Protégé ™
Theatre Organs
C-19c and Protégé Theatre Compact

AOC P/N 033-00084   Revised 5/27/03

ALLEN ORGAN COMPANY

For more than sixty years--practically the entire history of electronic organs-- Allen Organ Company has built the finest organs that technology would allow.

In 1939, Allen built and marketed the world's first electronic oscillator organ. The tone generators for this instrument used two hundred forty-four vacuum tubes, contained about five thousand components, and weighed nearly three hundred pounds. Even with all this equipment, the specification included relatively few stops.

By 1959, Allen had replaced vacuum tubes in oscillator organs with transistors. Thousands of transistorized instruments were built, including some of the largest, most sophisticated oscillator organs ever designed.

Only a radical technological breakthrough could improve upon the performance of Allen's oscillator organs. Such a breakthrough came in conjunction with the United States Space Program in the form of highly advanced digital microcircuits. In 1971, Allen produced and sold the world's first musical instrument utilizing digitally sampled voices!

Your organ is significantly advanced since the first generation Allen digital instrument. Organs with Renaissance™ technology are the product of years of advancements in digital sound and control techniques by Allen Organ Company. This system represents the apex of digital technology applied to exacting musical tasks. The result is a musical instrument of remarkably advanced tone quality and performance.

Congratulations on the purchase of your new Allen Organ! You have acquired the most advanced electronic organ ever built, one that harnesses a sophisticated custom computer system to create and control beautiful organ sound. Familiarize yourself with the instrument by reading through this booklet.

Contents

I. DESCRIPTION OF STOPS

PITCH FOOTAGE
The number appearing on each stop along with its name indicates the "pitch" or "register" of the particular stop. It is characteristic of the organ that notes of different pitches may be sounded from a single playing key. When this sound corresponds to the actual pitch of the playing key, the note (or stop) is referred to as being of 8' pitch; therefore, when an 8' stop is selected and middle C is depressed, the pitch heard will be middle C. If it sounds an octave higher, it is called 4' or octave pitch. If it sounds two octaves higher, it is called 2' pitch. Likewise, a 16' stop sounds an octave lower, and a 32' stop sounds two octaves lower.

Stops of 16', 8', 4', and 2' all have octave relationships, that is, these "even numbered" stops all sound octaves of whatever key is depressed. Pitches other than octaves are also used in organ playing. Their footage number always contains a fraction (i.e., 2 2/3, 1 3/5), and they are referred to as mutations. Because they introduce unusual pitch relationships with respect to the fundamental tone, they are most effective when combined with other stops, and are used either in solo passages or in small ensembles.

TONAL FAMILIES
Organ tones divide into two main categories: flues and reeds. In a pipe organ, flue pipes are those in which the sound is set in motion by wind striking directly on the edge of the mouth of the pipe. Flues include diapason tones, flute tones, and string tones. Compound stops and hybrid stops are "variations" within these three families.

The term "imitative" means that the organ stop imitates the sound of the corresponding orchestral instrument; for example, an imitative "Violin 8'" would be a stop voiced to sound like an orchestral violin.

In reed pipes, a metal tongue vibrates against an opening in the side of a metal tube called a shallot. The characteristic sounds of different reeds are produced through resonators of different shapes.

Your Protégé Chamber Series™ Allen Theatre Organ provides authentic examples of various types of voices as listed above. Some of these are protected by copyrights owned by the Allen Organ Company. The voices stored in memory are covered by United States copyright laws, pursuant to Title 17 of the United States Code, Section 101 et seq.

UNIFICATION
In theatre organs, and occasionally in classical organs, the system of "unification" was used. This allowed the same "rank" of pipes to be used at multiple pitches and on several manuals. Unification was the system theatre organs used to have large numbers of stops on the console with relatively few ranks of pipes as compared to a classical organ. For example, a Tibia Clausa rank may be drawn at 16', 8', 4', 2 2/3', 2', and 1 3/5' on a given manual and then still have some or all of those pitches duplicated on other manuals. In most classical organs, one rank would have one stop key on the console; however, in a theatre organ one rank could have many stop keys controlling it. Allen Theatre Organs are unified in the authentic theatre organ style.

Following is a discussion of individual ranks of the organ.

'D' Trumpet	Very imitative trumpet stop found on the style 'D' Wurlitzer theatre pipe organ.
Open Diapason	Foundation stop that adds fullness to ensemble. The 16' stop is usually called "Diaphone" because bottom octave of the 16' is a metal Diaphone sound. This lends power and good pitch sense to the pedal.
Tibia Clausa	The "foundation" rank of the theatre organ. This rank, coupled with its distinctive tremulant, is one of the main ingredients of a theatre organ.
Clarinet	Imitative solo reed can also be used as an ensemble stop.
Violins II	Two string tones slightly detuned from each other that create a shimmering quality in the sound.
Orchestral Oboe	Solo reed with a pungent nasal timbre somewhat imitative of its orchestral counterpart.
Vox Humana	Voice originally intended to imitate the human singing voice but really sound more like a goat! Used with the Tibia Clausa for the traditional theatre organ sound.
Concert Flute	Typical wood open flute of the 1920's, and used for accompaniment.

Chimes, Glockenspiel,
Chrysoglott, and the Cymbal   Imitative of their orchestral counterparts.

II. TREMULANTS

Your Protégé theatre organ has the most advanced authentic sounding tremulant system available. In addition to digitally sampling individual ranks without tremulant, Allen also samples individual ranks with tremulants on. When more than one rank is on the same tremulant system in a pipe organ, the tremulant sound from the playing the pipes is not identical from rank to rank. Each rank "reacts" to the varying supply of wind (tremulant) differently. Similarly, Allen sampled each rank of the organ with tremulant "on" to reproduce the authentic tremulant sound you hear. Even stops that are "ganged" together on one tremulant stop or tremulant motor will have a different tremulant sound. This Sampled Waveform Tremulant™ technology contributes to the huge ensemble sound of the organ.

III. EXPRESSION PEDAL

The Protégé Theatre Organ has one general expression pedal for the entire organ.

IV. CAPTURE COMBINATION ACTION

Your organ is equipped with an Allen multi-memory capture action, which offers the ultimate in registration control and convenience. The organist can set combinations on any memory and then lock the memory (except memory 1 that cannot be locked). This

prevents unwanted tampering with capture combinations. See the Console Controller™ instruction booklet later on in this manual regarding the setting of pistons.

THINGS TO REMEMBER

The "R" Piston, when activated, will recall the last combination set prior to using any general or divisional piston. General pistons affect all stops. Solo and Accompaniment pistons affect only stops in their division.

All pistons operate independently from each other. However, the capture action is not fully operable until approximately six seconds after the organ is turned on. Further information on setting, changing, and reconfiguration of pistons will be found in the Console Controller section of this manual.

V. TRANSPOSER

The Console Controller controls operation of the transposer. To raise or lower the music to a higher key, perform the following steps.

1. Press the cursor key twice (a box will illuminate around the large "0" in lower right corner of the window). When the zero is displayed, the organ is in neutral position.

2. The organ's pitch is now ready to be adjusted in half-step increments. Transposer will allow organist to raise pitch of organ up to 5 half steps, or down 7 half-steps.

3. To raise the pitch of the organ:
   With Controller displaying a "0" in the illuminated box, rotate the knob clockwise until a "1" is displayed in the illuminated box. The organ has now been raised one half step. Rotating the knob clockwise until a "2" is displayed in the box will cause the organ's pitch to be raised two half steps. Each advancement of the number (up to and including number 5) will raise the organ one half step. **Note: When the organ's pitch is altered by the transposer, the red LED will be illuminated.**

4. To lower the pitch of the organ:
   With the Controller displaying a "0" in the illuminated box, rotate the knob counter-clockwise until a "-1" is displayed in the illuminated box. The organ has now been lowered one half step. Rotating the knob counter-clockwise until a "-2" is displayed in the box will cause the organ's pitch to be lowered two half steps. Each advancement of the number (up to and including number –7) will lower the pitch of the organ one half step. **Note: When the organ's pitch is altered by the transposer, the red LED will be illuminated.**

5. To return the pitch of the organ to the neutral position:
   Rotate the dial until a "0" is displayed in the illuminated box. Press the cursor button once so that the large illuminated box disappears. The organ is now locked in the neutral position, and the red LED transposer light will no longer be illuminated.

Note: If organ is powered off, transposer will automatically return to neutral position.

VI. ARTISTIC REGISTRATION

Organ registrations fall into two broad categories: *solo* combinations and *ensembles*.

Solo

A solo combination is one in which a melody is played on one keyboard, the accompaniment on another keyboard, and the pedal often provides a light bass line. Almost any stop or combination of stops will sound good as a solo voice. A contrasting tone quality should be chosen for the accompaniment, so that the accompaniment is softer than the solo voice. The Pedal stops must provide a foundation for the sound without covering it. Caution is advised when the solo part involves chords, since some stops do not blend well in close harmony. Avoid fractionally pitched (mutated) stops and pungent sounding reeds unless they produce the effect you are seeking.

Most 8' reed stops make interesting solo voices. The addition of a 4' Tibia or a Tibia mutation (e.g., Twelfth or Tierce) to a light reed such as the Clarinet or Orchestral Oboe colors the sound further and increases its volume slightly. Adding an 8' Tibia to a reed will add body to the sound.

In creating registrations of your own, remember these three simple rules: (1) Seek tonal contrast between solo and accompaniment; (2) Be sure the solo is louder than the accompaniment; (3) Choose a solo whose character is appropriate to the specific piece.

ENSEMBLE

Ensemble registrations involve groups of stops that are played together, usually, but not always, with both hands on one keyboard. They are characterized by compatibility of tone, clarity, and occasionally power. Volumes have been written on the subject of ensemble registration. Following is a summary of the major points.

Ensembles are created by combining stops. Two factors are always to be considered: tone quality and pitch. Ensembles begin with a few stops at the 16', 8', and/or 4' pitch and expand "outward" in pitch as they build up.

Ensembles are generally divided into three tonal groupings or "choruses":

The *Tibia Clausa* chorus is the most fully developed with representation in various divisions of the organ and at every pitch from 16' (Tibia) through 1 3/5' (Tierce). Lighter stops can be added to the basic 8' and 4' Tibia combinations and then the Diapasons, Strings and Trumpets can be added to fill out an ensemble registration.

The *Reed* stops include those reed tones designed to be used in the ensemble buildup. Not all reed voices are ensemble tones. An Oboe, for example, is usually a solo stop. The various Trumpets, Horns, and Vox Humanas are usually ensemble voices that add brilliance, power, and incisiveness to the sound. If you have questions as to whether a specific reed is a solo or ensemble stop, refer to the stop glossary in the preceding section.

The *Pedal* ensemble is created in much the same way as the manual ensembles, with the Pedal starting at 16' pitch instead of 8'. Be careful that the volume of the pedals is not greater than that of the manuals. Although the manual to pedal couplers are useful in bringing clarity to the pedal line, especially on softer registrations, avoid the temptation to rely constantly on one or two 16' stops and a coupler. Many times in more rhythmic pieces you will want to have a predominantly 8' sound in the pedal.

This short treatment barely scratches the surface of the fascinating subject of organ registration. For those interested in gaining further insight into this vital area of organ playing, we recommend the following texts:

<u>Theatre Organ Registration:</u>
Strony, Walter. *Theater Organ Registration* $35.00

<u>Classical/General Organ Registration:</u>
Audsley, George Ashdown. *Organ Stops and their Artistic Registration.*
          Hialeah, FL: CPP Belwin, 1985
Irwin, Stevens. *Dictionary of Pipe Organ Stops.* 2nd Ed.
          New York: Macmillan Books, 1983.

Beginning Organist's Video:
Cherrington, Dr. Sally. A Church Organist's Primer. Volumes I, II, & III
          Allen Organ Company. Video Materials, 1998/1997
          AOC P/N: 031-0047, 031-0065, 031-0012.

VII. VIRTUAL ACOUSTICS™ SETTINGS

Virtual Acoustics™ provides the spatial ambiance of reverberant rooms of various sizes. Although most effective in poor (non-reverberant) acoustic environments, it enhances the sound even in optimal acoustic settings.

There are 21 selectable reverb pallets. One of these, the DEFAULT setting, is not adjustable. The other 20 pallets are selectable and adjustable. They allow an organist to modify the sound of the organ to accommodate a room's changing acoustical properties. For example, a room's reverberation characteristics change as the number of people present changes. Differences in reverberation time also occur when a room's windows are opened or closed.

The rocker switch labeled VIRTUAL ACOUSTICS™ in the Console Controller must be ON to hear the selected reverb. The amount of reverb can be changed on the 20 adjustable selections. The selected reverb level, measured in dB (decibels), is shown in the Console Controller™ window. The range of control is from Ø dB to -3Ø dB. Minus 3Ø dB is the least amount of reverb; Ø dB is the most reverb available. <u>When you change the Virtual Acoustics™ setting, you must turn the rocker switch OFF and ON again for the new setting to take effect</u>.

VIII. INSTALLATION, VOICING, AND CARE OF THE ORGAN

INSTALLATION

Wherever your Protégé Theatre Organ may be situated, careful installation is a prerequisite to achieving successful results. Your Allen representative is well qualified to guide you in planning for this. Allen Organ Company factory assistance with planning the installation is available and may be sought by your local Allen representative. Once the organ is installed, be mindful of changes made to the room it is located in. Care must be taken to insure that when acoustical changes occur, your Allen Organ representative is notified.

VOICING

The organ presents unprecedented accuracy in the scaling and voicing of each note of every stop. Should your needs be such that these parameters need to be changed, your Allen Organ representative is able to help make these changes. This musical breakthrough is an inherent part of the engineering design of the instrument. Final adjustments in scaling and voicing involve procedures that are best left to an expert. These adjustments are normally a part of installation and, once done, should not require changes. If the instrument is moved to a new location or major changes are made to the acoustical properties of the room the organ resides in, the instrument may need to be tonally finished again.

Your Allen Organ not only faithfully reproduces the organ traditions of the past but also anticipates the innovations of the future. Should you have questions that are not addressed in this manual, please do not hesitate to contact your local Allen Organ representative. Welcome to the family of satisfied Allen Organ owners!

BATTERY BACKUP SYSTEM

The memory for the capture system on your Chamber Series™ Organ is sustained by a Lithium battery. This allows capture settings and related items to be retained in memory when the organ is switched off or unplugged. Under normal circumstances, the Lithium battery should last for several years. A built-in warning system will alert you when the battery becomes weak and needs to be replaced. Have the Console Controller™ open before the organ is turned on. If there is a problem the window will display for about six seconds after the organ is switched on.:

```
Power Failure
REPLACE
BATTERY !
```

Should the battery in your Chamber Series™ organ require replacement, contact your local authorized Allen Organ service representative.

CLEANING AND POLISHING

Your Allen Organ constitutes a major advance in long-term maintenance-free operation. There are no regular maintenance procedures required and, therefore, no periodic maintenance schedules to be observed. Reasonable care will keep the instrument looking beautiful for years to come. The wood surfaces may be cleaned using a soft cloth dampened with lukewarm water. A mild solution of lukewarm water and furniture soap may be used to remove fingerprints, etc. Polish dry with a soft cloth.

Do not use wax, sprays or oils on the finish. Satin finished surfaces will take on a semi-gloss appearance when waxed and will eventually become yellowed. If you need to "polish" the organ for a special event, use only a very high quality wood furniture polish. Keys and stops should be cleaned using two clean cloths. Immerse one in clear, lukewarm water and wring it thoroughly damp dry. Loosen the dirt with this cloth, then polish with the dry cloth. Do not use soap or detergent on the keys or stops. Do not use wax, sprays or oils on the finish. Satin finished surfaces will take on a semi-gloss appearance when waxed and will eventually become yellowed. Keys and rocker stops should be cleaned using two clean cloths. Immerse one in clear, lukewarm water and

wring it thoroughly damp dry. Loosen the dirt with this cloth, and then polish immediately with the dry cloth. Do not use soap or detergent on keys or rocker stops.

You have purchased a remarkable organ that not only faithfully reproduces the organ traditions of the past but also anticipates the innovations of the future. Should you have questions that are not addressed in this manual, please do not hesitate to contact your local Allen Organ representative. Welcome to the family of satisfied Allen Organ owners!

IX. SAFETY

<div style="border:1px solid black; padding:10px;">

CAUTION

Do not plug the instrument into any current source other than 105-128 volts, 50/60-Hertz alternating current (AC). A verified-grounded outlet is essential to proper operation and protection of the instrument. Proper polarity should be checked with an AC circuit analyzer before connecting the organ.

Do not change the cable plug or remove the ground pin or connect with a two-pole adapter.

If you are in doubt about your electrical connection, consult your local electrician or electrical power company.

In churches where circuit breakers are turned off between worship services, the circuit breaker affecting the organ console AC power should have a guard installed to prevent its being accidentally switched off.

Read and comply with all instructions and labels that may be attached to the instrument.

</div>

<div style="border:1px solid black; padding:10px;">

Warning: This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause interference to radio communications. It has been type tested and found to comply with the limits for a Class B Computing Device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. Should this equipment cause interference to radio communications, the user at his own expense will be required to take whatever measures may be necessary to correct the interference. Whether this equipment actually causes the interference to radio communications can be determined by turning the equipment off and on. The user is encouraged to attempt to correct the interference by one or more of the following measures:

- Reorient the receiving antenna.
- Relocate the organ with respect to the receiver.
- Move the organ away from the receiver.
- Plug the organ into a different electrical outlet, so that the organ and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio technician for additional suggestions.

</div>

X. MIDI GUIDE FOR ORGANISTS

WHAT IS MIDI?

The term MIDI is an acronym for Musical Instrument Digital Interface and is nothing more than a communications system. MIDI has been adopted by the music industry as a standard means of communication between musical devices. MIDI enables devices of different types and manufacturers to easily communicate with each other. It is not necessary to understand all of the technical aspects of MIDI in order to take advantage of its benefits. It is important to explore the potential MIDI holds for musicians, as well as the various MIDI applications available today.

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. This means that an organ equipped with MIDI can send information to other MIDI devices, e.g., electronic pianos, keyboard synthesizers or sequencers, and can play those devices simultaneously or record information to be played back later.

Allen organs incorporate an expanded MIDI system, Smart MIDI™ allowing the transmission of volume changes, registrations, and more. It is even possible to control several devices from one manual simultaneously, or separately control different devices from each manual of the console.

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, freeing the director from the role of accompanist, and allowing him to concentrate on directing the choir. The sequencer may even 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 and to become aware of, from the earliest stage of learning a composition, the interrelationship of its voices, is especially valuable in learning contrapuntal works.

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 acoustics of a room, or positioning of the console, the sound of the instrument may be different when listened to from a congregation or audience's vantage point. MIDI allows the organist to check registrations by recording his playing and registration to a sequencer and then listening from different locations in the room during the music's playback.

OTHER USES FOR MIDI

An organist's ability to control external keyboards or sound modules puts an ever increasing array of non-traditional sounds at the organist's fingertips, with a degree of control only possible through the flexibility of an organ console. The ability to record MIDI data with the use of a sequencer opens a variety of new possibilities, both in practice and performance situations. Computer 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 Smart™ MIDI instruments will be compatible with tomorrow's MIDI innovations.

The MIDI-capable Allen Organ consoles may be connected to a variety of MIDI devices. The drawing below illustrates the proper procedure for connecting the Allen MDS-Expander II™ and Allen Smart Recorder™ to the Allen Protégé™ Chamber Series™ organ.

CONNECTING THE ALLEN ORGAN TO OTHER MIDI DEVICES

ORGAN	MDS-EXPANDER™	SMART RECORDER™
MIDI OUT 1 MIDI OUT 2 MIDI IN	MIDI IN MIDI THRU	MIDI IN MIDI OUT
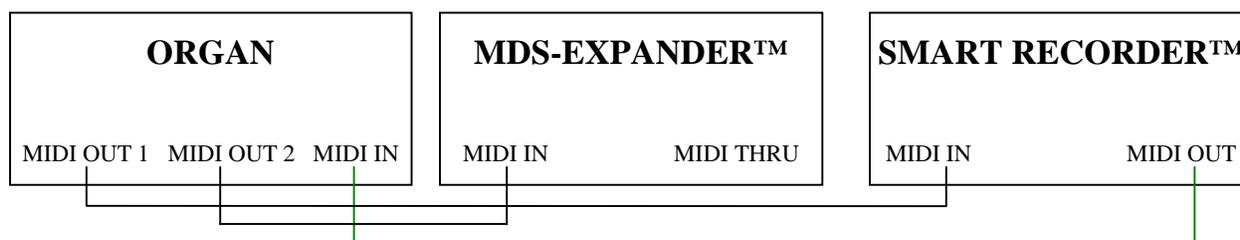
If you are connecting to external MIDI devices not made by Allen Organ Company and more specific information is required, please consult the owner's manuals of the external devices being connected. Contacting the local Allen Organ representative also will be helpful.

SmartMIDI™

Your Allen Protégé™ Chamber Series™ organ features SmartMIDI™ an expanded MIDI system with increased flexibility yet, simple operation. Allen's SmartMIDI™ provides a comprehensive interface between MIDI sound modules such as the Allen MDS-Expander II™, and digital sequencers such as the Allen Smart Recorder™. Two

MIDI Out ports, one switched and one un-switched, 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 un-switched MIDI port labeled MIDI OUT 1, eliminating the necessity of having to draw the MIDI stop controls before recording a digital sequence.

MIDI TRANSMISSION CHANNELS

MIDI information may be broadcast on several different channels simultaneously. This allows many channels of information to be sent through one cable and used independently of one another similar to the way several 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 devise that 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.

For example, the C-19c and Protégé Theatre Compact transmit MIDI information on the following channels:

    Solo Manual   =   Channel 1
    Accomp Manual =   Channel 2
    Pedal Manual   =   Channel 3
    General Pistons =   Channel 8

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 setting of MIDI sound modules or synthesizers that 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 note information, *MIDI Volume Change Information* is sent on MIDI channels 1, 2, and 3 by the organ's single expression pedal. In this manner, the volume level of connected sound producing MIDI devices may be controlled. Please consult your MIDI device's owner's manual for information on how MIDI volume information is handled by them.

If any external MIDI device is used to transmit information to the organ, the same assignment of MIDI channels must be used as outlined above.

MIDI SETTINGS FOR ALLEN'S MDS-EXPANDER II™

Your Allen Organ comes pre-programmed with organ registration and MIDI preset selection information for an Allen MDS Expander II™ sound module. The pre-programmed settings allow organists to access various presets from pistons of each of the organ's capture memory levels when connected to one of these. **Note: *This information is <u>not</u> permanent in the memory of the organ, so please make a copy of the current capture in the organ if you wish to save those registrations.*** To review the copy process, see the information in the publication **"**Console Controller Guide for the Chamber Series™".

GENERAL PISTON PRE-PROGRAMMED MIDI SETTINGS - PTC

Memory 1
Pistons 1 through 7 access Preset 1 through 7 of the MDS-Expander II™.

Memory 2
Pistons 1 through 7 access Preset 8 through 14 of the MDS-Expander II™.

Memory 3
Pistons 1 through 5 access Preset 15 through 21 of the MDS-Expander II™.

Memory 4
Pistons 1 through 5 access Preset 22 through 28 of the MDS-Expander II™.

The following example demonstrates how to program General Piston 5 on Memory 3 with a corresponding set of preset Voices from the MDS-Expander II™:

1. First, access Memory Level 3 in the Console Controller.

2. Next, program the MDS-Expander II™. Consult the Owner's Manual for the MDS-Expander II™ for detailed information on this process.

3. Once you have selected the combination you want, press the Set button <u>on the Expander II™</u>. The window now displays *Please Set Capture…* .

4. Press General Piston 5 on the Organ. The MDS-Expander™ now displays ***Preset 19*** with the voices you have chosen.

GENERAL PISTON PRE-PROGRAMMED MIDI SETTINGS - C-19c

Memory 1
Pistons 1 through 5 access Preset 1 through 5 of the MDS-Expander II™.

Memory 2
Pistons 1 through 5 access Preset 6 through 10 of the MDS-Expander II™.

Memory 3
Pistons 1 through 5 access Preset 11 through 15 of the MDS-Expander II™.

Memory 4
Pistons 1 through 5 access Preset 16 through 20 of the MDS-Expander II™.

DIVISIONAL PISTONS PRE-PROGRAMMED MIDI SETTINGS - C-19c

Divisional Pistons are programmed for the four memories of the organ. Here is how it works:

There are four divisional pistons for the Swell, and four for the Great/Pedal divisions. You can choose one MIDI voice per piston and set them to Pistons 1 through 4.

This example programs the Oboe with Trem on Swell piston 3 of Memory 4:

1. Access Memory 4 in the Console Controller

2. Next, on the MIDI MDS-Expander II™, press the Division button until the arrow is blinking at Swell (SW).

3. Next, press the Voice button, then use the Up/Down buttons to scroll to the Oboe. Once the word "Oboe" appears in the window press the Trem button and an asterisk (**) appears.

4. Next, press the Set button which is directly below the Trem button… the window now displays "Please set capture…". Press Swell Divisional 3 piston and you have now locked the Oboe with Trem onto this piston.

     Note: The organ must be in "User" Mode for all of this to work properly. Check the first window of the Console Controller to see if there is a "U" in the bottom right corner. If not, scroll to Window 2 and set it to User. In Window 6 the Controller must be set to "Low Bank".

Additional information about MIDI is included in the Console Controller Guide that follows in this manual.

XI. Chamber Series
Console Controller™ Guide

Introduction

The Console Controller™ is an interface that controls many organ functions and a variety of MIDI functions. It includes a window that displays functions one at a time, two function buttons and a rotary dial that may be used to make selections. Each window function is described here in detail.

A. BASIC OPERATION

1. START-UP SEQUENCE

Upon turning on the organ's main power switch the Console Controller™ will display **"Allen Organ Co. Copyright (©) 2000"** in its display window for several seconds. During this start-up period <u>do not</u> press any keys, pedals, stops or move the expression shoe(s). You may also notice that the power LED will blink momentarily as well as the stop indicators. The organ's computer is booting up during this time period and this is considered a NORMAL condition. The organ will be ready to play when the Main window function appears on the Console Controller™ and the power LED glows steadily.

The Main window function is the window that indicates the current capture memory as well as the current Transposer value. The capture memory value is on the first line at the upper left of the display. The Transposer value is located on the right side of the display. The Transposer value actually encompasses both lines.

WARNING: If a warning is displayed in the start-up sequence, contact your authorized Allen representative immediately.

2. ADVANCING THROUGH ALL WINDOWS

To advance the Console Controller™ display to each next window, press the **CURSOR** button until the blinking **CURSOR** is over the abbreviation **MEM** in the display. Once the abbreviation **MEM** is highlighted, slowly turn the **ROTARY DIAL** clockwise and the display will advance to the next window function. When the second window function is displayed, rotate the **ROTARY DIAL** counter-clockwise, the window will return to the Main window display function. Turn the **ROTARY DIAL** counter-clockwise again and the last window function will display.

REMEMBER: You may return to the *Main Window* function at any time by pressing and holding the **SET** piston. Then, while holding **SET**, press the **CANCEL** piston, then release both pistons. This process will always return the Console Controller's display to the Main Window function.

3. SELECTING THE FOUR CAPTURE MEMORIES

The Main window function must be displayed *(See Section A-2)*. Locate the "CURSOR" button on the face of the Console Controller™. Press this button to move the cursor to the first number to the right of the abbreviation **"MEM"**. Once the memory number is selected, turn the ROTARY DIAL clockwise to select the memories sequentially from **MEM 1, to MEM 2, to MEM 3.** Or, turn the ROTARY DIAL Counter-Clockwise to select the memories sequentially from **MEM 1, to MEM 4, to MEM 3.**

The 4 memories allow you to save different registrations on each piston/toe piston 4 times. This means **General Piston 1** on **MEM-1,** may be totally different from **General Piston 1** on **MEM-2, MEM-3, or MEM-4.**

NOTE: On standard models a factory pre-registered set of registration examples is stored on each piston of the last capture memory (Memory 4). You may change Memory 4 registrations to your preferred registrations knowing they can be restored to these original factory settings. Please see, RESTORING FACTORY SETTINGS referenced later in this manual.

4. SAVING REGISTRATIONS USING PISTONS
A **registration** is any combination of stops. 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 are those that affect all stops on the organ. **Divisional Pistons** affect only those stops associated with the particular manual above them.

To save a registration to a General Piston.
The Main window function in the Console Controller™ must be displayed (*See Section A-2)*. Select any memory number (MEM-2, MEM-3, or MEM-4, etc.); however, for this example use MEM-1.

Next, **select the stops** you want General Piston 1 to remember. Once the stops are illuminated, **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 1 the stops you selected.

NOTE: General Pistons are sometimes set gradually from soft to loud. General 1 is softest and General 5 or 7 the loudest.

Save Registrations to a Divisional Piston. *(Applicable for some models)*
The Main window function in the Console Controller™ must be displayed, (*See Section A-2)*. **Select a memory** (MEM-1, MEM-2, etc.) as aforementioned for the General Pistons. **Select the division stops** you want the associated Divisional piston to remember. **While holding** the **SET piston**, **press and release a Divisional Piston** you want to save to. Finally, **release the SET piston**. The Divisional Piston you pressed will now store the combination of stops you illuminated in the memory you selected.

Registering the Intermanual Couplers.
The intermanual coupler's, (e.g., Swell to Great, Great to Pedal, 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*).

5. 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. Therefore it is important not to place any registrations you do not wish to lose in Memory 1.

The Main window function in the Console Controller™ must be displayed, (*See Section A-2).* **Select the memory (2 to 4)** you wish to lock by highlighting the memory number and turning the ROTARY DIAL to the memory you want to lock.

Once you have stored your registrations to pistons, (*See Section A-4)* choose three digits you can easily remember (e.g., 1-2-3, 1-1-1, etc.). Any combination of three numbers will do. Use General Piston 1 for the number one digit, General Piston 5 for the five digit and General Piston 7 for the seven digit if available. You may only use the General Pistons for this function. Divisional Pistons *(if applicable)* will not work.

With the memory number you wish to lock still selected, locate the button with **MEM** above it on the Console Controller™. **Press and hold the MEM button**. **While holding the MEM button, press the General Pistons that correspond to your three digit code one at a time in the order of your selected code.** In other words, if your selected code is 1-5-5, press and hold the **MEM** button on the Console Controller™, then press and release General Piston 1, then press and release General Piston 5, and once again press and release General Piston 5. You may now release the **MEM** button on the Console Controller™. This procedure will cause an "L" to appear next to the MEM number on the display window indicating this memory is now locked. As long as it remains locked, the piston registrations on that memory cannot be changed. Other organists will still be able to use these locked registrations however, they will not be able to change them. Again, it is important to choose a three digit code that will be easy to remember.

6. UNLOCKING MEMORIES USING YOUR CODE
The Main window function on the Console Controller™ must be displayed: (*See Section A-2)* To unlock a memory using your three digit code, select the memory to be unlocked. Once selected, press and hold the MEM button on the Console Controller™. While pressing the MEM button, enter the same three-digit code that was used to lock this memory (*See Section A-5),* using the General Pistons. Remember, Divisional Pistons will not operate this function, only General Pistons will. Release the MEM button. The "L" will disappear, indicating that this memory is now unlocked.

Should a memory be locked and no one knows the code, it can still be unlocked. *(See Section A-7)*

7. UNLOCKING ALL CAPTURE MEMORIES—(Without code)
Advance to the window function: **"UNLOCK ALL CAPTURE MEMORIES"**. *(See Section A-2)* Press and hold the **MEM** button on the Console Controller™, then press General Pistons **2-5-5** in sequence one at a time. Release the **MEM** button on the Console Controller™, the window will display DONE!! when the organ is finished unlocking all the capture memories. The window display will then automatically return to the Main window function. All capture memories are now unlocked, including those memories, other organists may have locked. Registrations in all memories will remain unchanged.

8. STOP ACTION and CAPTURE SELF CHECK
This feature self-checks the capture system. It tests to insure each stop is functioning properly and able to be controlled by the capture system. Advance to the window function: **"SELF CHECK"**. *(See section A-2)* To start self-check, move the cursor to

highlight **OFF** then turn the ROTARY DIAL until the display changes to **ON**. In a second or two, the self testing process will begin. During this self testing procedure each stop will illuminate ON then OFF sequentially. *If any stop does not illuminate, notify your Allen Organ authorized service technician.*

During this testing process you can interrupt and return to the Main window function at any time. Press and hold the **SET** piston, then press the **CANCEL** piston and then release both. The testing process will stop and the window will return to the Main window function.

9. VIRTUAL ACOUSTICS SETTINGS

There are 21 Virtual Acoustic reverb pallets to select from. One of these is the DEFAULT setting that is not adjustable. The other 20 styles are adjustable. This allows an organist to modify the sound of the organ to accommodate a room's changing acoustical properties. (E.g., a room's natural reverberation characteristics become less reverberant as the number of people present increases. A room's reverberation time changes when a room's windows are opened or closed. It also changes with different levels of humidity.)

The rocker switch labeled VIRTUAL ACOUSTICS on the Console Controller™ must be ON to hear the default reverb or one of the 20 customized Virtual Acoustic selections. The Virtual Acoustics switch on the Console Controller™ has graphics that are depicted as a LINE and a CIRCLE. The LINE on the switch is ON and the CIRCLE on the switch is OFF. The amount of reverberation can be changed on the 20 customized selections. The amount of reverb is shown in dB (decibels). The range of control is from Ø dB to -3Ø dB. -3Ø dB is the least amount of reverb and Ø dB is the most reverb available.

To access the Virtual Acoustic settings, advance to the Set Reverb window function *(See Section A-2)*. The window will display: **"SET REVERB"** and list one of 20 reverb types on the window's second line. For example, to change to a different reverb type press the CURSOR button on the Console Controller™ until the cursor is on the second line of the display and on the reverb type. Once the cursor is positioned, turn the ROTARY DIAL to select another reverb type. The display will also show the current amount of reverberation applied to the setting selected. To change the amount of reverberation applied to the selected reverb type, press the CURSOR button until the cursor is on the reverb amount (the decibel number). Turn the ROTARY DIAL to change the amount of reverberation. The amount of reverb is shown in dB (decibels). The range of control is from Ø dB to -3Ø dB. -3Ø dB is the least amount of reverb and Ø dB is the most reverb available.

B. ADVANCED OPERATION

1. SELECTING AN ALTERNATE TUNING

Advance to the Alternate Tuning window function *(See Section A-2)*. It will display: **"ALTERNATE TUNING".** (*The current Alternate Tuning will appear after =.)*Allen Chamber Series Organs offer seven *Alternate Tuning Temperaments,* plus the standard Romantic tuning. These seven are accessible from the Console Controller™.

To select an *Alternate Tuning* from the list, press the CURSOR button on the Console Controller™ so that the cursor is on the name of the tuning. Turn the ROTARY DIAL to

select one of the seven tuning temperaments. The organ's overall tuning will be changed to the selected *Alternate Tuning*, once you turn on the stop labeled ALTERNATE TUNING.

The selected tuning will remain the *Alternate Tuning* until either another *Alternate Tuning* shown in the Console Controller™ window is selected, or the ALTERNATE TUNING stop 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 Tuning Temperaments.* 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 primarily of historical interest; however, these tunings may be limited in their application to modern music. When one of these tunings has been selected, it is normal for some intervals to sound out of tune; music may sound strange when played in certain keys.

2. CONFIGURING PISTONS

This procedure enables pistons to control stops that are normally not controlled by those pistons. Separate piston configuration changes can be made on each capture memory. E.g., A General Piston can be configured to respond like a Divisional Piston.

NOTE I: Changing the configuration of a piston *will not affect the registrations* previously remembered by that piston, prior to its reconfiguration. Piston configurations apply to all memories.

NOTE II: Reconfiguring a piston does not change its MIDI channel assignment. Divisional Pistons cannot make Expander II™ preset group selections.

TO RECONFIGURE PISTONS:
Advance to the Configure Pistons window function *(See Section A-2)*. It will display: **"CONFIGURE PISTONS"**. Press the CURSOR button until the cursor is on the "D" of disabled. Turn the ROTARY DIAL to change the display to ENABLED instead of DISABLED.

Once ENABLED is displayed, select ***all*** of the stops you want the General Pistons to be able to remember. Any stops not illuminated, will not be able to be registered later.

Once the stops you want are selected press and hold the "SET" piston, then press the General Piston that you want to reconfigure. You must return to the Main window function to store registrations to this General piston. *(See Section A-4)*

EXAMPLES
CONFIGURING A GENERAL PISTON TO BECOME A DIVISIONAL PISTON:
Advance to the Configure Pistons window function *(See Section A-2)*. It will display: **"CONFIGURE PISTONS"**. Press the CURSOR button until the cursor is on the "D" of disabled. Turn the ROTARY DIAL to change the display to ENABLED instead of DISABLED.

Select ***all*** of the stops from only one division. Any stops not illuminated, will not be able to be registered later. Press and hold the "SET" piston, press the General Piston you want to respond like a Divisional piston. This piston will only register stops from the

selected division. You must return to the Main window function to store Divisional registrations to this General piston *(See Section A-4)*.

CONFIGURING DIVISIONAL PISTONS *(Applicable for some models)*
Several examples of how this feature might be used are: (1) Divisional Pistons can be configured to respond like General Pistons. (2) Divisional Pistons normally *will not remember* the settings 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.

MAKE DIVISIONAL PISTONS BECOME GENERAL PISTONS:
Advance to the Configure Pistons window function *(See Section A-2)*. It will display: **"CONFIGURE PISTONS"**. Press the CURSOR button until the cursor is on the "D" of disabled. Turn the ROTARY DIAL to change the display to ENABLED instead of DISABLED.

Select *all* of the stops on the organ. Any stops not illuminated, will not be able to be registered later. Press and hold the "SET" piston, then press the Divisional piston you want to make respond like a General piston. This Divisional piston will now register stops from all divisions.   You must return to the Main window function to store registrations to this General piston *(See Section A-4)*.

TO ADD "SWELL TO GREAT" INTERMANUAL COUPLER TO GREAT DIVISIONAL PISTONS:

Advance to the Configure Pistons window function *(See Section A-2)*. It will display: **"CONFIGURE PISTONS"**. Press the CURSOR button until the cursor is on the "D" of disabled. Turn the ROTARY DIAL to change the display to ENABLED instead of DISABLED.

Select *all* of the Great Division stops, *and* the SWELL TO GREAT intermanual coupler. Press and hold the "SET" piston, then press the Divisional Piston(s) that you want the SWELL TO GREAT intermanual coupler assigned to. The Divisional piston(s) you selected will now also register the SWELL TO GREAT intermanual coupler in your registrations. You must return to the Main window function *(See Section A-4)* to save registrations to the Divisional Pistons, using combinations of stops and the SWELL TO GREAT coupler.

RECONFIGURE A DIVISIONAL PISTON TO CONTROL ONLY TREMULANT STOPS:
Advance to the Configure Pistons window function *(See Section A-2)*. It will display: **"CONFIGURE PISTONS"**. Press the CURSOR button until the cursor is on the "D" of disabled. Turn the ROTARY DIAL to change the display to ENABLED instead of DISABLED.

Select *all* of the organ's Tremulant Stops. Press and hold the "SET" piston, then press a Divisional piston. The Divisional piston you have selected will now *only* control the Tremulant stops. You must return to the Main window function *(See Section A-4)* to save registrations on this Divisional piston to only control the Tremulant stops.

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

3. RESTORING ORIGINAL FACTORY SETTINGS

Advance to the Re-Initialize window function *(See Section A-2).* It will display: **"RE-INITIALIZE PISTON CONFIG."** Certain functions can be restored to original factory settings. These functions are (1) Piston Configurations, (2) Capture Memory 4, (3) MIDI Settings. Each of these functions can be restored individually. To select one of these factory settings to restore press the CURSOR button on the Console Controller™ until the first letter of the bottom line is selected. Turn the ROTARY DIAL to select the item you want to re-initialize. Once selected, press and hold the "MEM" button on the Console Controller™, then press General Pistons 2-5-5 in sequence.

If the Piston Configure function was selected then the original factory piston configuration settings have been restored. Follow this same procedure to restore each factory setting.

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 SmartMIDI™ 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 owner's 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 Organs		
Channel	Organ Division	Channel		Organ Division
1	Swell	1	=	Great
2	Great	2	=	Accompaniment
3	Pedal	3	=	Pedal
4	Choir	4	=	Solo
5	Solo	5		Accomp. 2nd Touch
6	Not Used	6		Not Used
7	G1/G2 Pistons	7		T1/T2 Pistons
8	General Pistons	8		General Pistons

NOTE: The Base Channel always resets to Channel 1 whenever the organ is turned ON *(see section C-6).*

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 to receiving MIDI devices when a piston is pressed. 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.

One of three Program Change Modes can be selected in the Console Controller™ display window. These three modes are named **"PRESET", "USER", AND "NO"**. These three mode options determine how the organ is going to send program change information to MIDI devices. They allow external MIDI device voice changes to occur quickly by simply pressing a piston. This means a MIDI voice can be registered like traditional organ stops.

SELECTING A PROGRAM CHANGE MODE:

Advance to the Program Change window function *(See Section A-2)*. It will display: **"PROG CHG"** along with other information. Use the CURSOR button on the Console Controller™ to place the cursor on either **USER, PRESET,** or **NO,** whichever one is displayed. Once the cursor is positioned, turn the **ROTARY DIAL** to make a selection.

CAUTION: You must understand how to operate and when to use each of these modes before you change them!

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 through 5 or 7 (depending on your model) on MIDI Channel 8, the organ's General Piston control channel. The Divisional Pistons *(check if applicable on your particular model)* for each division will send program changes 1 through 4 on the channels as shown in the MIDI channel assignment list *(See Section C-1)*. For example, Swell Piston 1 would send Program Change 1 on Channel 1. Great Piston 2 will send Program Change 2 on Channel 2, etc., (*See Section C-6, Changing the MIDI Base Channel for additional information on MIDI channel assignments*).

USER MODE: With this mode selected the organ will send program change information that can 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 digits may also be selected). Any bank switch number between 0 and 127 can be assigned to any Divisional Piston *(check if applicable on your particular model)*. 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)*.

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

3. 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 CURSOR button along with the ROTARY DIAL to select one of the two modes.

GENERAL MIDI SOUND NAMES:

First, make certain the word **USER** is selected as the program change mode. Then by using the "CURSOR" button on the Console Controller™, place the cursor on the second line of the display following the word **DISPLAY**. Turn the ROTARY DIAL until the display shows **GEN MIDI** following the word **DISPLAY.** Advance to the next window function by placing the cursor back on the first line and word **"PROG CHG"**. Then turn the ROTARY DIAL clockwise until the window function **"MIDI PROG CHANGE"** appears on the display. Press any piston to view the General MIDI sound name assigned to that piston for any General MIDI device.

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

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

MIDI PROGRAM NUMBERS:
First, make certain the word **PRESET** is selected as the program change mode. Then by using the "CURSOR" button on the Console Controller™, place the cursor on the second line of the display following the word **DISPLAY**. Turn the ROTARY DIAL until the display shows **NUMBERS** following the word **DISPLAY.** Advance to the next window function by placing the cursor back on the first line and word **"PROG CHG"**. Then turn the ROTARY DIAL clockwise until the window function **"MIDI PROG CHANGE"** appears on the display. Press a General or Divisional Piston. The Console Controller™ window will display the same MIDI program change number as the associated piston pressed. A 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 the overall number of pistons on you model organ.

ASSIGNING MIDI PROGRAM CHANGE NUMBERS
With **USER** selected as the program change mode *(See above instructions to change modes)*, 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.

After selecting NUMBERS along with USER mode, advance to the next window function **"MIDI PROG CHANGE",** then press a General or Divisional Piston to view the Program Change Numbers assigned to that particular piston. 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 indicate that General Piston 1 has been pressed and that BANK 0 is assigned to that piston. On the second line of the display 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 CURSOR button on the Console Controller™ and the ROTARY DIAL to change the Program Change Numbers and also to change the BANK Numbers (*See Section C-5, Selecting BANK numbers*).

NOTE: Allen Organs use MIDI Program Change 0 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 0 for MIDI OFF. Consequently, Program Change 0, ("- - -" *in the window*) when sent from the organ, will correspond to Program Change 1 on those MIDI devices. Program Change 1 sent from the organ will correspond to Program Change 2 on those MIDI devices etc. Please check the manufacturer's specification on MIDI Program Changes for your particular MIDI device for more information.

4. 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).*

If your organ has an Allen MDS-Expander II™ or Smart Recorder™ the selection procedure is simpler than the procedure described here; however, **USER** mode must still be selected. Please refer to the MDS-Expander II™ or Smart Recorder™ Owner's Manual for more information.

Advance to the MIDI Program Change window function *(See Section A-2)*. It will display: **"MIDI PROG CHANGE"**. For this example press the Swell Division Piston 1. The display will indicate that Swell Divisional Piston 1 has been selected and the current BANK number assigned to that piston. The window also displays the MIDI program number registered to that piston. Using the "CURSOR" button place the cursor on the second line of the display by the **"P:".** Turn the **ROTARY DIAL** to raise or lower the program number. A 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).*

NOTE: On an organ with Divisional Pistons, changing a Divisional Piston to become a General Piston will NOT change the MIDI channel it transmits on. Therefore, Divisional Pistons cannot make group voice changes to an Allen MDS-Expander II™.

Also, refer to the program number chart in the owner's manual of 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.

5. 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 is possible that a MIDI device that is **only** 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. Think of these BANK Numbers as floors or stories in a tall building. Each floor would contain 128 rooms and each room could then contain 128 voices!

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.

Some MIDI devices 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 intend to use!

SELECTING HIGH BANK or LOW BANK:
Advance to the window function "MIDI Base Channel" *(See Section A-2)*. It will display: **"MIDI BASE CH: X"** along with the current **BANK** pointer. Using the CURSOR button on the Console Controller™ place the cursor on the second line after the word "BANK". Turn the **ROTARY DIAL** to select either HIGH or LOW Bank priority.

SELECTING MIDI BANK NUMBERS: *Applicable for some models)*
Bank Numbers are able to be assigned the same way MIDI Program Numbers are (*See Section C-3);* except 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"** mode selected as the program change mode *(See Section C-2)*

Advance to the MIDI Program Change window function *(See Section A-2)*. It will display: **"MIDI PROG CHANGE"**. For this example press the Great Division Piston 1. The display will indicate that Great Divisional Piston 1 has been selected and the current BANK number assigned to that piston. The window also displays the current MIDI program number assigned to that piston. Using the "CURSOR" button place the cursor on the first line of the display after the word **"BANK:"**. Turn the **ROTARY DIAL** to raise or lower the bank number. A bank number (0-127) will be transmitted on the channel assigned to the division from which you selected the piston; in this case, the Great Division on Channel 2. (*See Section C 1).* 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.

6. 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 in relationship to it. On Allen Organs, the Base Channel equals the Swell Division'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 shifts 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 MIDI Base Channel window function *(See Section A-2)*. It will display **"MIDI BASE CH: X"** and also display the current Bank pointer. Using the "CURSOR" button on the Console Controller™, place the cursor on the channel number, which is on the first line of the display. Turn the ROTARY DIAL to change the Base Channel number. 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 on/off messages, and program changes (Swell Divisional Pistons) will be transmitted and received on Channel 1 (*See Section C-1 MIDI Channel Assignments*).

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

7. MIDI EXPRESSION SETTINGS

Advance to the MIDI Expression window function *(See Section A-2)*. It will display: **"MIDI EXPRESSION"** along with the current setting on the second line of the display. There are four modes for transmitting expression data via MIDI. They are selected by using the "CURSOR" button on the Console Controller™ to place the cursor on the second line of the display. Then by turning the ROTARY DIAL select one of four modes. The four modes are as follows...

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.

8.   MIDI SUSTAIN KICK SWITCH (optional)
A kick lever may be located to the left of the Great/Pedal expression shoe and controlled by the organist's foot. This kick switch operates MIDI sustain. This function can be assigned to any one of or all of the instrument's manuals. Advance to the MIDI Sustain window function *(See Section A-2).* It will display: **"MIDI SUSTAIN"** along with the Swell Division's current switch status. Use the "CURSOR" button on the Console Controller™ to place the cursor on the division. Then turn the ROTARY DIAL to select **Sw, Gt, Pd.** You need to make a selection of either ON or OFF for each manual. Once you have selected the manual that you want the MIDI Sustain Kick-Switch to apply to, press the "CURSOR" button on the Console Controller™ once again to move the cursor to the switch status**.** Turn the **ROTARY DIAL** to select either ON or OFF. OFF status will cause no sustain information to be sent from the associated manual, ON will cause MIDI voices to sustain or decay slowly. An example is when a PIANO voice has been selected in a voice module. When the sustain function is **ON,** and the piano is played from the associated manual and the foot controlled lever is pressed, the piano sound will slowly decay similar to the way a sustain pedal on a piano operates.

9.   TRANSFERRING & SAVING CAPTURE MEMORY DATA TO A SEQUENCER
CAPTURE MEMORY refers to all of the remembered piston registrations on all 4 Memories. With this operation, the organist can copy and save all of this stored (remembered) information to a MIDI sequencer. Advance to the Capture Memory Save window function *(See Section A-2).* It will display: **"CAPTURE MEMORY SAVE"**. Set your sequencer to the record mode and begin recording as you normally would. Press and hold the "MEM" button on the Console Controller. While holding "MEM", press General Pistons 2-5-5 in sequence. The CAPTURE MEMORY information will be transmitted to the sequencer. During the memory data transfer process the display will indicate that the saving process is proceeding. Once the transmission of data is completed, the Console Controller™ window will display: **"DONE!!"**

A copy of all the CAPTURE MEMORY information will exist in the sequencer and the original information will be retained in the organ's Console Controller™ memory.

10. 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 window or Memory number the Console Controller displays.

NOTE: <u>Capture Memories must be unlocked</u> *(see section A-6)* before you press "Play" on the sequencer, allowing the organ's 4 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.

11. 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. To turn OFF or ON the transmission and reception of individual stop data, advance to the Transmit/Receive Stop window function *(See Section A-2)*. It will display: **"TRANSMIT/RECEIVE STOPS XXX"**. Using the "CURSOR" button on the Console Controller™, place the cursor on the second line after the word "STOPS". This position is this function's status. Turn the **ROTARY DIAL** to select either ON or OFF.

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

D. QUICK REFERENCE GUIDE

a. ADVANCING THROUGH THE WINDOWS: Press the **CURSOR** button so as to highlight the first letter of the first line; then rotate the **ROTARY DIAL**.

b. TO RETURN TO THE FIRST WINDOW: Press and hold **SET**, press **CANCEL**, release both.

c. SETTING PISTONS: First window. Select desired Memory. Select desired registration. Press and hold SET and press the piston to remember the registration. Release both.

d. TO SELECT A MEMORY AND LOCK IT: First window. Select desired memory using the **CURSOR** button and **ROTARY DIAL**. Press and hold **MEM**, enter three-digit code, release **MEM**. **"L"** will appear.

e. TO UNLOCK A MEMORY: Repeat d. above. **"L"** will disappear.

f. TO UNLOCK ALL MEMORIES WITHOUT A CODE: Locate the display **"Unlock All Capture Memories".** Press and hold MEM, press General Pistons 2-5-5, release **MEM**. Window will display **"Done!"**

g. 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 Main window function.