Renaissance
450

ALLEN ORGAN COMPANY

For more than 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.

Renaissance™ organs are the product of years of refinement in digital sound and control 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 Renaissance™ 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. The sections on stop description and organ registration are intended for immediate use as well as for future reference

Contents

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' (eight foot) 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 sounds two octaves lower.

Stops of 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 playing. Their footage number always contains a fraction, and they are referred to as *Mutations.* Among these are the 2-2/3' Nasard and Quinte, 1-3/5' Tierce, and 1-1/3' Quintflöte. Because they introduce unusual pitch relationships with respect to the fundamental (8') tone, they are most effective when combined with other stops, and are used either in solo passages or in small ensembles of flutes (see explanation of Cornet in Section II, Page 18).

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 8' Viola would be a stop voiced to sound similar to an orchestral viola.

<u>Principal Voices</u> Principal Diapason Octave Super Octave Fifteenth Quinte	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 Voices *Open:* Harmonic Flute Koppleflöte flute mutation stops Flute Voices *Stopped:* Holzgedackt Bourdon Lieblichgedackt Rohr Bourdon	Voices of lesser harmonic development than Principals. Open flutes are somewhat imitative; stopped flutes are less imitative. Present at all pitch levels and in all divisions.
String Voices Gamba Violone Viola Céleste	Mildly imitative voices and of brighter harmonic development than Principals. 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:* Waldhorn Tromba Posaune Clairon Bombard *Solo:* Oboe Clarinet Krummhorn	Voices of great harmonic development; some imitative, others not. Often brassy or buzz sounding.

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., © 1996 AOCO, © 1997 AOCO, etc., pursuant to Title 17 of the United States Code, Section 101 et seq.

RENAISSANCE 450 STOP LIST

Following is a discussion of individual stops and how they are generally used. Please note that due to dynamic nature of Renaissance voices, variations in specifications may be encountered.

PEDAL ORGAN:

32’	Contre Violone (With Reversible)	Rich string tone at the bottom of the Pedal Division.
32’	Contre Bourdon (With Reversible)	Large, heavy bass flute tone.
16’	Diapason	The 16’ member of the Pedal Principal Chorus. Strongest Pedal Division flue stop.
16’	Bourdon	Stopped flute tone of weight and solidity.
16’	Violone	Rich string tone, gives registrations more definition.
16’	Lieblichgedackt (Swell Expressed)	Softer stopped flute of delicacy and definition. Useful when the softest 16’ pitch is required.
8’	Octave	8’ member of the Pedal Principal Chorus.
8’	Gedacktflöte	Stopped flute tone of 8’ pitch, useful in adding clarity to a pedal line in combination with the 16’ Bourdon or 16’ Lieblichgedackt.
4’	Choralbass	Pedal 4’ principal tone.
4’	Flute	Stopped flute one octave above 8’ Gedacktflöte pitch.
	Mixture IV	Four rank mixture, a compound stop of principal tones. One pedal keyed produces four distinct pitches at octave and fifth relationships. Used to crown the Pedal Principal Chorus.
32’	Contre Bombarde (With Reversible)	A robust French reed that lends strength and snarl to the Pedal line. Used with large stop combinations.
16’	Waldhorn (Swell Expressed)	Imitation of the hunting horn. Excellent reed stop to combine with other reeds or flues.
16’	Bombarde	A strong Pedal reed that lends strength and snarl to the Pedal line.

PEDAL ORGAN continued:

4' Clairon	A bright 4' chorus reed. Combines with the 16' Bombarde and 8' Trompete to form the full Pedal Reed Chorus. Particularly useful as a solo voice.
8' Trompete	Clear Pedal reed useful in adding definition to a full pedal combination, or as a solo Pedal trumpet.
8' Great to Pedal (With Reversible)	Connects all Great stops so they may be played with the Pedal keys at the pitch indicated on the Great stops.
4' Great to Pedal	Connects all Great stops to the Pedal an octave higher in pitch than the Great stop indicates.
8' Swell to Pedal (With Reversible)	Connects all Swell stops so they may be played with Pedal keys at the pitch indicated on the Swell stops.
4' Swell to Pedal	Connects all Swell stops to the Pedal an octave higher in pitch than the Swell stop indicates.
8' Choir to Pedal (With Reversible)	Connects all Choir stops so they may be played with Pedal keys at the pitch indicated on the Choir stops.
8' String on Pedal	Enables Floating String Division stops to be played with the Pedal keys at the pitch indicated on the String stops.
8' Solo on Pedal (With Reversible)	Enables Solo Division stops to be played with the Pedal keys at the pitch indicated on the Solo stops.
Bass Coupler	When this coupler is used, the lowest note played on the Great 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 Great division.

For MIDI on PEDAL see this section page 15.

PEDAL ORGAN SECOND VOICES:

The voices of several stops in the Pedal Division can be instantly replaced by a Pedal Second Voice. This is done by engaging the Gt-Pd 2nd VOICES drawknob along with the Pedal Division drawknobs that have red italicized additional voice names.

PEDAL ORGAN SECOND VOICES continued:

16’	Prinzipal	Foundation voice with more high harmonics than the primary 16’ Diapason Pedal voice.
16’	Subbass	Stopped Bass Flute with more chiff sound than the 16’ Bourdon
8’	Oktav	Foundation stop of Diapason tone quality. More articulation tones than the primary Pedal 8’ Octave.
32’	Kontra Posaune	Sounds one octave below the 16’ Posaune.
16’	Posaune	A strong Pedal Division reed that lends fire to the pedal line when properly used in the Reed Chorus. Brighter than the 16’ Bombarde.

SWELL ORGAN**:**

8’	Rohr Bourdon	Half stopped flute tone. When used with other voices it will add fullness. More harmonics than stopped flutes.
8’	Flûte Celéste II	Two soft flute tones, one tuned slightly sharp from the other, that create a soft accompaniment celeste.
8’	Viola Pomposa	The loudest Viola of the organ. The greatest harmonic development of the Viola family. Good solo as well as ensemble voice.
8’	Viola Celeste #	String tone, tuned slightly sharp from and used with the 8’ Viola to create a warm string celeste.
8’	Viola Celeste b	String tone, tuned slightly flat to be used with both the 8’ Viola and the 8’ Viola Celeste # together to create the warmest string celeste on the organ. Celestes are created by using at least two sounds, one tuned at standard pitch, and one tuned slightly sharp creating a warm, undulating, “celestial” effect.
4’	Octave Geigen	Light principal sound with much harmonic development at the 4’ pitch level.

SWELL ORGAN continued:

4’	Travers Flute	Imitative of, and louder than the orchestral flute.
2-2/3’	Nasard	Flute mutation that sounds one octave and a fifth above the 8’ pitch. Always used with other stops (usually beginning with 8’) for coloration.
2’	Piccolo	Imitative of the orchestral piccolo. Much quieter than the principal Fifteenth. Useful as soft solo or with building choruses and ensembles.
1-3/5’	Tierce	Flute mutation that causes the pitch to sound a seventeenth (two octaves and a third) higher than played. Used with 8’ stops or flute ensembles.
	Fourniture IV	Four rank mixture comprised of principal tones. Each note played produces four distinct pitches at octave and fifth relationships to the key being pressed. The Fourniture IV should never be used without stops of lower pitches. The Fourniture IV is typically added to diapason or flute ensembles, or to the Reed Chorus.
16’	Waldhorn	Imitation of the hunting horn. Excellent reed stop to combine with other reeds or flues.
8’	Oboe	Soft solo voice of nasal timbre. It will give definition to the flute chorus when added.
8’	Vox Humana	Attempts to simulate the human voice from a distance. A gentle reed with many overtones. Can be used with flutes or strings.
8’	French Trumpet	A dominating Reed Chorus or solo voice.
4’	Clairon	A bright 4’ chorus reed. Combined with the 16’ Waldhorn and 8’ French Trumpet to form the Swell Reed Chorus. Particularly useful as a solo voice.
	Alternate Tuning	See “General Drawknobs” page 16.
	Tremulant	Use of this stop provides a vibrato effect, natural in the human voice and wind instruments, when used with the stops in the Swell Division. This drawknob must be engaged along with the TREMULANTS FULL stop to create the large tremulant sounds.

SWELL ORGAN continued:

Swell 16'	*Swell Sub-octave Coupler.* Swell voices speak one octave lower than the pitch indicated on the stop, when played from the Swell Manual.
Unison Off	Turns off stops in the Swell Division at the pitch level at which they are drawn, while allowing them to speak at octave and sub-octave pitch levels when octave and sub-octave couplers are drawn.
Swell 4'	*Swell Octave Coupler.* Swell voices speak one octave above the pitch indicated on the stop, when played from the Swell Manual.
8' Solo on Swell (With Reversible)	Enables Floating Solo Division stops to be played from the Swell Manual at the pitch indicated on Solo stops.
8' String on Swell	Enables Floating String Division voices to be played with the Swell keys at the pitch indicated on the String stops.

For MIDI on SWELL see this section page 15.

SWELL ORGAN SECOND VOICES:

Several voices in the Swell Division can be instantly replaced by Swell Second Voices. This is done by engaging the Swell Second Voicing drawknob along with Swell Division drawknobs having additional voice names written in italicized red.

8' Geigen Diapason	A foundation voice with louder overtones than diapason.
8' Salicional	Primarily an ensemble voice. More upper harmonics than the Viola Pomposa. The on-pitch member of the 8' Voix Celéste.
8' Voix Celéste	The sharp tuned member of the Second Voice Voix Celéste. To be used with the 8' Salicional.
8' Erzähler Celéste II	Two rank hybrid stop. One of the two ranks is tuned slightly sharp to create a warm accompaniment celeste. Combining tonal characteristics of the string and flute families, result in these small-scale Gemshorn voices.

SWELL ORGAN SECOND VOICES continued:

	Mixture IV	Four rank mixture, comprised of bright principal tones. Each note played produces four distinct pitches at octave and fifth relationships to the key being pressed.
8’	Hautbois	A French version of the primary voice, 8’ Oboe.
8’	Vox Humaine	A French version of the primary voice, 8’ Vox Humana.

GREAT ORGAN:

16’	Double Diapason	One octave lower in pitch, tonally similar and slightly quieter than the 8’ 1st Diapason.
8’	1st Diapason	Foundation stop of the Great Principal Chorus, which consists of the Diapason 8’, Octave 4’, and Super Octave 2’. Larger of the two diapasons and of English style.
8’	2nd Diapason	E. M. Skinner style of diapason. Very clear sounding yet not quite as large as the 1st Diapason.
8’	Harmonic Flute	Tone quality of solo stature and the basic tone of the Flute Chorus.
8’	Gamba	Moderately loud string stop that blends well with flues as well as strings. More fundamental tone than the Violone and more harmonics than the flutes. Rounds out the Great Unison Chorus.
4’	Octave	The 4’ member of the Great Principal Chorus.
4’	Flute	Not shrill yet useful in brightening an ensemble of flues.
2-2/3’	Twelfth	Foundation mutation stop that sounds an octave and a fifth above the 8’ pitch. It helps bind higher pitches to the fundamental tone. To be used with other stops (usually beginning with 8’) for coloration.
2’	Fifteenth	Foundation stop that adds brilliance to any combination of stops. The Super Octave of a Principal Chorus.

GREAT ORGAN continued:

	Mixture IV	Four rank mixture, a compound stop of principal tones. Four notes in octave and fifth relationships sounding 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 Great Principal Chorus, adding brilliance and pitch definition throughout the entire compass.
	Cymbale III	Three rank mixture, comprised of principal tones. Each note produces three distinct pitches at octave and fifth relationships to the key being pressed. Tradition is to never use the Cymbale III without also using stops of lower pitches. It is typically added to Diapason or Flute ensembles after the Mixture IV has been engaged.
16'	Double Trumpet	Rich sounding chorus reed that provides a solid base for the Great Reed Chorus.
8'	Tromba	Harmonically full, more like trombone tone than trumpet tone. Excellent reed chorus building voice and will offer a less bright reed solo voice.
	Tremulant	Creates a quivering or shimmering of the Great Division voices. This drawknob must be engaged along with the TREMULANTS FULL stop to create the larger tremulant.
	Chimes	Typical Tubular Chimes that are expressed with the Great/Pedal expression shoe.
16'	Swell to Great	Intermanual coupler connecting all Swell stops to the Great manual an octave lower than indicated.
8'	Swell to Great (With Reversible)	Intermanual coupler connecting all Swell stops to the Great manual at the pitch indicated on the Swell stops.
4'	Swell to Great	Intermanual coupler connecting all Swell stops to the Great manual an octave higher than indicated.
8'	Choir to Great (With Reversible)	Intermanual coupler connecting all Choir stops to the Great manual at the pitch indicated on the Choir stops.
8'	Solo on Great (With Reversible)	Enables Solo Division stops to be played from the Great Manual at the pitch indicated on Solo stops.

GREAT ORGAN continued:

8' String on Great	Enables Floating String Division stops to be played with the Great keys at the pitch indicated on the String stops.
Gt / Pd to Antiphonal	Causes the Gt / Pd Division's voices to speak from Antiphonal speakers. With this drawknob engaged, these divisions speak from both the Antiphonal and Main speakers. When the Gt / Pd Main Off control is also engaged, the Antiphonal will sound alone.
Gt / Pd Main Off	To be used in conjunction with Gt / Pd to Antiphonal Drawknob. This control disables the Gt / Pd Main speakers. If this drawknob is engaged and the corresponding Gt / Pd to Antiphonal Drawknob is not engaged, the Gt / Pd Division will make no sound.
Melody Coupler So->Gt	When used with an appropriate Solo stop such as the French Horn, this feature will automatically key that voice from the highest note played on the Great manual, accentuating a melody.

For MIDI on GREAT see this section page 15.

GREAT ORGAN SECOND VOICES:

The voices of several stops in the Great Division can be instantly replaced by a Great Second Voice. This is done by engaging the Gt-Pd 2nd VOICES drawknob along with the drawknobs that have red italicized additional voice names in the Great Division.

16' Quintaton	Tranquil stopped flute with firm prime tone and weaker third harmonic. Slightly softer than a Quintaten.
8' Prinzipal	Similar to the Diapason with more chiff articulation in its sound.
8' Bourdon	A stopped flute, not as loud or articulate as the Metalgedackt.
8' Metalgedackt	Articulate flute tone.

GREAT ORGAN SECOND VOICES continued:

4’	Oktav	Similar in timbre to 8’ Prinzipal, not as loud and sounds one octave higher.
	Sesquialtera II	Two rank compound foundation mixture.

CHOIR ORGAN:

16’	Erzähler	Hybrid voice that sounds one octave lower than the 8’.
8’	Holzgedackt	Large sounding stopped flute.
8’	Erzähler	Hybrid stop that combines the tonal characteristics of the string and flute families, resulting in a small-scale Gemshorn. Useful accompaniment voice.
8’	Erzähler Celéste	To be used in combination with the Erzähler 8’ to create a warm accompaniment celéste.
4’	Prinzipal	Bright classical Principal voice.
4’	Koppleflöte	An open metal flute. Primarily a voice to be used in combination with other voices. Not too bright, not too dull; good for Baroque as well as modern Flute tone.
4’	Erzähler Celéste II	Two gentile hybrid tones, one tuned slightly sharp from the other to create a warm celéste.
2’	Oktav	An open metal stop that produces foundation tone at the 2’ pitch.
1-1/3’	Quintflöte	Open flute mutation that causes the pitch to sound a nineteenth (two octaves and a fifth) higher than played. Used with 8’ stops or flute ensembles.
	Zimbel III	Three rank mixture made from foundation tones.
16’	Rankett	A nasal-sounding reed stop of considerable harmonic development. The Rankett carries very little fundamental and adds character both as a solo and ensemble stop.

CHOIR ORGAN continued:

8' Krummhorn	Imitative of a very old instrument Krummhorn (crooked horn). Audsley describes it to mean *cor* horn, and *morne* mournful. This reed voice can be used alone as a solo stop or combined with light flues for a somewhat rounder reed solo effect.
Unison Off	Turns off voices in the Choir Division yet allowing the voices of Swell, Solo, and String divisions to be played on the Choir Manual when coupled to it.
Tremulant	Use of this stop provides a vibrato effect, natural in the human voice and wind instruments, when used with the stops in the Choir division.
16' Swell to Choir	Intermanual coupler connecting all Swell stops to the Choir manual an octave lower than indicated.
8' Swell to Choir (With Reversible)	Intermanual coupler connecting all Swell stops to the Choir manual at the pitch indicated on the Swell stops.
4' Swell to Choir	Intermanual coupler connecting all Swell stops to the Choir manual on octave higher than indicated.
8' Solo on Choir (With Reversible)	Enables Solo Division stops to be played from the Choir Manual at the pitch indicated on Solo stops.
8' String on Choir	Enables Floating String Division stops to be played with the Choir keys at the pitch indicated on the String stops.
Great-Choir Manual Transfer	Transposes stops in the Great and Choir Divisions so that the stops from the Great Division are played from the bottom Choir Manual and the stops from the Choir Division are played from the second Great Manual.
Choir to Antiphonal	Causes the Choir Division's voices to speak from Antiphonal speakers. With this drawknob engaged, the division speaks from both the Antiphonal and Main speakers. When the Choir Main Off control is also engaged, the Antiphonal will sound alone.

CHOIR ORGAN continued:

Choir Main OFF	To be used in conjunction with the Choir to Antiphonal Drawknob. This drawknob disables the Choir Division's Main speakers. If engaged while the Choir Antiphonal ON control is not engaged, The Choir Division will make no sound.

For MIDI to Choir see this section page 15.

CHOIR PERCUSSION SECOND VOICES:

The voices of several stops in the Choir Division can be instantly replaced by Choir Percussion Second Voices. This is done by engaging the Choir Percussion drawknob along with the Choir Division drawknobs having red italicized additional voice names.

Harpsichord	Imitative of the Baroque stringed keyboard instrument.
Handbells	Imitative of the sounds made by bell choirs.
Orchestral Harp	Imitative of the orchestral stringed instrument.
Celesta	Imitative of the same named orchestral percussion instrument.

SOLO ORGAN:

16' Tuba Mirabilis	Speaks one octave lower that the 8' Tuba Mirabilis.
8' Tuba Mirabilis	Reed voice of the trumpet variety. A more powerful commanding voice than other reeds.
4' Tuba Clarion	Speaks one octave above the 8' Tuba Mirabilis.
8' Corno di Bassetto	Imitative of the orchestral instrument having tone similar to a clarinet however, not as "woody" sounding.

SOLO ORGAN continued:

8’	French Horn	Imitative of the orchestral version of the same name.
8’	Cor Anglais	Imitative of the orchestral English Horn. Voiced such that it can be used in ensembles or as a solo voice.
8’	Flauto Mirabilis	Large, loud, solo flute.
	Solo Tremulant	Turns on tremulant on Solo Organ Division voices.

FLOATING STRING DIVISION – (accessible from four divisions):

The String Division can be played from any or all manuals except the Solo Manual. It does not have a specific manual, therefore it “floats”. The String Division may be expressed or unexpressed (shades open or closed) when played. There are three pistons mounted on the left cheek block of the Swell, Great, and Choir manuals. Each piston is accompanied with an indicator light (LED). Only one of these three pistons may be selected at a time. When one is selected, the appropriate expression shoe for the corresponding manual will then control the expression of the Floating String Division. The Floating String Division may be played from more than one manual at a time however, this division can only be expressed by one expression shoe at a time.

16’	Strings VI	A compound stop of six ranks, that imitates the sound of an orchestral string section. A unit voice one octave in pitch below the 8’ Strings.
8’	Strings VI	A compound stop of six ranks, that imitates the sound of an strings in an orchestra. The standard six ranks are Viol d’ Orchestra, Viol Celéste, Gamba, Gamba Celéste, Dulcet, Dulcet Celéste.
4’	Strings VI	A compound stop of six ranks, that imitates the sound of an orchestral string section. A unit voice one octave in pitch above the 8’ Strings.
	Gambas II OFF	When this drawknob is drawn, the two ranks Gamba and Gamba Celéste, will be removed from the voices of each of the 4’, 8’ and 16’ Strings. Thus, Strings VI becomes Strings IV.

FLOATING STRING DIVISION continued:

	Dulcets II OFF	When this drawknob is drawn, the two ranks Dulcet and Dulcet Celéste, will be removed from the voices of each of the 4', 8' and 16' Strings. Thus, Strings VI becomes Strings IV. Should the organist draw the Gambas II OFF along with Dulcets II OFF and draw any of the Strings VI it then will only be a two rank string voice made of the Viol d' Orchestra and Viol Celéste.
16'	Vox Humana	A unit voice one octave in pitch below the 8' Vox Humana.
8'	Vox Humana	Impressionistic of the human voice and similar to the Vox Humana contained in the Swell Division except the standard String Division voice is slightly brighter.
	String Tremulant	Turns on tremulant on String Organ Division voices.

MIDI DRAWKNOBS – ALL DIVISIONS:

One of these drawknobs must be pulled "ON" to play voices from a MIDI device. For example, if the instrument is equipped with an Allen MDS-MIDI Division™II or MDS-EXPANDER™II, the appropriate MIDI drawknob must be engaged so that voices from the MDS-MIDI Division™II will make sounds.

MIDI to Pedal	Enables Pedal Manual to transmit MIDI information.
MIDI to Great	Enables Great Manual to transmit MIDI information.
MIDI to Choir	Enables Choir Manual to transmit MIDI information.
MIDI to Swell	Enables Swell Manual to transmit MIDI information.
MIDI to Solo	Enables Solo Manual to transmit MIDI information.

GENERAL DRAWKNOBS:

All Swells to Swell	When this drawknob is drawn, it enables the organist to express all voices from one expression shoe. The organist may increase or decrease the volume of the entire instrument by opening or closing the expression pedal labeled "SWELL". This drawknob overrides the String expression controls.
Tremulants Full	When activated along with one or more of the Divisional Tremulant stops, this control causes the Divisional Tremulants to become less subtle and much deeper in their oscillation than classical tremulants. Useful forGospel music, etc. More extreme than the human voice vibrato. Also known as tremolo.
Alternate Tuning "On" (Located with Swell Division drawknobs but affects the entire organ's tuning.)	When activated, the organ's tuning will change to the alternate tuning selected from the Console Controller™. See Section B-1, Page 11, of the Renaissance Console Controller™ and MIDI Guide (AOC P/N 033-0099) for more information about alternate tunings.

SWELL ANTIPHONAL DRAWKNOBS:

Swell Mains Off	To be used in conjunction with the Swell to Antiphonal drawknob. This control disables the Swell Division's main speakers. If this drawknob is engaged and the corresponding Swell to Antiphonal drawknob is not engaged, the Swell Division will make no sound.
Swell to Antiphonal	Causes the Swell Division's voices to speak from Antiphonal speakers. With this engaged, the Swell Division will speak from both the Antiphonal and Main speakers. When the Swell Main Off drawknob is also engaged, the Antiphonal will sound alone.

EXPRESSION SHOES (PEDALS):

There are five expression shoes on the Renaissance 450. The one on the far right is the Crescendo Pedal (see below). The pedal on the far left expresses both the Great and Pedal Divisions. The second expression shoe from the left, expresses the Choir Division while the center expression shoe expresses the Swell Division. The fourth expression shoe from the left, next to the Crescendo Shoe, expresses the Solo Division.

The Floating String Division expression can be controlled with three shoes, (not the Solo Division Shoe) or may be played unexpressed (shades open). There are three pistons mounted on the left cheek block of the Swell, Great, and Choir manuals. Each piston is accompanied with an indicator light (LED). Only one of these three pistons may be selected at a time. When one is selected, the corresponding expression shoe for the appropriate manual will control the expression of the Floating String Division. The Floating String Division may be played from more than one manual at a time however, this division can only be expressed by one expression shoe at a time.

CRESCENDO PEDAL:

One master Crescendo, for all divisions, gradually adds stops as this pedal is opened. Sequential green, yellow, and red lights indicate the relative position of this pedal. Crescendo B is a secondary Crescendo that can be programmed by the organist or Allen representative. Refer to the Renaissance Console Controller™ and MIDI Guide, (AOC P/N 033-099) Section B-3, Page 14, to change the settings of this second Crescendo. Indiscriminate use of the Crescendo pedal, in lieu of careful registration, should be avoided.

TUTTI I & II:

Tutti I and II are each set for full organ registrations. Tutti II is a fuller registration than Tutti I. Tuttis are turned "ON" by using manual pistons located beneath the Swell manual directly above the Cancel piston. The pistons are reversible, i.e., pressing them will reverse the setting of the corresponding Tutti "ON" or "OFF". The Cancel button will also turn "OFF" the Tuttis. Red signal lights, appropriately labeled and located on the right side of the console and just left of the expression indicators, illuminate when Tutti I or II is in operation. A second set of Tuttis can be programmed by the organist. Refer to the Renaissance Console Controller™ and MIDI Guide, (AOC P/N 033-099) Section B-3, page 14, to change the settings of the secondary Tuttis.

ARTISTIC REGISTRATION

This section is intended to aid the organist that is looking for suggestions. By no means should registration be confined to only what is included here. Organ registrations fall into two broad categories: solo registrations and ensembles.

SOLO REGISTRATIONS:

A solo registration is one in which a melody is played on one keyboard, the accompaniment part played on another keyboard, and the pedal often provides a supportive 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 being too loud.

Most 8' reed stops make interesting solo voices. The addition of a 4' flute or a flute mutation (e.g., Nasard or Tierce) to a reed such as the Trumpet, colors the sound further and increases its volume slightly. Adding an 8' flute to a reed will add body and fullness to the tone.

Flutes can be used alone or in combinations as solo voices. One special combination of flutes that creates an appealing and historically significant solo combination is the Cornet (pronounced kor-NAY). The Cornet is created by using the following Swell stops: 8' Rohr Bourdon, 4' Traverse Flute, 2-2/3' Nasard, 2' Piccolo, and 1-3/5' Tierce. This solo combination was used widely in Baroque organ music, but it is just as appropriate for some modern music. Useful variations of the Cornet may be achieved by eliminating the 4', the 2', or both.

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.

For accompaniment, desirable voices are the 8' flutes and strings on each manual. Celestes often make effective accompaniments. The correct choice depends on the volume of the solo tone (a soft solo voice requires the softest accompaniment stop), the element of contrast, and the location of the solo stop. A bright, harmonically rich solo reed, for example, can be accompanied by either a string or flute, but the flute will often contribute more interest because of its greater contrast.

Try to seek a "natural" balance of volume between solo and accompaniment. This will be especially easy to accomplish since the solo and accompaniment are under separate expression.

SUGGESTED SOLO REGISTRATIONS:

CHIMES SOLO

Swell: (8') Flûte Céleste II; or 8' Rohr Bourdon, 8' Viola, and 8' Viola Céleste
Great: Chimes
Choir: 8' Erzähler, and 8' Erzähler Celeste
Pedal: 16' Lieblichgedackt, 8' Swell to Pedal
Play solo on Great and accompaniment on Swell or Choir.

SWELL SOLO COMBINATION

Swell: 8' Rohr Bourdon, 4' Traverse Flute, 2-2/3' Nasard, 2' Piccolo, 1-3/5' Tierce
Great: 8' Metalgedeckt (second voice); or 8' Gambe
Choir: 8' Holtzgedeckt
Pedal: 16' Lieblichgedackt, 8' Gedacktflöte
Play solo on Swell and accompaniment on Great or Choir.

FLUTE SOLO

Swell: 8' Viola, 8' Viola Céleste; or (8') Flûte Céleste II
Great: 8' Harmonic Flute or couple Solo on Great, with 8' Flauto Mirabilis (with or without tremolo)
Choir: 8' Erzähler, 8' Erzähler Celeste
Pedal: 16' Lieblichgedackt, 8' Swell to Pedal
Play solo on Great and accompaniment on Swell or Choir.

REED SOLO

Swell: 8' Viola Pomposa, 8' Rohr Bourdon, 4' Traverse Flute, 4' Octave Geigen, 8' Oboe,
Great: 8' 2nd Diapason, 8' Gamba, 4' Octave, 8' Swell to Great,
Choir: Solo on Choir, with 8' Tuba Mirabilis
Pedal: 32' Contre Violone, 16' Bourdon, 16' Violone, 8' Octave, 8' Swell to Pedal
Play solo on Choir and accompaniment on Great.

These few combinations demonstrate basic techniques of solo registration. 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. Such registrations are used in hymn singing, choir accompaniments, and much of the contrapuntal organ literature.

Volumes have been written on the subject of ensemble registration; here 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 ensemble groupings or "choruses":

The Principal Chorus is the most fully developed with foundation voices of various divisions at every pitch from 16' Diapason to the high mixtures. The Principal chorus is sometimes called the narrow-scale flue chorus, a reference to the relative thinness of Principal pipes in relation to their length.

The Flute Chorus is also well represented with a diversity of stops at various pitches. Generally speaking, the Flute chorus is composed of less harmonically developed tones, and is smoother and is not as loud as the Principal chorus. 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 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, Tromba Clairons, Posaune Bombarde, etc., 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 list in Section I.

The Swell Reed Chorus consists of Waldhorn 16', French Trompet 8', and Clarion 4'. These stops create a blaze of richly harmonic sounds that bring "fire" to top off both flue choruses.

Another special ensemble combination is the Cornet, which was discussed in the section on Solo Registration. This combination can be used with the chorus reeds and mutations to create the "Grand Jeu." The Cornet is also useful in Romantic ensembles to add weight and thickness to the sound.

SUGGESTED ENSEMBLE REGISTRATIONS:

GREAT MANUAL DIVISION

1. 8’ Harmonic Flute, 4’ Flute
2. 8’ 2nd Diapason, 4’ Octave
3 8’ 1st & 2nd Diapason, 4’ Octave,
4. 8’ 2nd Diapason, 4’ Octave, 2’ Fifteenth
5. 8’ 1st & 2nd Diapason, 4’ Octave, 2’ Fifteenth, Mixture IV
6. 8’ 1st & 2nd Diapason, 8’ Harmonic Flute, 4’ Octave, 4’ Flute, 2’ Fifteenth, Mixture IV,
7. 8’ 1st & 2nd Diapason, 8’ Harmonic Flute, 4’ Octave, 4’ Flute, 2’ Fifteenth, Mixture IV, Cymbale III, 8’ Tromba

SWELL MANUAL DIVISION

1. 8’ Rohr Bourdon, 8’ Viola Pomposa
2. 8’ Rohr Bourdon, 8’ Viola Pomposa, 4’ Traverse Flute
3. 8’ Rohr Bourdon, 8’ Viola Pomposa, 4’ Traverse Flute, 2’ Piccolo
4. 8’ Rohr Bourdon, 8’ Viola Pomposa, 4’ Octave Geigen, 4’ Traverse Flute, 2’ Piccolo
5. 8’ Rohr Bourdon, 8’ Viola Pomposa, 4’ Octave Geigen, 4’ Traverse Flute, 2’ Piccolo, Fourniture IV
6. 8’ Rohr Bourdon, 8’ Viola Pomposa, 4’ Octave Geigen, 4’ Traverse Flute, 2’ Piccolo, Fourniture IV, 16’ Waldhorn, 8’ French Trumpet

The use of the Swell to Great coupler allows these separate ensembles to be combined on the Great manual. For example, the #5 Great and #3 Swell registrations coupled together and played on the Great form a nice round hymn combination.

CHOIR MANUAL DIVISION

1. 8’ Holtzgedeckt, 8’ Erähler
2. 8’ Holtzgedeckt, 4’ Koppleflöte
3. 8’ Holtzgedeckt, 4’ Koppleflöte, 4’ Prinzipal
4. 8’ Holtzgedeckt, 4’ Koppleflöte, 4’ Prinzipal, 2’ Oktav
5. 8’ Holtzgedeckt, 4’ Koppleflöte, 4’ Prinzipal, 2’ Oktav, Zimbel III
6. 8’ Holtzgedeckt, 4’ Koppleflöte, 4’ Prinzipal, 2’ Oktav, Zimbel III, 1-1/3’ Quintflöte

ENSEMBLE REGISTRATIONS continued:

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 constantly rely on one or two 16' stops along with 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 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, NY: Macmillan Books, 1983.

Cherrington, Dr. Sally. *A Church Organist's Primer.* Volumes I, II, & III. Allen Organ Company. Video Materials, 1996/1997. AOC P/N: 031-0047, 031-0065, 031-0112.

TRANSPOSER

Vast computer capabilities make 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, found inside the Console Controller™ drawer. Neutral (no transposition) position for the knob is marked "●." To shift the music to a higher key, rotate the knob counter-clockwise. The key can be raised a maximum of five half-steps. To shift to a lower key, rotate the Transposer knob clockwise from "●." The key can be lowered a total of seven half-steps. A RED INDICATOR LIGHT COMES ON WHENEVER THE TRANSPOSER KNOB IS MOVED FROM THE NEUTRAL ("●") POSITION. This is to warn the organist that the organ is not ready to play in the same key as when in the Neutral position. This is another reason it is a good habit to operate the instrument with the Console Controller™ drawer open.

WHY TRANSPOSE?

1. Because the range of a song will not always suit the vocal range of a particular singer. By adjusting the Transposer, 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 play the same music as the organist, if the Transposer knob is set two half-steps lower.

3. Because hymn singing can sometimes be improved by a more favorable key selection. Hymn singing can also be enhanced by playing the hymn in its original key, and then playing a short modulation at the end of the stanza that leads into the key one-half step above the stanza key just completed. If the hymn is already in a fairly high key, it may be preferable to play the first few stanzas with the Transposer pitch lowered one-half or even one whole step, then modulate up to the original key for the final stanza.

VIRTUAL ACOUSTICS SETTINGS

The Digital Reverberation System provides the spatial ambiance of various sizes of reverberant rooms. 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 is the DEFAULT setting that is not adjustable. The other 20 styles are selectable and adjustable. They allow an organist to modify the sound of the organ to accommodate a room's changing acoustical properties. (E.g., a room's reverberation characteristics change as the number of people present changes. Differences in reverberation time also occurs when a room's windows are opened or closed.)

The rocker switch labeled VIRTUAL ACOUSTICS in the Console Controller™ drawer must be ON to hear the default reverb or one of the 20 customized virtual acoustic selections. The amount of reverb can be changed on the 20 customized selections and 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.

CARE OF THE ORGAN

BATTERY BACKUP SYSTEM:

The memory for the capture system on your Renaissance 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. Always have the Console Controller™ drawer open before the organ is turned on. If there is a problem the window will display:

Power Failure REPLACE BATTERY !

or some other type of self diagnostic display for about six seconds after the organ is switched on. Should the battery in your Renaissance 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.

To polish a clear music rack, a furniture wax polish may be sprayed on a dry cloth and rubbed on the front of the music rack. Keep the wax off of the wood finishes. This will keep the music rack most clear.

INSTALLATION, and VOICING, OF THE ORGAN

INSTALLATION

Wherever your Renaissance 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 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.

Bass frequency projection is strongly affected by tone cabinet location. Although none of the tone cabinets should ever be moved once the installation is completed, extra care should be exercised to prevent inadvertent movement of the bass tone cabinets. When chambers have been utilized to house tone cabinets, make sure they are not later used for storage closets. Placing sound absorbent materials (choir robes, flowers, papers, etc.) will only damage the organ's sound quality.

VOICING

The Renaissance 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 room the organ resides in, the instrument may need to be tonally finished again.

If your musical needs change, the Renaissance Organ is capable of having the existing voices replaced with other voices. There are available voices stored in memory on compact discs that can be exchanged with your existing voices. Contact your Allen Organ representative to demonstrate examples and make the changes for you.

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!

USA ONLY

CAUTION

Do not plug the instrument into any current source other than 110 to 120 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 ground lift 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 it from accidentally being 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 receiver with respect to the organ's location.
Plug the organ into a different electrical outlet, so that the organ and receiver are on different AC branch circuits.

If necessary, the Allen Organ dealer or an experienced radio technician should be consulted 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.