like a General Piston.

Return to the First Window to save General registrations to the Divisional pistons you pressed (See Section A-3, Pg. 4).

To add the SWELL TO GREAT Intermanual Coupler to the Great Divisional Pistons:

Advance to the Ninth Window. It will display:

CONFIGURE PISTONS

Select *all* of the Great Division stops/drawknobs, *and* the SWELL TO GREAT intermanual coupler. **Press and hold the SET piston.** While holding SET, **press the Divisional Piston(s)** that you will use when finished to save registrations. **Return to the First Window** and save registrations to these Divisional Pistons, using combinations of stops/drawknobs and the SWELL TO GREAT coupler. (Hold in SET, press CANCEL, release both).

To reconfigure a Divisional Piston such that, it controls only the Tremulant stops/drawknobs:

Advance to the Ninth window. It will display:

CONFIGURE PISTONS

Select *all* of the organ's Tremulant Stops/Drawknobs. Next press and hold SET. While holding SET, press a Divisional piston. Return to the First Window. You can use this reconfigured Divisional Piston, to control *just* the Tremulant Stops without affecting any other stops.

You can always restore the original factory settings.

See section B-4 Pg. 15, for the window that displays:

RE-INITIALIZE PISTON CONFIG.

REMEMBER: The examples above determine only which stops/drawknobs will become accessible by the reconfigured pistons; they will not change previously saved registrations.

3. MODIFYING THE CRESCENDO AND TUTTIS

Most models feature a second set of Tuttis and a second set of Crescendo settings that can be altered to suit the organist's needs. To view the current settings you must:

Advance to the Eighth Window. It will display:

SET SECONDARY
CRESC AND TUTTIS

To view the order that stops/drawknobs are turned on by Crescendo "B", slowly push open the Crescendo Shoe. You will see the stop/drawknobs turn on and off in response to the pedal movement when this window is selected.

To view the stops/drawknobs registered to the second TUTTI I or TUTTI II, press either one of them. In other words, if you press TUTTI I or TUTTI II when this window is displayed, the associated stops/drawknobs will turn on.

To reset the stops/drawknobs activated by Crescendo "B":

First, understand how the Crescendo functions. There are 22 positions evenly dispersed along the Crescendo Shoe's range of travel. Each of these 22 positions corresponds to a piston that must be set. They correspond as follows: General Pistons 1-10 represent Crescendo positions 1 to 10, Great Pistons 1-6 (Accomp on theatre models) represent Crescendo positions 11 to 16, and Swell Pistons 1-6 (GT on theatre models) represent Crescendo positions 17 to 22.

Advance to the Eighth Window. It will display:

SET SECONDARY
CRESC AND TUTTIS

When re-setting the Crescendo "B", use only the pistons and the stops/drawknobs. You don't need to use the Crescendo Shoe. **Start by selecting the stops/drawknobs** to be remembered at Crescendo Shoe position 1. You can use all stops/drawknobs on the organ, including celestes, intermanual

couplers, and tremulants; however, celestes and tremulants are automatically disabled when the louder voices are added, such as reeds or mixtures. Once selected, press and hold SET, press General Piston 1, release both. The Crescendo Shoe will now engage the same stops/drawknobs you selected, when you slightly push open the Crescendo Shoe. Keep in mind, you must set a registration to each of the remaining 21 positions, even if you must duplicate a previous registration. For each remaining position, select the new stop/stops that you will add, or use the same stops you selected for the previous position. It is normal to progress from quieter settings to louder ones. Once this process is complete, return to the First Window (See Section A-1, Pg. 1).

NOTE: Registrations and memory settings for the PISTONS are not affected by resetting the CRESCENDO "B".

To play the organ using the secondary Crescendo "B":

The First Window must be displayed.

Press the CRES. B piston.

MEM - 1 (00:00:00) am P

On the bar-graph display, the green CRESC-B indicator will illuminate. Push open the Crescendo Shoe and play.

To change the registrations that are activated when either secondary TUTTI-I or secondary TUTTI-II are selected:

Advance to the Eighth window. It will display:

SET SECONDARY
CRESC AND TUTTIS

Create a registration (select the stops) to be remembered by, either Secondary TUTTI I, or Secondary TUTTI II. Press and hold SET, next press the Tutti Piston you wish to change, release both. The new registration is now stored. It can be selected during normal playing conditions.

To play the organ using the secondary Tuttis:

Return to the First Window.

MEM - 1 (00:00:00) am

Press the CRES. B piston.



P

On the bar-graph display, the green CRESC-B indicator will illuminate. **Press the Tutti piston** of your choice. The Tutti pistons function like General Pistons and customarily have very large registrations; however, the registered stops/ drawknobs **do not move** to their ON positions when a Tutti piston is selected.

4. RESTORING ORIGINAL FACTORY SETTINGS

Advance to the 12th Window. It will display:

RE-INITIALIZE PISTON CONFIG.

Certain functions can be restored to the original factory settings.

They are:

RE-INITIALIZE
TUTTI/VENTIL B

RE-INITIALIZE
CRESC B SETTINGS

RE-INITIALIZE
CAPTURE MEMORY 6

RE-INITIALIZE MIDI SETTINGS

Each of these functions can be restored individually.

RE-INITIALIZE PISTON CONFIG.

Select one of these factory settings you wish to restore by using the "▲" and "▶" buttons on the Console Controller™. Press and hold the MEMORY button in the Console Controller™ drawer.

While holding it, press General Pistons 2-5-5 in sequence.

If **PISTON CONFIG.** was selected, the window will display:

RE-INITIALIZE
PISTON CONFIG.

DONE !!

TThe original factory configurations for all pistons have been restored. This procedure restores the other factory settings.

Notice the term VENTIL B. This is a function that is used on Allen custom organs. If you are playing an Allen standard model, disregard the term VENTIL B; it does not apply. If you are playing a custom model and TUTTI/VENTIL is selected, the RE-INITIALIZE procedure described above will return the secondary TUTTI B *as well as* the VENTIL B settings to the original factory settings.

C. MIDI FUNCTIONS

This section deals with the MIDI capabilities of your organ. Knowledge of this section is not required for everyday use of the organ, normal service playing, or normal use of Allen SmartMIDITM devices. This information's usefulness, will ultimately be determined by your needs, along with the type and capabilities of any external MIDI devices you choose to use--e.g., sequencers, voice/sound modules, and external MIDI keyboards. The MIDI topics covered by this manual are limited in scope, because this section is written with the assumption that you possess an understanding of MIDI. You need to understand the terms MIDI-IN, OUT, and THRU and their function. If you need to increase your understanding of MIDI, there are other books that describe how to use MIDI.

NOTE: You must also consult the owners manual that covers the external MIDI device you are using for more details.

1. STANDARD MIDI CHANNEL ASSIGNMENTS

These are the Allen Organ standard MIDI channels settings:

Classical Organs	Theatre Or	gans
Channel Organ Division	Channel Organ	Division
1 = Swell	1 = Great	
2 = Great	2 = Accompanimen	ıt
3 = Pedal	3 = Pedal	
4 = Choir	I = Solo	
5 = Solo	S = Accomp. 2nd T	ouch
6 = Not Used	5 = Not Used	
7 = G1/G2 Pistons	7 = T1/T2 Pistons	
8 = General Pistons	3 = General Pistons	

NOTE: The Base Channel always resets to Channel 1 whenever the organ is turned on (see section C-5, Pg. 24).

2. SELECTING PROGRAM CHANGE MODES, VIEWING PROGRAM NUMBERS or GENERAL MIDI SOUND NAMES

Program change modes establish how MIDI program changes will be sent from the organ when a piston is pressed, and what the resulting display will be in the Console ControllerTM window. Once a particular program change mode is selected, the organ will retain this same program change mode (even if the organ is turned off) until a new program change mode is selected.

During normal playing conditions, (First Window) one of three letters, "U", "P", or "N" will display in the lower right-hand corner of the Console ControllerTM window, to signify the current program change mode. These three mode options determine how the organ sends program change information to MIDI devices.

SELECTING A PROGRAM CHANGE MODE:

Advance to the Third Window. It will display:

PROG CHG: USER DISPLAY: NUMBERS

Use the "≺" and ">" buttons on the Console Controller™ to select either "Preset", "User", or "No" modes. You must understand how and when to use each of these modes before you change them.

"P" is for PRESET MODE: This mode causes the organ to send a program change number equal to the piston number that is pressed. The General Pistons will send program changes 1-10 on MIDI Channel 8, the organ's General Piston control channel. The Divisional Pistons (1-6) for each division will send program changes 1-6 on the channels as shown on the previous page. For example, Swell Piston 1 would send Program Change 1 on Channel 1. Great Piston 2 would send Program Change 2 on Channel 2, etc., (See Section C-5 Pg. 24 Changing the MIDI Base Channel).

"U" is for USER MODE: With this mode the organ is enabled to send program change information that will select voices, change banks, or change program "patch" numbers on another MIDI device. Any program change number from 1 through 128 can be assigned to any General or Divisional Piston (blank or no digit may also be selected). Any bank switch number between 0 and 127 can be assigned to any Divisional Piston. As in the PRESET mode, General Pistons will send program change information on MIDI Channel 8. Divisional Pistons will send information on their respective MIDI channels (See Section C-1, previous page).

"N" is for NO MODE: With this mode selected, NO information is transmitted or received. This mode cancels transmission and reception of all program change information.

GENERAL MIDI SOUND NAMES or PROGRAM NUMBERS:

The Console Controller™ window can display MIDI program changes as either MIDI program numbers or as General MIDI sound names. Use the "▲" and "▼" buttons to select one of the two modes.

GENERAL MIDI SOUND NAMES:

With General MIDI selected, the Third Window will display:

PROG CHG: USER DISPLAY: GEN MIDI

Make sure the word USER is selected as the mode and GEN MIDI has been selected following the word DISPLAY. You must advance to the Fourth Window then press a piston to view the sound names for any General MIDI device

PRESS and HOLD: SET THEN PRESS: RELEASE BOTH!

The Fourth Window will display:

MIDI PROG CHANGE

As you press a General or Divisional Piston, the Console Controller window will now display the General MIDI sound name that corresponds to the MIDI program change selected.

For example, press General Piston 1. The Console ControllerTM will display the MIDI program change names.

GEN 1 BANK Ø

P: Ac Grand Piano

NOTE: In some cases, the General MIDI sound name will be abbreviated in the Console ControllerTM window.

PROGRAM NUMBERS:

With NUMBERS selected, the Third Window will display:

PROG CHG: PRESET DISPLAY: NUMBERS

With PRESET selected as the program change mode, press a General or Divisional Piston. The Console Controller™ window will display the same MIDI program change number as the associated piston pressed. The MIDI program change number will be displayed in PRESET mode, no matter if NUMBERS or GEN MIDI is displayed. You must select USER mode to view GEN MIDI sound names. You must also select USER mode to assign MIDI program change numbers larger than 10 (the largest number of any piston).

With USER selected as the program change mode, along with NUMBERS following the word DISPLAY, you will be able to assign "- - -" (OFF) or any program change number from 1 through 128 to any General or Divisional Piston.

PROG CHG: USER DISPLAY: NUMBERS

After selecting NUMBERS along with PRESET or USER. Advance to the Fourth Window, then press a General or Divisional Piston to view the Program Change Numbers.

The Fourth Window will display:

MIDI PROG CHANGE

After pressing a General or Divisional Piston, the Console Controller window will now display the number that has been selected for that piston.

For example, press General Piston 1, The display will change to:

GEN 1	BANK	Ø
P:	<u> </u>	
· · · · · · · · · · · · · · · · · · ·	3	

There may be a number or "- - -" following the "P:". This "P:" represents the Program Change Number and does not stand for PRESET in this window. If there is "- - -" following "P:", this means that the "ZERO" Program Change Number will be sent from the associated piston.

Use the "▲" and "▶" buttons to change the Program Change Numbers. Use the "◄" and "▶" buttons to change the BANK Numbers (See Section C-4, Pg. 23 Selecting MIDI BANK numbers).

NOTE: The Allen Organ uses MIDI Program Change Zero as a message for "MIDI OFF." Therefore, MIDI Program Change 1 corresponds to the General MIDI sound "Grand Piano." Some MIDI devices do not use Program Change zero for MIDI OFF. Consequently, Program Change Zero, ("---" in the window) when sent from the organ, will correspond to Program Change 1 on those MIDI devices. Program Change 1 sent from the Allen will correspond to Program Change 2 on those MIDI devices etc.

3. ASSIGNING MIDI PROGRAM CHANGES TO THE ORGAN'S PISTONS

This function allows the organist to select any voice from an external MIDI device by pressing any General or Divisional piston on the organ. *The "USER" program change mode must be selected (See Section C-2, Pg. 17)*. If the organ is equipped with an Allen MDS-Expander IITM, the selection procedure is simpler than the procedure described here. However, the USER mode must still be selected. Please refer to the MDS-EXPANDERTM II Owner's Manual.

Advance to the Fourth Window. It will display:

MIDI PROG CHANGE

For this example press the Swell Division Piston 1.

The dis	play	will
change	to:	

SW 1	BANK Ø	
P:		
597		

The window displays the last piston pressed and the MIDI program number being sent by that piston. Use the "▲" and "▼" buttons to raise or lower the program number. The program number (1-128) will be transmitted on the channel assigned to the division from which you selected the piston; in this case, the Swell Division on Channel 1. (See Section C 1, Pg. 17). Also, refer to the program number chart in the owner's manual for the external MIDI device you are using. Once you have assigned a MIDI program change number to a piston, that number will remain assigned to that piston even if the organ has been turned off and on again.

4. MIDI BANK SELECTING

Many MIDI devices permit access to a variety of sounds in addition to the General MIDI sounds. Normally these additional sounds are stored in groups called BANKS. A BANK, in MIDI terminology, means a group of voices or sounds. There are two levels of banks. One level offers two choices, High Bank and Low Bank. Each of these, High Bank and Low Bank, has as sub-groups the other level of banks, BANK Numbers.

MIDI devices can have as many as 128 sounds/voices per BANK Number. There are also 128 BANK Numbers (Ø through 127).

Therefore, it would be possible for a MIDI device that is **either** High Bank **or** Low Bank compatible, to have 128 BANK Numbers, each could contain up to 128 voices/sounds, for a total of 16,384 sounds.

There also are MIDI devices that are High Bank and Low Bank compatible. It therefore, would be possible for these MIDI devices to have as many as (128 X 128 X 2 = 32,768 voices/sounds) 128 voices/sounds in each of the 128 BANK Numbers, in each of the High and Low Banks. Most MIDI devices do not use all of the locations available. It would be very expensive as well as difficult to remember the address for each sound location.

There are MIDI devices that offer only General MIDI sounds/voices. These General MIDI devices may operate using High Bank or Low Bank but only the sub-group Ø Bank Number is used to store the 128 General MIDI sound settings.

Allen Organs are able to access any of the Banks and therefore are able to communicate with all MIDI devices.

NOTE: You MUST know the capabilities of, and understand how to operate, any MIDI device you plan to use with the organ!

SELECTING HIGH BANK or LOW BANK:

Advance to the Seventh Window. It will display:

MIDI BASE CH: 1

Use the "≺" and ">" buttons on the Console Controller™ to select either HIGH or LOW Bank priority.

SELECTING MIDI BANK NUMBERS:

MIDI Bank Numbers are assigned the same way MIDI Program Numbers are (See Section C-3, Pg. 20); except this time you must only select from the Divisional Pistons. Using a BANK Number to select an external MIDI Device sound/voice, can be done from any of the Divisional Pistons. You

must have USER selected in the Third Window!

Advance to the Fourth Window. It will display:

MIDI PROG CHANGE

For this example press the Great Division Piston 1.

The display will change to:

BANK Ø

The window displays the last piston pressed, the MIDI BANK Number, and the program number being sent by that piston. Use the " \checkmark " and " \gt " buttons on the Console ControllerTM to raise and lower the MIDI BANK Number. The selected BANK number (\varnothing -127) will be transmitted on the channel assigned to the division from which you selected the piston, in this case, the Great Division which is Channel 2. (*See Section C 1, Pg. 17*). Also, refer to the Bank selection/program number chart in the owner's manual for the external MIDI device you are using.

Once you have assigned a MIDI BANK Number to a piston, that number will remain assigned to that piston even if the organ has been turned off and on again.

5. CHANGING the MIDI BASE CHANNEL

This operation allows you to change the setting of the MIDI Base Channel. The Base Channel is a reference point to establish the positioning of the other 15 MIDI channels. On Allen Organs, the Base Channel equals the Swell's channel of transmission (i.e., if the Base Channel = 1, then the Swell Channel = 1, if the Base Channel = 2, then the Swell Channel = 2, etc.). Moving the Base Channel allows you to shift the organ's range of

MIDI channels. This is helpful when reassigning an external MIDI device from one organ division to another.

NOTE: The Base Channel always resets to Channel 1 whenever the organ is turned on.

Advance to the Seventh Window. It will display:

MIDI BASE CH: 1 BANK: LOW

Use the "▲" and "▼" buttons to change the Base Channel.

All functions associated with a particular division will transmit and receive on its assigned channel. For example, MIDI Channel 1 is normally assigned to the Swell Division and the Swell Manual; therefore, keying velocity or on/off messages, and program changes (Swell Divisional Pistons) will be transmitted and received on Channel 1 (See Section C-1 Pg. 17 for Allen MIDI Channel Assignments).

If the Base Channel is reset to 2, in the display, all of the channels will shift higher by one. Now, Swell = 2, Great = 3, Pedal = 4, Choir = 5, and the General Pistons = 9.

NOTE: Channel numbers will wrap, i.e. channel numbers go only to 16 and will then repeat to 1. FOR NORMAL USE, DO NOT USE A BASE CHANNEL LARGER THAN 9.

6. MIDI EXPRESSION SETTINGS

Advance to the Sixth Window. It will display:

MIDI EXPRESSION POLY — VOLUME

There are four modes for transmitting expression data via MIDI. They are selected by pressing the " \blacktriangle " and " \blacktriangledown " buttons on the Console ControllerTM.

POLY-VOLUME — This setting will always be selected when the organ is turned on. In this mode, the expression data is distributed among the appropriate MIDI channels. This is the proper mode to use when recording to, or playing back from, a sequencer.

POLY-VELOCITY — This mode should be selected if you are using a percussion-type voice from a sound module or an external MIDI keyboard. For example, if a digital piano sound were played from the organ keyboard through MIDI Channel 1, the piano could be made to sound more realistic. By opening the Swell expression shoe, the piano strings would appear to be struck harder than when the Swell pedal was in the closed position.

NOTE: In POLY-VELOCITY mode, all expression information is sent in key velocity form. Changes in velocity will occur only when a new key is struck; consequently, if you change the position of the Swell pedal after a key is struck, there will be no change in velocity until a new key is struck. Use this mode only when a velocity-sensitive external MIDI device is connected. If this mode is selected when recording to a sequencer, the expression on the organ will not function when playing back from the sequencer.

SWELL-VOLUME — This mode causes MIDI expression data to be sent only on the Swell MIDI channel. *Some early sequencers can only interpret one volume message.*

NO EXPRESSION — No MIDI expression (volume) data sent.

7. TRANSFERRING and SAVING CAPTURE MEMORY DATA TO A SEQUENCER

CAPTURE MEMORY refers to: all of the remembered piston registrations on all 16 Memories, plus all 22 Crescendo "B" position settings, and the Secondary Tutti "B" settings.

With this operation, the organist can copy and save all of this stored (remembered) information to a MIDI digital sequencer.

NOTE: This operation is not required if you are using an Allen Smart RecorderTM to save capture memories. Refer to the Smart RecorderTM Owners Manual for details.

Advance to the 10th Window. It displays:

CAPTURE MEMORY SAVE

Set your sequencer to the record mode and begin recording as you normally would. **Press and hold the MEMORY button** on the Console Controller. **While holding MEMORY, press General Pistons 2-5-5** in sequence. The CAPTURE MEMORY information will be transmitted to the sequencer. When the information transmission is completed,

the Console Controller™ window will display:

DONE!!

A copy of the CAPTURE MEMORY information will exist in the sequencer and the original information will be retained in the Console ControllerTM memory.

8. TO RETURN CAPTURE MEMORY DATA FROM A SEQUENCER TO THE ORGAN.

To replace previously recorded Capture Memory information into the organ from your sequencer, simply press "Play" on the sequencer and the recorded capture data will be transmitted to the organ. You must have a MIDI cable from the OUT port of the sequencer to the IN port of the Allen Organ. It does not matter what number window the Console Controller displays.

NOTE: <u>Capture Memories must be unlocked</u> (see section A-5 Pg.-6.) before you press "Play" on the sequencer, allowing each of the organ's memories to receive capture information. It is a good idea to first save whatever is stored in the organ's memory because, it will be erased by this procedure.

9. TRANSMITTING STOP DATA

This operation allows the organist to turn off the transmission and reception of individual stop data, known in MIDI terminology as "Non-Registered Parameters". In some cases, individual stop data (on/off) from the organ may conflict with data from an external MIDI device. When this occurs, select the "OFF" position by pressing the "A" and "Y" buttons.

NOTE: Piston changes will still be transmitted and received, because they are program changes.

Advance to the 11th Window. It displays:

TRANSMIT / RECEIVE STOPS ON

Press the "▲" and "▼" buttons to change the transmit / receive mode.

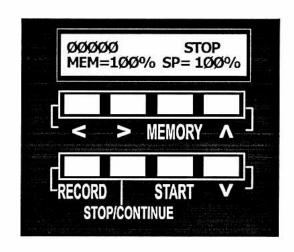
D. PERFORMANCE RECORDERTM OPERATING INSTRUCTIONS

The Allen Console ControllerTM includes an internal sequencer called the Performance RecorderTM. It allows you to record and play-back music, note for note, with expression and registration changes, including any piston selections. Recordings can be made from the Allen console or from an external MIDI keyboard connected to the MIDI ports.

NOTE: When recording two or more tunes in succession, use the piston registrations from only one memory level for all of the tunes you will be recording.

1. SELECTING RECORD/PLAY-BACK MODES

All Performance RecorderTM operations are controlled by the lower row of buttons on the Console ControllerTM. Pressing any one of the three buttons (RECORD, STOP/CONTINUE, START) will cause the window to display the Performance RecorderTM mode:



NOTE: The number in the upper left corner of the window is the counter number for the recorder. $\emptyset\emptyset\emptyset\emptyset\emptyset$ (all zeros) indicates the starting point of the first recording.

2. TO START RECORDING

To start recording, press and hold the RECORD button (lower left). While holding RECORD, momentarily press the START button. Position the Expression Shoes, press a piston or select stops/drawknobs and begin to play.

CAUTION! ALL PREVIOUSLY RECORDED MATERIAL WILL BE ERASED when you start recording from the ALL ZERO counter position.

NOTE: At the beginning of a recording, the sequencer automatically checks which stops/drawknobs are currently engaged, as well as the current expression pedal, Crescendo Pedal, and Tutti settings. Therefore, to minimize registration time (silence) during playback, set your registration before starting the recorder. Registration information is then placed at the beginning of the recording. Upon playback, the organ is automatically returned to the same settings that were selected at the beginning of the original recording.

When you have finished playing, press the STOP/ CONTINUE button to pause the recording. You can either play-back what you recorded, or continue recording another tune that will follow the previously recorded one.

3. TO CONTINUE RECORDING

You may record additional material while retaining previously recorded material.

Position the counter numbers to the end of the last recording that is to be retained. (See page 32, POSITIONING THE COUNTER NUMBER.)

Select the registration to begin the next recording. Press and hold RECORD and momentarily press the STOP/ CONTINUE button to

resume recording. The counter will begin to advance and you can begin to play the next piece.

NOTE: Any material from a prior recording located past the recording resumption point will be erased by this procedure. Current registration and expression, Crescendo, and Tutti settings are automatically inserted at the beginning of each recording segment. Recordings will be retained even if organ is turned off.

4. TO PLAYBACK A RECORDING

IMPORTANT - BEFORE STARTING any playback sequence be sure the EXPRESSION SHOES are FULLY OPEN.

Make sure you are viewing the Performance Recorder™ display to play back previously recorded material. Press the START button, the sequencer will play, from the beginning, the material saved in its memory. The counter number will start at the all zeros position. The stops will turn on and the organ will play. If you want to start anyplace in the counter number sequence other than all zeros, see CONTINUE PLAYBACK below.

TO STOP PLAYBACK Press the button marked STOP/CONTINUE.

To CONTINUE PLAYBACK when the sequencer is stopped at a given point other than all zeros, press the STOP/CONTINUE button.

NOTE: When continuing playback from any point after the starting point of a recording, the registrations will not automatically reset.

BE SURE THE APPROPRIATE STOPS HAVE BEEN SELECTED BEFORE CONTINUING PLAYBACK FROM WITHIN A RECORDING. IF PISTONS WERE USED DURING RECORDING, BE SURE THE SAME CAPTURE MEMORY IS USED DURING PLAYBACK.

5. POSITIONING THE COUNTER NUMBER

Use this procedure to select a point after the start of an existing recording, where playback or continued recording will begin.

When the recorder is stopped, the "≺" and ">" buttons may be used to decrease or increase the counter number. Think of these two buttons as having the same functions as the "Rewind" and "Fast Forward" buttons on a tape recorder. During recording, the counter number increases at a rate of one count per second. Playback or Record may be continued from any counter number selected.

6. CHANGING PLAYBACK SPEED

While stopped, or during playback, the playback speed can be gradually increased or decreased by using the "▲" and "▼" buttons. The playback speed ranges from 50% to 200%, with the original recorded rate being 100%. Changes are made incrementally and remain in effect until further adjustments are made or until the organ's power is turned off. Turning off the organ's power will automatically reset the playback speed to the originally recorded speed (100%).

During playback, you can press and hold the "▼" button to reduce the playback speed instantly to 50% of the recorded speed. Releasing this button returns playback to its original speed.

Pressing and holding the "A" button during playback will instantly increase (double) playback speed to 200% of recorded speed. Releasing this button returns playback to its original speed. This process is especially useful in scanning an existing recording to locate a desired point for continuing playback or recording. Upon reaching the desired point in the recording, press STOP/CONTINUE to stop playback.

7. RECORDING AN EXTERNAL MIDI DEVICE

Input from an external MIDI device can be recorded to the sequencer. Make sure the MIDI OUT of the external device is connected to the Allen Organ MIDI IN. The same rules apply when recording from an external MIDI sequencer.

NOTE: The external MIDI device's current tonal and expression settings <u>ARE NOT</u> recorded automatically at the beginning of recordings. For this reason, it is best to START recording before setting registration and expression levels of external devices.

For the external MIDI device to play on playback, the MIDI stop for the appropriate division on the organ must be turned on, and the MIDI OUT of the organ must be connected to the MIDI IN of the external device. The audio output of the device must also be connected to an audio system.

CAUTION! Make sure that the external MIDI device has been properly programmed to transmit the types of messages desired (MIDI channel selected, program changes, control data, etc.) before recording is started.

8. RETURNING TO THE FIRST WINDOW

To return to a normal playing mode, press MEMORY on the Console Controller™ panel, or press and hold the CANCEL piston, press the SET piston, release both. Either method gets the same result.

E. QUICK REFERENCE GUIDE

1. BASIC OPERATIONS REVIEW

- a. ADVANCING THROUGH THE WINDOWS: Hold SET, press "R".
- b. TO RETURN TO THE FIRST WINDOW: Hold SET, press CANCEL, release both.
- c. SETTING PISTONS: First window. Select desired registration. Hold SET and press the piston to remember the registration.
- **SELECT** d. TO **MEMORY** AND LOCK Α IT: First desired memory using the window. Select and " Y" buttons. Press hold MEMORY, and enter threedigit code, release MEMORY. "L" will appear.
- e. TO UNLOCK A MEMORY: Repeat previous item "d" above. "L" will disappear.
- f. TO UNLOCK ALL MEMORIES WITHOUT A CODE: Advance to the display "Unlock All Capture Memories". Press and hold MEMORY, press General Pistons 2-5-5, release MEMORY. Window will display "Done!"
- g. SET CLOCK: Advance display: "Set Clock". THE to Use "▲" and Use "≺" "**∀**" to change the digits. and "**>**" between hours and minutes. move Press and hold SET, press CANCEL, release both to reset clock.
- h. SELF-CHECK CAPTURE AND STOP ACTION: Advance to the display: "Self-Check". Press Great Piston 1. To discontinue, Press and hold SET, press CANCEL, release both, return to the First Window.

2. ADVANCED OPERATIONS REVIEW

- a. TO RECONFIGURE PISTONS: Advance to the display: "CONFIGURE PISTONS". Select the desired stops. Press and hold SET, press the desired piston. Return to First Window (press SET and CANCEL) and set new registrations (see section E,1,c. previous page).
- b. TO SET SECONDARY CRESCENDO "B": Advance to the display: "SET SECONDARY CRESC. and TUTTIS". SET stops in all 22 positions (Generals 1-10, Great 1-6 or theatre Accomp, and Swell 1-6 or theatre GT), just as you would set pistons. ALL 22 POSITIONS MUST BE SET EVEN IF YOU DUPLICATE SETTINGS.
- c. TO SET SECONDARY TUTTIS: Advance to the display: "SET SECONDARY CRESC. and TUTTIS". Select stops. Press and hold SET, press the Tutti piston you want to memorize the setting. In normal play press Cres B piston, and then press Tutti Piston I or II to access memorized registration.
- d. TO RESTORE FACTORY SETTINGS: Advance to the display: "RE-INITIALIZE PISTON CONFIGURATION". Use "▲" and "▼" to select the settings you want to restore. Press and hold MEMORY, press 2-5-5 using General Pistons.

F. MIDI GUIDE

1. MIDI FOR ORGANISTS

The term MIDI is an acronym for Musical Instrument Digital Interface. MIDI has been adopted by the music industry as a standard means of communication between digital musical devices. This enables devices of different types and manufacturers to communicate with ease. MIDI by itself will not make a sound. It is not necessary to understand all of the technical aspects of MIDI in order to take advantage of many of the benefits it offers. It is important to explore the potential MIDI holds for musicians, as well as the various MIDI applications available today.

a. TYPES OF MIDI DEVICES

MIDI devices fall into two categories. The first category consists of musical instruments such as organs and synthesizers, which transmit and receive MIDI data. The second category includes controllers and processors, that, as their name implies, can transmit, receive, or manipulate MIDI data but do not necessarily produce sound themselves. Sequencers, which are MIDI recording devices, fall into this category. Although the technical nature of their recording and editing processes differs from those of a tape recorder, many operate in similar fashion. Most are equipped with record, playback, fast forward and reverse controls that function in the same way as their tape recorder counterparts.

b.TYPES OF MIDI DATA

There are several types of MIDI messages that can be sent from one device to another. The most common is keying information, allowing one device to sense which keys have been played on another device. This means an organ equipped with MIDI can send information to other

MIDI devices, e.g., synthesizers or sequencers, and can play those devices simultaneously or record information to be played back later.

Allen Organs incorporate a complete MIDI system allowing the transmission and reception of all types of MIDI information (velocity keying, volume change, sustain, registrations, Crescendo settings and more). It is even possible to control several devices from one manual simultaneously, or control a different device from each manual of the console.

c. MIDI AS A PRACTICE TOOL

For the organist/choir director, the MIDI organ console and sequencer are valuable rehearsal tools for both choral and organ works. Anthem accompaniments may be recorded in advance and played back by the sequencer during choir rehearsal. The director, freed from the role of accompanist, can focus entirely on directing the choir. The sequencer can play the music back at a slower tempo without affecting pitch, or at a lower pitch without affecting tempo, features that are useful in rehearsing difficult choral passages. If the sequencer allows multi-tracking, each vocal section's part may be recorded on a different track, and then played back individually, or in any combination, for increased flexibility.

Multi-tracking can also be used in teaching and learning new organ works. The teacher may record each hand or pedal part on a different track, allowing the student to "mute" or turn off any part being practiced while still being able to hear the sequencer play the rest of the composition. The student's ability to hear the piece in its entirety from the earliest stage of learning a composition, and to become aware of the interrelationship of its voices, is especially valuable in learning contrapuntal works.

d. MIDI AS A REGISTRATION TOOL

In some churches and auditoriums it is difficult to judge the effectiveness of a registration from the organ console. Due to the acoustics of a room, or positioning of the console, the sound of the instrument may be different when listened to from the congregation's or audience's vantage point. MIDI allows the organist to evaluate registrations by recording the music using a sequencer, and then listening from different locations in the room as the music is played back.

e. OTHER USES FOR MIDI

MIDI has created new possibilities for the organist. The ability of the organ console to control external keyboards or sound modules puts an ever increasing array of non-traditional sounds at the organist's fingertips. A superior degree of control is made possible by the flexibility of an organ console. The ability to record MIDI data using a sequencer opens a variety of new possibilities during practice and performance situations. Computer software programs are available that allow musicians to play MIDI devices connected to a computer, and have their performance printed as conventional five-line musical notation. Because MIDI is an industry-wide standard, today's MIDI instruments will be compatible with tomorrow's MIDI innovations.

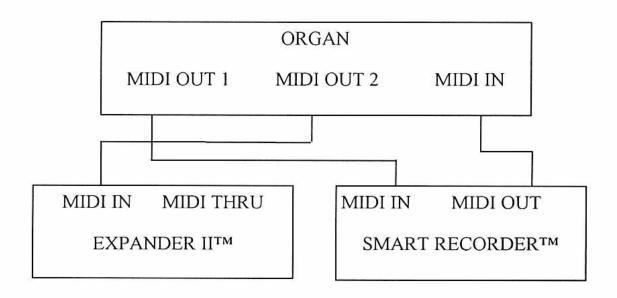
2. CONNECTING TO OTHER MIDI DEVICES

The Allen Organ can be connected to a variety of MIDI devices. A connecting diagram for a variety of MIDI devices can be found at the end of this section. Although the diagram is not meant to be an exhaustive list of possibilities, it illustrates the most commonly used connections of MIDI devices. If more specific information is required, please consult the owners' manuals of the external devices being connected to the organ.

SmartMIDI™

Your Allen Organ features SmartMIDITM, an expanded MIDI system with increased flexibility. Allen's SmartMIDITM provides a comprehensive interface between MIDI sound modules, such as the Allen MDS-Expander IITM, and digital sequencers such as the Allen Smart RecorderTM. Two MIDI Out ports, one switched and one unswitched, allow unprecedented control over external MIDI devices attached to the organ.

Under normal circumstances, MIDI sound modules should be connected to the switched MIDI port labeled MIDI OUT 2. Doing so allows the organist to disable the sending of MIDI data from the organ to the sound module. Devices such as MIDI sequencers should be connected to the unswitched MIDI port labeled MIDI OUT 1, eliminating the necessity of having to draw the MIDI stop controls before recording a digital sequence. The drawing below illustrates the proper procedure for connecting the Allen MDS-Expander™ and Allen Smart Recorder™ to an Allen Organ.



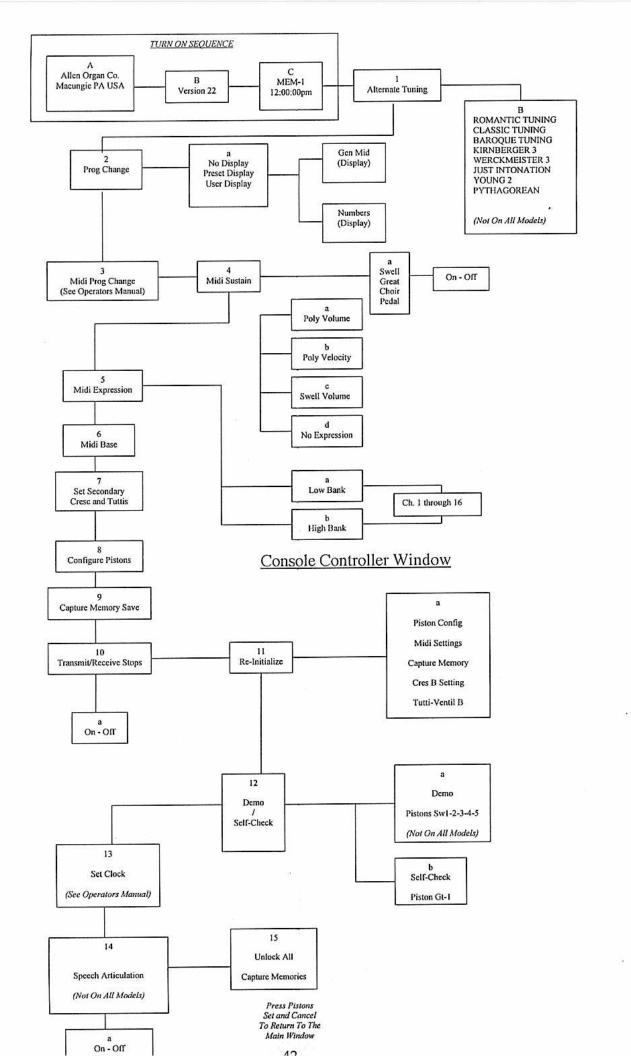
4. MIDI TRANSMISSION CHANNELS

MIDI information may be transmitted on several different channels simultaneously. This allows many channels of information to be sent through one cable and used independently from one another, similar to the way many television broadcasts can be sent through one cable. In order to receive the intended information, a MIDI device must be tuned to the same channel as the device which is sending the information. Your Allen Organ transmits MIDI information on several channels. When external MIDI devices are connected to the organ, it is important to make sure that the devices' channels of transmission and reception match the MIDI channels of the Allen Organ divisions to which they are assigned.

MIDI Program Change Messages are transmitted from the organ's General Pistons on MIDI Channel 8. These program change messages can be used to change the settings of MIDI sound modules or synthesizers which are connected to the organ. Please consult the owner's manual of your MIDI device(s) for more information on how MIDI Program Change Messages are handled by that particular device.

In addition to keying and divisional registration information, MIDI Volume Messages are sent on the individual MIDI channels for each division of the organ. These volume messages are controlled by the division's expression shoe. In this manner, the volume of connected MIDI devices may be controlled. Please consult the owner's manual of your MIDI device(s) for more information on how MIDI Volume information is handled by that device. If any external MIDI device is used to transmit information to the Allen organ, the same assignment of MIDI channels must be used as described elsewhere in this manual.

NOTES



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