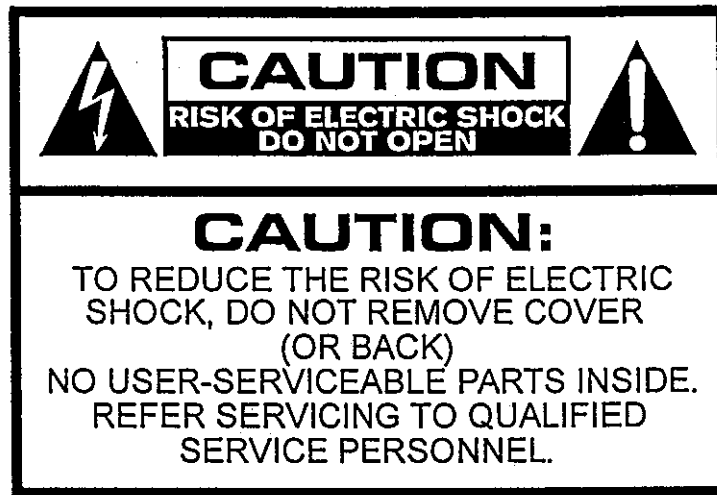


MDS THEATRE II

Copyright © 1991 Allen Organ Company
All Rights Reserved

AOC P/N 033-0048



All warning and safety instructions pertain to the organ and the amp rack (if required).

Explanation of Graphical Symbols:



The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the instrument's enclosure that may be of sufficient magnitude to constitute a risk of electrical shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the instrument.

Warning: To reduce the risk of fire or electrical shock, do not expose this instrument to rain or moisture. Do not plug the instrument into any current source other than 105-128 volts, 50/60 Hertz alternating current (AC). A certified 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 instrument.

To reduce the risk of electrical shock, match the wide blade of the instrument AC cord power plug to the wide slot in the receptacle and fully insert the plug into the receptacle.

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 power company.

For safety reasons, make sure any equipment or accessories connected to this instrument bear the UL listing symbol.

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

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.

IMPORTANT SAFETY INSTRUCTIONS

These safety instructions are provided to reduce the risk of fire, electric shock and injury. **WARNING** -- When using electric products, basic precautions should always be followed, including the following:

1. Read and understand all instructions and warnings.
2. This product may be equipped with a polarized line plug (one blade wider than other). This is a safety feature. If you are unable to insert plug into outlet, contact an electrician to replace obsolete outlet. Do not defeat the safety purpose of the plug.
3. Do not overload wall outlets and extension cords. This can increase the risk of fire or electric shock.
4. Do not allow anything to rest on the power cord.
5. Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
6. Unplug the organ from the wall outlet and consult qualified service personnel in any of the following situations.
 - The power supply cord is frayed or damaged.
 - Liquid has been spilled into the product.
 - The product has been exposed to water.
 - The product does not appear to operate normally or exhibits a marked change in performance.
 - The product has been dropped, or the enclosure damaged.
7. This product, either alone or in combination with an amplifier and headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult an audiologist.
8. Do not attempt to service the product beyond that described in the owners manual. All other servicing should be referred to qualified service personnel.

Grounding instructions - This product must be grounded. If it should malfunction or break down, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This product is equipped with a cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

DANGER - Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or serviceman if you are in doubt as to whether the product is properly grounded. Do not modify the plug provided with the product - if it will not fit the outlet, have a proper outlet installed by a qualified electrician.

SAVE THESE INSTRUCTIONS

ALL WARNING AND SAFETY INSTRUCTIONS PERTAIN
TO THE ORGAN AND THE AMP RACK (IF REQUIRED)

重要な安全上の注意

この安全上の注意書は火災・感電・損害の危険を避けるためのものです。

警告—電気製品を使用する際は、以下の基本的な注意を常に守って下さい：

1. 取扱説明書と注意書きに全て目を通して下さい。
2. この製品には極性プラグ（一方の刃がもう一方よりも幅広いもの）が取り付けられています。これは安全を確保するためのものです。コンセントに電源プラグを差し込めない場合は、電気技術者に連絡をとり、旧型のコンセントを新しいものに取り替えて下さい。極性プラグの安全目的を妨げないようにして下さい。
3. コンセントと延長コードに負荷をかけ過ぎないで下さい。火災と感電の危険があります。
4. 電源コードの上には何も置かないで下さい。
5. 内部に、物を落としたり液体をこぼしたりしないよう、注意してください。
6. 次の場合にはコンセントからオルガンの電源コードを抜き、専門のサービスマンに相談して下さい。
 - 電源コードがすり切れたり傷んでいる。
 - 製品の中に液体をこぼした。
 - 製品を水に濡らした。
 - 製品が正常に動作しない、性能に著しい変化が見られる。
 - 製品を落としてしまった、外装が破損した。
7. この製品は、単独でも、あるいはアンプやヘッドフォンやスピーカーと組み合わせることによって、慢性的な聴覚の原因となる程の音量を出すことが出来ます。大きなボリューム・レベルや、不快なレベルで、長時間使用しないで下さい。少しでも難聴や耳鳴りを感じたら、専門医に相談して下さい。
8. オナーズ・マニュアルに書かれた内容以外に製品の修理をしようとししないで下さい。その他の調整・修理は専門のサービスマンにおまかせ下さい。

接地（アース）に関する指示—この製品は必ずアースを取らなくてはなりません。誤動作や故障が生じた際、アースしておくことで、抵抗が最小の電流経路が確保され、感電の危険を減らすこととなります。この製品の電源コードにはアース線と接地プラグがついています。電源プラグは、関連法規に従って正しく取り付けられアース付きコンセントに差し込まなくてはなりません。

危険—アース線の取り方を誤ると、感電する危険があります。もし製品が正しくアースされているかどうか疑わしい時は、専門の電気技術者かサービスマンに点検を依頼して下さい。製品に付いている電源プラグを変更しないで下さい。もしコンセントに合わないような場合は、専門の電気技術者に正しいコンセントを取り付けてもらって下さい。

以上の指示をお守り下さい

CONSIGNES DE SECURITE IMPORTANTES

Les consignes de sécurité ci-dessous sont destinées à réduire les risques de feu, de court-circuit et de blessure.

ATTENTION : En utilisant des produits électriques, les précautions de base doivent toujours être prises, y compris les suivantes :

1. Lire et respecter toutes les instructions et les avertissements.
2. Ce produit est équipé d'une prise d'alimentation où les polarités sont repérées (les plots de connexion ne peuvent pas être inversés). Ceci est une mesure de sécurité. Si vous ne pouvez pas connecter la prise d'alimentation de l'instrument à votre prise murale, contactez un électricien pour la remise en conformité de votre prise. Ne supprimez jamais la terre de la prise d'alimentation.
3. Ne surchargez pas les prises murales et les rallonges. Ceci pourrait accroître les risques d'incendie ou de court-circuit.
4. Ne rien poser sur le câble d'alimentation.
5. Il convient de faire attention à ce que des objets et des liquides ne soient pas renversés dans la console par les ouvertures.
6. Débranchez l'orgue et consultez un technicien Allen dans tous les cas suivants :
 - le cordon d'alimentation est détérioré,
 - du liquide a été renversé dans l'instrument,
 - l'instrument a été exposé à l'eau,
 - l'orgue ne paraît pas fonctionner normalement ou montre des performances altérées.
 - l'instrument est tombé et la console est abîmée.
7. Cet instrument, seul ou en combinaison avec un amplificateur et un casque ou des haut-parleurs, est capable de produire des niveaux de sons qui pourraient causer une perte permanente d'audition. Ne travaillez pas pendant une longue durée à un volume élevé ou à un volume inapproprié. Si vous constatez une perte auditive ou des bourdonnements, consultez un spécialiste.
8. Ne pas intervenir dans l'appareil au-delà de ce qui est indiqué dans le manuel de l'utilisateur. Toutes les autres interventions doivent être confiées à un technicien Allen.

Instructions de base :

L'instrument doit être équipé d'une prise de terre. Dans le cas d'un dysfonctionnement ou d'une panne, la mise à la terre fournit un chemin de moindre résistance au courant électrique pour réduire le risque de court-circuit.

Cet orgue est équipé d'un câble ayant un fil de terre et une prise de terre. La prise doit être branchée dans une prise adéquate correctement installée et équipée de la terre conformément à toutes les normes en vigueur.

DANGER :

Une connexion impropre du fil de terre peut provoquer un court-circuit. Si vous avez un doute, vérifiez avec un électricien qualifié que le produit est correctement relié à la terre.

Ne modifiez pas la prise fournie avec le produit. Si elle ne se connecte pas avec la prise d'alimentation murale, faites installer une prise murale correcte par un électricien qualifié.

RESPECTEZ CES INSTRUCTIONS

Wichtige Sicherheitsvorschriften

Diese Sicherheitsvorschriften sollen die Feuer-, Kurzschluß- und Verletzungsrisiken herabsetzen.

Warnung: Während des Gebrauchs von elektrischen Geräten sollten Sie grundsätzlich immer Vorsichtsmaßnahmen beachten, einschließlich der folgenden:

1. Lesen Sie immer alle Beschreibungen und Warnungshinweise.
2. Dieses Gerät wurde mit einem eindeutigen Netzstecker versehen (Ein Kontakt ist größer als der andere). Dies ist eine Sicherheitsmaßnahme. Wenn der Stecker nicht in die Steckdose paßt, beauftragen Sie einen Elektriker mit der Änderung der Steckdose. Beseitigen Sie keinesfalls die Sicherheitsfunktion des Steckers.
3. Überlasten Sie nicht Wandsteckdosen und Kabel. Dies erhöht die Brand- und Kurzschlußgefahr.
4. Lassen Sie keine Gegenstände auf den Leitungen liegen.
5. Verhindern Sie, daß Gegenstände in die geöffnete Anlage fallen oder Nässe eindringt.
6. Trennen Sie die Orgel von der Steckdose und beauftragen Sie Fachpersonal in folgenden Fällen:
 - ♦ das Netzkabel ist gerissen oder beschädigt
 - ♦ Feuchtigkeit ist in das Gerät eingedrungen
 - ♦ Das Gerät wurde dem Wasser ausgesetzt
 - ♦ Das Gerät arbeitet nicht normal oder zeigt Fehler im Betriebszustand
 - ♦ Das Gerät ist gefallen oder das Gehäuse wurde beschädigt
7. Dieses Gerät, ob alleine oder in Verbindung mit externen Verstärker und Lautsprecher oder Kopfhörer benutzt, ist imstande, extreme Lautstärken zu erzeugen, was bei langzeitigem Gebrauch Hörschäden hervorrufen kann.
8. Versuchen Sie nicht das Gerät zu reparieren oder abzuändern, beachten Sie die Betriebsanleitung. Service und Reparaturen obliegen ausschließlich qualifiziertem Personal.

Grundsätzliche Instruktionen:

Dieses Gerät muß geerdet werden. Ist die Erdung nicht vorhanden oder unterbrochen, hat dies eine Minderung des elektrischen Schutzes vor Kurzschluß zur Folge. Dieses Gerät ist mit einem dreipoligen (Phase, Neutral und Erde) Stecker ausgestattet. Der Stecker muß an eine zugelassene, sorgfältig installierte und geerdete Steckdose angeschlossen werden, in Übereinstimmung mit den örtlichen gesetzlichen Bestimmungen.

Gefahr !! eine unvorschriftsmäßige Erdung und Anschluß erhöht die Gefahr eines elektrischen Schlags. Falls Sie Zweifel haben, ob Ihr elektrischer Anschluß richtig geerdet ist, lassen Sie ihn von einem Elektriker überprüfen. Nehmen Sie niemals Änderungen an dem Netzstecker des Gerätes vor - wenn er nicht paßt, beauftragen Sie einen qualifizierten Elektriker mit der Installation eines vorschriftsmäßigen Anschlusses.

Bewahren Sie diese Instruktionen sorgfältig auf

ALLEN ORGAN COMPANY

For over fifty years--practically the entire history of electronic organs--the Allen Organ Company has sought to build the finest organs that technology would allow.

In 1939, Allen built and marketed the world's first purely electronic oscillator organ. The tone generators for this first 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 the oscillator organs with transistors. Thousands of transistorized instruments were built, including some of the largest, most sophisticated oscillator organs.

Only a radical technological breakthrough could improve upon the fine performance of Allen's solid-state oscillator organs. Such a breakthrough came in conjunction with the U.S. Space Program in the form of highly advanced digital microcircuits.

Your MDS organ is the product of years of refinement in digital techniques by Allen engineers. It represents the apex of computer technology applied to exacting musical tasks. The result is an instrument of remarkably advanced tone quality and performance.

Congratulations on the purchase of your new Allen Digital Computer Organ! You have acquired the most advanced electronic organ ever built, one that harnesses a modern computer to create and control beautiful organ tones.

Familiarize yourself with the instrument by reading through this booklet. We call your attention particularly to sections on Second Voicing, Automatic Rhythms, Transposer, and Capture Action, since these elements are important to realizing the full potential of the instrument.

The sections on stop description and organ registration are intended for immediate use as well as for future reference. Because the Allen Digital Computer Organ offers limitless tonal possibilities, plus authentic tone quality, these subjects can now be more readily explored than ever before.

Contents

I. Description of Stops	1
II. Artistic Registration	9
III. Second Voicing	12
IV. Automatic Rhythms.....	15
V. Transposer.....	17
VI. Special Programmable Console Functions.....	18
A. Music Memory™	22
VII. Capture Combination Action.....	23
VIII. Installation, Voicing, and Care of the Organ	24

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, while a stop sounding three octaves higher is at 1' pitch. Likewise, a 16' stop sounds an octave lower, and a 32' stop sound two octaves lower.

Stops of 32', 16', 8', 4', 2', and 1' pitch 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 work. Their footage number always contains a fraction, and they are referred to as mutations. Among these are the Tibia Quint $5\frac{1}{3}'$, Twelfth $2\frac{2}{3}'$, and Tierce $1\frac{3}{5}'$. Because they introduce unusual pitch relationships with respect to the fundamental (8') tone, they are most effective when combined with other stops and used either in solo passages or in small ensembles of flutes (see explanation of Cornet in Section II).

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 principal 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 "Viola 8'" would be a stop voiced to sound like an orchestral viola.

Principal Voices

Principal
Diapason
Diaphone
Octave

Characteristic organ tone, not imitative of orchestral instruments. Usually present at many pitch levels, as well as in all divisions. Rich, warm, and harmonically well developed.

Flute Tones

Open Types:

Flute
Melodia
Flute mutation stops

Voices of lesser harmonic development than principals. Open types somewhat imitative; stopped types not. Present at all pitch levels and in all divisions.

Stopped Types:

Tibia
Tibia Clausa

String Voices

Salicional
Cello
Violin

Mildly imitative voices of brighter harmonic development than principal. Usually appear at 8' pitch.

Compound Voices

Mixture
Cornet

Voices produced by more than one rank sounding simultaneously.

Hybrid Voices

Gemshorn
Erzähler
Spitzflöte

Voices that combine the tonal characteristic of two families of sound, e.g., flutes and principals, or strings and principals.

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. The family of reeds subdivides as follows:

Reed Voices

Chorus or
Ensemble Types:

Voices of great harmonic development; some imitative,
others not.

Tuba
Tuba Horn
Trumpet
Saxophone

Solo Types:

Vox Humana
Oboe
Kinura
Clarinet

The Allen Digital Computer 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 are stored in memory devices, each having affixed to it a copyright notice; e.g., © 1990 AOCO, © 1991 AOCO, etc., pursuant to Title 17 of the United States Code, Section 101 et seq.

Following is a discussion of individual stops and how they are generally used. Please note that slight variations in specifications may be encountered.

THEATRE II STOPLIST

PEDAL ORGAN

Tuba 16'	A solid, powerful, solo or ensemble reed of considerable harmonic development. Biggest stop at 16' pitch level.
Diapason 16'	Principal sound of greater harmonic development than the Diaphone. It provides weight and roundness to the Pedal division.
Tibia Clausa 16'	Stopped wooden flute tone with strong fundamental and mild development of the third harmonic.
Tuba Horn 8'	A mellow solo reed that is also useful in providing ensemble development without being overpowering.
Diapason 8'	Foundation stop that adds fullness to a combination.
Tibia Clausa 8'	A stopped wooden flute with strong fundamental.
Flute 8'	A delicate flue stop that is useful for accompaniment.
Bass Drum	
Cymbal	
Accompaniment to Pedal	Connects all Accompaniment stops to the Pedal.
MIDI to Pedal	Opens MIDI channel to Pedal

SOLO ORGAN

Trumpet 16'	Solo reed at 16' pitch level.
Diapason 16'	Principal stop at 16' pitch level.
Tibia Clausa 16'	Stopped wooden flute with strong fundamental and mild development of the third harmonic.
Violone Celeste II (16')	Multi-rank string ensemble.
Saxophone 16'	More developed version of the Vox Humana that works well when used in combination with Tibia stops.
Tuba Horn 8'	A mellow solo reed that is also useful in providing ensemble development without being overpowering.
Diapason 8'	Foundation stop that adds fullness to a combination.
Tibia Clausa 8'	Strong fundamental flute tone with mild third harmonic development.
Clarinet 8'	Imitative solo reed that is also usable as an ensemble stop.
Orchestral Oboe 8'	Solo reed with a pungent nasal timbre.
Violin Celeste II (8')	Warm, multi-rank string ensemble at 8' pitch level.
Flute 8'	Open flute at the 8' pitch level.
Vox Humana 8'	Solo voice intended to imitate the human singing voice.
Piccolo 4'	High, bright flute sound.

Twelfth 2-2/3'	Tibia mutation that sounds one octave and a fifth above the keys played. Always used with other stops (usually beginning with 8') for coloration.
Fife 1'	Clear, imitative flute sound. It is the highest pitched flute on the organ.
Chimes	Typical tubular chimes.
MIDI to Solo	Opens MIDI channel to Solo.

Accompaniment Organ

Tuba Horn 8'	A mellow solo reed that is also useful in providing ensemble development without being overpowering.
Diapason 8'	Foundation stop that adds fullness to a combination.
Tibia Clausa 8'	A stopped wooden flute with strong fundamental.
Clarinet 8'	Imitative solo reed that is also usable as an ensemble stop.
Violin Celeste II (8')	Two 8' string sounds, one slightly detuned from the other to produce a shimmering string quality.
Flute 8'	Open flute at the 8' pitch level.
Vox Humana 8'	Solo voice intended to imitate the human singing voice.
Octave 4'	4' member of the principal chorus.
Piccolo 4'	Bright flute sound.
Viole 4'	Full-bodied string stop at the 4' pitch level.
Flute 4'	High, bright flute sound.

Piccolo 2'	A high, bright flute stop.
Snare Drum	
Tom Tom	
Tambourine	
Wood Block	
MIDI to Accompaniment	Opens MIDI channel to Accompaniment.

GENERALS

These stops are located in the row of General stop tablets to the right of the Solo division.

Celeste Tuning	Widens the tuning when added to a combination, resulting in a faster "beat." Should be used with Tremulants.
Second Voicing	Changes certain stops on the Solo and the Accompaniment manuals to a second classical voicing. See separate section on Second Voicing.
Bass Coupler	When this coupler is used, the lowest note played on the Accompaniment manual will automatically key the appropriate Pedal note, playing those stops that have been drawn in the Pedal division as well as those in the Accompaniment division.
Melody Coupler	When used with an appropriate solo stop, such as a Solo reed, this feature will automatically key the highest note played on the Accompaniment, allowing accentuation of the melody.
Reverb (located under right key cheek)	Stop engages reverberation system.

External Speakers
(located under right key cheek)

Causes the organ to speak from the external speakers. The organ will speak from both external and internal speakers.

EXPRESSION PEDALS

There is one expression pedal on the MDS-Theatre II. It controls the Main (non-tibia), Tibia and Percussion voices.

ARTISTIC REGISTRATION

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

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 needs to provide a foundation for the sound without covering it. Caution is suggested when the solo part involves chords, since some stops do not blend well in close harmony. Avoid fractional pitched 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' flute or a flute mutation (e.g., Twelfth or Tierce) to a light reed, such as the Clarinet, colors the sound further and increases its volume slightly. Adding an 8' flute to a reed will add body to the sound.

When choosing stops for a solo voice, it is not always necessary to include an 8' stop; for example, since the 4' flute has a tone quality different from that of the 8' flute, the 4' flute can be used as an independent solo voice. By playing the solo an octave lower than written, the notes will sound at the correct pitch. In similar fashion, a 16' stop can be selected and the notes played an octave higher than written. Tonal variety will be gained, because each stop has its own tone color. 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 REGISTRATIONS

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 8' and/or 4' pitch and expand "outward" in pitch as they build up. New pitches are usually added in preference to another 8' stop.

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

The flute chorus is the most fully developed with representation in various divisions of the organ and at every pitch from 16' (Tibia) through 1' (Fife). The flute chorus is sometimes called the wide-scale flue chorus, owing to the generally "fatter" look of flute pipes as compared to principals.

The principal chorus is also well represented with a diversity of stops at various pitches. Generally speaking, the principal chorus is composed of more harmonically developed tones, and is of lesser volume than the flute chorus. The principal chorus is sometimes called the narrow-scale flue chorus, a pipe reference to the relative thinness of the principal pipes in relation to their length.

The reed chorus includes 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, 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. Please note that the softest stops and flute mutations are normally not used with ensembles.

FULL ORGAN

Due to the immense capabilities of the Allen Digital Computer Organ, every stop and coupler on the instrument could be used simultaneously without distortion, if the organ is adjusted properly. In good registration practice, however, the organist would not haphazardly put on every stop on the instrument. For best results, listen and include only those stops that really contribute to the fullness and brilliance of the ensemble. Eliminate soft stops and solo stops that make no purposeful contribution.

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:

- Audsley, George Ashdown. *Organ Stops and their Artistic Registration*.
Hialeah, FL: C.P.P. Belwin, 1985.
- Irwin, Stevens. *Dictionary of Pipe Organ Stops*. 2nd ed.
New York: Macmillan Books, 1983.

SECOND VOICING

In addition to the comprehensive list of theatre organ sounds on the MDS-Theatre II, there are many classical organ and orchestral stops that can be accessed with the Second Voicing control.

SOLO ORGAN

Principal 8' (Diapason 8')	Foundation stop of the principal chorus.
Gedackt 8' (Tibia Clausa 8')	Full-bodied, partially stopped flute tone.
Octav 4' (Octave 4')	Principal tone at 4' pitch level.
Super Octave 2' (Viola 4')	An open metal stop that produces foundation tone at the 2' pitch level.
Mixture IV (Piccolo 2')	A compound stop of principal tones. Four notes in octave and fifth relationships sound together when a single key is depressed. As pitches progress upward, they "break" back to the next lower octave or fifth. Used to cap the principal chorus, adding brilliance and pitch definition throughout the entire compass.

ACCOMPANIMENT

Principal 8' (Diapason 8')	Foundation stop of the principal chorus.
Gedackt 8' (Tibia Clausa 8')	Full-bodied, partially stopped flute tone.
Octav 4' (Octave 4')	Principal tone at 4' pitch level.
Super Octave 2' (Viola 4')	An open metal stop that produces foundation tone at the 2' pitch level.
Mixture IV (Piccolo 2')	A compound stop of principal tones. Four notes in octave and fifth relationships sound

together when a single key is depressed. As pitches progress upward, they "break" back to the next lower octave or fifth. Used to cap the principal chorus, adding brilliance and pitch definition throughout the entire compass.

PEDAL ORGAN

Octav 8' (Diapason 8')

Principal stop at 8' pitch level.

Gedackt 8' (Tibia Clausa 8')

Full-bodied, partially stopped flute tone.

SUGGESTED CLASSICAL REGISTRATIONS

Here are some typical classic registrations. Keep in mind that the Second Voicing stop tablet must be pressed down for these combinations.

1. Solo: Orchestral Oboe, Solo Tremulant
Accompaniment: Gedackt 8'
Pedal: Tibia Clausa 16'

2. Solo: Tuba Horn 8', Solo Tremulant
Accompaniment: Gedackt 8', Piccolo 4'
Pedal: Tibia Clausa 16', Accompaniment to Pedal

3. Solo: Gedackt 8', Twelfth 2-2/3'
Accompaniment: Violin Celeste II (8')
Pedal: Tibia Clausa 16', Accompaniment to Pedal

4. Solo: Principal 8', Octav 4', Super Octave 2', Mixture IV
Accompaniment: Gedackt 8', Piccolo 4', Piccolo 2'
Pedal: Diapason 16', Octav 8', Accompaniment to Pedal

5. Solo: Diapason 8', Gedackt 8', Octav 4', Piccolo 4',
 Mixture IV
Accompaniment: Principal 8', Gedackt 8', Piccolo 4', Super Octave 2'
Pedal: Diapason 16', Tibia Clausa 16', Diapason 8',
 Tibia Clausa 8', Accompaniment to Pedal

6. Solo: Tuba Horn 8'
Accompaniment: Principal 8', Octave 4', Super Octave 2', Mixture IV
Pedal: Diapason 16', Diapason 8', Accompaniment to Pedal

AUTOMATIC RHYTHMS

The MDS-Theatre II is equipped with a rhythm and special effects unit. It is located in a drawer to the left side of the console under the Accompaniment manual. Inside the drawer are several rows of white buttons, which, when depressed, will be marked by a small amber light.

The buttons in the top row activate the "effects" part of the unit. The special effect sounds are labeled: Sound Effect 1, which is a police whistle, Sound Effect 2, which is a siren, Bass Drum, Cymbal, Snare Drum, Tom Tom, Wood Block, and High Hat. A sound will occur once each time one of these buttons is depressed. Unlike the rhythm sounds, special effect sounds are not continuous.

The second and third rows of buttons are for the various rhythms. Each rhythm button allows the organist to access two different rhythms, an "A" rhythm and a "B" rhythm listed above the button. For example, in the second row, the first button on the left will activate both the Samba and the Mambo rhythms. Consequently, 32 rhythms are available from the 16 rhythm buttons.

To access the "A" rhythm sounds, press the button under the desired rhythm and then press the start/stop button in the bottom row. To access the "B" rhythm sounds, press the desired rhythm button and then press the start/stop button and finally the "B" rhythms button in the bottom row.

The volume controls for the unit appear in the bottom row of buttons. Pressing and holding the Volume Down button will make the rhythm pattern softer. Holding the Volume Up button will increase the volume. The tempo of the rhythm pattern can be adjusted faster or slower by using the Tempo Up and Tempo Down buttons on the bottom row.

There are three different ways to start the rhythm pattern. Press the start/stop button once to start the rhythm, and press it once again to stop it. Another option is to use the Solo Intro. When this button is pressed, the unit will play a two-measure introduction pattern appropriate to the selected rhythm and will then go right into the rhythm pattern. The third method of starting the rhythm is to use the Pedal Start. By depressing the Pedal Start button, the rhythm unit will not activate until the first pedal is played. This can be useful when playing a piece with an introduction during which no rhythm is desired. If the introduction is played only on the manuals, the rhythm will start when the pedal is played for the first time.

Note: When the organist stops playing pedals, the rhythm will continue for one more measure, and then it will stop.

Note the digital readout on the right side of the unit. When the unit is not playing, the readout will show a number from 18 to 305. This is a metronome setting that indicates the speed in beats per minute at which the rhythm will play. This allows the organist to set the rhythm unit to a tempo marking listed in the music, or decide on the best tempo for a piece and then set the rhythm unit quickly and accurately before beginning to play.

When the unit is activated, the readout shows two single-digit numbers. The number on the left indicates which measure in the pattern the rhythm unit is playing. Each rhythm pattern is a 1-, 2-, 4-, or 8-measure repetitive pattern. For example, if the selected rhythm has a one-measure pattern, the number on the left will always be 1; however, if a 2-, 4-, or 8-measure pattern has been selected, the number will change to indicate which measure of the pattern is currently being played. The number on the right indicates which beat of the measure is currently being played. For example, in a waltz, the number on the right will count up to 3, while in a 4/4 march, it will count up to 4. This allows the organist to find the downbeat easily or the first beat of a measure in order to start the rhythm.

TRANSPOSER

The vast capability of the computer makes it possible to perform the sometimes difficult task of transposing while allowing the organist to play in the notated key.

Operation of the Transposer is controlled by the Transposer knob. Neutral (no transposition) position for this knob is marked "N."

To shift the music to a higher key, move the knob upward one or more half-steps. The key can be raised a maximum of five half-steps, in half-step increments.

To shift to a lower key, move the Transposer knob downward from "N." The key can be lowered a total of seven half-steps.

A RED LIGHT COMES ON WHENEVER THE TRANSPOSER KNOB IS MOVED FROM THE "N" POSITION.

WHY TRANSPOSE?

1. Because the range of a given song will not always suit the vocal range of a particular singer. By adjusting the key upward or downward, whichever is appropriate, the piece can be sung more comfortably and effectively.
2. Because some instruments are non-concert pitch. A trumpet in B^b, for example, can read the same music as the organist, if the Transposer knob is set two half-steps lower.

SPECIAL PROGRAMMABLE CONSOLE FUNCTIONS

- A. Description
- B. Selecting the four capture memories
- C. Setting pistons
- D. Choosing MIDI expression pedal functions
- E. Selecting the desired expression mode
- F. Restoring factory settings
- G. Automatically checking the capture and stop action

A. DESCRIPTION

1. The MDS-Theatre II is equipped with a special programmable control system that provides useful extra functions. It is not necessary for the organist to use all available features to play the instrument. The organ is capable of all traditional functions without the use of the control system. The system provides additional flexibility for those organists whose requirements go beyond the capabilities of the traditional organ console.

B. SELECTING THE FOUR CAPTURE MEMORIES

1. Locate the Capture keylock switch on the right side of the console. You will see that you can select memory A, B, C, or D. **NOTE:** Memory D has been programmed at the factory with combinations on all pistons, although it may be reprogrammed by the user. If memory D is changed, the original factory memory is stored and can be recalled by restoring the factory settings (see Section G).

C. SETTING PISTONS

1. Allen's quadruple memory system allows the organist to set four complete groups of piston combinations covering the entire organ, or each of several organists to set his or her own combinations on one memory. Select the capture memory you want to use by turning the Capture keylock switch to the desired memory.

2. Choose a stop combination that you wish to place, for example, on General Piston 1. General pistons are found in the center of the console underneath the Accompaniment manual and are numbered 1 through 7. Remember that generals are customarily set using graduated stop combinations from soft to loud. After you have selected your stops, press and hold the "Set" button and then press and release General Piston 1. Release the "Set" button. General Piston 1 will now bring on that combination, until someone changes it.

The following information deals with the MIDI capabilities of your organ. The usefulness of these operations will ultimately be determined by the type and capabilities of the particular external MIDI devices--e.g., sequencers, samplers, and external keyboards--being used. Knowledge of these operations is not required for normal service playing or everyday use of the organ.

D. CHOOSING MIDI EXPRESSION PEDAL FUNCTIONS

1. The expression pedals control the volume of the organ regardless of the setting of the MIDI expression function. When using the organ in conjunction with other MIDI devices, however, it is possible to choose from the following types of MIDI data transmission via the expression pedals.
 - a. Poly - Volume: this is the default (normal) mode. MIDI volume information is transmitted from each division on the MIDI channel assigned to that division. Solo transmits on channel 1, Accompaniment on channel 2, and Pedal on channel 3. This is the proper mode to use when recording to, or playing back from, a sequencer.
 - b. Poly - Velocity: should be selected if you are using a percussion voice from an external MIDI keyboard; for example, if a digital piano sound were played from the organ keyboard through channel 1, the piano could be made to sound more realistic in this mode. By depressing the Expression pedal, the piano "strings" would sound as if they were struck "harder" than when the pedal was in the closed position. The transmission channels for all divisions are as stated in Section a. above. NOTE: When in this 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 Expression pedal after a key is struck, there will be no change in velocity until a new key is struck. Use this mode only when an external keyboard is connected. If this mode is used when recording to a sequencer, the expression on the organ will not function when playing back from the sequencer.

- c. Solo - Volume: will send MIDI expression data only on the Solo MIDI channel. Information is transmitted on MIDI channel 1. Some MIDI devices do not respond well to multiple channel volume information. If a MIDI device does not properly receive volume information when the organ is in the Poly - Volume mode, use the Solo - Volume mode. It may be necessary to set the MIDI receive of the external device to channel 1.
- d. No Expression: cancels transmission/reception of expression data.

E. SELECTING THE DESIRED EXPRESSION MODE

1. Press and hold the "Set" button and press the "R" piston twice.
 - a. The absence of flashing lights indicates that the organ is in the MIDI Expression Selection Mode, and that the current setting is Poly - Volume. this setting is automatically engaged when the organ is turned on.
2. To select Poly - Velocity, press Piston 2.
 - a. The bottom three lights of the indicator next to the expression indicator will now flash.
3. To select Solo - Volume, press Piston 3.
 - a. The middle four lights of the indicator next to the expression indicator will now flash.
4. Piston 4 selects No Expression and causes the top three lights of the indicator next to the expression indicator to flash.
5. If a different setting is chosen, and the Expression Selection Mode is re-entered later, the current setting will be shown by the appropriate flashing light as described above.
6. To exit this mode, press and hold the "Set" button and press "Cancel."
7. MIDI Patch Change Transmission--All pistons send a patch change equal to their number, i.e., General piston 8 will send a patch change number 8, etc.

F. RESTORING FACTORY SETTINGS

1. There are certain functions that can be restored to the original factory settings. They are: Capture Memory D, and MIDI settings.
 - a. To enter the Factory Setting Restoration Mode, press and hold the "Set" button and press the "R" piston three times. The bottom four lights of the

expression indicator will flash to indicate that the organ is in the restoration mode.

- b. To restore all factory settings, press Piston 1.
 - c. To return to normal playing mode, press and hold the "Set" button and press the "Cancel" piston.
2. Note: All user-programmed Capture Memory D settings are erased during restoration of the factory settings.

G. AUTOMATICALLY CHECKING THE CAPTURE AND STOP ACTION

1. This is a self-check of the capture system to see that every individual stop is controllable by the capture action.
 - a. To enter the self-check mode, press and hold the "Set" button and press the "R" piston four times. The top five lights of the expression indicator will flash to indicate that the organ is in the self-check mode.
 - b. The self-check is started by pressing Piston 1. The stops will move consecutively down and up. If any stop does not move, notify your service technician. You may interrupt the scanning process at any time by pressing and holding "Set" and then pressing the "Cancel" button.

MUSIC MEMORY™

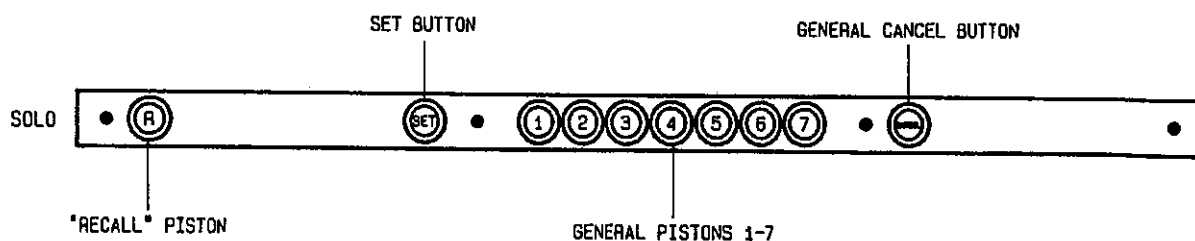
The MDS-Theatre II is equipped with pre-recorded demonstrations of a variety of tonal combinations and musical styles. This feature is called Music Memory™. To access these recordings, press and hold the "Set" Piston. While holding the "Set" Piston, press the "R" Piston one time. The Transposer light will now flash, indicating that you have entered the DEMO mode of operation. In this mode the Demo Recordings may be accessed through the Pistons. Pistons 1 through 5 begin Demo Recordings 1 through 5 respectively. Piston 6 acts as a stop/continue switch for stopping or continuing any of the Demos. To skip directly to a different Demo, merely press the desired Piston number, which will interrupt the current Demo and automatically start the new one.

To exit this mode of operation, press the "Set" and "Cancel" Pistons together and release. This returns the organ to its normal playing mode.

Important: Expression pedals must be fully "on" for the Demo.

CAPTURE COMBINATION ACTION

Organs equipped with Allen's Quad Memory Capture Action offer the ultimate in registration control and convenience. Quad memories provide a total of 28 separate combinations. The organist can set combinations on any memory and then lock the memory (except Memory 1) using a three-digit code. This prevents unwanted tampering with capture combinations.



THINGS TO REMEMBER

The "R" Piston, when activated, will recall the last combination set prior to using any general or divisional piston.

All pistons operate independently from each other.

The capture action is not fully operable until approximately six seconds after the organ is turned on.

INSTALLATION, VOICING, AND CARE OF THE ORGAN

INSTALLATION

Wherever your MDS-Theatre II organ may be situated, careful installation is a prerequisite to successful results. Your Allen representative is well qualified to guide you in planning for this.

Factory assistance in planning the installation is also available and may, in fact, be sought by your representative, in order that optimal results may be achieved.

VOICING

The MDS-Theatre II organ enjoys unprecedented accuracy in the scaling and voicing of each note of every stop. This musical breakthrough is an inherent part of the engineering design of the instrument. Final adjustments in scaling and voicing involve controls within the console and are best left to an expert. These adjustments are normally a part of installation and, once done, should not require changes unless the instrument is moved to a new location.

Bass frequency projection is strongly affected by tone cabinet location. Although none of the tone cabinets should be moved once the installation has been completed, extra care should be exercised to prevent inadvertent movement of the bass tone cabinets.

REVERBERATION

The optional ADR-4 Digital Reverberation System provides the spatial ambience of a large reverberant auditorium. Although most effective in poor acoustic environments, it even enhances the tones in an ideal acoustic setting.

The Reverb stop is not affected by the capture system.

Adjustment of reverberation can be accomplished by your service technician or sales representative.

CARE OF THE ORGAN

Your Allen Digital Computer 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. If desired, polish the wooden portions with a high-grade furniture wax. *Do not* use abrasive polishes, cleaners, or waxes containing silicone.

Keys and stop tablets should be cleaned in the following manner: Use two clean cloths. Immerse one in clear, lukewarm water and wring it thoroughly damp dry. Loosen the dirt with this cloth, then polish immediately with the dry cloth. Do not use soap or detergent on keys or stop tablets.

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!

ADDENDUM

BATTERY BACKUP SYSTEM

The memory for the capture system on your MDS 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.

On Allen MDS organs that include a Console Controller™, the LCD display will flash a warning message for a few seconds during power-up when the battery requires replacement. The display will read as follows:

WARNING!!
Replace Battery

On Allen MDS organs without a Console Controller™, the green power light will flash for about ten seconds after the organ is switched on.

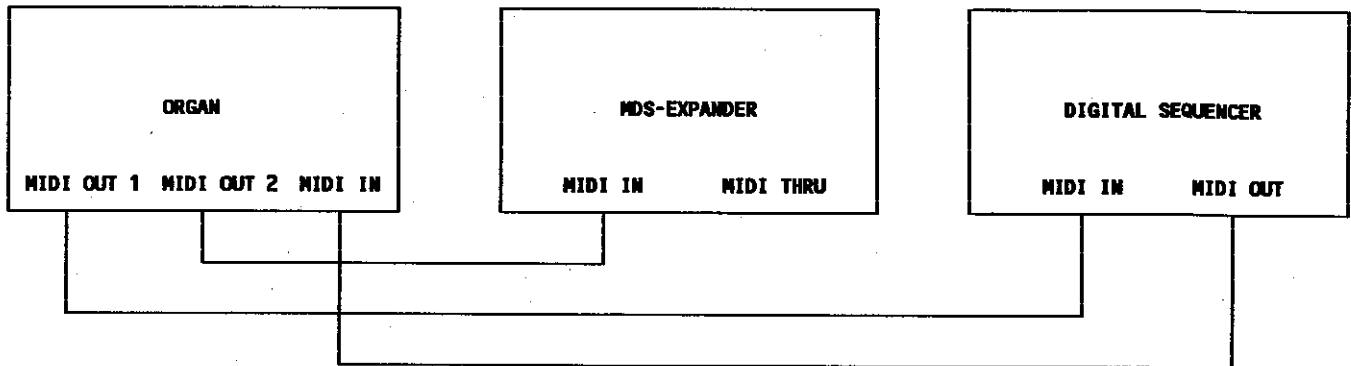
Should the battery in your MDS organ require replacement, contact your local Allen authorized service representative.

ADDENDUM TO MIDI INFORMATION

TOTAL MIDI PLUS™

Some MDS-15 and larger Allen organ models now feature Total MIDI Plus™, an expanded MIDI system with increased flexibility. Through the use of Allen's SmartMIDI™, Total MIDI Plus™ provides a comprehensive interface between MIDI sound modules such as the Allen MDS-Expander™, and digital sequencers. 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. Refer to the drawing below for information on the proper procedure for connecting multiple MIDI devices to the organ.



USA ONLY

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 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.

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.

CE mark shows compliance with the EMC Directive.

INTERNATIONAL ONLY

CAUTION

Do not plug the instrument into any current source other than that stated by the selling dealer. 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 (if applicable).

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