HAMMOND ORGAN

OWNER'S PLAYING GUIDE

FOR THE New B-3 / New C-3 **CONSOLE MODEL ORGAN**

IMPORTANT SAFETY INSTRUCTIONS

Read these instructions.

Keep these instructions.

Heed all warnings.

Follow all instructions.

Do not use this apparatus near water.

Clean only with dry cloth.

Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce heat.

Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wider blade or third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

Only use attachments/accessories specified by the manufacturer.

Use only with the cart, stand ,tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When cart is used :use caution when moving the cart/apparatus combination to avoid injury from tip-over.

S3´25A

Unplug this apparatus during lightning storms, or when unused for long periods of time.

Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Apparatus shall not be exposed to dripping and splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.

WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

⚠ ⚡

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

⚠ !

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER. NO USER SERVICABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

⚠ ⚡

The lightning flash with arrowhead symbol within an equilateral triangle, indicates that dangerous voltage constituting a risk of electric shock is present within this unit.

⚠ !

The exclamation point within an equilateral triangle, indicates that there are important operating and maintenance instructions in the literature accompanying this unit.

IMPORTANT - PLEASE READ

Your Hammond Organ is designed to give you the true and authentic sound of Hammond Harmonic Drawbars, as well as provide you a large variety of other sounds and features to allow great flexibility in how you want to play. This Guide is designed to explain the operating features of your Hammond Organ as simply and graphically as possible.

The **Information** **Center** section of this Guide requires special explanation. It is <u>not</u> <u>necessary</u> to use the Information Center Display to get the full musical benefit from your New B-3. However, should you want to change some aspect of the sound or performance of your Hammond Organ, the Information Center Display is provided for that purpose. Each feature is treated as an explanation unto itself, and does <u>not</u> require you to already have prior working knowledge of some other feature. The explanations are presented such that, if you follow the steps outlined, the message you see in the Information Center Display screen will be identical to that shown in the manual at that stage of the explanation.

Do not be daunted by the number of steps required to perform each operation. Each step is simple. Simply bear these things in mind:

      1.   Read each step carefully.
      2.   Don't skip any of the steps.
      3.   Don't perform the steps out of sequence.

With these guidelines, you are well on your way to mastering all of the many sounds and features of your Hammond Organ.

You've Selected The World's Most Popular Organ!

Welcome to the exclusive circle of Hammond Organ owners. We're proud you recognize the distinctive quality that has made it the overwhelming choice of beginners, "buffs," and professionals since Hammond first introduced the electric organ in 1935.

Hammond ingenuity has developed a unique digital sound voicing system combined with the traditional Hammond sound and quality. You own one of the world's great sounding instruments. Play it. Discover the exciting effects you can get. You'll achieve new levels of musical enjoyment with your Hammond.

We thank you for selecting this fine new instrument from Hammond, over the vast number of other instruments that are on the market today.

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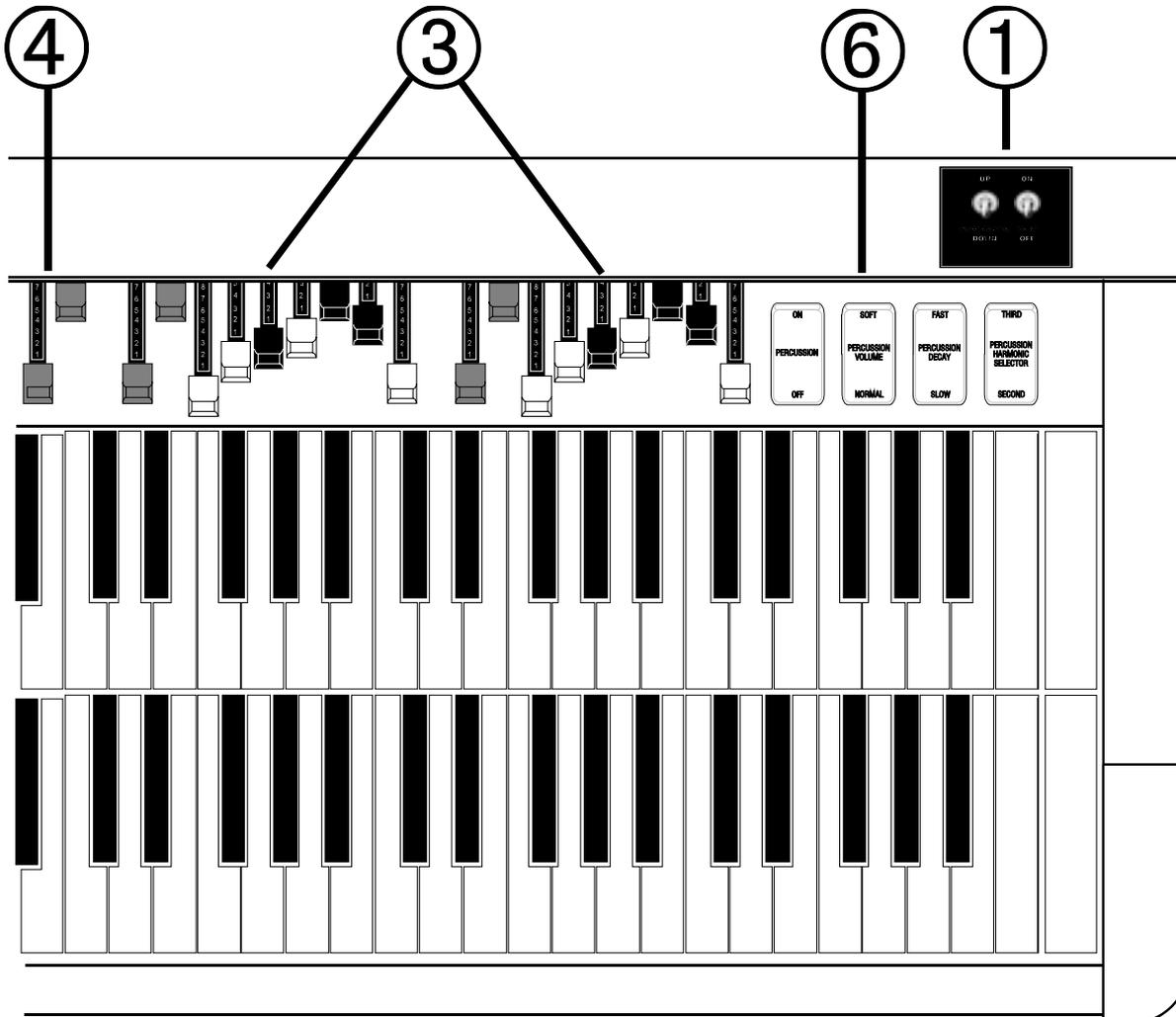
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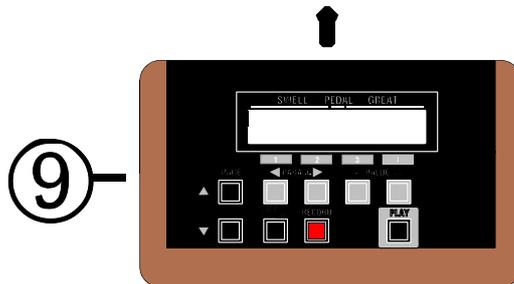
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INTRODUCTION

INTRODUCTION

Ë **Basic Hook-Up**

In order to use your new Hammond Organ to its fullest, you will need to do the following:

1. Connect the organ to A.C. power.
2. Connect the organ to one or more Leslie Speakers.
3. Connect the Pedal Keyboard to the organ.

Ë **AC/Leslie Panel**

The AC/Leslie panel is located at the bottom rear of the organ console, and looks like this:

MAIN   **ECHO**
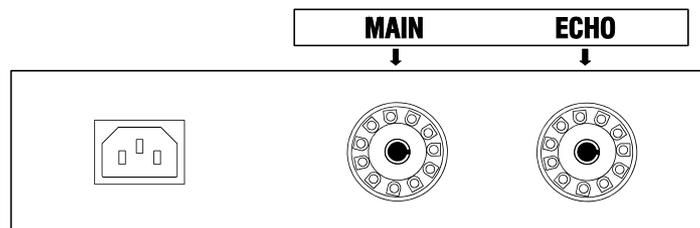
Connecting the organ to A.C. Power

AC LINE

Your Hammond Organ is shipped from the factory set for local A.C. power. Locate the A.C. Power Cord and plug the female end into the A.C. Power receptacle of your organ, and the male end into your A.C. power outlet.
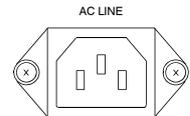
NOTE: When connecting the New C-3, feed the A.C. Power Cord (female end) through one of the round cable holes, and plug the female end into the receptacle of your organ, and the male end into your A.C. power outlet

Connecting the organ to a single Leslie® Speaker

A Leslie™ Speaker will usually be included with your organ. Before turning the organ power "ON", the Leslie Speaker should be connected to the organ. To do this:

1. Locate the Leslie Connector Cable.

2. Plug the female end of the Connector Cable into the receptacle on the back lower left corner of the Leslie Speaker.

3. Plug the male end of the Connector Cable into the 11-pin Leslie socket marked **MAIN**.
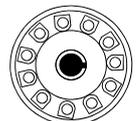
NOTE: When connecting the New C-3, feed the female end of the Leslie Cable through one of the round cable holes on the organ cabinet, and plug the male end of the Connector Cable into the 11-pin Leslie socket marked **MAIN**.

NOTE: Both the Leslie connections are "keyed", that is, each connection contains a notch which insures that the pins properly match up.

IMPORTANT NOTE: Connecting the organ to certain Leslie Speakers may require a special adapter kit and/or Connector Cable. Contact your Hammond Organ Dealer for more information regarding which adapter kit and/or cable you may need.

Leslie Speed Switch

A Leslie Speed Switch is provided with your New B-3 or New C-3 Hammond Organ to allow control of the Leslie Speaker rotors from the organ console. If you wish to move the location of the Leslie Speed Switch:

1. Loosen and remove the two screws holding the Leslie Speed Switch to the underside of the organ.

2. Mount the Leslie Speed Switch in the new location as shown in the diagram below. Secure the cable using the clamps provided underneath the organ.
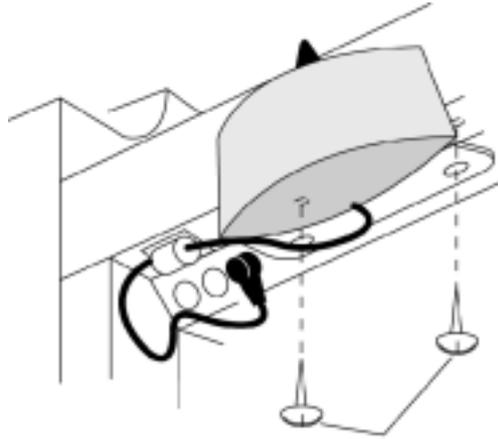
Connecting the organ to multiple Leslie® Speakers

Your New B-3 or New C-3 Hammond Organ has <u>two</u> 11-pin Leslie connectors, one marked <u>**MAIN**</u> and the other marked <u>**ECHO**</u>, making it easy to connect multiple Leslie Speakers to your organ. To do this:

1. Follow steps 1 through 3 under **<u>Connecting the organ to a Leslie Speaker</u>** to connect the first Leslie Speaker.

2. Plug the female end of the Connector Cable into the receptacle on the back lower left corner of the second Leslie Speaker.

3. Plug the male end of the Connector Cable into the 11-pin Leslie socket marked <u>**ECHO**</u>.

NOTE: When connecting the New C-3, feed the female end of the other Leslie Cable through one of the round cable holes on the organ cabinet, and plug the male end of the Connector Cable into the 11-pin Leslie socket marked <u>ECHO</u>.

NOTE: Both the left and right sides of the organ cabinet are outfitted with cable holes in order to allow for different placements of Leslie Speakers relative to the location of the organ console.

Leslie MAIN/ECHO Switch

When two Leslie Speakers are connected to the organ, the optional MAIN/ECHO switch will allow the sound to come from only the MAIN cabinet, only the ECHO cabinet, or both cabinets simultaneously.

Connecting the Leslie MAIN/ECHO Switch to the organ

1.   Locate the MAIN/ECHO jack found on the Rotary Control Panel underneath the manuals on the left side.

2.   Plug the connector from the Leslie MAIN/ECHO Switch into the MAIN/ECHO jack.

3.   Mount the Leslie MAIN/ECHO Switch on the organ as shown in the diagram under **Connecting the Leslie Speed Switch**.

You can connect up to four Leslie Speaker cabinets to one organ using "Y" cables and the MAIN and ECHO connectors on the organ. To connect more than four cabinets, an external Power Relay should be used to avoid damage to the Power Switch of the organ. This accessory is available from your Hammond Dealer.

Connecting the Pedal Keyboard to the organ

Your Hammond Organ is supplied with a 25-note Pedal Keyboard which should be connected to the organ. To set up the Pedal Keyboard:

1.   Lay the Pedal Keyboard on the floor in front of the organ.

2.   Locate the Pedal Keyboard connector cable, and plug it into the Socket found on the Pedal Keyboard.
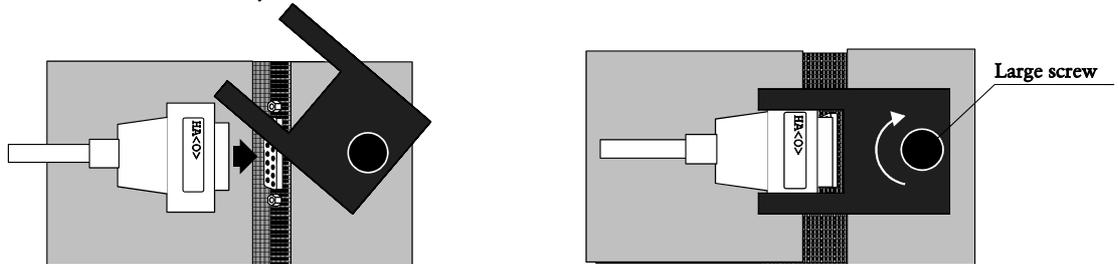
3.   Secure the Pedal Keyboard connection by tightening the large screw opposite the cable plug. This can be tightened by hand.

4.   Carefully slide the Pedal Keyboard underneath the organ, and push it back all the way as far as it will go.

When you have made all of the Basic Hook-Up connections described above, your Hammond Organ will be ready to play.

ADDITIONAL NOTE: Connecting MIDI devices to the organ

Before turning the power to the organ "ON", any MIDI devices that you wish to use should be connected. See the **MIDI** Section of this Guide for information on how to connect MIDI devices to your organ.

The remainder of this Owner's Playing Guide will describe in detail the playing features of your Hammond Organ.

This section will introduce you to the basic sections of the instrument in order to help you get started making music right away.

Ë **Turning The Organ "ON"**

At the right of the music rack slot, you will find two switches. The first is a "toggle" switch to control the pitch of the organ, and will be explained later in this Guide.
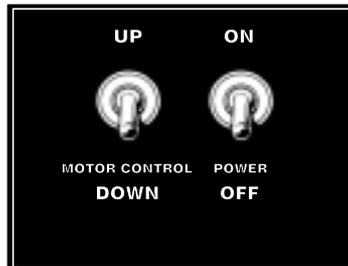
The second "toggle" switch is the **ON / OFF Power Switch**. To turn the organ "ON", simply push this switch forward so that it is in the "ON" position. After about 5 seconds, the organ will be ready to play. However, if you are using a Leslie Speaker cabinet with a tube amplifier, wait about 20 seconds until the tubes warm up.

To shut off the organ, simply pull the ON / OFF Power Switch to its "OFF" position.

Ë **The Preset Keys**
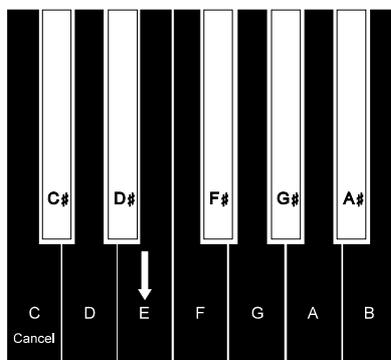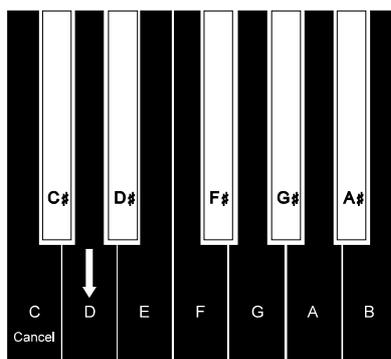
Located to the left of the Swell and Great Manuals are the reverse-color keys called the **Preset Keys**. For the moment, depress the keys (as shown) "E" on the Swell Manual and "D" on the Great Manual. Now both manuals will play. (Depress only one Preset Key on each manual. If two keys are locked down by mistake, release them by pressing the "C" key, at the far left.) The **Presets** section of this Owner's Playing Guide contains a complete explanation of the principle behind the Preset Keys and how they work.

Ë The Harmonic Drawbars
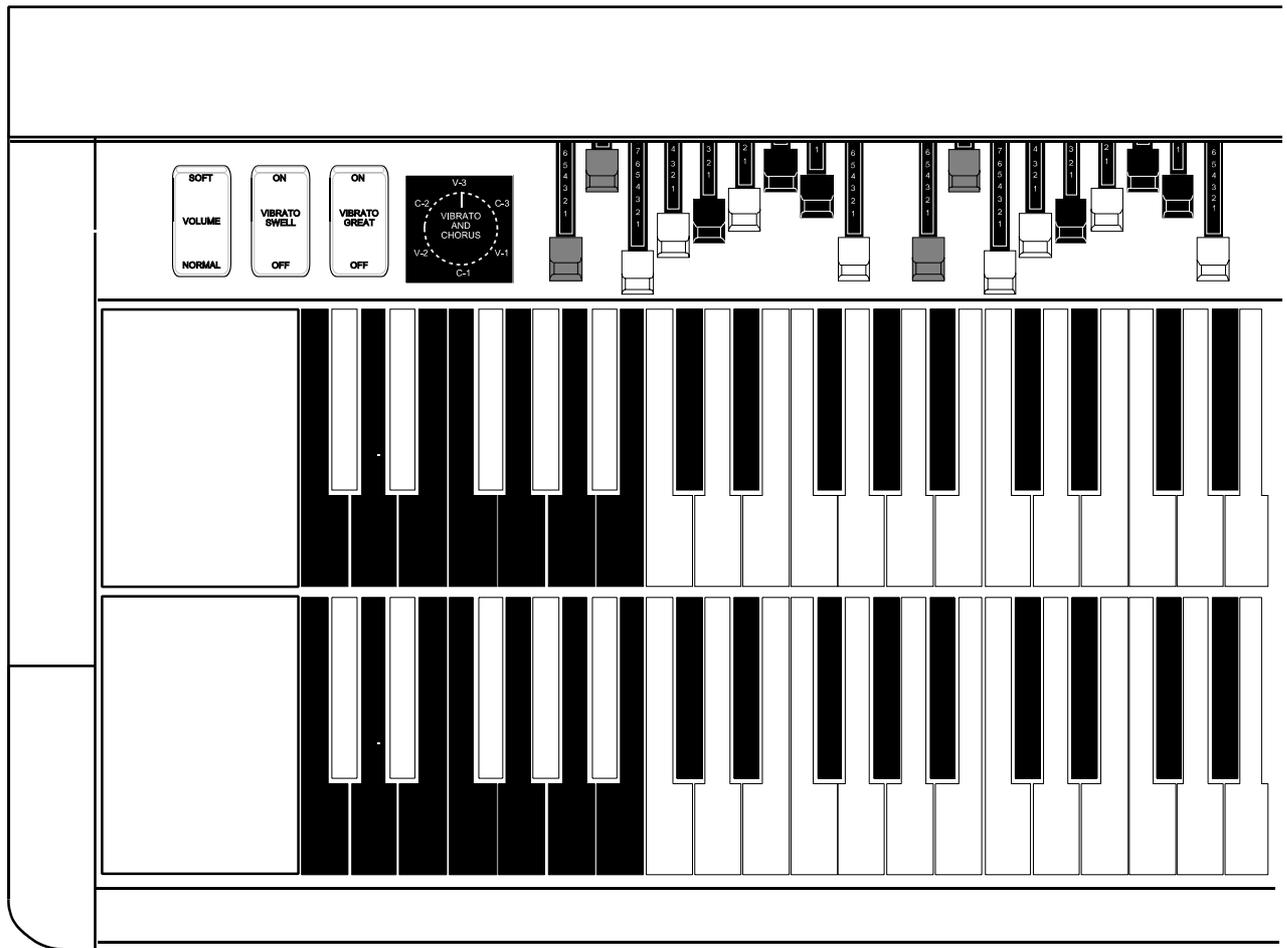
In the illustration above you will notice that there are four groupings of <u>Harmonic Drawbars</u> on your Hammond Organ, located above the Swell Manual. The first two groups control the Swell Manual. Next are two brown Drawbars (set slightly apart from the other Drawbars) which control the volume of the Pedal tones. Finally, there are two more groups of Harmonic Drawbars that control the Great Manual. The tones for each manual are created by making arrangements of these Harmonic Drawbars. The principle behind the Harmonic Drawbars of the Hammond Organ is simplicity itself, yet it results in providing you with incredible versatility. See the <u>Harmonic Drawbars</u> section starting on page 18 for a complete explanation of the principle behind them and how they work. With two groups of Drawbars for each manual, it becomes necessary to be able to select which group you want. The first group of Drawbars for each manual is therefore controlled by the "A<" Preset Key on that manual and can be played only when that Preset Key is depressed, while the second group for each manual comes in when you depress the "B" Preset Key for that manual. If no Preset Keys are depressed, the manual will not sound when played.
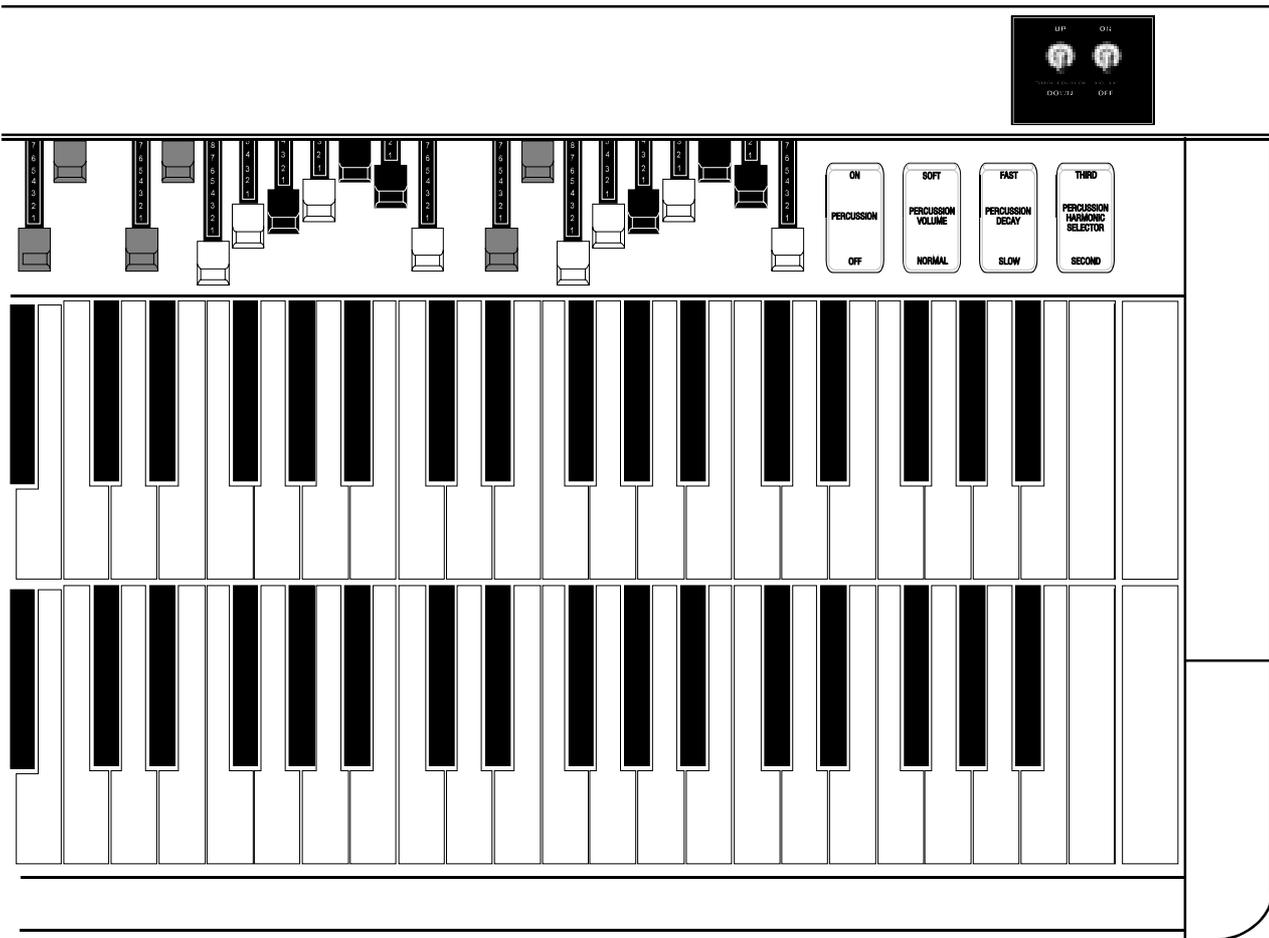
The Harmonic Drawbar is a device for controlling the intensity of the harmonics. By varying the positions of these Drawbars, an unbelievable number of different tones can be created. Thus, the player of a Hammond Organ can "create" his own tones. Each harmonic is available in eight stages of intensity (volume) plus "OFF", the eight numbers being marked on the Drawbars. These numbers are used to record a tone quality so that the organist can duplicate, exactly, any tone which he desires to remember. The reason for providing two groups instead of one for each manual is so that you can have several of your favorite combinations ready and waiting for use.

Pulling a Drawbar out (toward you) will increase the volume in incremental steps from 0 (no volume) to 8 (full volume). Pushing the Drawbar back in (away from you) decreases the volume of that Drawbar.
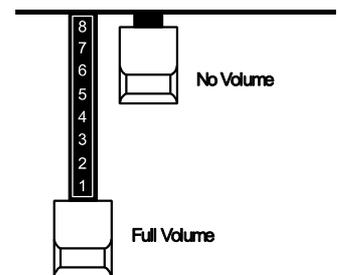
Ë **The Pedal Keyboard**
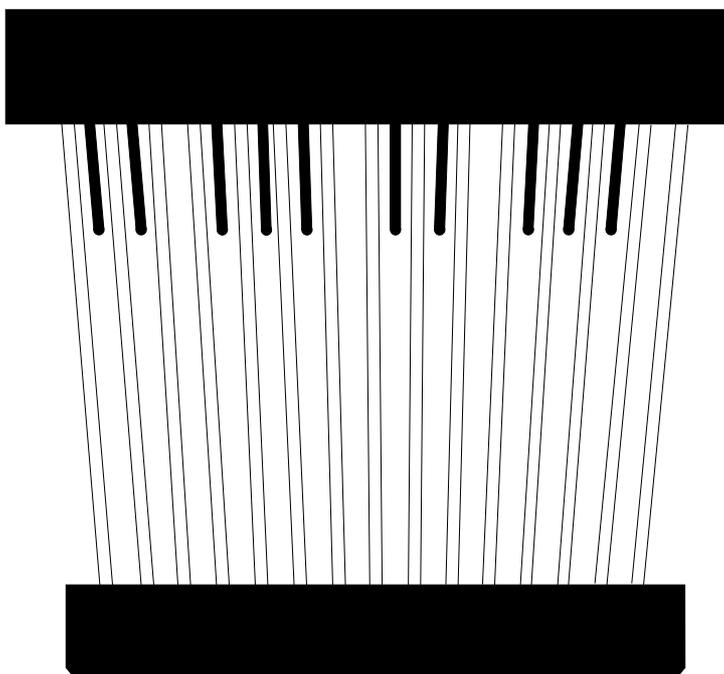
The large keyboard on the floor is known by two names - the pedal keyboard or the pedal clavier. The Pedal Keyboard is really nothing more then a keyboard large enough to play using your feet. On the pedal keys you play the low bass notes. When the foot plays the bass notes, the left hand is then free to play the harmony, and the pedal note will blend in smoothly since the foot can sustain the bass note as long as desired.

Ë **The Expression Pedal**

To the center and just above the Pedal Keyboard is the Expression or Volume Pedal, which you operate with your right foot, and with which you vary the volume of the organ to create "expression." Press forward with the front of your foot to increase the volume and back with your heel to decrease the volume. Practice using the Expression Pedal with a very slow and gradual pressure to secure a beautifully smooth flow of music, and to avoid sudden unmusical changes in volume. To begin, leave the Expression Pedal set halfway open.
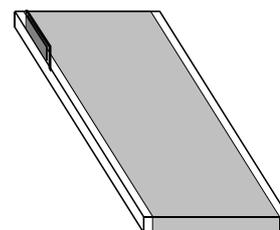
Ë **Expression Pedal Foot Switch**

Located on the left side of the Expression Pedal is a Foot Switch which can be programmed to activate one of several different functions.
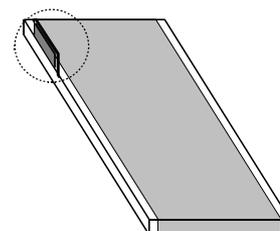
Ë The Volume and Vibrato Controls
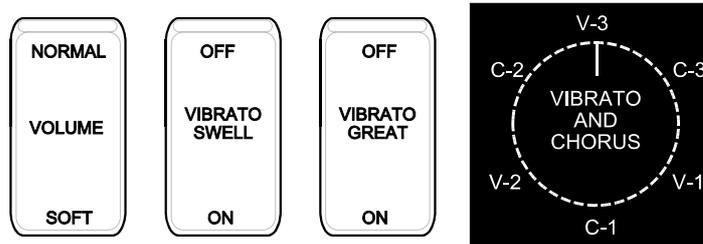
Your Hammond Organ has three Control Tablets and a six-position switch controlling the degrees of Vibrato and Vibrato Chorus.

Normal / Soft Volume

This Control Tablet allows you to play either at "normal volume" or "soft volume" in a small room or for practice. While, of course, you can also play the organ softly by keeping the Expression Pedal partly closed, the "soft" volume position reduces volume while giving you the entire range of the Expression Pedal.

VIBRATO SWELL

This Control Tablet turns the "Vibrato" or "Vibrato Chorus" (depending upon the position of the six-position switch) "ON" or "OFF" on the Swell or Upper Manual.

VIBRATO GREAT

This Control Tablet turns the "Vibrato" or "Vibrato Chorus" "ON" or "OFF" on the Great or Lower Manual.

Amount of Vibrato and Chorus

The **Vibrato** **and** **Chorus** switch is controlled by a knob which operates in six positions, providing three degrees of Vibrato and three degrees of Vibrato Chorus. Each degree of the Hammond Vibrato is noticeably different and serves a different purpose, adding greatly to the musical resources of the organ. To select the amount of Vibrato or Chorus, simply turn the knob to the desired position.
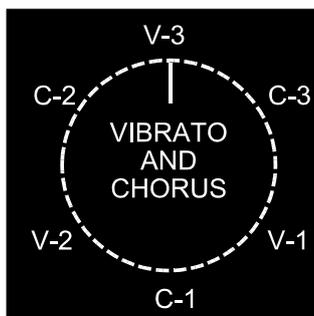
Vibrato

V-1 (Small Vibrato)

This is the lightest depth and produces the vibrato equivalent of most orchestral solo instruments.
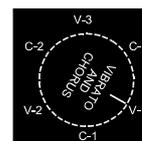
V-2 (Wide Vibrato)

This is the standard depth vibrato used with the Drawbars to produce the effect of a theater organ.
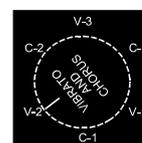
V-3 (Full Vibrato)

This is the fullest amount and adds much warmth and enhances your music.
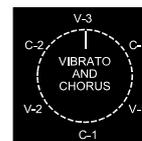
Remember, either one or both of the VIBRATO SWELL or VIBRATO GREAT Control Tablets must be in the "ON" position to allow you to hear the selected Vibrato effect for each Manual.

Chorus

When the CHORUS effect is used, *half* of the tone is heard without Vibrato, and *half* of the tone is heard with Vibrato.

C-1 (Small Chorus)

This is the lightest depth, and produces the light chorus effect.
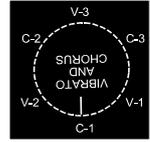
C-2 (Wide Chorus)

This is the standard depth of the chorus effect.
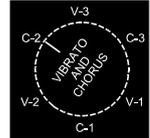
C-3 (Full Chorus)

This is the fullest amount.
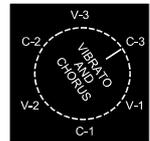
Remember, either one or both of the VIBRATO SWELL or VIBRATO GREAT Control Tablets must be in the "ON" position to allow you to hear the selected Chorus effect for each Manual.

Ë Percussion
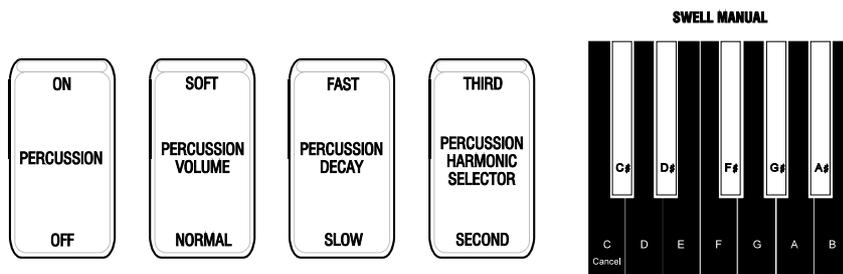
The Percussion tones are available only with the second group of Swell Manual Drawbars. Thus the "B" Preset Key must be active to obtain Percussion.

Organ tones are normally "sustained" in that they are steady in their loudness as long as a playing key is held down. The word "Percussion" refers to a tone that is not steady and fades away, such as a piano or chimes. Your Hammond Organ has Percussion tones which enhance the sounds produced by the Drawbars.

The four Control Tablets controlling the Percussion tones are located to the right of the Drawbars above the Swell Manual.

Percussion "ON-OFF"

This Control Tablet, when in its "ON" position, renders the Percussion effect effective on the Swell Manual.

NOTE: In the "ON" position, all of the second group upper manual Swell Manual Drawbars will be effective except the 8th Harmonic Drawbar. This latter is employed for operating the percussion system. In the "OFF" position, the 8th Harmonic Drawbar is effective as usual.

Percussion Volume

This Control Tablet regulates the volume of the Percussion tone. When it is set to its "NORMAL" position, the Percussion effect will be very prominent for the tones produced by the Swell Manual Drawbars. It will also be noticed that the tones from the Swell Manual Drawbars are reduced in volume to compensate for the addition of the percussion tones. This volume compensating feature enables the organist to quickly make registration changes by merely manipulating the "ON-OFF" percussion control. When the Percussion Volume Control is set to its "SOFT" position, the percussion effect is much less prominent. The volume of the Swell Manual Drawbar tones therefore remains unaffected by the addition of the soft percussion effect.

Percussion Decay

When this Control Tablet is set to its "SLOW" position (push tablet down at front), the Percussion tone will decay (die away) slowly like a chime. In its "FAST" position, the Percussion effect will decay rapidly like a xylophone or marimba.

Percussion Harmonic Selector

The position of this Control Tablet determines the pitch at which the percussion tone sounds. When set at "SECOND," the pitch is up one octave with respect to the Fundamental Drawbar; when set at "THIRD," the percussion pitch is up an octave and a fifth with respect to the Fundamental Drawbar.

HARMONIC DRAWBARS

HARMONIC DRAWBARS

Your Hammond Organ has 4 sets of nine Drawbars, two for each manual. Drawbars, often called Tonebars, are the heart and the basis of the renowned Hammond Sound and have been used since the first Hammond Organ Model A introduced in 1935.

There are approximately 253,000,000 possible sound combinations that can be produced by these Drawbars. Each Drawbar consists of sine waves of different pitches (which means tone depth). The illustration below shows how each Drawbar relates to the manual when middle "C" is pressed.

PIPE PITCH	16'	5 1/3'	8'	4'	2 2/3'	2'	1 3/5'	1 1/3'	1'
SCALE INTERVAL	sub-OCTAVE	5th	unison	8th	12th	15th	17th	19th	22nd
STOP NAME	BOURDON	QUINT	PRINCIPAL	OCTAVE	NAZARD	BLOCK FLÖTE	TIERCE	LARIGOT	SIFFLÖTE

MIDDLE "C"
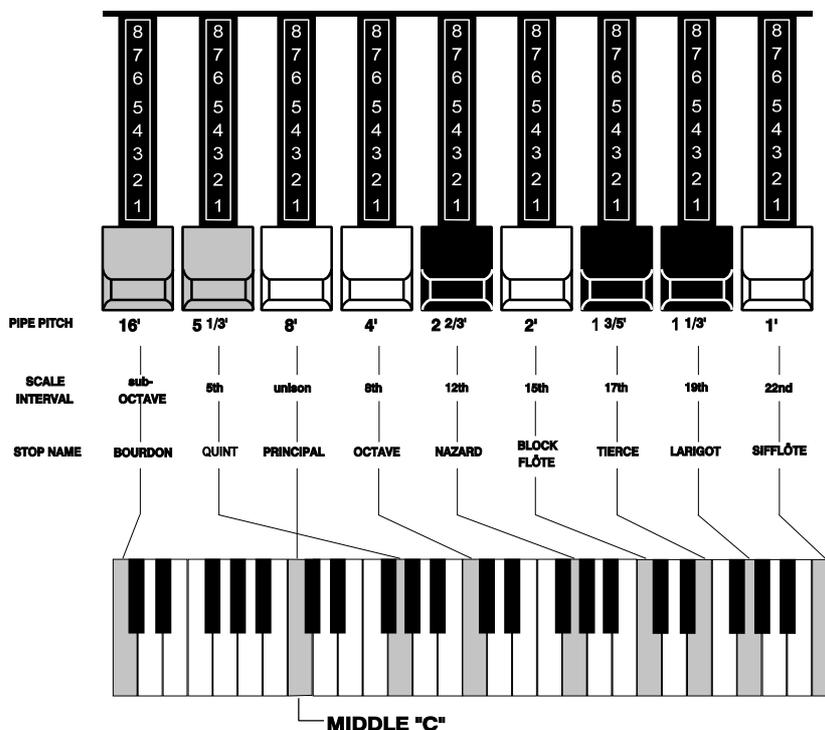
Each Drawbar is marked with a number followed by a footage mark. For example, the first white Drawbar is marked "8'." This is pipe organ terminology indicating that the pipe used to produce the lowest note on the keyboard on a pipe organ is actually eight feet long. The numbers from "1" to "8" on each Drawbar represent degrees of loudness - number 1 being the softest, and number 8 being the loudest.

Drawbars are divided into 3 groups of sound as well as 3 groups of color. We will first look at the 3 sound groups.

Ë **Sound Groups**

You may think of these sound groups in terms of the three levels – The Sub being the deep pitches, the Foundation being the mid range of pitches and the Brilliance being the high pitches.

```
        - SUB -              - FOUNDATION -              - BRILLIANCE -
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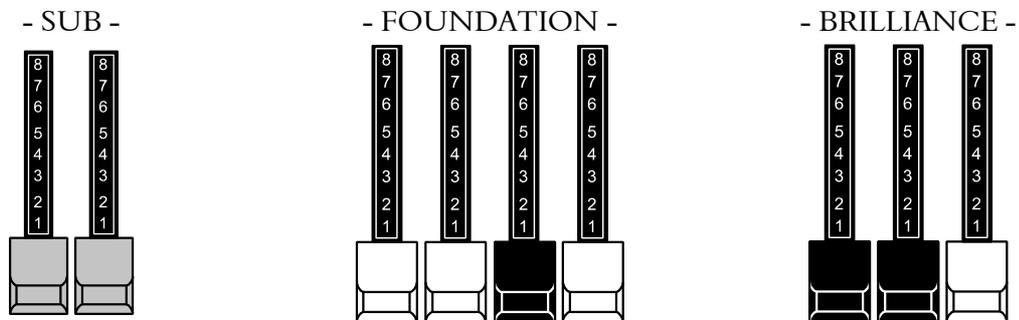
TRY THIS:

1.   Make sure all Drawbars are "IN" (off).

2.   Press the "B" Preset Key on the Swell (upper) Manual.

3.   Hold down a "C" chord, starting with "E" above middle "C", ("E", "G" & "C" notes) with your right hand on the Swell Manual.

4.   Starting with the first white Drawbar in the second group of Drawbars for the Swell Manual, pull out and push in each of the Swell Manual Foundation Drawbars one group at a time until you have a sound that you like.

5.   While still holding the "C" chord down, pull each of the Swell Manual brown Sub Drawbars out until you like the sound.

6.   Now do the same with the Swell Manual Brilliance Drawbars.

It's that easy to create your own custom Drawbar settings.

Ë **Color Groups**

White Drawbars

The first white Drawbar represents the "fundamental" or "8' base" tone. All of the other white Drawbars are octave intervals or harmonics of the fundamental tone. The tonal brilliance is greatly increased by adding white Drawbars, but the harmonics added are always in "consonance" or harmony.
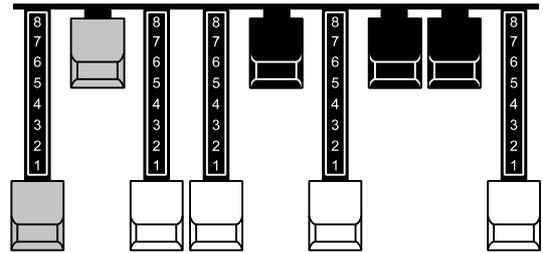
- CONSONANT HARMONICS -

TRY THIS:

1.   Make sure all Drawbars are pushed "In" (off).

2.   Press the "B" Preset Key on the Swell Manual.

3.   Hold down middle "C" on the Swell Manual.

4.   Pull the first white Drawbar in the second group for the Swell Manual, marked 8', all the way out.

5.   Now, one by one, pull the other Swell white Drawbars out in sequence.

As you add each Drawbar, you will hear the addition of the same note an octave higher in each case.

Black Drawbars

The Black Drawbars on the Hammond Organ represent the dissonant (discordant) harmonics which are also necessary in building rich tone colors. The mellowness of a horn, the pungency of strings, and the brilliance of reed voices owe much of their character to the presence of these harmonics in different degrees.
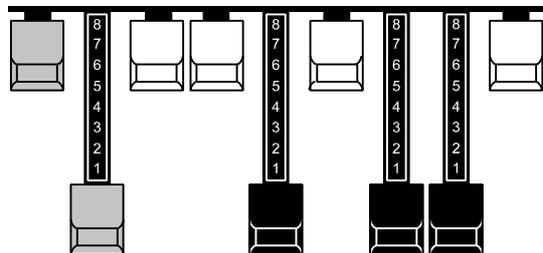
- DISSONANT HARMONICS -

TRY THIS:

1.   Make sure all Drawbars are pushed "in.”

2.   Press the "B" Preset Key on the Swell Manual.

3.   Hold down middle "C" on the Swell Manual.

4.   Pull the first white Drawbar in the second group of Drawbars for the Swell Manual, marked 8', all the way out.

5.   Now pull the 3 Black Drawbars in the second group of Drawbars for the Swell Manual all the way out.

The sound produced by the Drawbars is that of a clarinet.

Brown Drawbars

In addition to the white and black Drawbars, there are two brown Drawbars in the group. These two Drawbars produce "sub-octave" effects. The first brown Drawbar is the sub-octave of the fundamental 8' Drawbar. It is "one octave" lower in sound.

TRY THIS:

1.   Make sure all Drawbars are pushed "in.”

2.   Press the "B" Preset Key on the Swell Manual.

3.   Hold down middle "C" on the Swell Manual.

4.   Pull the first white Drawbar in the second group of Drawbars for the Swell Manual, marked 8', all the way out.

5.   While continuing to hold middle "C" down, pull the first brown Drawbar in the second group of Drawbars for the Swell Manual, marked 16', all the way out.

You will now hear the sound of "C" one octave lower being added.

The second brown Drawbar is the "sub-octave" of the third harmonic. Both of these Drawbars are used to add depth and richness to many combinations. They also increase the range of the manual by one octave since a solo registration of the "8 foot," or normal pitch, can be set up using the first brown Drawbar as the fundamental and played one octave higher.

TRY THIS:

1.   Make sure all Drawbars are pushed "in."

2.   Press the "B" Preset Key on the Swell Manual.

3.   Hold down middle "C" on the Swell Manual.

4.   Pull the first white Drawbar in the second group of Drawbars for the Swell Manual, marked 8', all the way out.

5.   While continuing to hold middle "C" down, pull the first brown Drawbar in the second group of Drawbars for the Swell Manual, marked 16', all the way out. You will now hear the sound of "C" one octave lower being added.

6.   Now pull the second brown Drawbar in the same group out, and you will hear it add a richness to the sound of the "C" note that you are holding down.

Ė Tone Families By Shape

Regardless of the size of a pipe organ or its number of stops, all of its voices are related to four basic families of tone. The four basic families – Flute, Reed, String and Diapason – can be quickly set up on the Drawbars by relating a pattern or shape to each family.

These are the generalities which apply to the tonal resources of the organ, and in themselves produce pleasant and usable effects. However, real beauty of tone is secured in two ways. The first way is to use registrations which have been devised by organists. The second way, and eventually the one that best expresses your own feeling for the music, is to create your own tonal effects, experimenting with and perfecting tones which you use to play your favorite selections.

The Hammond Organ Drawbars allow you not only to set up any tonal effect you want, but also to make many fine variations of the tone. Only with the Hammond Drawbars can you play exactly the shade of tone you want for every selection and, perhaps even more important, for every size and type of room in which you play.

With the Hammond Organ Drawbars, a touch of a finger is all that is needed to make the tone quality softer or more brilliant, richer in one harmonic or another.

Typical Drawbar Registration Patterns For The
Four Families Of Organ Sound

Ë **Flute family (2 step pattern)**
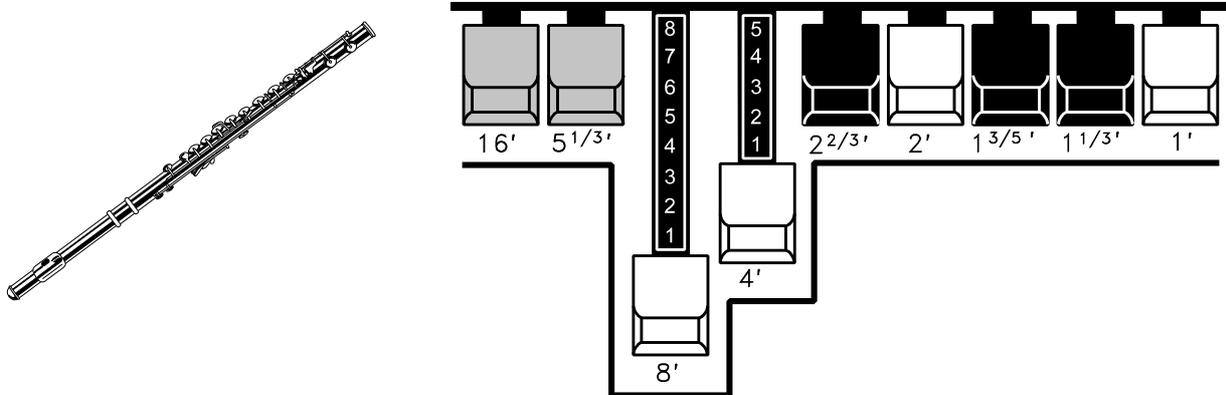
A Basic Flute Tone

There are literally hundreds of flute tones available on the Hammond Organ, in contrast to other types of organs on which you can play only one or perhaps two or three tones which are set up at the factory. By simply changing the relative positions of the 8' and 4' Drawbars to 00 3700 000, you can create a light concert type of flute. Or by closing the 4' Drawbar altogether and adding a little of the $2^2/_3$' Drawbar plus a heavier fundamental, you can get a solo tibia – 00 8020 000.

Any combination of white Drawbars provides various flute tones; the first brown Drawbar adds depth.

Flute Tones

Accompaniment Flute 8'	00 8460 000
	00 3220 000
	00 8600 000
Blokflöte 8'	00 5310 000
Blokflöte 4'	00 0503 010
Chorus of Flutes 16'	80 8605 002
Concert Flute 8'	00 6300 000
Flute 8'	00 6201 000
Flute 4'	00 0602 001
Flute 2'	00 0106 004
Flute (Organ type) 16'	50 3000 000
Flute (Organ type) 8'	00 5300 000
Flute (Organ type) 4'	00 0503 000
Flute (Organ type) 2'	00 0005 000
Nazard 2 2/3	00 0030 000
Open Flute 8'	00 7510 000
Orchestral Flute 8'	00 3831 000
Piccolo 2'	00 0006 003
Principal Flute 8'	00 8530 000
Stopped Flute 8'	00 5020 000
Tibia 8'	00 7030 000
Tibia 4'	00 0700 030
Tibia (Solo) 8'	00 8020 000
Tibia (Theater) 16'	80 8605 004
Wooden Open Flute 8'	00 8840 000

Ë Reed family (triangle pattern)
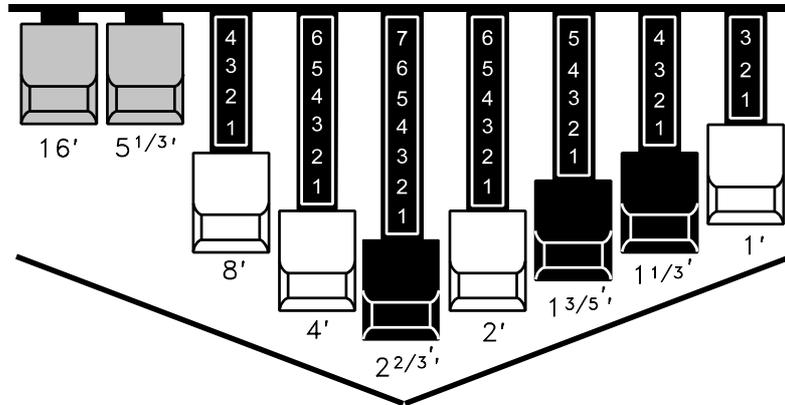
A Basic Reed Tone

The reeds are more brilliant and numerous than any other tone group. Many are used as solo stops because of their strong personalities.

Reed tones include the brasses and woodwinds. The tones of the woodwinds are created by vibrating reeds. The oboe, a typical reed tone, is obtained by emphasizing the Drawbars in the middle of the group, with nearly as much of the first black Drawbar as the fundamental itself. Use of the first black Drawbar is typical of many reed registrations. It creates a "triangle" pattern that is easy to remember. The triangle pattern of a less powerful registration, 00 2333 200, is a useful accompaniment tone.

Reed Tones

Bassoon 16'	44 7000 000
Bassoon 8'	08 7500 000
Bombarde 16'	86 8400 000
Chorus Reed 8'	00 7777 750
Clarinet 8'	00 6070 540
Clarinet 8'	00 6060 300
English Horn 8'	00 3682 210
Flugel Horn 8'	00 5777 530
French Horn	00 7654 321
Kinura 8'	00 0172 786
Oboe (Orchestral) 8'	00 4764 210
Oboe (Organ type) 8'	00 4571 320
Oboe Horn 8'	00 4675 210
Post Horn 8'	00 6677 530
Reed Chorus	63 8888 863
Saxophone 16'	86 7100 000
Saxophone 8'	01 8762 431
Trombone 8'	01 8777 530
Trumpet (Orchestral) 8'	00 6788 650
Trumpet (Organ type) 8'	00 7677 320
Tuba (Organ type) 16'	88 8864 000
Tuba (Organ type)	03 6888 760
Tuba Sonora 8'	02 7788 640
Vox Humana 16'	33 6045 000
Vox Humana 8'	00 4720 123

Ë Diapason family (check mark pattern)
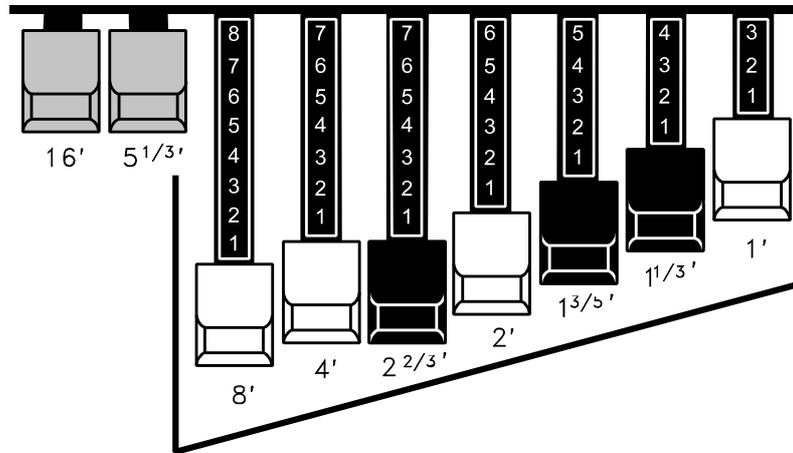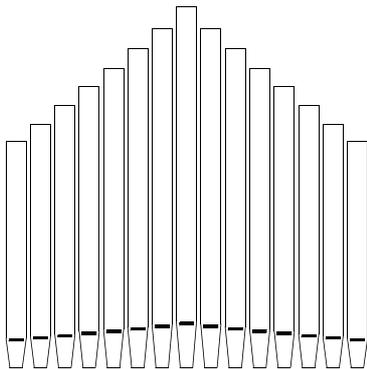
A Basic Diapason Tone

All diapason tones are characterized by a strong fundamental and second harmonic with relatively weak upper harmonics. Diapason tones are more affected by good or bad acoustics than are the tones of more pronounced character. Registration that is good in one location may not be satisfactory in another. The "phonon" type of diapason was developed on pipe organs by designers who wanted to produce a soft foundation tone.

In discussing tone as a structure, diapason tones lie between the flute tones, which are almost devoid of upper harmonics, and the string tones, which are characterized by strong upper harmonic development.

Diapason Tones

Accomp. Diapason 8'	00 8874 210
Chorus Diapason 16'	84 8421 000
Chorus Diapason 8'	00 8686 310
Chorus Diapason 4'	00 0806 085
Diapason 8'	00 7785 321
	00 7783 210
Diapason Chorus 8'	61 8855 424
Echo Diapason 16'	43 4421 000
Echo Diapason 8'	00 4434 210
Harmonic Diapason 16'	85 8524 100
Harmonic Diapason 8'	00 8877 760
Harmonic Diapason	00 8678 453
Harmonic Diapason	00 6546 532
Harmonic Diapason 4'	00 0606 045
Horn Diapason 16'	77 7621 000
Horn Diapason 8'	00 8887 480
Open Diapason 8'	01 8866 430
Open Diapason	00 8745 423
Open Diapason	01 6655 320
Solo Diapason 16'	85 8544 000
Solo Diapason 8'	01 8855 331
Solo Diapason 4'	00 0818 055
Wood Diapason 16'	82 7311 000
Wood Diapason 8'	00 7754 321

Ë **String family (bow pattern)**

| 16' | 5 1/3' | 8' | 4' | 2 2/3' | 2' | 1 3/5' | 1 1/3' | 1' |
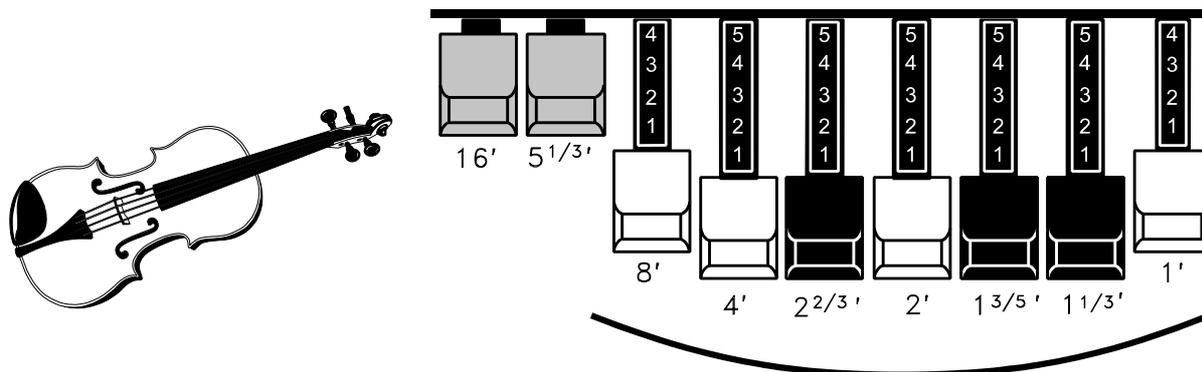
A Basic String Tone

The fourth and last of the organ "family" groups is the string family, both organ and orchestral. String tone qualities are characterized by especially strong upper harmonic development. The fundamental and second harmonic structure is the opposite of flutes.

There are many hundreds of possible string tone registrations. Every string tone can be made either "dull" or "bright" by varying the amount of the upper harmonics. In fact, the string family, considered the most versatile of the four tone families, can be soft or loud, single strings or groups and used as solos or accompaniments.

String Tones

Cello 8'	00 3564 534
Cello 8'	00 3564 211
Dulciana 8'	00 7770 000
Gamba 8'	00 3484 443
Gamba 8'	00 3474 121
Gemshorn 8'	00 4741 321
Gross Gamba 8'	00 4786 543
Harmonica (Organ type) 8'	00 1233 321
Keen Strings 8'	00 1687 664
Muted String 8'	00 2452 010
Orchestral String 8'	00 1464 321
Salicional 16'	25 4321 000
Salicional 8'	00 2453 321
Salicional 4'	00 0204 052
Soft String 16'	13 3210 000
Soft String 8'	00 1332 320
Solo Cello 8'	00 3485 543
Solo Viola 8'	00 2474 341
Solo Violin 8'	00 3654 324
String Organ	22 5787 765
String Organ	22 4767 765
Viola da Gamba 8'	00 2465 432
Violin 8'	00 2334 434
Violin 8'	00 2382 233
Violin 8'	00 2476 264
Violina 4'	00 0103 064
Violine 16'	26 3431 000

Ë **Pedal Drawbars**
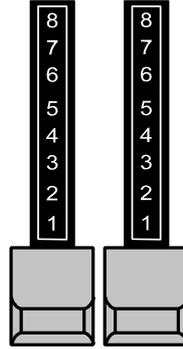
The two brown Drawbars located between the Drawbars for the Swell and Great Manuals control the sounds produced by the Pedal Keyboard. The first Pedal Drawbar produces a tone at 16' pitch for a deep foundation bass, while the second Pedal Drawbar produces a tone at 8' pitch, or one octave higher.

NOTE: You can change the characteristics of the Drawbar sounds of the organ. To see how to do this, please consult page 53 of this Guide.

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PRESETS

PRESETS

Ë **The Preset Keys**

SWELL MANUAL

To the left of each manual are the twelve Preset Keys. The first key on each manual is a Cancel key. The next nine keys, "C<" through "A", are preset to the tones most often used by organists. These tones can be changed if you wish, to suit the acoustics of the room or to incorporate tone colors that you particularly like. The last two keys on each manual, "A<" and "B", (sometimes called "Adjust" Keys) are actually "on-off" switches to control the tones created and set up on the four groups of Drawbars.

	C♯	D♯		F♯	G♯	A♯
C	D	E	F	G	A	B
Cancel						
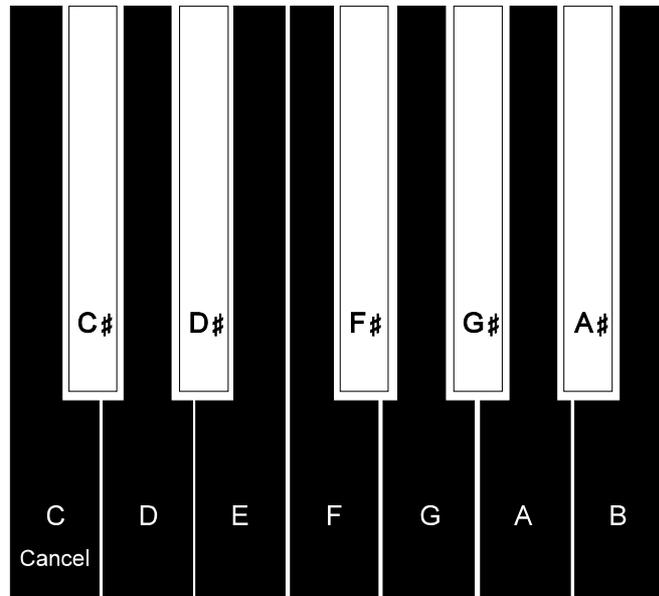
GREAT MANUAL
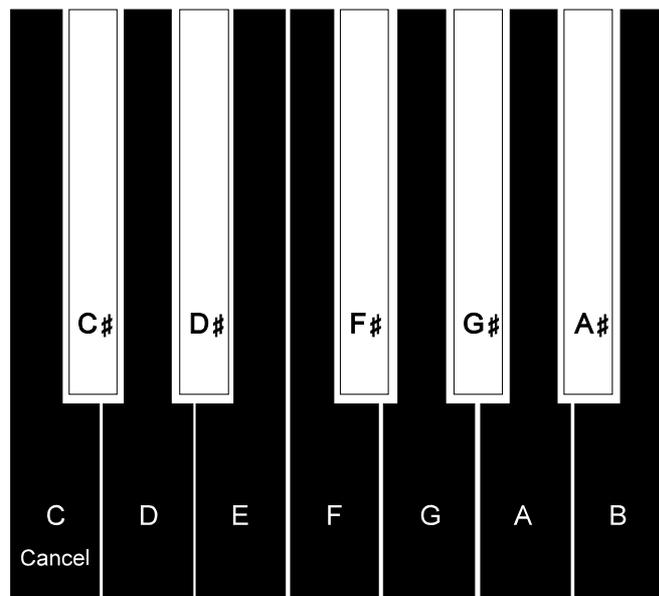
The organ has three built-in Preset Banks - **Liturgical, Jazz** and **Theatre**. For the Liturgical and Theatre Preset Banks, the white keys are the solo and single-tone qualities, while the black ones are the ensemble qualities. The softer tones are to the left, gradually growing louder to the right. In all Preset Banks, the Presets are used one at a time, and cannot be used in combination. Pressing one key cancels any other key.

NOTE: You can access the three Preset Banks using the Information Center. Please see page 47 for information on how to do this.

	C♯	D♯		F♯	G♯	A♯
C	D	E	F	G	A	B
Cancel						

Ë Preset Chart - Liturgical Bank

Swell Manual

PRESET KEY	DRAWBAR SETTING	TONE QUALITY	LOUDNESS VALUE
C		Cancel	
C<	00 5320 000	Stopped Flute	pp
D	00 4432 000	Dulciana	ppp
D<	00 8740 000	French Horn	mf
E	00 4544 222	Salicional	pp
F	00 5403 000	Flutes 8' & 4'	p
F<	00 4675 300	Oboe Horn	mf
G	00 5644 320	Swell Diapason	mf
G<	00 6876 540	Trumpet	f
A	32 7645 222	Full Swell	ff
A<	Adjust harmonic Drawbars in 1st group, Swell Manual		
B	Adjust harmonic Drawbars in 2nd group, Swell Manual		

Great Manual

PRESET KEY	DRAWBAR SETTING	TONE QUALITY	LOUDNESS VALUE
C		Cancel	
C<	00 4545 440	Cello	mp
D	00 4423 220	Flute & String	mp
D<	00 7373 430	Clarinet	mf
E	00 4544 220	Diapason, Gamba and Flute	mf
F	00 6644 322	Great, no reeds	f
F<	00 5642 200	Open Diapason	f
G	00 6845 433	Full Great	ff
G<	00 8030 000	Tibia Clausa	f
A	42 7866 244	Full Great with 16'	fff
A<	Adjust harmonic Drawbars in 1st group, Great Manual		
B	Adjust harmonic Drawbars in 2nd group, Great Manual		

SPECIAL NOTE: You can change the registrations on the Preset Keys using the Information Center. To see an explanation of how to do this, please turn to page 74.

Ë Preset Chart - Jazz Bank

Swell Manual

PRESET KEY	DRAWBAR SETTING	TONE QUALITY
C		Cancel
C<	88 8000 000	Jimmy1
D	88 8800 000	Power
D<	88 8800 008	Jimmy2
E	80 0008 888	Squabble
F	80 0800 000	Walter
F<	88 8000 008	Groove
G	88 8880 000	Pop
G<	88 0888 080	Jackie
A	88 8888 888	All Nine
A<	Adjust harmonic Drawbars in 1st group, Swell Manual	
B	Adjust harmonic Drawbars in 2nd group, Swell Manual	

Great Manual

PRESET KEY	DRAWBAR SETTING	TONE QUALITY
C		Cancel
C<	83 8000 000	Jimmy 1 Bass
D	00 8800 000	Accomp.
D<	84 8000 000	Jimmy2 Bass
E	82 8000 000	Squabble Bass
F	80 8000 000	Smooth Bass
F<	85 8000 000	Groove Bass
G	00 8840 000	Pop Accomp.
G<	84 8010 000	Fat Bass
A	00 8886 540	Full Accomp.
A<	Adjust harmonic Drawbars in 1st group, Great Manual	
B	Adjust harmonic Drawbars in 2nd group, Great Manual	

SPECIAL NOTE: You can change the registrations on the Preset Keys using the Information Center. To see an explanation of how to do this, please turn to page 74.

Ë Preset Chart - Theatre Bank

Swell Manual

PRESET KEY	DRAWBAR SETTING	TONE QUALITY
C		Cancel
C<	00 8740 000	French Horn 8'
D	00 8408 004	Tibias 8' & 2'
D#	00 8080 840	Clarinet 8'
E	08 8800 880	Novel Solo 8'
F	60 8088 000	Theatre Solo 16'
F<	00 4685 300	Oboe Horn 8'
G	60 8807 006	Full Tibias 16'
G<	00 6888 654	Trumpet 8'
A	76 8878 667	Full Theatre Brass 16'
A<	Adjust harmonic Drawbars in 1st group, Swell Manual	
B	Adjust harmonic Drawbars in 2nd group, Swell Manual	

Great Manual

PRESET KEY	DRAWBAR SETTING	TONE QUALITY
C		Cancel
C<	00 4545 442	Cello 8'
D	00 4432 000	Dulciana 8'
D<	00 4800 000	Vibraharp 8'
E	00 2500 234	Vox 8' & Tibia 4'
F	00 6554 322	String Accomp. 8'
F<	00 5642 200	Open Diapason 8'
G	00 7656 311	Full Accomp. 8'
G<	00 8030 000	Tibia 8'
A	84 7767 666	Bombarde 16'
A<	Adjust harmonic Drawbars in 1st group, Great Manual	
B	Adjust harmonic Drawbars in 2nd group, Great Manual	

SPECIAL NOTE: You can change the registrations on the Preset Keys using the Information Center. To see an explanation of how to do this, please turn to page 74.

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ROTARY
CONTROL
PANEL

ROTARY CONTROL PANEL

Your New B-3 has a <u>Rotary</u> <u>Control</u> <u>Panel</u>, which is located underneath the manuals on the extreme left side and looks like this:

```
┌─────────────────────────────────────────────────────────────────────┐
│                                                                       │
│              HEAD      LESLIE     MASTER                               │
│  MAIN/ECHO   PHONE     SWITCH     VOLUME    BASS   TREBLE  REVERB  OVERDRIVE │
│                                                                       │
│     ( )       ( )       ( )        ( )      ( )    ( )     ( )     ( )  │
│                                                                       │
└─────────────────────────────────────────────────────────────────────┘
```

Ể **Rotary Controls**

You can use these controls to adjust the sound of your Hammond Organ.

MASTER VOLUME

The MASTER VOLUME Rotary Control allows you to control the total or maximum volume of the entire organ. Turning this control clockwise will increase the total volume, while turning it counter-clockwise will decrease the total volume. The Expression Pedal will express up to the total volume amount determined by the setting of the Total Volume control.

BASS

This control allows you to adjust the Bass response of the organ. Turn the control to the left (counter-clockwise) for the Minimum amount of Bass. Turn the control to the right (clockwise) for the Maximum amount of Bass.

TREBLE

This control allows you to adjust the Treble response of the organ. Turn the control to the left (counter-clockwise) for the Minimum amount of Treble or high frequencies. Turn the control to the right (clockwise) for the Maximum amount of Treble.

NOTE: For normal operation, the BASS and TREBLE controls should normally be set in the <u>center</u> (12:o'clock) position.

REVERB

This Rotary Control allows you to control the total or maximum amount of Digital Reverb. Turn the control to the left (counter-clockwise) to decrease the amount of Reverb down to zero (no Reverb.) Turn the control to the right (clockwise) to increase the amount of Reverb.

OVERDRIVE

This Rotary Control allows you to control the total or maximum amount of "overdrive", the fuzzy, raspy sound produced by a tube amplifier when it is pushed to its sound limit. Turning this control clockwise will increase the amount of overdrive, while turning it counter-clockwise will decrease the amount.

NOTE: For normal operation, the OVERDRIVE control should normally be turned all the way to the <u>left</u>.

Ë **Jacks**

The Rotary Control Panel also contains three jacks. The following paragraphs explain their function.

MAIN/ECHO

Use this jack to connect a MAIN/ECHO switch so that you can switch among two or more Leslie Speaker cabinets.

HEADPHONE

Use this jack to connect a set of stereo headphones so that you may play or practice in privacy.

NOTE: If a Leslie Speaker is connected to the organ, it will be silenced whenever the Headphone Jack is in use.

LESLIE SWITCH

Use this jack to connect a Leslie Speed Switch, allowing you to control the rotor speed of one or more connected Leslie Speakers.

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EFFECTS

EFFECTS

You can add <u>Vibrato/Chorus,</u> <u>Leslie</u>, <u>Pedal</u> <u>Sustain</u>, <u>Reverb</u> and <u>Overdrive</u> to the sounds of your Hammond Organ. In the following section, each effect is explained in detail.

Ë Vibrato and Chorus
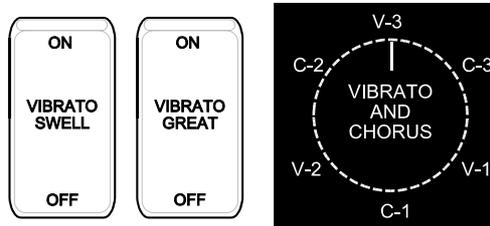
Your Hammond Organ has two Control Tablets and one Rotary Knob which turn Vibrato "ON" and "OFF" for each Manual, and which also control the degrees of Vibrato and Chorus.

Vibrato / Chorus ON / OFF

To turn the Vibrato or Chorus effect "ON," turn the appropriate Control Tablet "ON."

V-1 – (Small Vibrato) – This produces the vibrato equivalent of most orchestral solo instruments.

V-2 – (Wide Vibrato) – This is the standard depth vibrato to produce the effect of a theater organ.

V-3 – (Full Vibrato) – This gives the fullest amount of vibrato, adding much warmth and enhancing your music.

Chorus

When the CHORUS effect is used, *half* of the tone is heard without Vibrato, and *half* contains the vibrato amount indicated by the number "1" "2" or "3."

C-1 – (Small Chorus) – This produces the light chorus effect.

C-2 – (Wide Chorus) – This is the standard depth of the chorus effect.

C-3 – (Full Chorus) – This is the fullest amount of Chorus, adding warmth that enhances your Drawbar settings.

Ë **Leslie**®

Your Hammond Organ is designed to directly interface with a Leslie Speaker Cabinet. A Leslie Speaker cabinet, in addition to amplifying the basic sound of the organ, also uses mechanical rotors which turn at different speeds to add different animation effects. The data chart below shows the options available.

LESLIE ROTOR SPEED OPTIONS	
Description	**Function**
SLOW (Chorale)	Rotors will turn slowly, producing an effect suitable for use with hymns, classical style music and some slower songs.
OFF	Rotors do not turn. Animation can be provided by using Vibrato and Chorus.
FAST (Tremolo)	Rotors will speed up and rotate fast to produce a rich full sound.

NOTE: The above table shows the options which can be selected for either a single- or multi-channel Leslie Speaker cabinet using an 11-pin interface.

Ë **Pedal Sustain**

The PEDAL SUSTAIN effect will produce a lingering tone when pedals are released. Normally, this feature is "OFF," but when it is active, the Pedal tones will sound when a pedal is pressed, and then fade away gradually when the pedal is released.

NOTE: You can change the length of the Pedal Sustain using the Information Center. To see how to do this, turn to page 70 of this Guide.

Ë **Reverb**

Using REVERB adds the beautiful concert hall effect to all voices when you are playing and counteracts the "deadening" effect of carpets, drapes or furniture.

REVERB

REVERB Rotary Control

This Rotary Control allows you to control the total or maximum amount of Reverb. Turning this control clockwise will increase the amount of Reverb, while turning it counter-clockwise will decrease the amount.

NOTE: There are eight different Reverb programs available. To see how to select the one you want, please consult the **Information Center** section of this Guide.

Ë **Overdrive**

Overdrive adds the fuzzy, raspy, "dirty" sound created by the vacuum tubes of a tube-style Leslie Speaker when its volume is pushed past its sound limit.

OVERDRIVE Rotary Control

OVERDRIVE

This Rotary Control allows you to control the total or maximum amount of "Overdrive" (the fuzzy, raspy sound produced by a tube amplifier when it is pushed to its sound limit). Turning this control clockwise will increase the amount of Overdrive, while turning it counter-clockwise will decrease the amount.

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INFORMATION
CENTER

INFORMATION CENTER

The Drawbars, Control Tablets and Rotary Controls control the operations necessary for performance on the organ. Advanced Features such as Drawbar Voice Mode, Pedal Sustain Length, etc., are accessed using the Information Center. This allows you to see and make changes.

The Information Center Display and Touch Buttons are located on a drawer underneath the manuals on the extreme right side. Carefully slide this drawer out all the way to reveal the controls.
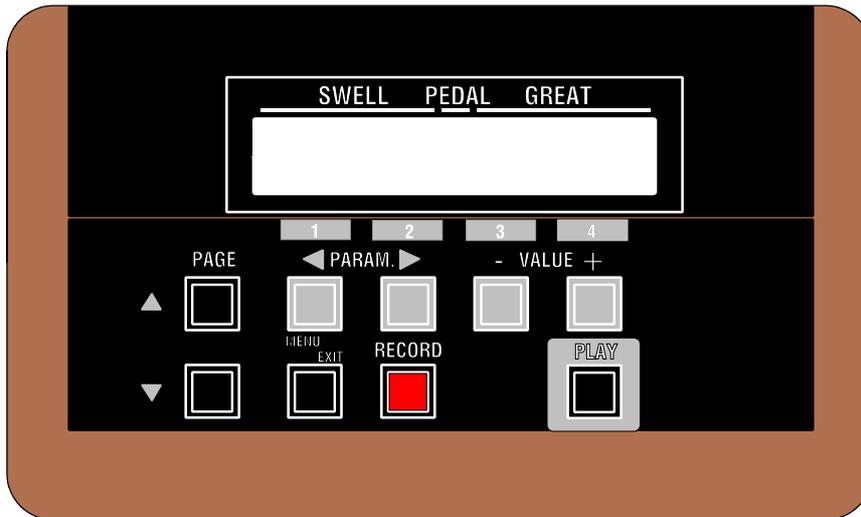

Ë **Information Center Display**

When you slide the drawer out, you will notice the Information Center Display. This is an LCD screen which looks like this:
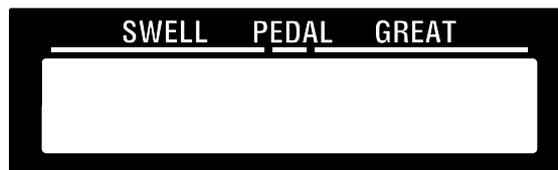
Ë **Touch Buttons**

Below the Information Center Display are the Touch Buttons.
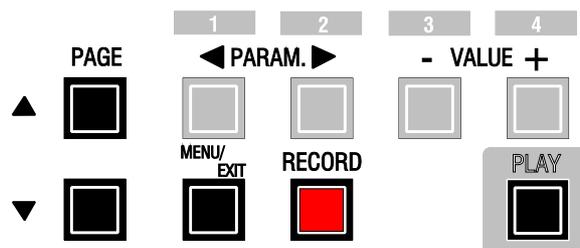
These buttons have functions that change automatically as different modes and menus are used. These basic functions are:

1.   Turning something ON or OFF.
2.   Modification of parameters - increasing or decreasing.
3.   Selecting among multiple functions.
4.   Confirmation - YES, NO or OK.

Ë Touch Buttons - Top Group
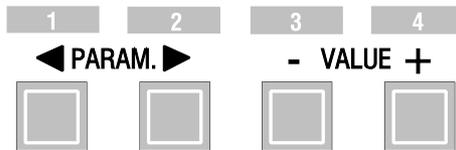
The Information Center Display has two basic modes of operation - PLAY Mode and MENU Mode. When using MENU Mode, these 4 Touch Buttons, marked 1 through 4, allow you to choose from among the various Menu choices in each screen. Menu Mode is explained starting on page 37.

Ë Touch Buttons - Bottom Group

These three Touch Buttons allow you to choose from among the various options for using the Information Center Display. The following is a very brief explanation of each of these Touch Buttons.

MENU / EXIT - This Touch Button allows you to access the MENU Mode from any other display mode, and to exit out of a specific Menu back into MENU Mode.

RECORD - This Touch Button will allow you to record your own Preset registrations.

PLAY - This Touch Button allows you to instantly access PLAY Mode from any other display mode.

Ë Touch Buttons - PAGE

These two Touch Buttons allow you to page through a list of Advanced Features when you are in MENU Mode. Use the "•" Touch Button to move to the **next** Page and the "–" Touch Button to move to the **previous** Page.

As stated on the previous page, there are two <u>basic</u> <u>modes</u> of the Information Center Display - PLAY Mode and MENU Mode. The following is only the basic levels and NOT a complete explanation of all the functions. Detailed information for every function of the menus is given in each chapter of this Owner's Playing Guide as needed.

> **IMPORTANT:** It is assumed at this point that you have just turned the organ "ON" and have not touched either the PLAY or MENU Touch Buttons. If you have, please turn the organ "OFF", wait 5 seconds and turn it back "ON." Also the Drawbars should be "OFF" (pushed "in") so no numbers are showing.

Ë **PLAY Mode**

There are two (2) screen displays to the PLAY Mode - Graphic with parameters and Numeric with parameters.

PLAY Mode - Graphic Display with parameters.

Turn the instrument "ON." The LCD screen should look like this when it is first turned on. This information is only displayed for a short time.

```
 SWELL   PEDAL   GREAT

   HAMMOND   B-3
Music'sGloriousVoice
```

Once the opening message has disappeared, the display screen of your instrument should now look similar to this:

```
 SWELL   PEDAL   GREAT

          00
B3Liturgic  P.Sus=OFF
```

The upper half of the display shows the following information from left to right:

  1.   Swell Manual graphic Drawbar settings.
  2.   Pedal Numeric settings.
  3.   Great Manual graphic Drawbar settings.

The bottom half of the display shows the following information from left to right:

  1.   Currently active Preset Bank.
  2.   Pedal Sustain setting - "ON" or "OFF."

PLAY Mode - Numeric Display with parameters.

Now, touch the black PLAY Select Touch Button. The Information Center Display should now show the following:

```
     SWELL   PEDAL   GREAT
  _____
  000000000  000000000
  B3Liturgic P.Sus=OFF
```

Now you are in the Numeric Display of the Play Mode.

The upper half of the display shows the following information from left to right:

1.   Swell Manual Numeric Drawbar settings.
2.   Pedal Graphic settings.
3.   Great Manual Numeric Drawbar settings.

NOTE: If the Pedal Drawbars are both pushed all the way in, this area of the screen will be blank.

The bottom half of the display shows the following information from left to right:

1.   Currently active Preset Bank.
2.   Pedal Sustain setting - "ON" or "OFF."

Touching the black PLAY Select Touch Button again will return to the initial Graphic Display.

Normally when playing the organ, the Information Center Display should be set for one of the PLAY display modes.

Selecting Preset Banks

As noted above, the currently active Preset Bank will display on the lower line of the Information Center Display. In the <u>Presets</u> section of this Guide, it was explained that there are three Preset Banks - <u>Liturgical</u>, <u>Jazz</u> and <u>Theatre</u>. You can select these other Preset Banks using the Information Center. To do this:

1.   Touch the black PLAY Select Touch Button so that the Information Center Display shows one of the two PLAY Mode screens:
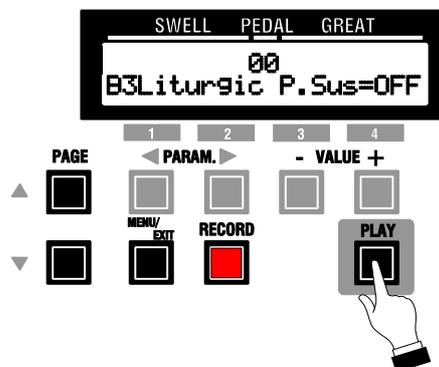
```
     SWELL   PEDAL   GREAT
  _____
            00
  B3Liturgic P.Sus=OFF
```

```
         1      2        3      4

PAGE     ◄ PARAM. ►    -  VALUE  +
  ▲  [ ]    [ ]    [ ]    [ ]    [ ]

            MENU/   RECORD   PLAY
            EXIT
  ▼  [ ]    [ ]    [■]    [ ]
```

2.   Touch the PARAM " ▶" Select Touch Button <u>once</u>. The Information Center Display should now look similar to this:

```
       SWELL   PEDAL   GREAT
                 00
   B3Jazz         P.Sus=OFF
```
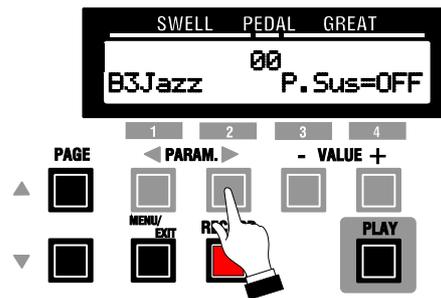
Notice that the lower line now reads, "B3Jazz."

3.   Now try some of the settings on the Preset Keys. You will notice that they are now different. This Preset Bank is particularly well suited for Jazz and Blues playing. Most of the Great Manual Presets are "Keyboard Bass" settings of the type used by jazz and blues organists.

4.   From the above screen, touch the PARAM " ▶" Select Touch Button <u>once</u>. The Information Center Display should now look similar to this:

```
       SWELL   PEDAL   GREAT
                 00
   B3Theatre     P.Sus=OFF
```
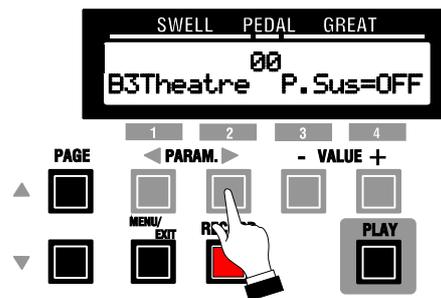
Notice that the lower line now reads, "B3Theatre."

5.   Now try some of the settings on the Preset Keys. This Preset Bank contains settings suitable for playing "pop organ" style.

Touching the PARAM "◀" Select Touch Button <u>two</u> times will return you to the first Preset Bank ("B3Liturgic").

Starting on page 74 of this Guide, we will explain how to program your own Presets. You can program all three Preset Banks with your own settings and store them as a <u>Setup</u> on a CompactFlash® Card.

Ë MENU Mode

There are 4 Levels or screens to the MENU Mode. Each of these levels or screens has Advanced Features. These Advanced Features allow you to change parameters, save or load data to and from CompactFlash® Cards, turn something "OFF" or "ON," etc. These functions are explained in detail in later sections of this Owner's Playing Guide.

Menu A

If you touch the black MENU / EXIT Select Touch Button once from any of the Play Mode screens, the Information Center Display should look like this for the A Screen of the MENU Mode:

```
┌─────────────────────────────────┐
│    SWELL   PEDAL   GREAT         │
│  ───────────────────────────    │
│  A█DRAWBAR   █SETUP              │
│    █TUNE     █CONTROL            │
└─────────────────────────────────┘
```

Four (4) choices from 1 through 4 should now appear in the display window with the letter A in the upper left hand corner.

Touching a numbered gray Select Touch Button will enter the Information Center Display into an Advanced Feature selection.

This is a brief explanation of these 4 Advanced Feature functions:

A-1   DRAWBAR - Allows you to modify the characteristics of the Drawbars.

A-2   TUNE - Allows you to fine-tune the overall pitch of the entire organ up or down, transpose the entire organ into other musical keys and select the tuning temperament for the entire organ.

A-3   SETUP- Allows you to Load, Save, Name or Delete Setups, or groups of additional Preset Banks, using a CompactFlash® Card.

NOTE: CompactFlash® Cards are discussed later in this Guide.

A-4   CONTROL - Allows you to determine the characteristics of various features of the organ such as the Foot Switch, etc.

Menu B

From the <u>A</u> screen of the MENU Mode, touch the black PAGE "•" Select Touch Button <u>once</u>. The Information Center Display should look like this for the <u>B</u> Screen of the MENU Mode:

```
  SWELL   PEDAL   GREAT

B 1 PERCUSS  3 PSUSLGTH
  2 VIB RATE 4 REV TYP
```
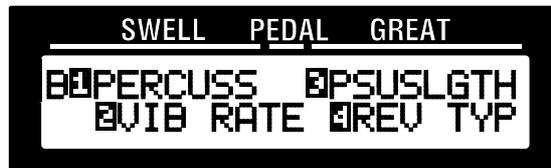
Four (4) choices from 1 through 4 should now appear in the display window with the letter <u>B</u> in the upper left hand corner.

Touching a numbered gray Select Touch Button will enter the Information Center Display into an Advanced Feature selection.

This is a brief explanation of these 4 Advanced Feature functions:

B-1   PERCUSS - Allows you to change the characteristics of the Percussion.

B-2   VIB RATE - Allows you to set the Vibrato Rate for Swell and Great Manuals.

B-3   PSUSLGTH - Allows you to set the Sustain Length for the Pedal tones.

B-4   REV TYP - Allows you to select from among different Reverb programs.

Menu C

From the <u>B</u> screen of the MENU Mode, touch the black PAGE "• " Select Touch Button <u>once</u>. The Information Center Display should look like this for the <u>C</u> Screen of the MENU Mode:

```
     SWELL   PEDAL   GREAT

C EX.ZONE   EX.DAMP
    MIDI CH.
```

Three (3) choices from 1 through 4 should now appear in the display window with the letter <u>C</u> in the upper left hand corner.

Touching a numbered gray Select Touch Button will enter the Information Center Display into an Advanced Feature selection.

This is a brief explanation of these 3 Advanced Feature functions:

C-1   EX..ZONE - Allows you to select the upper and lower limits for each External MIDI Zone.

C-2   MIDI CH. - Allows you to set MIDI Channel information for the instrument.

C-3   EX..DAMP - Allows you to select which External Zones will have the Damper effect.

NOTE: Please see the <u>MIDI</u> section of this Guide starting on page 99 for more information about the MIDI features of your organ.

Menu D

From the <u>C</u> screen of the MENU Mode, touch the black PAGE "• " Select Touch Button <u>once</u>. The Information Center Display should look like this for the <u>D</u> Screen of the MENU Mode:

```
 ┌─────────────────────────────────┐
 │   SWELL   PEDAL   GREAT         │
 │ ─────────────────────────────── │
 │ D█CFFORMAT █DEFAULT             │
 │   █SYSTEM                       │
 └─────────────────────────────────┘
```
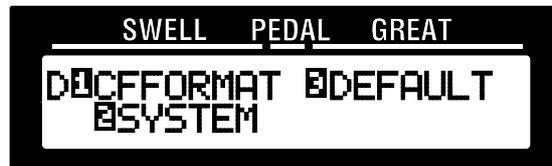
Three (3) choices should now appear in the display window with the letter <u>D</u> in the upper left hand corner.

Touching a numbered gray Select Touch Button will enter the Information Center Display into an Advanced Feature selection.

This is a brief explanation of these 3 Advanced Feature functions:

D-1   CFFORMAT - Allows you to format a CompactFlash® Card for use with the organ.

D-2   DEFAULT - Allows you to restore the instrument to its default settings.

D-3   SYSTEM - Allows you to select Pedal Mode and display Software Versions.

These are the four screens of the MENU Mode. The Advanced Features they control will be explained on the following pages.

A   **Advanced Features - DRAWBARS**

There are three Drawbar Advanced Features which allow you to make the following changes to the organ:

1.   Tone Wheel Select SWL & GRT –
      Allows you to select different Drawbar Voicings for the Swell and Great Manual tones.

2.   Tone Wheel Select PEDAL –
      Allows you to select different Drawbar Voicings for the Pedal tones.

3.   Drawbar Fold Back –
      Allows you to set the Drawbar Fold Back points for both the 16' & 8th harmonic (1') Drawbars of the Upper and Great Manuals. The default settings are the same as the older Hammond Models B-3, C-3, RT-3, D-100 and A-100: Sub-Fundamental (16') Drawbar at "C2" and the 8th harmonic (1') Drawbar at "4G." By using this you can lower the playing range of the 16' Drawbar and raise the playing range of the 1' Drawbar.

The following pages give a more detailed explanation of how these Advanced Features work.

Tone Wheel Select - SWL & GRT

This Advanced Feature allows you to change the overall sound of the Drawbar tones of the Swell and Great Manuals. You can select either "B-TYPE" which reproduces the sound of the B-3 tone-wheel generator, or "MELLOW" which produces a very pure sine-wave tone quality. These voicing types are subtle changes. However, they allow you the ability to create the differences in the sound of Hammond Drawbars over the years.

TRY THIS:

1. From either of the PLAY Mode Displays, touch the black MENU / EXIT Select Touch Button to display the <u>A</u> Menu of the MENU Mode:
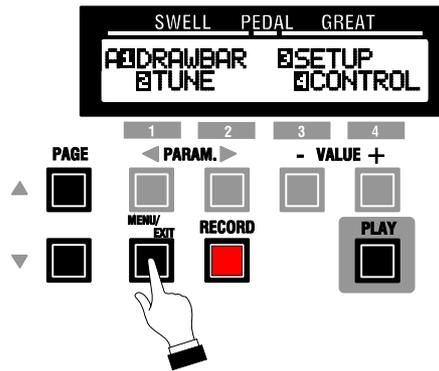
2. Touch the Number 1 Select Touch Button <u>once</u> to select the **DRAWBAR** Menu:
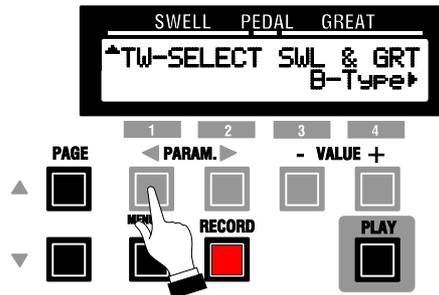
Notice that the legend <u>B-Type</u> is flashing "on" and "off."

3. Now select the setting you want by doing the following:

Use the VALUE "-" Select Touch Button to select <u>B-Type</u>.

Use the VALUE "+" Select Touch Button to select <u>Mellow</u>.

NOTE: You can exit by touching the MENU / EXIT Select Touch Button.

Tone Wheel Select - PEDAL

This Advanced Feature allows you to change the overall sound of the Pedal Drawbar tones. You can select either "NORMAL" which reproduces the rich sound of the B-3 pedal tones, or "MUTED" which is a very pure tone quality suitable for "string-bass" effects.

TRY THIS:

1.   From either of the PLAY Mode Displays, touch the black MENU / EXIT Select Touch Button to display the <u>A</u> Menu of the MENU Mode:
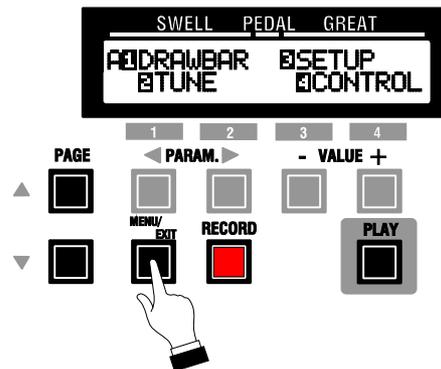
2.   Touch the Number 1 Select Touch Button <u>once</u> to select the <u>**DRAWBAR**</u> Menu:
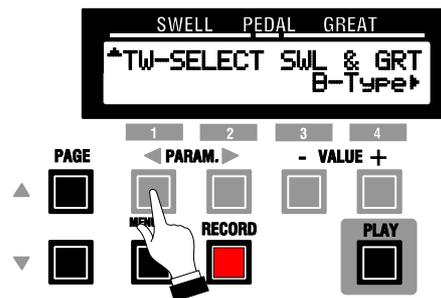
3.   Touch the PAGE "•" Select Touch Button <u>once</u>. The Information Center Display should now look like this:
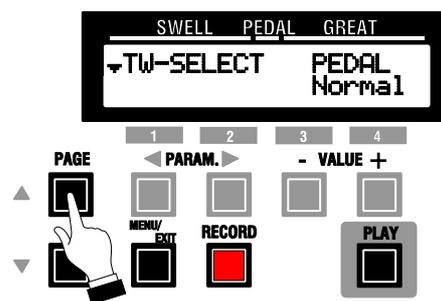
Notice that the word <u>Normal</u> is flashing "on" and "off."

4.   Now select the setting you want by doing the following:

Use the VALUE "-" Select Touch Button to select <u>**Normal**</u>.

Use the VALUE "+" Select Touch Button to select <u>**Muted**</u>.

NOTE: You can exit by touching the MENU / EXIT Select Touch Button.

Drawbar Fold Back

There are two function selections to the Drawbar Fold Back Advanced Feature Menu of the organ: (1) Select how low the 16' Drawbar will play on each manual. (2) Set the upper frequency limit for each manual.

On the earliest model Hammond Organs, such as the original models A, B and C, the 16' Drawbar would continue to play all the way down to the lowest C (1C). Newer models such as the Hammond Models X-66, X-77, Concorde, and SX and CX Series do the same, however, the 1' Drawbar continues to play up the manual to the next to the highest C (5C) on the manual. The other higher-pitched Drawbars perform similarly. The default settings for both the 16' and 1' foot Drawbars will replicate the original B-3, C-3, RT-3 or A-100.
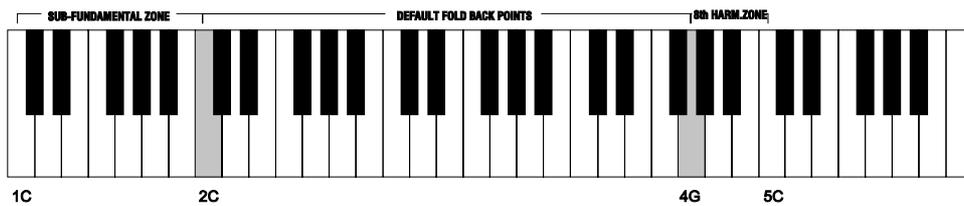
On a B-3, the lowest note produced by the 16' Drawbar is the 2nd C (2C) from the left end of the manual. The lowest octave on the manual, from the 1st B (1B) down to the lowest C (1C) repeats the same octave as the one above it, or "Folds Back." The highest note that can be played by the 1' Drawbar is the 4th F< from the left end of the manual. The higher keys on the manual also "Fold Back", in that they repeat the pitches played by lower notes.

TRY THIS:

1.   From either of the PLAY Mode Displays, touch the black MENU / EXIT Select Touch Button to display the <u>A</u> Menu of the MENU Mode:
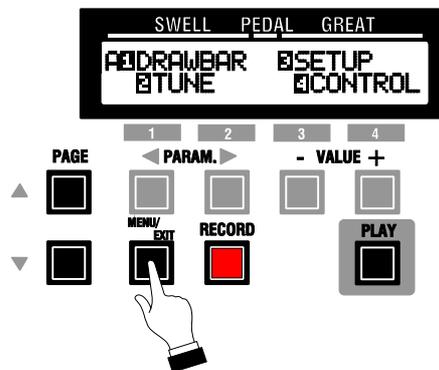
2.   Touch the Number 1 Select Touch Button **once** to select the **DRAWBAR** Menu:
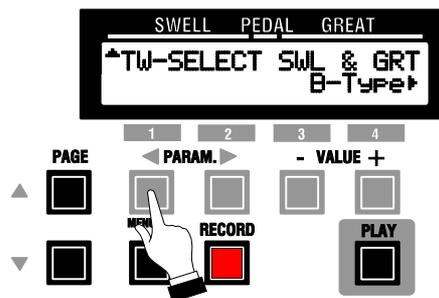
3.   Touch the PARAM "▶" Select Touch Button <u>once</u>. The Information Center Display should now look similar to this:
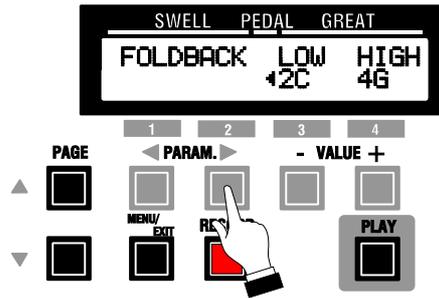
Notice that the legend underneath the word LOW is flashing "on" and "off."

4.   Now select the Fold Back settings you want by doing the following:

Use the PARAM Select Touch Buttons to move between "LOW" and "HIGH."

The "LOW" parameter represents the range of the Drawbar marked "16'," and can be set from "1C" through "2C," while the "HIGH" parameter represents the range of the Drawbar marked "1'," and can be set from "4G" through "5C."

Use the VALUE "-" Select Touch Button to <u>decrease</u> the numbers.

Use the VALUE "+" Select Touch Button to <u>increase</u> the numbers.

The data chart below shows the options that you may select. The default settings are the same as the Hammond Models B-3, C-3, RT-3, and A-100: 16' Drawbar at "C2" and the 1' Drawbar at "4G."

MANUAL	16' RANGE	1' RANGE
SWELL	1C-2C	4G-5C
GREAT	1C-2C	4G-5C

NOTE: You can exit by touching the MENU / EXIT Select Touch Button.

A **Advanced Features - PERCUSSION**

There are four PERCUSSION Advanced Features which allow you to make the following changes to the organ:

1. Percussion Level -
   Allows you to select the overall level of the Percussion.

2. Percussion Decay -
   Allows you to set the rate of decay for the Percussion tones.

3. Percussion Drawbar Cancel -
   This Advanced Feature allows you to select whether or not the 1' Drawbar will cancel when using Percussion.

4. Drawbar Level With Percussion -
   This Advanced Feature allows you to select whether or not the volume of the Drawbars will decrease when Percussion is used at Normal volume.

The following pages give a more detailed explanation of how these Advanced Features work.

Percussion Volume Level

This Advanced Feature allows you to set the overall volume level of the Percussion tones. This will allow you to balance the amount of "normal" and "soft" Percussion sound (the choices provided by the PERCUSS. SOFT Control Tablet) with the sound produced by the Drawbars.

NOTE: This Advanced Feature works independently of the PERCUSS. SOFT Control Tablet.

TRY THIS:

1.   From either of the PLAY Mode Displays, touch the black MENU / EXIT Select Touch Button to display the <u>A</u> Menu of the MENU Mode:
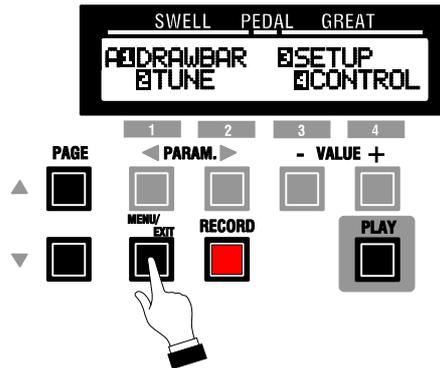
2.   Touch the PAGE "▪" Select Touch Button <u>once</u> to display the <u>B</u> Menu:
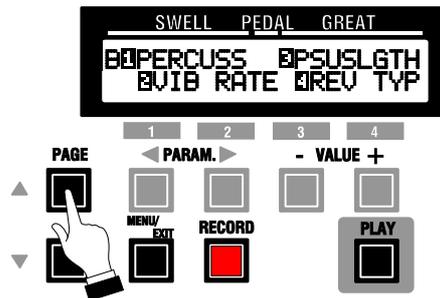

3.   Touch the Number 1 Select Touch Button to select the **<u>PERCUSSION</u>** Menu:
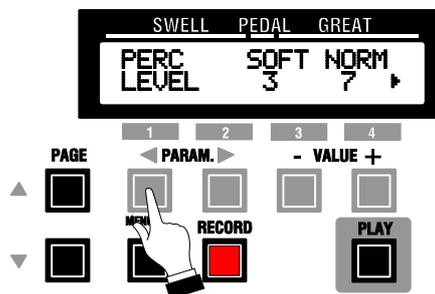
Notice that the number underneath the word SOFT is flashing "on" and "off."

4.   Now select the Percussion Volume you wish by doing the following:

Use the PARAM Select Touch Buttons to select "SOFT" (the Percussion Volume when the PERCUSSION VOLUME Control Tablet is set to SOFT) or "NORM" (the Percussion Volume when the PERCUSSION VOLUME Control Tablet is set to NORMAL).

Use the VALUE "-" Select Touch Button to <u>decrease</u> the Percussion Volume.

Use the VALUE "+" Select Touch Button to <u>increase</u> the Percussion Volume.

The data chart below shows the options that you may select.

PERCUSSION VOLUME
1 - 8

NOTE: You can exit by touching the MENU / EXIT Select Touch Button.

Percussion Decay

This Advanced Feature allows you to set the rate of decay for the Percussion tones. You can select from"1" (the shortest decay) to "16" (a continuous tone).

NOTE: The numerical setting represents the decay rate for both "FAST" and "SLOW"

NOTE: When "SLOW" is selected, setting the Percussion Decay number to "16" (maximum setting) will cause the Percussion tone to sound continuously without decaying. The effect will be similar to that produced by the SECOND VOICE Tab on certain older Hammond Organs, such as the H-series.

TRY THIS:

1. From either of the PLAY Mode Displays, touch the black MENU / EXIT Select Touch Button to display the <u>A</u> Menu of the MENU Mode:

2. Touch the PAGE " ▪ " Select Touch Button <u>once</u> to display the <u>B</u> Menu:

3. Touch the Number 1 Select Touch Button to select the <u>**PERCUSSION**</u> Menu:

Notice that the number underneath the word SOFT is flashing "on" and "off."

4.   Touch the PARAM "▶" Select Touch Button <u>two</u> times. The Information Center Display should now look like this:

```
        SWELL   PEDAL  GREAT
     PERC    FAST  SLOW
     DECAY  ◄ 5    10 ►
```
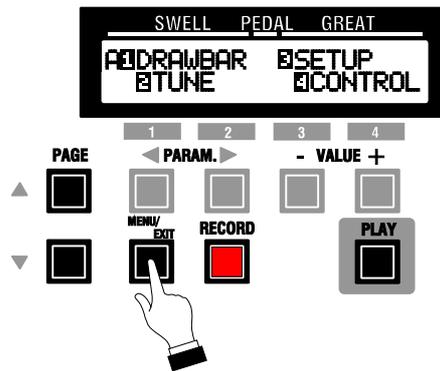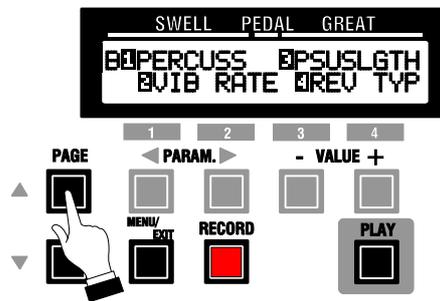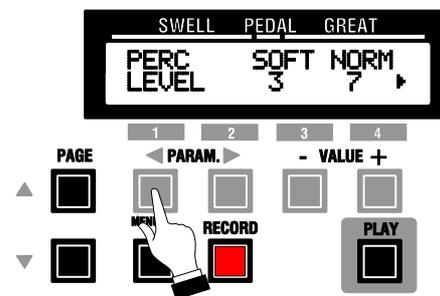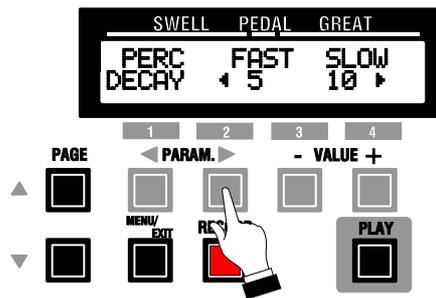
Notice that the number underneath the word FAST is flashing "on" and "off."

5.   Now select the option you wish by doing the following:

Use the PARAM Select Touch Buttons to select "SLOW" (the Percussion Decay when the PERCUSSION DECAY Control Tablet is set to SLOW) or "FAST" (the Percussion Decay when the PERCUSSION DECAY Control Tablet is set to FAST).

Use the VALUE "-" Select Touch Button to <u>decrease</u> the Percussion Decay.

Use the VALUE "+" Select Touch Button to <u>increase</u> the Percussion Decay.

The data chart below shows the options that you may select.

| PERCUSSION DECAY |
| --- |
| 1 - 16 |

NOTE: You can exit by touching the MENU / EXIT Select Touch Button.

Percussion 1' Cancel

On the original Hammond Organs with Touch-Response Percussion, such as the B-3, C-3 and RT-3, when the Swell Manual "B" Preset Key is engaged, and Percussion is "ON", the sound produced by the 8th harmonic (1') Drawbar is canceled. However, some pros would re-wire the organ so that the 1' Drawbar would continue to play while Percussion is "ON."

The Percussion 1' Cancel Advanced Feature allows you to select whether the 1' Drawbar will continue to sound when Percussion is turned "ON." The default setting is "OFF."

TRY THIS:

1. From either of the PLAY Mode Displays, touch the black MENU / EXIT Select Touch Button to display the <u>A</u> Menu of the MENU Mode:
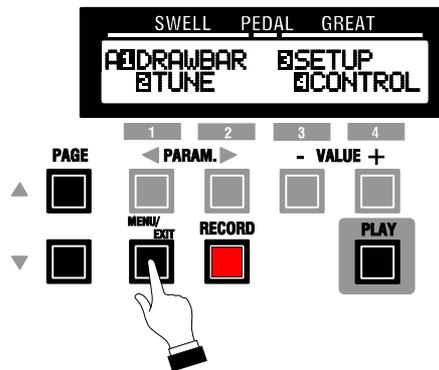
2. Touch the PAGE "• " Select Touch Button <u>once</u> to display the <u>B</u> Menu:
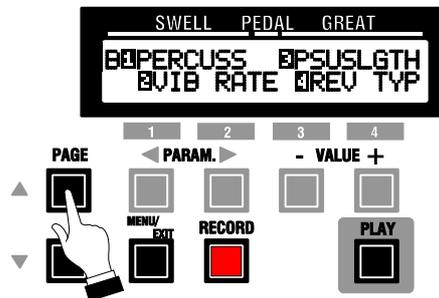
3. Touch the Number 1 Select Touch Button to select the <u>**PERCUSSION**</u> Menu:
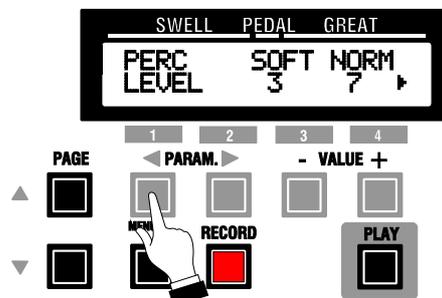
 Notice that the number underneath the word SOFT is flashing "on" and "off."

4. Touch the PARAM "▶" Select Touch Button <u>four</u> times. The Information Center Display should now look similar to this:
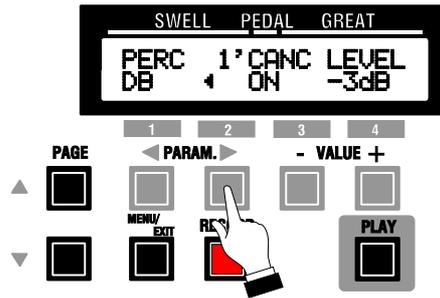
Notice that the word just under the legend <u>1' CANC</u> is flashing "on" and "off."

5. Now select the option you wish by doing the following:

Use the VALUE "-" Select Touch Button to turn 1' Cancel <u>OFF</u>.

Use the VALUE "+" Select Touch Button to turn 1' Cancel <u>ON.</u>

The data chart below shows the options you may select.

PERCUSSION 1' CANCEL OPTIONS	
Option	**Function**
ON	The 8th harmonic Drawbar will be canceled when Percussion is "ON".
OFF	The 8th harmonic Drawbar will sound while Percussion is "ON".

NOTE: You can exit by touching the MENU / EXIT Select Touch Button.

Drawbar Level with Percussion

On the original Hammond Organs with Touch-Response Percussion, such as the B-3, C-3, RT-3 and A-100, when the Swell Manual "B" Preset Key is engaged, Percussion is "ON" at normal volume and a Drawbar setting is used, the volume of the Swell Manual Drawbars is reduced slightly in order to preserve the musical balance between Swell and Great Manuals. However, some pros would perform a modification so that the "B" Preset Drawbar settings would remain at full volume even if Percussion were "ON" at normal volume.

This Advanced Feature allows you to select either "-3db." (Percussion volume is reduced) or "0db" option.

TRY THIS:

1.　　　From either of the PLAY Mode Displays, touch the black MENU / EXIT Select Touch Button to display the <u>A</u> Menu of the MENU Mode:
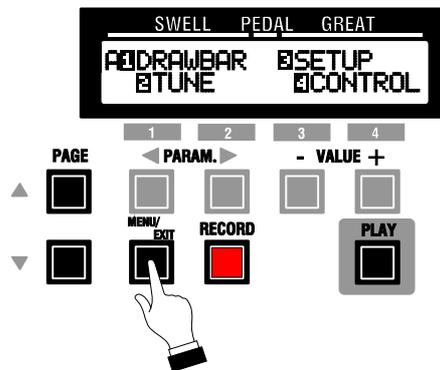
2.　　　Touch the PAGE "▴ " Select Touch Button <u>once</u> to display the <u>B</u> Menu:
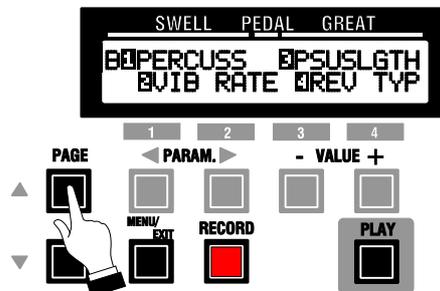
3.　　　Touch the Number 1 Select Touch Button to select the **PERCUSSION** Menu:
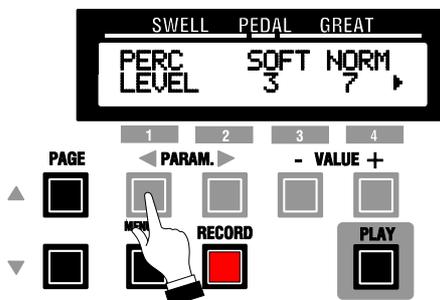
Notice that the number underneath the word SOFT is flashing "on" and "off."

4.   Touch the PARAM "▶" Select Touch Button <u>five</u> times. The Information Center Display should now look similar to this:
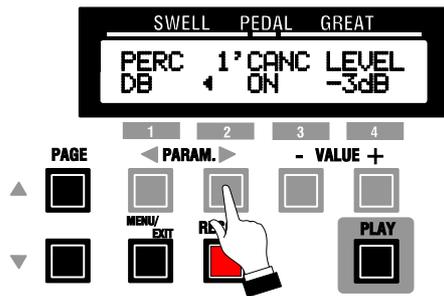
Notice that the legend just under the word LEVEL is flashing "on" and "off."

5.   Now select the option you wish by doing the following:

Use the VALUE "-" Select Touch Button to select <u>0dB</u>.

Use the VALUE "+" Select Touch Button to select <u>-3dB.</u>

The data chart below shows the options that you may select.

DRAWBAR LEVEL WITH PERCUSSION	
*-3dB	The volume level of the Drawbars will be reduced by 3 decibels*, or a small amount, when Percussion is "ON" at normal volume
0dB	The volume of the Drawbars will stay at the same level, or "0db", when Percussion is "ON" at normal volume.

*default setting

NOTE: You can exit by touching the MENU / EXIT Select Touch Button.

A   **Advanced Feature - VIBRATO RATE**

This Advanced Feature Menu Page allows you to select the Vibrato/Chorus Rate that you prefer. You may select "SLOW," "MID," "NORMAL," "MIDFST," and "FAST." The default setting is "NORMAL."

TRY THIS:

1.   From either of the PLAY Mode Displays, touch the black MENU / EXIT Select Touch Button to display the <u>A</u> Screen of the MENU Mode.
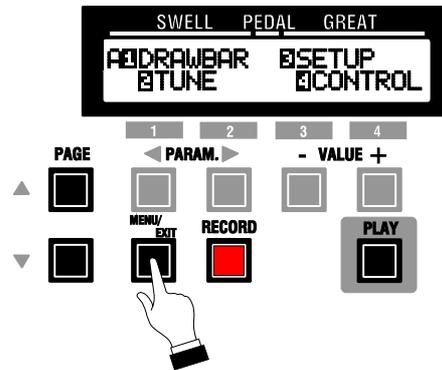
2.   Touch the PAGE "•" Select Touch Button <u>once</u> to display the <u>B</u> Menu:
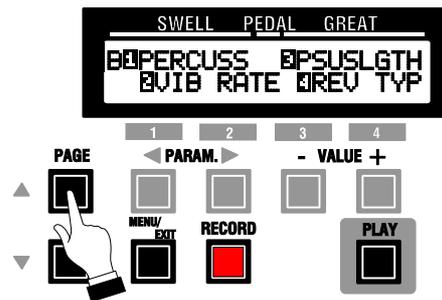
3.   Touch the Number 2 Select Touch Button to select the <u>VIB RATE</u> Menu:
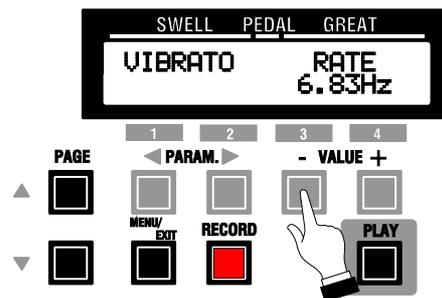
Notice that the numbers on the lower line are flashing "on" and "off."

4.   Now select the option you wish by doing the following:

Use the VALUE "-" Select Touch Button to scroll **down** through the selections.

Use the VALUE "+" Select Touch Button to scroll **up** through the selections.

The data chart below shows the options that you may select.

VIBRATO RATE	
Message	**Description**
6.10Hz	Slow
6.50Hz	Medium
6.83Hz	Normal
7.00Hz	Medium Fast
7.25Hz	Fast

NOTE: You can exit by touching the MENU / EXIT Select Touch Button.

A Advanced Feature - PEDAL SUSTAIN

You can add Sustain (a lingering effect) to the Pedal tones.

TRY THIS:

1. Make sure the Information Center is in PLAY Mode. If it is not, touch the PLAY Select Touch Button.
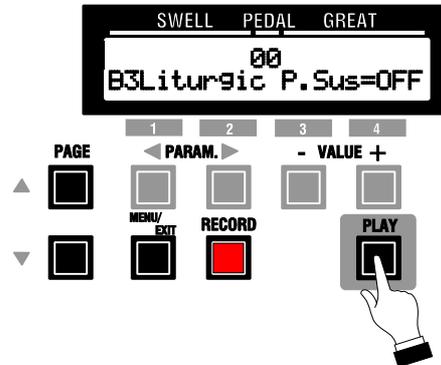
2. Touch the Number 4 Select Touch Button. The Information Center Display should now look like this:
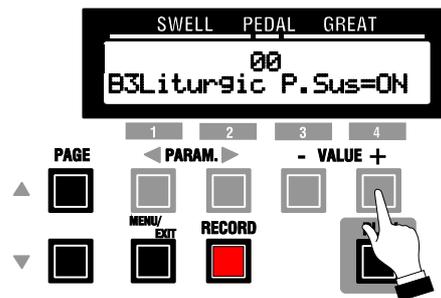
3. Now play a series of Pedal notes. You will hear a Pedal note gradually fade away after the Pedal is released.

4. To turn Pedal Sustain "OFF," touch the Number 3 Select Touch Button as shown below.
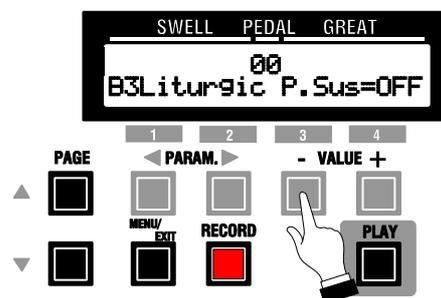
A Advanced Feature - PEDAL SUSTAIN LENGTH

This Advanced Feature allows you to select the length of the Pedal Sustain   You can select Sustain degrees from "1" (short) through "5" (long). The default setting is "3" (medium amount).

TRY THIS:

1.   From either of the PLAY Mode Displays, touch the black MENU / EXIT Select Touch Button to display the <u>A</u> Menu of the MENU Mode:
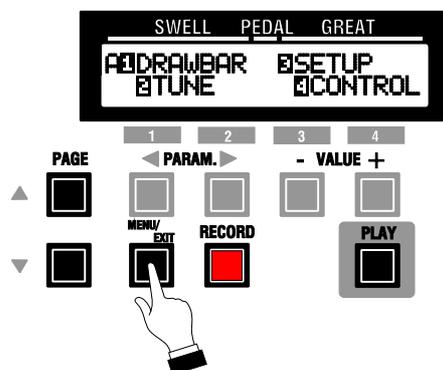
2.   Touch the PAGE "▪ " Select Touch Button <u>once</u> to display the <u>B</u> Menu:
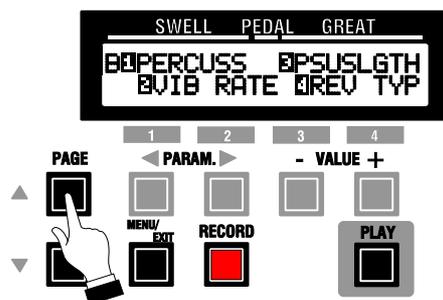
3.   Touch the Number 3 Select Touch Button to select the <u>**PSUSLGTH**</u> <u>**(Pedal Sustain Length)**</u> Menu:
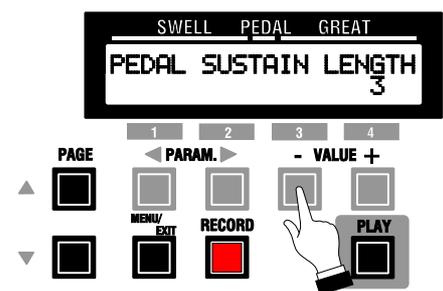
Notice that the number just underneath the word LENGTH is flashing "on" and "off."

4.   Now select the option you wish by doing the following:

Use the VALUE "-" Select Touch Button to <u>decrease</u> the Sustain Length.

Use the VALUE "+" Select Touch Button to <u>increase</u> the Sustain Length.

The data chart below shows the options that you may select.

PEDAL SUSTAIN LENGTH
1 ~ 5

default setting is 3.

NOTE: You can exit by touching the MENU / EXIT Select Touch Button.

A   ## Advanced Feature - REVERB

This Advanced Feature Menu allows you to select the Reverb Type for the entire organ.

Reverb Type

This Advanced Feature allows you to select the type of Reverb that you prefer.

TRY THIS:

1.   From either of the PLAY Mode Displays, touch the black MENU / EXIT Select Touch Button to display the **A** Menu of the MENU Mode:
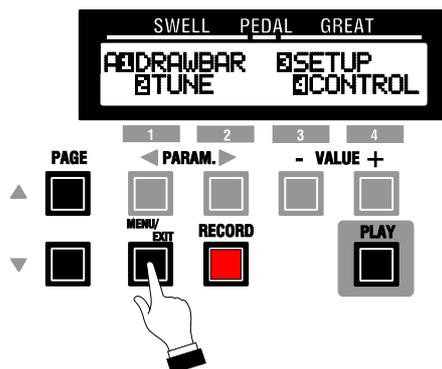
2.   Touch the PAGE "▲" Select Touch Button <u>once</u> to display the **B** Menu:
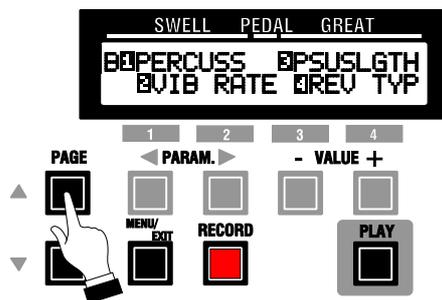
3.   Touch the Number 4 Select Touch Button to select the <u>**REV TYP**</u> Menu:
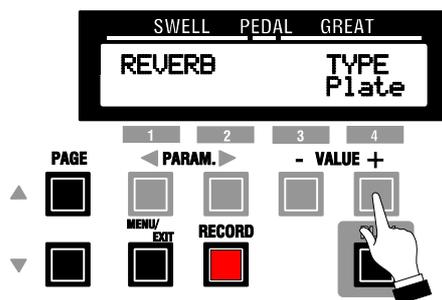
4.   Now select the option you wish by doing the following:

Use the VALUE "-" Select Touch Button to scroll <u>down</u> through the selections.

Use the VALUE "+" Select Touch Button to scroll <u>up</u> through the selections.

The data chart below explains the options you may select. The Reverb Programs increase in length from approximately 1 second (ROOM 1) to approximately 6 seconds (CATHEDRAL).

REVERB OPTIONS
ROOM 1
ROOM 2
ROOM 3
*HALL 1
HALL 2
PLATE
CHURCH
CATHEDRAL

*default setting

NOTE: You can exit by touching the MENU / EXIT Select Touch Button.

A   **Advanced Feature - PRESETS**

This Advanced Feature allows you to program your own Presets using the Information Center and the Preset Keys.

### "Preset Banks" and "Setups"

As was explained on page 47, your Hammond Organ has three built-in Preset Banks - <u>B3Liturgic</u>, <u>B3Jazz</u> and <u>B3Theatre</u>. A group of three Preset Banks is called a <u>Setup</u>. This terminology is important to know when you want to store Preset Banks to a CompactFlash® Card, because the Card can store several Setups, or collections of three Preset Banks.

TRY THIS:

1.   Make sure the Information Center is in PLAY Mode. If it is not, touch the PLAY Select Touch Button.
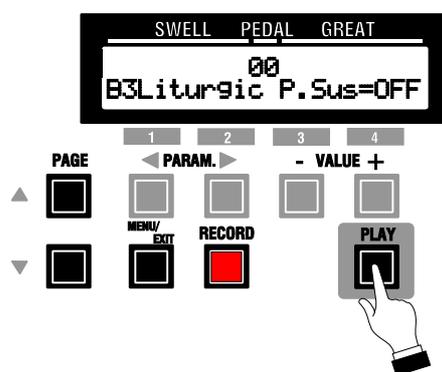
2.   Select the Preset Bank you want to change. From the PLAY Mode screens, use the PARAM Select Touch Buttons to select Preset Banks.

3.   Set up a registration you want to save on the organ.

4.   Touch and Hold the red RECORD Select Touch Button. After approximately 1 second, the Information Center Display should show the following:
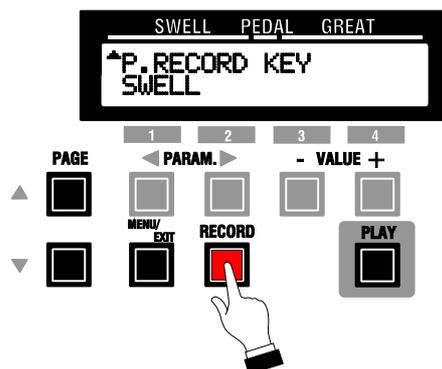

5.   Use the PAGE Select Touch Buttons to make your Manual selection. You can select either "SWELL" or "GREAT."

6.   After you have made your Manual selection, depress the Preset Key to which you want to save your new registration. The Preset Key will latch, and your selection will appear in the Information Center Display. For example, if you select the Swell Manual Preset Key "G," the Information Center Display will show:

7.   Touch the Number 4 [OK] Select Touch Button. The Information Center Display will flash the following for approximately 1 second:
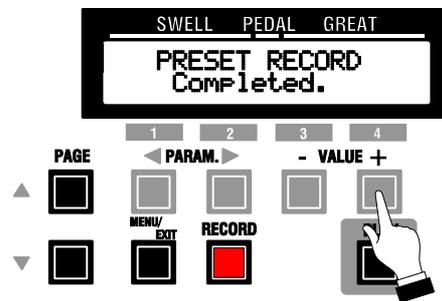
When the PLAY Mode screen returns, your registration has been saved to the selected Preset.

You can save up to 9 Presets ("C<" through "A") on both the Swell and Great Manuals.

NOTE: Percussion and Vibrato settings may not be saved to a Preset.

8.   Now you can use the PARAM Select Touch Buttons to select the other Preset Banks. These may also be reprogrammed with your own settings. If you wish to program one or both of the other two Preset Banks, follow steps 1 through 6 above for each Bank. However, it is not necessary to program all three Preset Banks in order to save a Setup, or bundle of three Banks, to a CompactFlash® Card. You may reprogram only one Bank if desired.

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SPECIAL PERFORMANCE FEATURES

SPECIAL PERFORMANCE FEATURES

Ë **Motor Control Switch**

On the original Hammond Organs with tone-wheel generators driven by non-self-starting synchronous motors (i.e., requiring START and RUN motors and therefore two switches), it was possible to "bend the pitch" in different ways by using the START and RUN switches to force the main motor to run at other than its normal speed. These pitch-bending capabilities are incorporated into the New B-3.

By now, you have noticed two "toggle" switches on the far right end of the console.
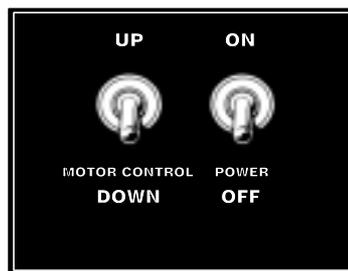
The second of these switches is the ON/OFF Power Switch and has already been explained. This is the equivalent of the RUN switch on the original Hammond Organs.

The New B-3 does not use an electro-mechanical tone generator requiring a separate Start motor, and therefore does not require a START switch; however, the first "toggle" switch has been retained in order to provide the additional "pitch bending" features described above.

Using this first switch, you may either bend the pitch <u>UP</u> or <u>DOWN</u> in a manner similar to that possible on a tone-wheel Hammond Organ.

Motor Control UP

The UP position of the Motor Control switch allows you to slightly raise the pitch similar to the effect produced by holding the START switch in the "up" position on a tone-wheel Hammond Organ.

TRY THIS:

1.   With the organ "ON," set up a registration on one of the Manuals.

2.   Play a chord (such as C Major - "C" "E" and "G") on the registered manual.

3.   While continuing to hold the chord, move the Motor Control switch <u>forward</u>.

You will now hear the pitch of the entire organ rise. The pitch will continue to be raised as long as the switch is pressed forward. When you release the switch, the organ pitch will return to normal.

Motor Control DOWN

The DOWN position of the Motor Control switch allows you to recreate the "tone-wheel brake" effect. This occurs when notes are pressed and held and the RUN switch is turned "OFF" on a tone-wheel Hammond Organ.

TRY THIS:

1. With the organ "ON," set up a registration on one of the Manuals.

2. Play a chord (such as C Major - "C" "E" and "G") on the registered manual.

3. While continuing to hold the chord, move the Motor Control switch **<u>backward</u>**.

You will now hear the chord you are holding slowly decrease in pitch until two octaves down. The pitch will continue to be down as long as the switch is pressed backward. When you release the switch, the pitch will slowly rise until it is back to normal.

A   Advanced Features - TUNE

There are two Advanced Features which allow you to make the following changes to the organ:

1. Master Tune -
   Allows you to change the overall pitch of the entire instrument.

2. Transpose -
   Allows you to shift the musical key of the entire instrument.

The following pages give a more detailed explanation of how these Advanced Features work.

Master Tune

This Advanced Feature allows you to change the overall tuning pitch of the entire instrument. You can select from "430Hz" to "450Hz." The default setting is "440Hz."

NOTE: The term "Hz" is an abbreviation for <u>Hertz</u>, and refers to the frequency of a pitch measured in cycles per second. The note reference commonly used is "A440," meaning that a note consisting of 440 Hertz will be the pitch "A." This is the international standard used to tune most musical instruments.

TRY THIS:

1.   From either of the PLAY Mode Displays, touch the black MENU Select Touch Button to display the <u>A</u> Menu of the MENU Mode:
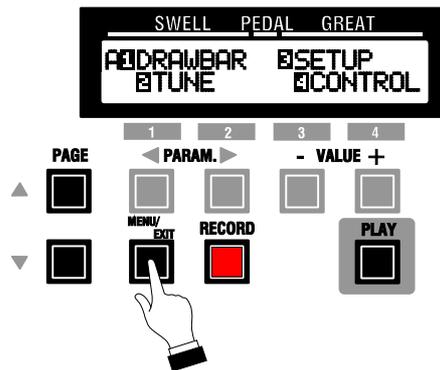
2.   Touch the Number 2 Select Touch Button to select the <u>TUNE</u> Menu:
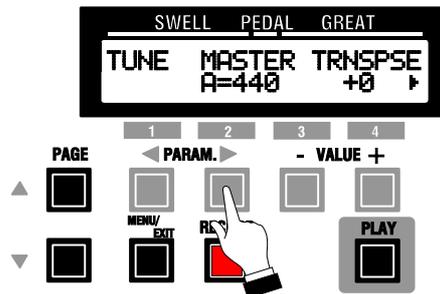
Notice that the legend below the word MASTER is flashing "on" and "off."

3.   Now select the option you wish by doing the following

Use the VALUE "-" Select Touch Button to <u>raise</u> the pitch.

Use the VALUE "+" Select Touch Button to <u>lower</u> the pitch.

The data chart below explains the options you may select.

MASTER TUNE OPTIONS
430 ~ 450 Hz

default setting is "440Hz."

NOTE: You can exit by touching the EDIT Select Touch Button.

Transpose (Key Select)

This Advanced Feature allows you to shift the musical key of the entire organ. This is useful if you have a piece of music written in one key but which needs to sound in another key; for example, a song written and played in C Major, could sound in G Major. Transpose will step either up or down six (6) semitones from the center position. Transpose consists of two separate switches. The VALUE "+" Touch Button is for ascending transposition and the VALUE "-" Touch Button is for descending transposition.

TRY THIS:

    1.   From either of the PLAY Mode Displays, touch the black MENU / EXIT Select Touch Button to display the <u>A</u> Menu of the MENU Mode:
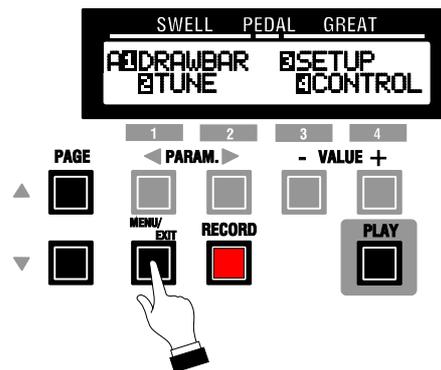
    2.   Touch the Number 2 Select Touch Button to select the **<u>TUNE</u>** Menu:
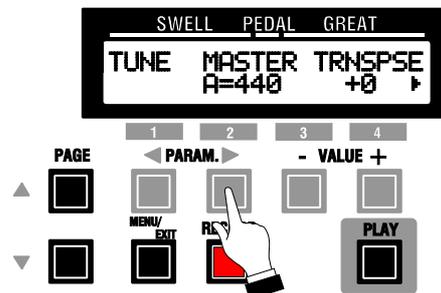
    3.   Touch the PARAM " ▶" Select Touch Button <u>once</u>. The Information Center Display should now look similar to this:
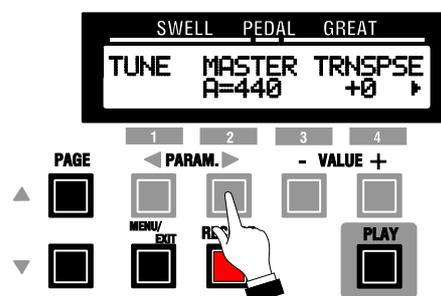
                Notice that the legend just underneath the word TRNSPSE is flashing "on" and "off."

4.   Touch the VALUE "-" Touch Button <u>once</u>. The pitch of the entire organ will be <u>lowered</u> one semitone (half step). The lower right-hand corner of the Information Center Display will show, "-1".

```
            SWELL    PEDAL    GREAT
   TUNE    MASTER   TRNSPSE
            A=440      -1      ▶
```
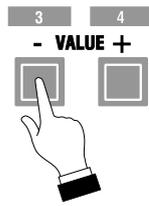
Each time you touch the VALUE "-" Touch Button, the display will change showing each step down ("-2", "-3," etc.).

5.   Now touch the VALUE "+" Touch Button <u>two</u> times. The pitch of the entire organ will be <u>raised</u> one semitone (half step). The Information Center will now show, "+1".

```
            SWELL    PEDAL    GREAT
   TUNE    MASTER   TRNSPSE
            A=440      +1      ▶
```
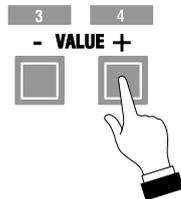
Each time you touch the VALUE "+" Touch Button, the display will change showing each step up ("+2", "+3," etc.).

NOTE: In order to change the Transpose by only one half-step, it is only necessary to touch the appropriate Touch Button once. Touching and Holding either of the VALUE Touch Buttons will rapidly scroll through the half-steps.

6.   Now touch the VALUE "-" and "+" Touch Buttons together <u>once</u>.

```
            SWELL    PEDAL    GREAT
   TUNE    MASTER   TRNSPSE
            A=440      +0      ▶
```
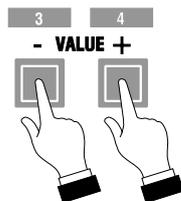
This will return the organ to "concert pitch," or no transposition. The Information Center Display will show, "+0" in the lower right-hand corner.

A   **Advanced Features - CONTROL**

Foot Switch Function

As explained on page 12, located on the left side of the Expression Pedal is a Foot Switch which can be programmed to activate one of several different functions. This Advanced Feature allows you to select the functions to be controlled by the Foot Switch.

TRY THIS:

1.   From either of the PLAY Mode Displays, touch the black MENU / EXIT Select Touch Button to display the <u>A</u> Menu of the MENU Mode:
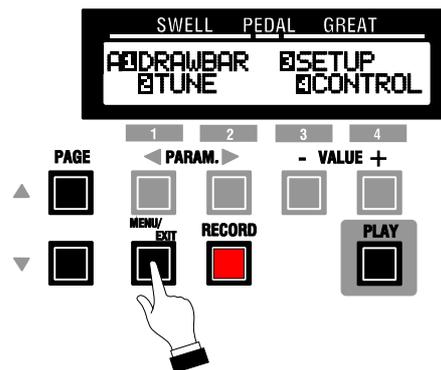
2.   Touch the Number 4 Select Touch Button <u>once</u> to select the <u>**CONTROL**</u> Menu:
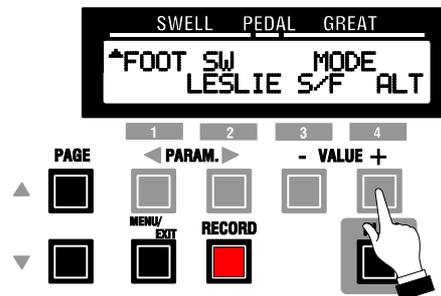
Notice that the legend on the bottom line of the display is flashing "on" and "off."

3.   Now select the option you wish by doing the following:

Use the VALUE "-" Select Touch Button to scroll **backward** through the choices.

Use the VALUE "+" Select Touch Button to scroll **forward** through the choices.

The data chart below explains the options you may select.

| FOOT SWITCH OPTIONS	
Option	Function
OFF	Foot switch has no assigned function.
* LESLIE S/F ALTERNATE	The rotors of a Leslie Speaker can be toggled between SLOW and FAST.
LESLIE S/F MOMENTARY	The rotors of a Leslie Speaker will turn FAST while the Foot Switch is held.
EXTERNAL DAMPER SWELL MOMENTARY	Notes played on the selected Manual or Pedals will be "damped" or sustained indefinitely.
EXTERNAL DAMPER GREAT MOMENTARY	Notes played on the selected Manual or Pedals will be "damped" or sustained indefinitely.
EXTERNAL DAMPER PEDAL MOMENTARY	Notes played on the selected Manual or Pedals will be "damped" or sustained indefinitely.

* Default setting

NOTE: You can exit by touching the MENU / EXIT Select Touch Button.

Expression Minimum Level

This Advanced Feature allows you to control how the Expression Pedal functions at its Minimum volume setting. You can select either "Soft" (the organ plays at a minimum volume level) or "0" (no sound is heard). The default setting is "Soft."

TRY THIS:

1.   From either of the PLAY Mode Displays, touch the black MENU / EXIT Select Touch Button to display the **A** Menu of the MENU Mode:

2.   Touch the Number 4 Select Touch Button <u>once</u> to select the <u>CONTROL</u> Menu:
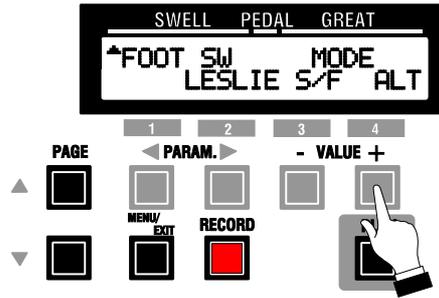
3.   Touch the PAGE "• " Touch Button <u>once</u>. The Information Center Display should now look like this:
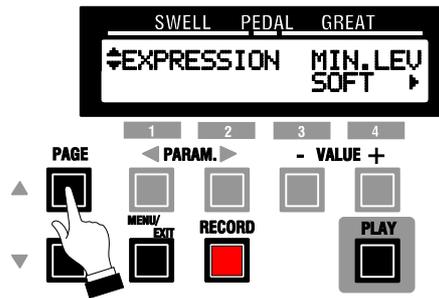
Notice that the legend on the bottom line of the display is flashing "on" and "off."

4.   Now select the option you wish by doing the following:

Use the VALUE "-" Select Touch Button to select <u>SOFT</u>.

Use the VALUE "+" Select Touch Button to select <u>ZERO</u>.

The data chart below explains the options you may select.

| EXPRESSION MINIMUM LEVEL OPTIONS	
Option	Function
*SOFT	The volume will be at a very soft level when the Expression Pedal is "closed," or at its Minimum volume setting.
ZERO	The organ will be silent when the Expression Pedal is closed.

*default setting

NOTE: You can exit by touching the MENU / EXIT Select Touch Button.

Expression Curve

This Advanced Feature allows you to select the response curve of the Expression Pedal. You can select from among three different curves, which are explained below.

TRY THIS:

1. From either of the PLAY Mode Displays, touch the black MENU / EXIT Select Touch Button to display the <u>A</u> Menu of the MENU Mode:
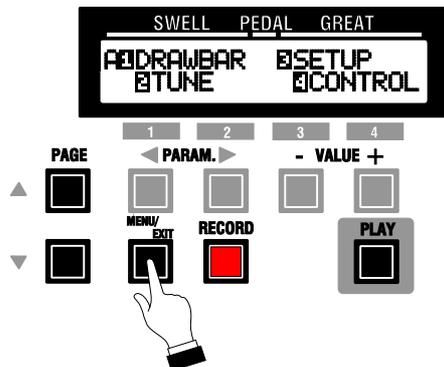
2. Touch the Number 4 Select Touch Button <u>once</u> to select the <u>**CONTROL**</u> Menu:
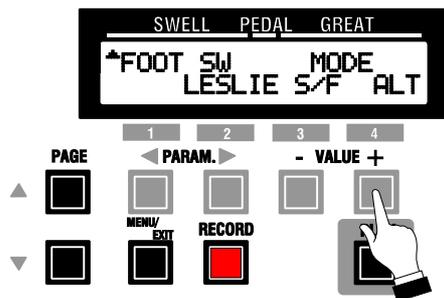
3. Touch the PAGE "•" Touch Button <u>once</u>. The Information Center Display should now look like this:
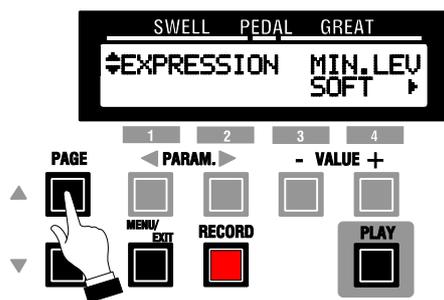
Notice that the legend on the bottom line of the display is flashing "on" and "off."

4.   Touch the PARAM "▶" Touch Button <u>once</u>. The Information Center Display should now look like this:
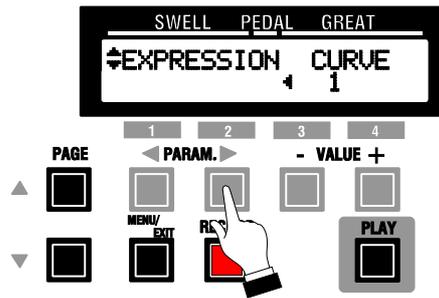
Notice that the number on the bottom line of the display is flashing "on" and "off."

5.   Now select the option you wish by doing the following:

Use the VALUE "+" Select Touch Button to scroll <u>forward</u> through the choices.

Use the VALUE "-" Select Touch Button to scroll <u>backward</u> through the choices.

The data chart below explains the options you may select.

| EXPRESSION CURVE OPTIONS	
Option	Function
*1	Duplicates the expression curve of the tone-wheel B-3.
2	Similar to 1, but with a slightly different point at which the volume "peaks."
3	Straight linear curve.

*default setting

NOTE: You can exit by touching the MENU / EXIT Select Touch Button.

Preset Load - EX.ZONE

This Advanced Feature allows you to select whether you want the Presets to change External MIDI Zones. You can select either "ON" or "OFF" for the Swell and Great Manual Presets individually. The default setting is "OFF" for both Swell and Great Presets.

TRY THIS:

1.   From either of the PLAY Mode Displays, touch the black MENU / EXIT Select Touch Button to display the <u>A</u> Menu of the MENU Mode:

2.   Touch the Number 4 Select Touch Button <u>once</u> to select the **CONTROL** Menu:

```
      SWELL   PEDAL   GREAT
┌─────────────────────────────┐
│ ▲FOOT SW     MODE            │
│   LESLIE S/F  ALT            │
└─────────────────────────────┘
       1      2      3      4
      PAGE   ◄ PARAM. ►   - VALUE +
   ▲  ■      ■      ■      ■
         MENU/   RECORD
          EXIT
   ▼  ■      ■      ■      ■
```
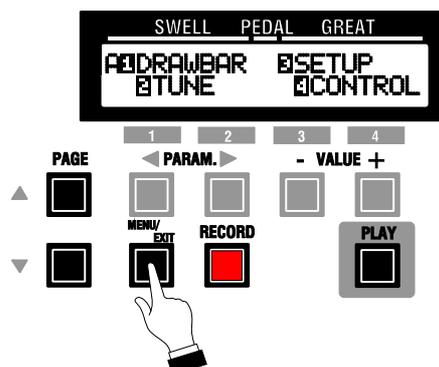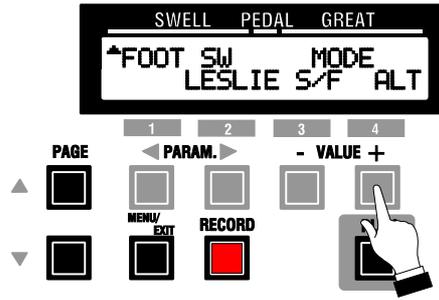
3.   Touch the PAGE "•" Touch Button <u>three</u> times. The Information Center Display should now look like this:

```
      SWELL   PEDAL   GREAT
┌─────────────────────────────┐
│ ▼P.LOAD      SWL    GRT      │
│   EX.ZONE    OFF    OFF      │
└─────────────────────────────┘
       1      2      3      4
      PAGE   ◄ PARAM. ►   - VALUE +
   ▲  ■      ■      ■      ■
         MENU/   RECORD       PLAY
          EXIT
   ▼  ■      ■      ■      ■
```
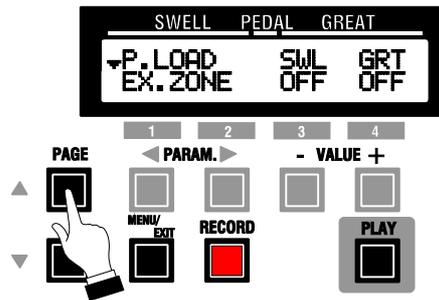
Notice that the word underneath SWL is flashing "on" and "off."

4.   Now select the option you wish by doing the following:

Use the PARAM Select Touch Buttons to select "SWL" (Swell Manual Presets) or "GRT" (Great Manual Presets).

Use the VALUE "-" Select Touch Button to select <u>OFF</u>.

Use the VALUE "+" Select Touch Button to select <u>ON</u>.

The data chart below explains the options you may select.

PRESET LOAD EXTERNAL ZONE OPTIONS	
Option	Function
ON	MIDI settings will change when Preset Keys are selected.
*OFF	MIDI settings will not change when Presets are selected.

*default setting

NOTE: You can exit by touching the MENU / EXIT Select Touch Button.

USING
CompactFlash®
CARDS

USING CompactFlash™ CARDS

Your Hammond Organ can store and retrieve several types of data:

1.   Drawbar Wave data
2.   Preset data

The above types of data can be stored to, and retrieved from, Compact Flash™ Cards.

The following pages will explain each function.

Ë What Is a "CompactFlash® Card?"

CompactFlash® was first introduced in 1994 as a way of storing large amounts of digital data - more data than can be stored to other types of media such as floppy disks, etc. In addition to providing mass storage, its small size (43mm (1.7") x 36mm (1.4") x 3.3mm (0.13") makes it very portable and easy to store. The CompactFlash® Card makes use of flash technology, which does not require a battery to retain data indefinitely.

The CompactFlash logo looks like this:

There are two types of CompactFlash® Cards - <u>Type 1</u> and <u>Type 2</u>. They are electrically identical; however Type 1 cards are 3.3mm thick while Type 2 cards are 5mm thick. Your New-B-3 Hammond Organ uses Type 1 CompactFlash® Cards.

NOTE: "CompactFlash" and the CompactFlash logo are trademarks of the CompactFlash Association (www.compactflash.org).

NOTE: Be sure to use Hammond HCF-32 or other compatible Cards, such as SANDISK, HAGIWARA or I.O DATA.

Ë CompactFlash® Card Slot

The **CompactFlash® Card Slot** is located in a receptacle on the back of the organ. In order to access the Card Slot, it will be necessary to remove the back of the organ.

Follow these steps to access the CompactFlash® Card Slot:

1.   The wooden back of the organ is held in place by two large thumbscrews. These can be removed by rotating them counter-clockwise by hand. Remove these screws.

2.   Carefully lift up and remove the back of the organ and set it to one side.

You should now see the CompactFlash® Card Slot.

To use a CompactFlash® Card, simply insert it into the Slot. Be sure to insert the Card with the label facing <u>up</u>. Use the Eject Button located to the right of the slot to eject the Card after use.

# A   Advanced Feature - CFFORMAT

Since a card must be formatted before it can be used, we will explain the FORMAT process first. Normally, this only has to be done once, when a card is new; however, you may find it useful to re-format a card you have previously used to make sure it is empty.

TRY THIS:

1.   Insert a CompactFlash® Card into the Card Slot.

2.   From either of the PLAY Mode Displays, touch the black MENU / EXIT Select Touch Button to display the <u>A</u> Menu of the MENU Mode:
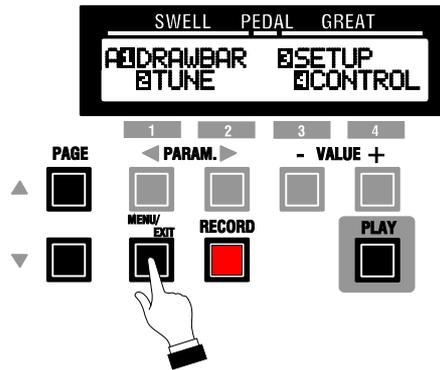
3.   Touch the PAGE "• " Select Touch Button <u>three</u> times to display the <u>D</u> Menu:
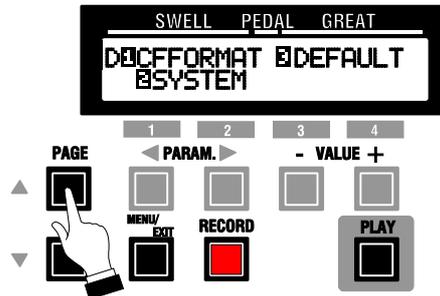
4.   Touch the Number 1 Select Touch Button <u>once</u> to select the <u>**CFFORMAT**</u> Menu:
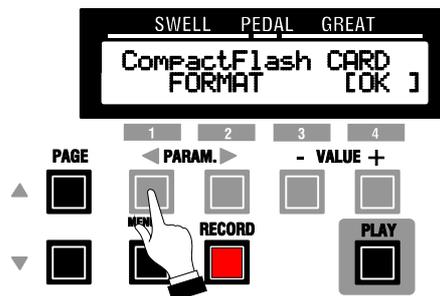
5. Touch the Number 4 Select Touch Button <u>once</u>. The Information Center Display should now show the following:
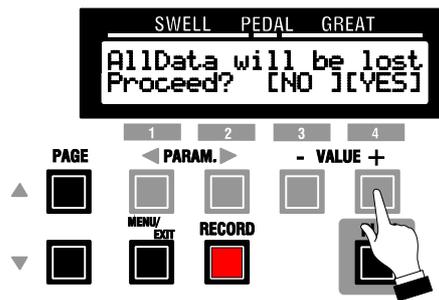
Notice that the word <u>Proceed?</u> is flashing "on" and "off."

6. If you DO NOT wish to format the card, touch the Number 3 (NO) Select Touch Button, and the previous MENU screen will appear. If you want to format the card, touch the Number 4 (YES) Select Touch Button. After a short time (from 1 to 5 seconds), the Information Center Display will flash the following message:


The Card is now ready for use.

A **Advanced Features - Using a Card to store Setups**

Saving Setups to a Card

TRY THIS:

1. Use the procedure described starting on page 74 to program your own Preset Banks.

2. Insert a CompactFlash® Card into the Card Slot.

3. From either of the PLAY Mode Displays, touch the black MENU / EXIT Select Touch Button to display the <u>A</u> Menu of the MENU Mode:
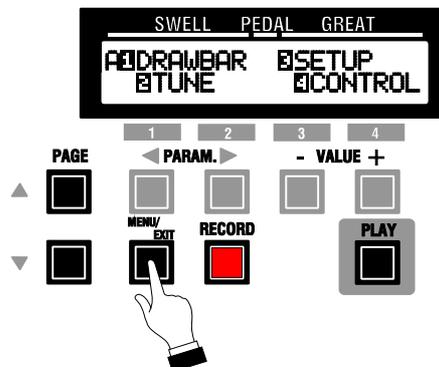
4. Touch the Number 3 Select Touch Button <u>once</u> to select the **SETUP** Menu. If the card is blank, the Information Center Display will look similar to this:
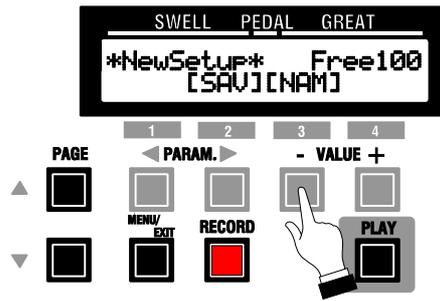

If the card already has Setup Data stored on it, the Information Center Display will look similar to this:
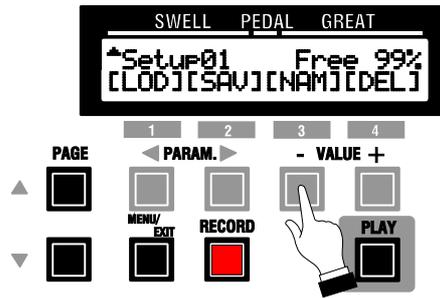

If you see the above screen and you want to update or overwrite Setup Data on the card, proceed to step.5. If you see the above screen and you DO NOT wish to erase Setup Data that already exists, touch the PAGE " · " Select Touch Button repeatedly or until you see "★NewSetup★ shown in the display.

NOTE: If there is no Card inserted in the Card Slot, the Information Center Display will show, "⌐Not Ready.

5. Touch the Number 2 Select Touch Button to select <u>Save</u> (SAV). The Information Center Display should now look similar to this:
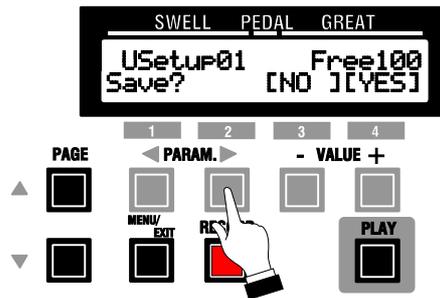
6. To complete the Saving procedure, Touch the black Number 4 Select Touch Button. The Information Center Display will flash the following:



```
    SWELL   PEDAL   GREAT
USetup01
  *** Complete ***
```
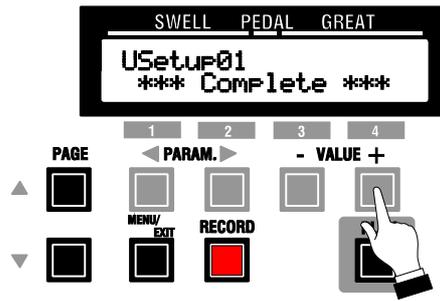
7. As soon as the above message disappears, your Preset Banks will have been Saved to the Card.

Loading Setups from a Card

TRY THIS:

1. Insert a CompactFlash® Card containing Setup Data into the Card Slot.

2. From either of the PLAY Mode Displays, touch the black MENU / EXIT Select Touch Button to display the <u>A</u> Menu of the MENU Mode:


```
    SWELL   PEDAL   GREAT
A▯DRAWBAR    ▯SETUP
  ▯TUNE      ▯CONTROL
```

3. Touch the Number 3 Select Touch Button <u>once</u> to select the <u>**SETUP**</u> Menu:


```
    SWELL   PEDAL   GREAT
↑Setup01      Free 99%
[LOD][SAV][NAM][DEL]
```
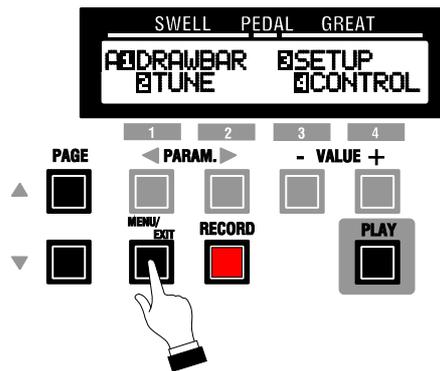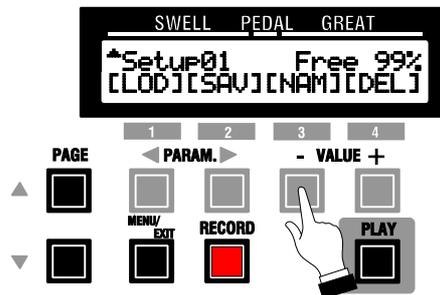
4.   Touch the Number 1 Select Touch Button <u>once</u>. The Information Center Display should now look similar to this:
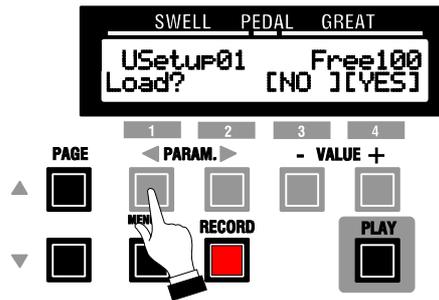
If the Card contains more than one Setup use the PAGE Touch Buttons to select the Setup containing the Preset Data you want.

5.   When you have found the Setup you want, touch the VALUE "+" Select Touch Button to Load it. The Information Center Display will flash the following:
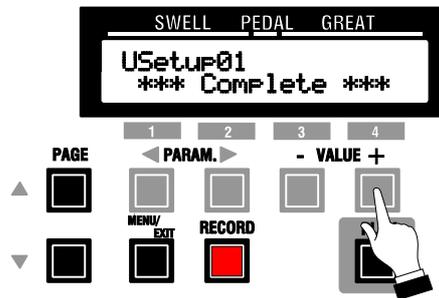

6.   As soon as the above message disappears, your Preset Banks will be loaded into the organ's memory.

Deleting a Preset Bank from a Card

TRY THIS:

1.   Insert a CompactFlash® Card containing Setup Data into the Card Slot.

2.   From either of the PLAY Mode Displays, touch the black MENU / EXIT Select Touch Button to display the <u>A</u> Menu of the MENU Mode:

3.   Touch the Number 3 Select Touch Button <u>once</u> to select the <u>**SETUP**</u> Menu:

```
       SWELL   PEDAL   GREAT

  ↑Setup01      Free 99%
  [LOD][SAV][NAM][DEL]
```

4.   Touch the Number 4 Select Touch Button <u>once</u>. The Information Center Display should now look similar to this:

```
       SWELL   PEDAL   GREAT

  USetup01       Free100
  Delete?    [NO ][YES]
```
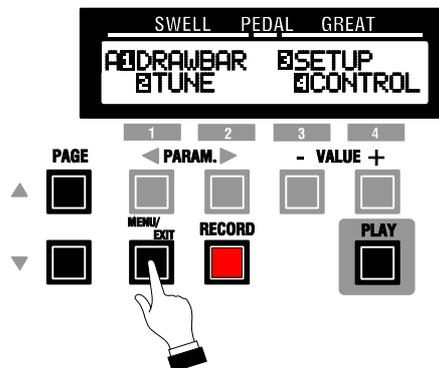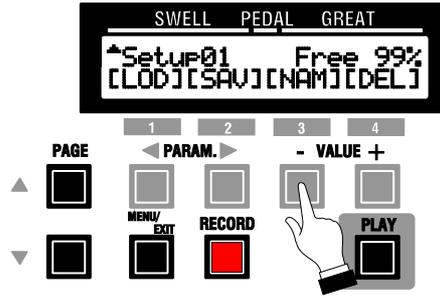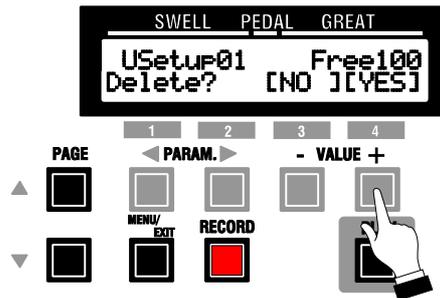
5.   Touch the number 4 Select Touch Button to select "YES". If you DO NOT wish to delete the Setup, touch the Number 3 Select Touch Button to select "NO". If you select "YES", the Setup will then be deleted from the Card.

The Information Center Display will flash the following:

```
       SWELL   PEDAL   GREAT

  USetup01
   *** Complete ***
```
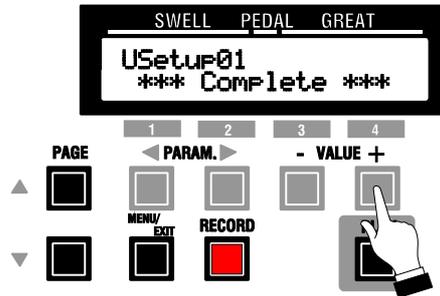
6.   As soon as the above message disappears, the Setup has been deleted from the Card.

Naming a Setup

TRY THIS:

1. Insert a CompactFlash® Card containing Preset Data into the Card Slot.

2. From either of the PLAY Mode Displays, touch the black MENU / EXIT Select Touch Button to display the <u>A</u> Menu of the MENU Mode:
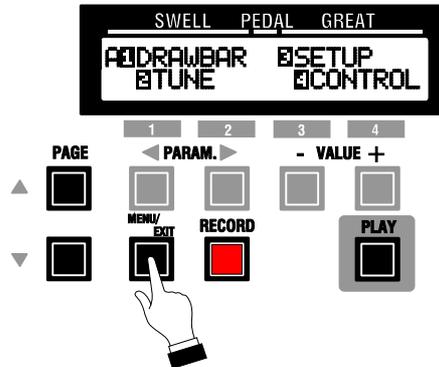
3. Touch the Number 3 Select Touch Button <u>once</u> to select the <u>**SETUP**</u> Menu:
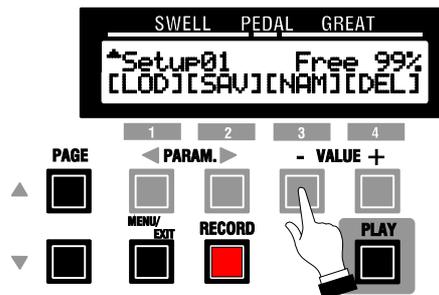
4. Use the PAGE Select Touch Buttons to select the Setup you want to name.

5. After you have made your selection, touch the Number 3 Select Touch Button. You will now see a cursor underneath the first character of the Preset Name flash "ON" and "OFF."

6. Name the Preset Bank by doing the following:

    Use the PARAM " ▶" Select Touch Button to move the cursor to the <u>right</u>.

    Use the PARAM " ◀" Select Touch Button to move the cursor to the <u>left</u>.

    Use the VALUE "-" Select Touch Button to scroll <u>down</u> through the character list.

    Use the VALUE "+" Select Touch Button to scroll <u>up</u> through the character list.

    Touch and Hold the RECORD Select Touch Button and use either of the VALUE Select Touch Buttons to quickly scroll through the characters.

The data chart below shows the options that you may select.

SETUP NAME ALPHANUMERIC CHARACTER LIST
space - . ' & A ~ Z a ~ z 0 ~ 9

7.   When you having finished entering the Name (8 characters maximum), touch the PARAM " ▶" Select Touch Button repeatedly until [ENT] appears in the lower right-hand corner of the Information Center Display.

8.   Touch the Number 4 Select Touch Button. The Information Center Display should now look similar to this:
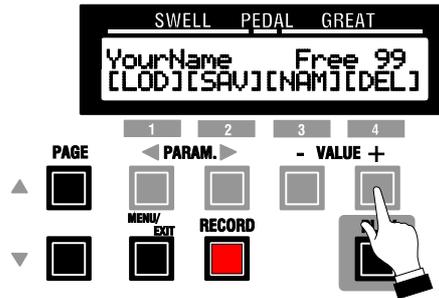
You will see your Setup Name displayed in the upper left-hand corner of the Information Center Display.

SPECIAL NOTE: If a CompactFlash® Card is not inserted in the Card Slot, you will see the message, "Card is not ready." when you access the SETUP or CFFORMAT Menus. Touch the Number 4 [OK] Select Touch Button to exit from this screen.

MIDI

# MIDI

The letters MIDI stand for <u>M</u>usical <u>I</u>nstrument <u>D</u>igital <u>I</u>nterface. MIDI is an international standard for allowing electronic musical instruments equipped with MIDI capability to exchange performance information. For example, a synthesizer can be used to communicate with a drum machine, an electronic piano can interface with a computer, and so forth. Additionally, since MIDI is an international standard recognized and implemented by all musical instrument manufacturers worldwide, instruments made by different manufacturers can communicate with each other via MIDI.

Ë **MIDI OUT Jack**

Your Hammond Organ has a MIDI OUT jack which is located underneath the organ on the left side.

MIDI OUT

Ë **Using the MIDI Jack**

To control another MIDI instrument (synthesizer, sound module, etc.) from the organ, connect the MIDI OUT from the organ to the MIDI IN of the instrument you wish to control using a MIDI cable, as shown in the diagram below.
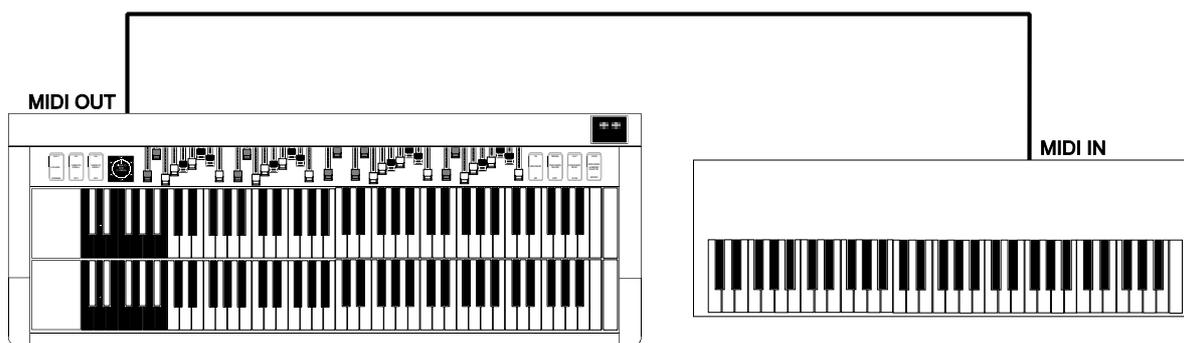
Ë **Special Note - MIDI IN and THRU**

Many MIDI devices, in addition to MIDI OUT, also have MIDI IN and MIDI THRU jacks to allow incoming MIDI data from another instrument as well as to allow MIDI data to "pass through" to another instrument in multiple MIDI hookups.

Due to the unique tone-generation system of the New B-3, it does not implement MIDI IN or MIDI THRU.

Ë **What Is A "Part"?**

The MIDI implementation of your New B-3 allows you to play up to three MIDI voices at a time from each manual and pedals. Each voice is considered as being played by a separate performance platform or "sub-manual" called a **Part**. Each Part can have its own settings for such things as Program Number, Bank Number, Volume, Panpot, Reverb and Chorus levels. In this way, you can play, for example, Piano and Strings together, or any combination of voices available from whatever MIDI gear you may be using, with each voice having its own Volume setting, Pan setting, etc.

The Parts are referred to by manual and by number; SWELL 1, SWELL 2, SWELL 3, GREAT 1, GREAT 2, GREAT 3, and PEDAL 1, PEDAL 2 and PEDAL 3. The first letter of the manual designation is used in the Information Center Display, so that "S1" refers to SWELL 1, "G3" means GREAT 3, etc.

A   **Advanced Features - MIDI**

There are three main pages to the MIDI Advanced Feature Menu that allow you to do the following:

1.   EX.ZONE -
Allows you to select External MIDI voices and set their characteristics.

2.   EX.DAMP -
Allows you to use the Expression Pedal Foot Switch as a "damper" pedal to sustain notes indefinitely, such as a Piano sound from a connected MIDI device.

3.   MIDI CH. -
Allows you to set the MIDI Channels on which the organ will Transmit (Tx).

The following pages give a more detailed explanation of how these Advanced Features work.

Advanced Features - EX.ZONE

There are nine EX.ZONE Advanced Features which allow you to make the following changes to the organ:

1.   EX.ZONE ON/OFF –
     Allows you to turn each External Zone Part "ON" or "OFF."

2.   EX.ZONE Bank & Program Select –
     Allows you to send Bank and Program Changes to a connected MIDI module.

3.   EX.ZONE Volume –
     Allows you to select the volume at which the External MIDI voice will play for each Part.

4.   EX.ZONE Pan –
     Allows you to set the directionality of the External MIDI voice for each Part.

5.   EX.ZONE Octave –
     Allows you to select the octave in which the External MIDI voice will sound for each Part. You can select "-2" (up to two octaves down) through "+2" (up to two octaves up).

6.   EX.ZONE Reverb –
     Allows you to select the Reverb amount for each Part. You can select from "0" (no Reverb) through "127" (maximum Reverb).

7.   EX.ZONE Chorus –
     Allows you to select the Chorus amount for each Part.   You can select from "0" (no Chorus) through "127" (maximum Chorus).

8.   EX.ZONE Velocity –
     Allows you to select the Velocity Curve which will be applied to the External MIDI voices.

9.   EX.ZONE Zone –
     Allows you to set the upper and lower limits for each Part. You can select from "1C" (the lowest note)through "6C" (the highest note).

EX.ZONE ON/OFF

This Advanced Feature allows you to turn each External Zone Part "ON" or "OFF."

TRY THIS:

1. From either of the PLAY Mode Displays, touch the black MENU Select Touch Button to display the <u>A</u> Menu of the MENU Mode:

2. Touch the PAGE "▲" Select Touch Button <u>two</u> times to display the <u>C</u> Menu:
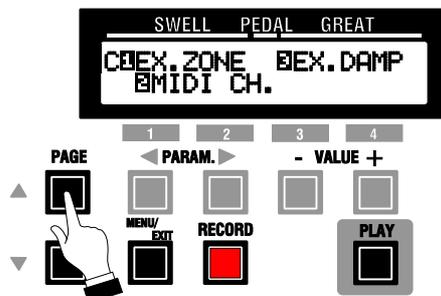
3. Touch the Number 1 Select Touch Button to select the **EX.ZONE** Menu:
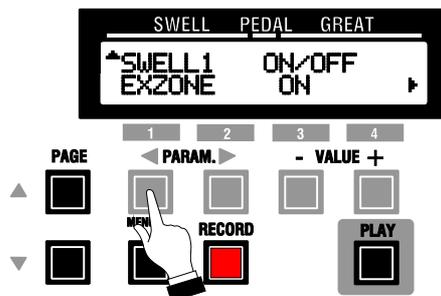
Notice that the word ON is flashing "on" and "off."

4. Now select the option you wish by doing the following:

Use the PAGE Select Touch Buttons to make your Manual, Pedal and Part selections ("SWELL 1," "SWELL 2," "SWELL 3," "GREAT 1," "GREAT 2," "GREAT 3" or "PEDAL 1," "PEDAL 2" and "PEDAL 3").

Use the VALUE "-" Select Touch Button to turn the selected Part <u>OFF</u>.

Use the VALUE "+" Select Touch Button to turn the selected Part <u>ON</u>.

NOTE: You can exit by touching the MENU / EXIT Select Touch Button.

EX.ZONE Bank & Program Select

This Advanced Feature allows you to send Program and Bank Numbers for each Part.

TRY THIS:

1. From either of the PLAY Mode Displays, touch the black MENU Select Touch Button to display the <u>**A**</u> Menu of the MENU Mode:
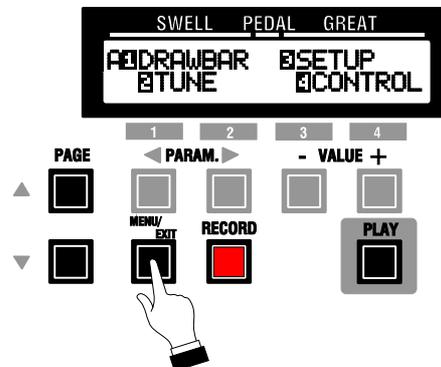
2. Touch the PAGE "•" Select Touch Button <u>**two**</u> times to display the <u>**C**</u> Menu:
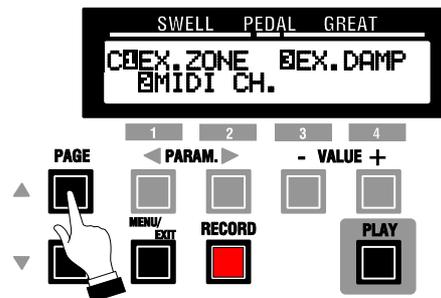

3. Touch the Number 1 Select Touch Button to select the <u>**EX.ZONE**</u> Menu:
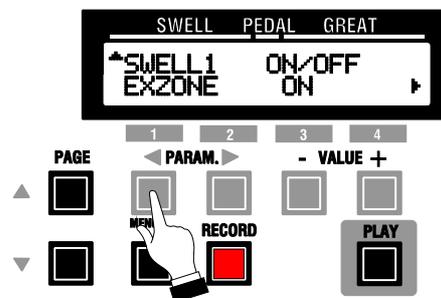
    Notice that the word ON is flashing "on" and "off."

4. Touch the PARAM "▶" Select Touch Button <u>**once**</u>. The Information Center Display should now look similar to this:
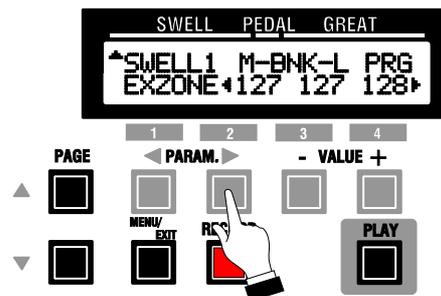
    Notice that the number just underneath the letter M is flashing "on" and "off."

5.   Now select Program and Bank Numbers by doing the following

Use the PAGE Select Touch Buttons to make your Manual, Pedal and Part selections ("SWELL 1," "SWELL 2," "SWELL 3," "GREAT 1," "GREAT 2," "GREAT 3," or "PEDAL 1," "PEDAL 2" and "PEDAL 3").

Use the PARAM Touch Buttons to select "M" (MSB or <u>M</u>ost <u>S</u>ignificant <u>B</u>it) "L" (LSB or <u>L</u>east <u>S</u>ignificant <u>B</u>it) of the Bank Number, or "PRG " (Program Number).

Use the VALUE "-" Select Touch Button to scroll <u>down</u> through the numbers.

Use the VALUE "+" Select Touch Button to scroll <u>up</u> through the numbers.

NOTE: You can exit by touching the MENU / EXIT Select Touch Button.

EX.ZONE Volume

This Advanced Feature allows you to select the Volume of the External MIDI voice for each Part.

TRY THIS:

1.   From either of the PLAY Mode Displays, touch the black MENU Select Touch Button to display the <u>A</u> Menu of the MENU Mode:
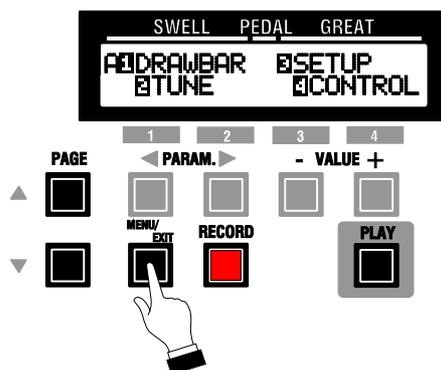
2.   Touch the PAGE "▪ " Select Touch Button <u>two</u> times to display the <u>C</u> Menu:
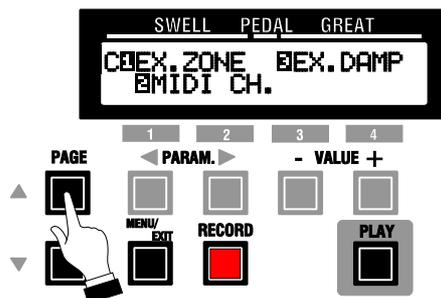
3.   Touch the Number 1 Select Touch Button to select the **EX.ZONE** Menu:
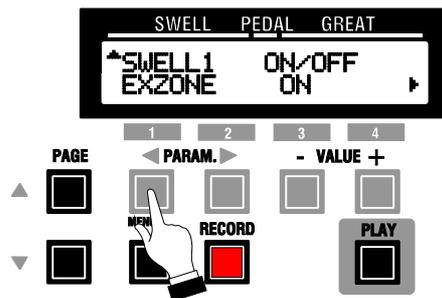
Notice that the word ON is flashing "on" and "off."

4.   Touch the PARAM " ▶" Select Touch Button <u>four</u> times. The Information Center Display should now look similar to this:
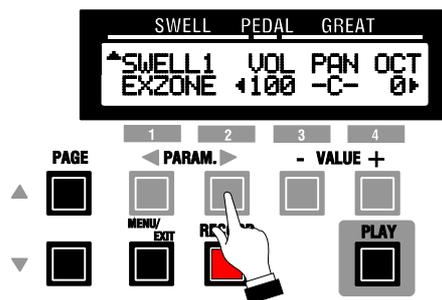
Notice that the number just underneath the word VOL is flashing "on" and "off."

5.   Now select the Volume for each Part by doing the following:

Use the PAGE Select Touch Buttons to make your Manual, Pedal and Part selections ("SWELL 1," "SWELL 2," "SWELL 3," "GREAT 1," "GREAT 2," "GREAT 3" or "PEDAL 1," "PEDAL 2" and "PEDAL 3").

Use the VALUE "-" Select Touch Button to <u>lower</u> the Volume for the selected Part.

Use the VALUE "+" Select Touch Button to <u>raise</u> the Volume for the selected Part.

The data chart below shows the options that you may select.

EX.ZONE VOLUME - All Parts
0 ~ 127

NOTE: You can exit by touching the MENU / EXIT Select Touch Button.

EX.ZONE Pan

This Advanced Feature allows you to select the directionality of the MIDI voice for each Part.

TRY THIS:

1. From either of the PLAY Mode Displays, touch the black MENU Select Touch Button to display the **A** Menu of the MENU Mode:
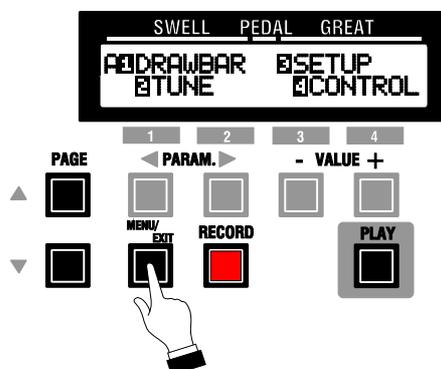
2. Touch the PAGE "•" Select Touch Button <u>two</u> times to display the **C** Menu:
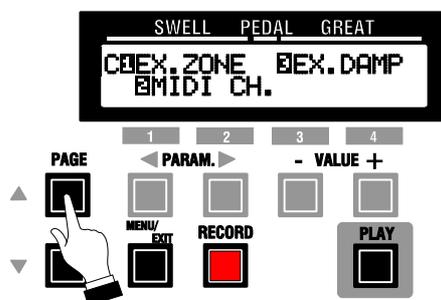

3. Touch the Number 1 Select Touch Button to select the **EX.ZONE** Menu:
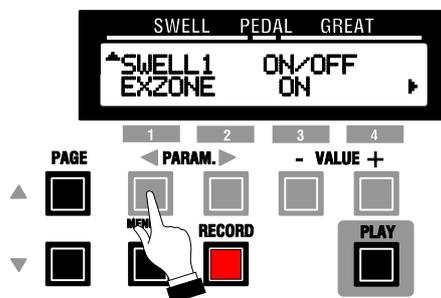
    Notice that the word ON is flashing "on" and "off."

4. Touch the PARAM "▶" Select Touch Button <u>five</u> times. The Information Center Display should now look similar to this:
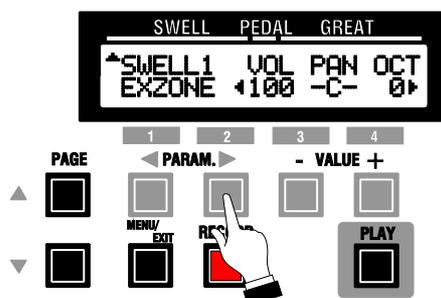
    Notice that the legend just underneath the word PAN is flashing "on" and "off."

5.   Now select the Pan setting for each Part by doing the following:

Use the PAGE Select Touch Buttons to make your Manual, Pedal and Part selections ("SWELL 1," "SWELL 2," "SWELL 3," "GREAT 1," "GREAT 2," "GREAT 3" or "PEDAL 1," "PEDAL 2" and "PEDAL 3").

Use the VALUE "-" Select Touch Button to move the sound into the <u>left</u> channel.

Use the VALUE "+" Select Touch Button to move the sound into the <u>right</u> channel.

The data chart below shows the options that you may select.

EX.ZONE PAN - All Parts
L64 ~ C ~ R63

NOTE: You can exit by touching the MENU / EXIT Select Touch Button.

EX.ZONE Octave

This Advanced Feature allows you to select the Octave in which the External MIDI voice will play for each Part.

TRY THIS:

1.   From either of the PLAY Mode Displays, touch the black MENU Select Touch Button to display the <u>A</u> Menu of the MENU Mode:
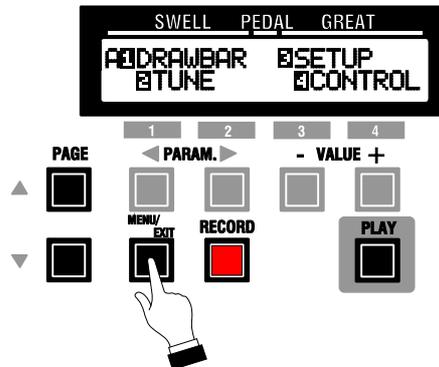
2.   Touch the PAGE "▲ " Select Touch Button <u>two</u> times to display the <u>C</u> Menu:
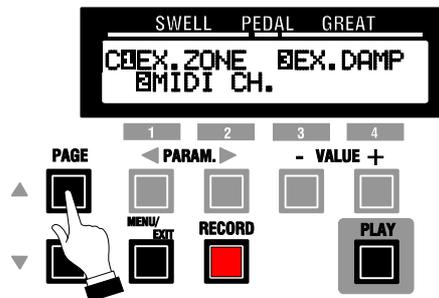
3. Touch the Number 1 Select Touch Button to select the **EX.ZONE** Menu:
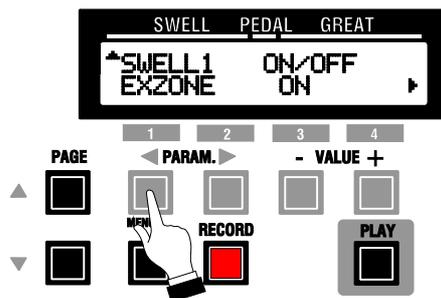
Notice that the word ON is flashing "on" and "off."

4. Touch the PARAM " ▶ " Select Touch Button <u>six</u> times. The Information Center Display should now look similar to this:
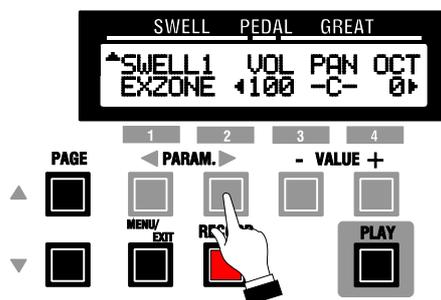
Notice that the legend just underneath the word OCT is flashing "on" and "off."

5. Now select the Octave setting for each Part by doing the following:

    Use the PAGE Select Touch Buttons to make your Manual, Pedal and Part selections ("SWELL 1," "SWELL 2," "SWELL 3," "GREAT 1," "GREAT 2," "GREAT 3" or "PEDAL 1," "PEDAL 2" and "PEDAL 3").

    Use the VALUE "-" Select Touch Button to <u>lower</u> the Octave setting for the selected Part.

    Use the VALUE "+" Select Touch Button to <u>raise</u> the Octave setting for the selected Part.

   The data chart below shows the options that you may select.

EX.ZONE OCTAVE - All Parts
-2 (two octaves lower) ~ 0 ~ +2 (two octaves higher)

NOTE: You can exit by touching the MENU / EXIT Select Touch Button.

EX.ZONE Reverb Level

This Advanced Feature allows you to select the Reverb amount for each Part.

TRY THIS:

1. From either of the PLAY Mode Displays, touch the black MENU Select Touch Button to display the <u>**A**</u> Menu of the MENU Mode:
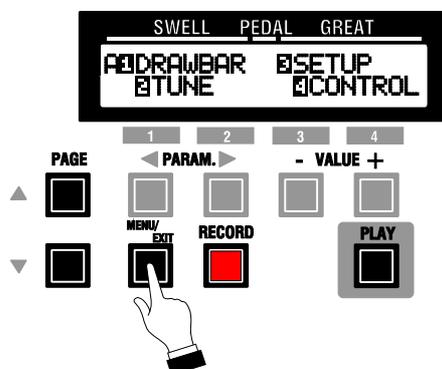
2. Touch the PAGE "•" Select Touch Button <u>two</u> times to display the <u>**C**</u> Menu:
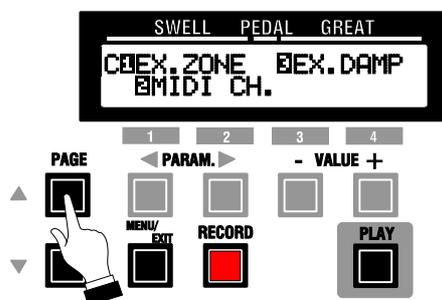
3. Touch the Number 1 Select Touch Button to select the <u>**EX.ZONE**</u> Menu:
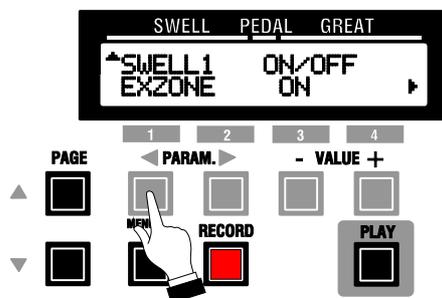
    Notice that the word ON is flashing "on" and "off."

4. Touch the PARAM "▶" Select Touch Button <u>seven</u> times. The Information Center Display should now look similar to this:
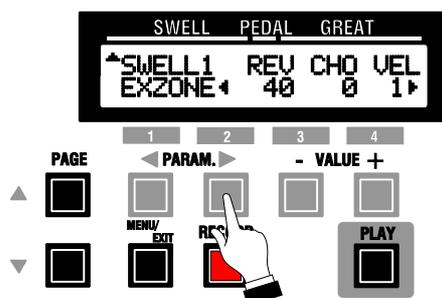
    Notice that the number just underneath the legend REV is flashing "on" and "off."

5.   Now select the Reverb amount for each Part by doing the following:

Use the PAGE Select Touch Buttons to make your Manual, Pedal and Part selections ("SWELL 1," "SWELL 2," "SWELL 3," "GREAT 1," "GREAT 2," "GREAT 3" or "PEDAL 1," "PEDAL 2" and "PEDAL 3").

Use the VALUE "-" Select Touch Button to <u>decrease</u> the Reverb amount for the selected Part.

Use the VALUE "+" Select Touch Button to <u>increase</u> the Reverb amount for the selected Part.

The data chart below shows the options that you may select.

EX.ZONE REVERB - All Parts
0 ~ 127

NOTE: You can exit by touching the MENU / EXIT Select Touch Button.

EX.ZONE Chorus

This Advanced Feature allows you to select the amount of Chorus for each Part.

TRY THIS:

1.   From either of the PLAY Mode Displays, touch the black MENU Select Touch Button to display the <u>A</u> Menu of the MENU Mode:

2.   Touch the PAGE "▪ " Select Touch Button <u>two</u> times to display the <u>C</u> Menu:

3.   Touch the Number 1 Select Touch Button to select the **EX.ZONE** Menu:

```
      SWELL  PEDAL  GREAT
  ‾SWELL1   ON/OFF
   EXZONE    ON        ▶
```
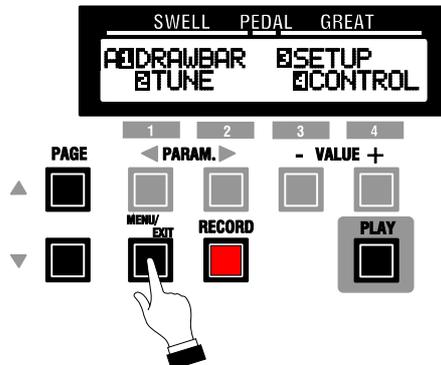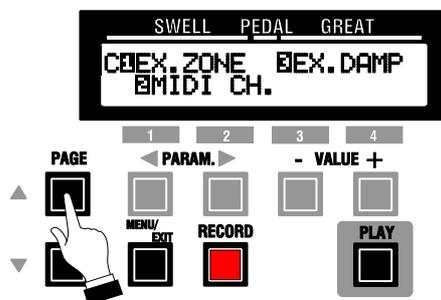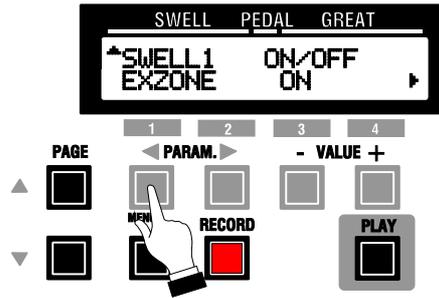
Notice that the word <u>ON</u> is flashing "on" and "off."

4.   Touch the PARAM " ▶" Select Touch Button <u>eight</u> times. The Information Center Display should now look similar to this:

```
      SWELL  PEDAL  GREAT
  ‾SWELL1   REV CHO VEL
   EXZONE◀  40   0   1▶
```
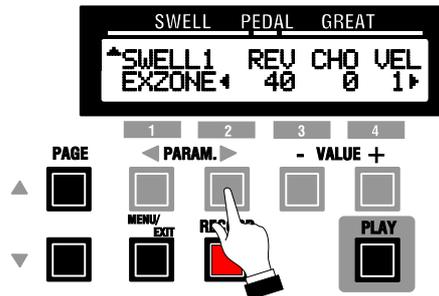
Notice that the number just under the word CHO is flashing "on" and "off."

5.   Now select the Chorus amount for each Part by doing the following:

Use the PAGE Select Touch Buttons to make your Manual, Pedal and Part selections ("SWELL 1," "SWELL 2," "SWELL 3," "GREAT 1," "GREAT 2," "GREAT 3" or "PEDAL 1," "PEDAL 2" and "PEDAL 3").

Use the VALUE "-" Select Touch Button to <u>decrease</u> the Chorus amount for the selected Part.

Use the VALUE "+" Select Touch Button to <u>increase</u> the Chorus amount for the selected Part.

The data chart below shows the options that you may select.

EX.ZONE CHORUS - All Parts
0 ~ 127

NOTE: You can exit by touching the MENU / EXIT Select Touch Button.

EX.ZONE Velocity Curve

This Advanced Feature allows you to select the Velocity Curve which will be applied to each Part.

TRY THIS:

1.   From either of the PLAY Mode Displays, touch the black MENU Select Touch Button to display the <u>**A**</u> Menu of the MENU Mode:
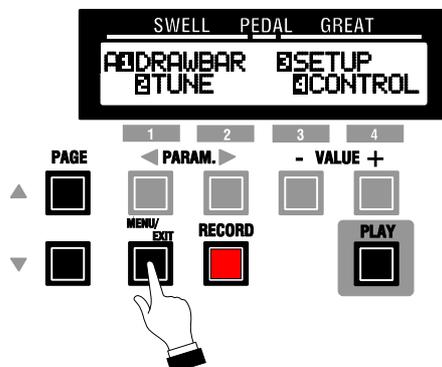
2.   Touch the PAGE "•" Select Touch Button <u>two</u> times to display the <u>**C**</u> Menu:
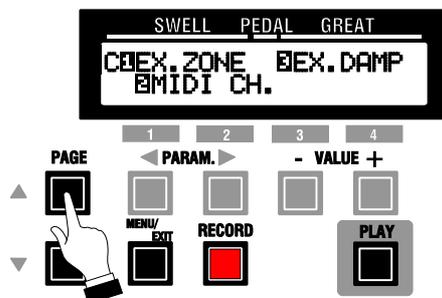
3.   Touch the Number 1 Select Touch Button to select the <u>**EX.ZONE**</u> Menu:
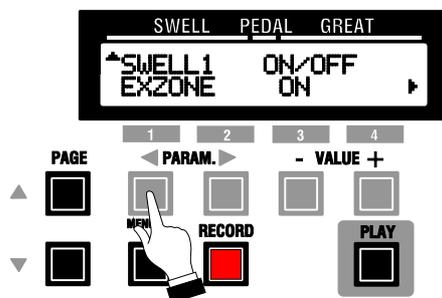
Notice that the word ON is flashing "on" and "off."

4.   Touch the PARAM " ▶" Select Touch Button <u>nine</u> times. The Information Center Display should now look similar to this:
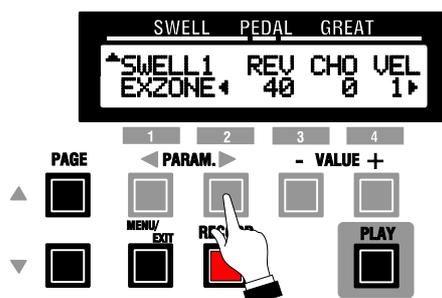
Notice that the legend just under the word VEL is flashing "on" and "off."

5.   Now select the Velocity setting for each Part by doing the following:

Use the PAGE Select Touch Buttons to make your Manual, Pedal and Part selections ("SWELL 1," "SWELL 2," "SWELL 3," "GREAT 1," "GREAT 2," "GREAT 3" or "PEDAL 1," "PEDAL 2" and "PEDAL 3").

Use the VALUE "-" Select Touch Button to scroll <u>down</u> through the choices.

Use the VALUE "+" Select Touch Button to scroll <u>up</u> through the choices.

The data chart below shows the options that you may select.

EX.ZONE VELOCITY OPTIONS
OFF, 1 ~ 5

NOTE: The Pedal velocity setting is permanently set at "100."

NOTE: You can exit by touching the MENU / EXIT Select Touch Button.

EX.ZONE Zone

This Advanced Feature allows you to select the range of the manual or pedals in which the External MIDI voice will play for each Part.

TRY THIS:

1.   From either of the PLAY Mode Displays, touch the black MENU Select Touch Button to display the <u>A</u> Menu of the MENU Mode:
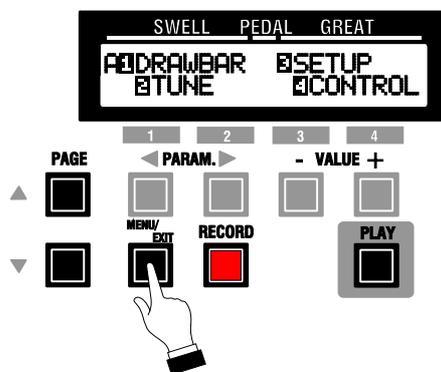
2.   Touch the PAGE "•" Select Touch Button <u>two</u> times to display the <u>C</u> Menu:
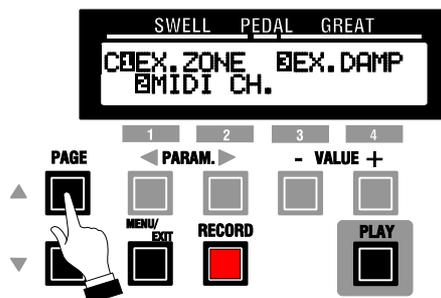
3.   Touch the Number 1 Select Touch Button to select the **EX.ZONE** Menu:
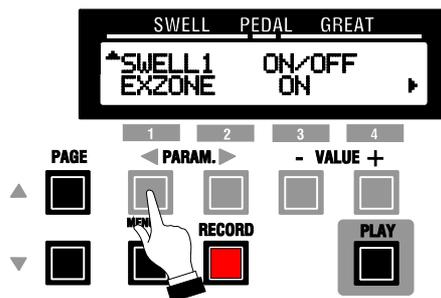
4.   Touch the PARAM " ▶" Select Touch Button <u>ten</u> times. The Information Center Display should now look similar to this:
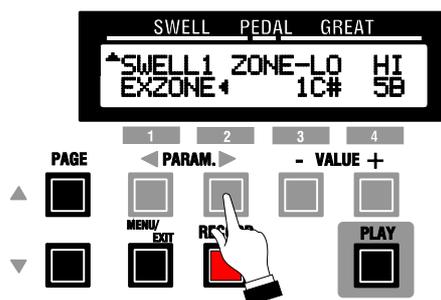
Notice that the legend just under the word LO is flashing "on" and "off."

5.   Now select the Zone range for each Part by doing the following:

Use the PAGE Select Touch Buttons to make your Manual, Pedal and Part selections ("SWELL 1," "SWELL 2," "SWELL 3," "GREAT 1," "GREAT 2," "GREAT 3" or "PEDAL 1," "PEDAL 2" and "PEDAL 3").

Use the PARAM Select Touch Buttons to move between "LO" and "HI."   "LO" represents the lowest note playable by the selected Part, while "HI" represents the highest note playable by the selected Part.

Use the VALUE "-" Select Touch Button to set the Zone range <u>lower</u>.

Use the VALUE "+" Select Touch Button to set the Zone range <u>higher</u>.

The data chart below shows the options that you may select.

EX.ZONE - All Parts
1C ~ 6C

NOTE: You can exit by touching the MENU / EXIT Select Touch Button.

Advanced Feature - EX.DAMP

This Advanced Feature allows you to use the Expression Pedal Foot Switch as a "damper" pedal to sustain notes indefinitely, such as a Piano sound from a connected MIDI device.

TRY THIS:

1. From either of the PLAY Mode Displays, touch the black MENU Select Touch Button to display the <u>A</u> Menu of the MENU Mode:
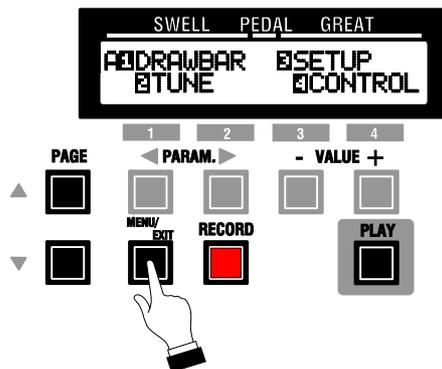
2. Touch the PAGE "• " Select Touch Button <u>two</u> times to display the <u>C</u> Menu:
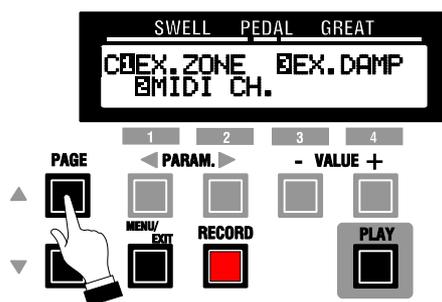
3. Touch the Number 2 Select Touch Button to select the <u>EX..DAMP</u> Menu:
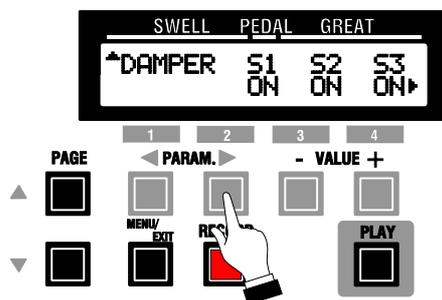
4.   Now select the options you wish by doing the following:

Use the PARAM Select Touch Buttons to make your Manual and Part selection ("S1," "S2," "S3," "G1," "G2," "G3," or "P1," "P2," and "P3").

Use the VALUE "-" Select Touch Button to turn the Damper feature **OFF** for the selected Part.

Use the VALUE "+" Select Touch Button to turn the Damper feature **ON** for the selected Part.

NOTE: You can exit by touching the MENU / EXIT Select Touch Button.

Advanced Feature - MIDI CH.

This Advanced Feature allows you to select the MIDI Channels on which the organ will transmit. You can select the MIDI Channels for: Swell 1, 2 and 3, Great 1, 2 and 3 and Pedal 1, 2 and 3.

TRY THIS:

1.   From either of the PLAY Mode Displays, touch the black MENU Select Touch Button to display the **A** Menu of the MENU Mode:
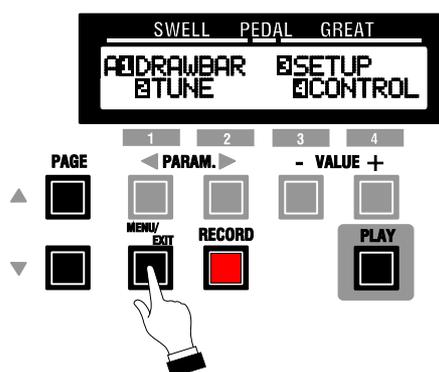

2.   Touch the PAGE " ▲ " Select Touch Button **two** times to display the **C** Menu:
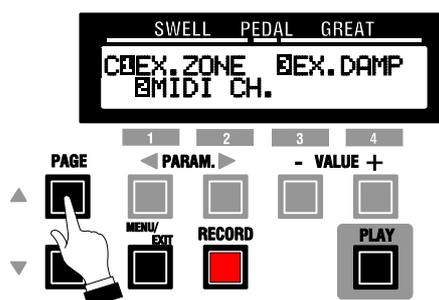
3.   Touch the Number 3 Select Touch Button to select the **MIDI CH.** Menu:

```
      SWELL  PEDAL  GREAT
   ┌─────────────────────────┐
   │ TX CH   S1   S2   S3     │
   │ SWELL    1   OFF  OFF▶   │
   └─────────────────────────┘
```
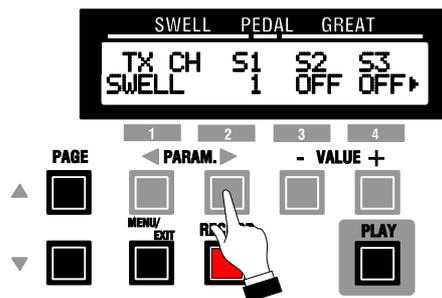
4.   Now select the MIDI Channels by doing the following:

Use the PARAM Select Touch Buttons to make your Manual and Part selection ("S1," "S2," "S3," "G1," "G2," "G3," or "P1," "P2," and "P3").

Use the VALUE "-" Select Touch Button to scroll **down** through the channel numbers.

Use the VALUE "+" Select Touch Button to scroll **up** through the channel numbers.

The data chart below shows the options you may select.

MIDI CHANNEL OPTIONS - All Parts
1 ~ 16, OFF

NOTE: You can exit by touching the MENU / EXIT Select Touch Button.

SPECIAL
UTILITY
FEATURES

SPECIAL UTILITY FEATURES

Your Hammond Organ has a number of special features which would not normally be accessed during performance, but which enable you to make certain adjustments to the organ's playing features, as well as give you specific information about the organ. The following paragraphs explain these features in detail.

A   Advanced Feature - DISPLAY LOCK

This Advanced Feature allows you to put the organ into a special playing mode whereby the Information Center Display is rendered inoperative. Touching any of the Select Touch Buttons will have no effect. This is useful if you want to use the organ exactly as if it were an old-style tone-wheel Hammond Organ.

TRY THIS:

1.   If the organ is "ON," turn the power "OFF."

2.   Touch and Hold the PLAY Touch Button.
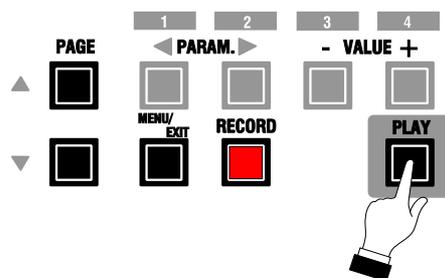
3.   While holding the PLAY Touch Button, turn the power to the organ "ON."
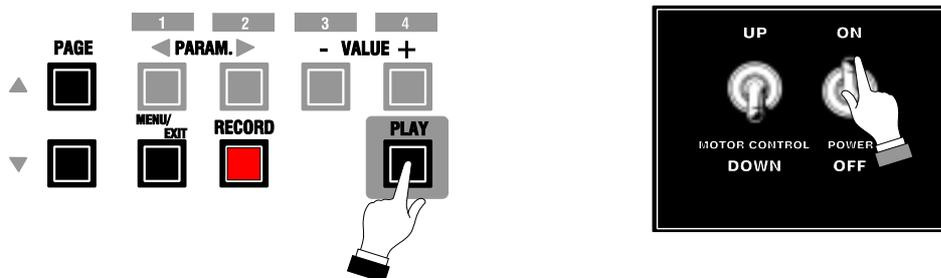
4.   Continue to hold the PLAY Touch Button until the opening message finishes displaying. After approximately 1 second, the Information Center Display will look like this:
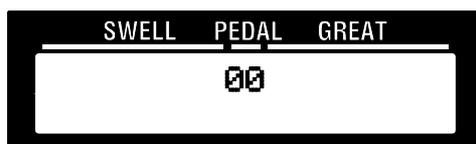
Notice that the bottom line of the screen is now blank. The Information Center Display will show Drawbar settings and Preset information <u>only</u>. None of the Advanced Features may be accessed using the Touch Buttons.

To restore the organ to its normal playing mode, simply repeat steps 1 through 4 listed on the previous page. After doing so, you will be able to access the Advanced Features normally.

A   Advanced Features - SYSTEM

There are three System Advanced Features which allow you to make the following changes to the organ:

1.   Pedal Key Mode MONO / POLY -
Allows you to select whether the Pedals play only one note at a time ("MONO") or several notes at once ("POLY").

2.   Leslie Type -
Allows you to select the sound character for a particular Leslie Speaker cabinet.

3.   Software Version -
Allows you to see the software version of your organ.

4.   Default -
Allows you to Reset the organ to its factory settings.

The following pages give a more detailed explanation of how these Advanced Features work.

PEDAL KEY MODE

This Advanced Feature allows you to select whether the Pedals play only one note at a time ("MONO") or several notes at once ("POLY").

TRY THIS:

1.   From either of the PLAY Mode Displays, touch the black MENU / EXIT Select Touch Button to display the <u>A</u> Menu of the MENU Mode:
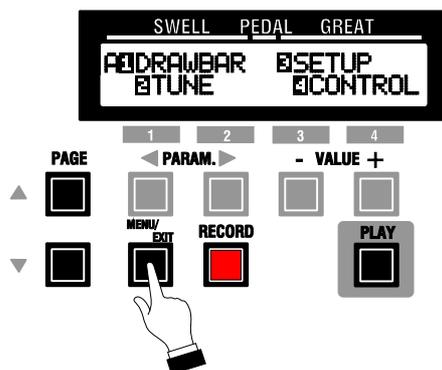
2.   Touch the PAGE "▲" Select Touch Button <u>three</u> times to display the <u>D</u> Menu:
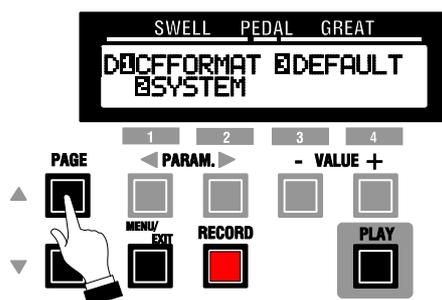
3.   Touch the Number 2 Select Touch Button <u>once</u> to select the <u>SYSTEM</u> Menu:
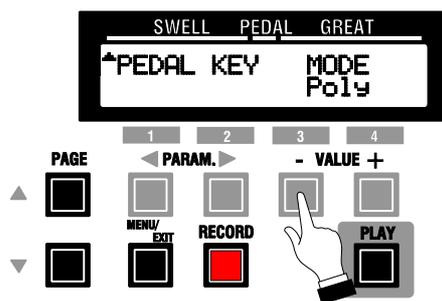
Notice that the word <u>Poly</u> is flashing "on" and "off."

4.   Now select the option you wish by doing the following:

Use the VALUE "-" Select Touch Button to select <u>Poly</u>.

Use the VALUE "+" Select Touch Button to select <u>Mono</u>.

The data chart below shows the options that you may select.

PEDAL KEYBOARD MODE	
Mode	Description
*Poly	"Polyphonic" - the Pedal Keyboard will play several notes at once.
Mono	"Monophonic" - the Pedal Keyboard will play only one note at a time. If two or pedals are played, the last Pedal key pressed will sound.

*default setting

NOTE: You can exit by touching the MENU / EXIT Select Touch Button.

LESLIE TYPE

This Advanced Feature allows you to tailor the organ to the type of Leslie being used. You can select either "Tube" which is a mellow setting, or "SolidState" which emphasizes the higher frequencies. The default setting is "Tube."

TRY THIS:

1.   From either of the PLAY Mode Displays, touch the black MENU / EXIT Select Touch Button to display the <u>A</u> Menu of the MENU Mode:

2.   Touch the PAGE "▼ " Select Touch Button <u>three</u> times to display the <u>D</u> Menu:

3.   Touch the Number 2 Select Touch Button <u>once</u> to select the <u>System</u> Menu:

```
  SWELL   PEDAL   GREAT
*PEDAL KEY    MODE
              Poly
```

4.   Touch the PAGE "▪ " Select Touch Button <u>once</u>. The Information Center Display should now look similar to this:

```
  SWELL   PEDAL   GREAT
⬍LESLIE       TYPE
              Tube
```
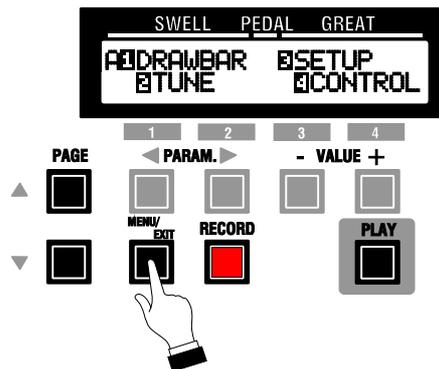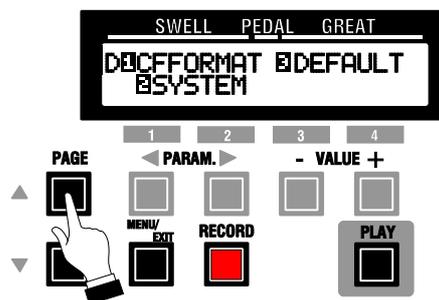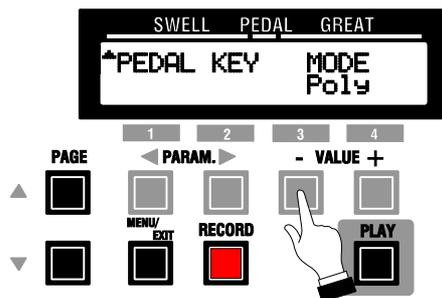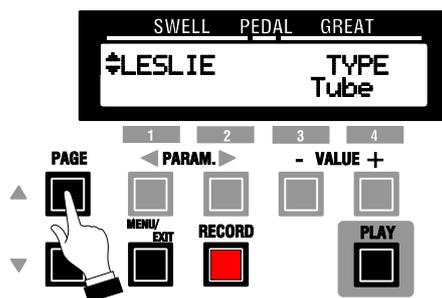
Notice that the word <u>Tube</u> is flashing "on" and "off."

5.   Now select the option you wish by doing the following:

Use the VALUE "-" Select Touch Button to select <u>Tube</u>.

Use the VALUE "+" Select Touch Button to select <u>SolidState</u>.

The data chart below shows the options that you may select.

LESLIE TYPE OPTIONS	
Mode	**Description**
*Tube	A setting whereby the frequency response is "flat"for use with a Leslie Speaker having a tube amplifier, such as model 122XB.
SolidState	A setting which "rolls off" the upper fequencies slightly, thereby adding warmth to the sound when used with older Leslie Speakers having solid-state amplifiers, such as models 760, 770, etc.

*default setting

NOTE: You can exit by touching the MENU / EXIT Select Touch Button.

SOFTWARE VERSION

This Advanced Feature Menu Page allows you to see the software version of your organ. This page is simply an information screen.

TRY THIS:

1.   From either of the PLAY Mode Displays, touch the black MENU / EXIT Select Touch Button to display the <u>A</u> Menu of the MENU Mode:
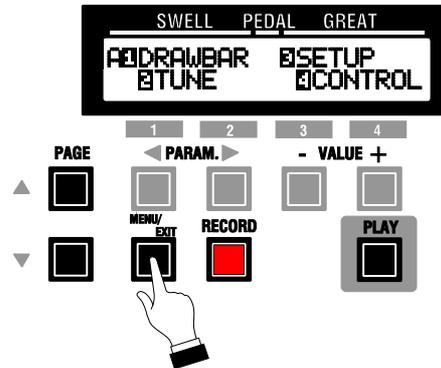
2.   Touch the PAGE " • " Select Touch Button <u>three</u> times to display the <u>D</u> Menu:
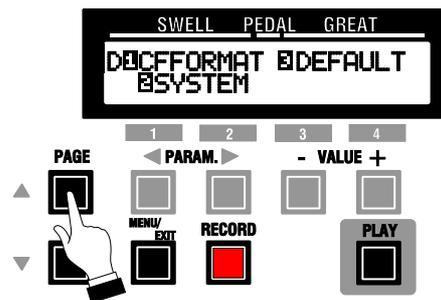
3.   Touch the Number 2 Select Touch Button <u>once</u> to select the <u>SYSTEM</u> Menu:
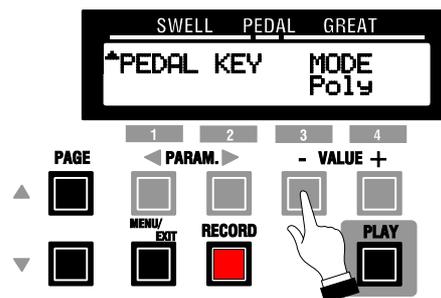
4.   Touch the PAGE "•" Select Touch Button <u>two</u> times. The Information Center Display should now look similar to this:
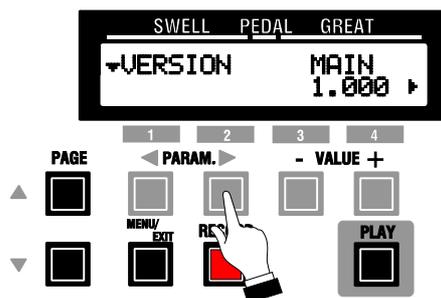
5.   Now see the Software Version of your organ by doing the following:

Use the PARAM Select Touch Buttons to select the Software Module you wish to see.

The data chart below shows the Software Modules and a description of each one.

SOFTWARE VERSION & DATE	
Message	**Description**
MAIN	Main operating system
DSP	EFFECTS(Vibrato, Percussion, Equalization, Reverb, Overdrive etc.)
PEDAL	Pedal Voice Generator

NOTE: You can exit by touching the MENU / EXIT Select Touch Button.

A   **Advanced Feature - DEFAULT**

This Advanced Feature allows you to Reset the organ to its factory settings.

WARNING: Doing the following will ERASE all parameters, settings and registrations you may have programed. Make sure you are completely "backed up" before performing a Reset of the organ.

TRY THIS - to restore factory settings:

1.   From either of the PLAY Mode Displays, touch the black MENU / EXIT Select Touch Button to display the <u>A</u> Menu of the MENU Mode:
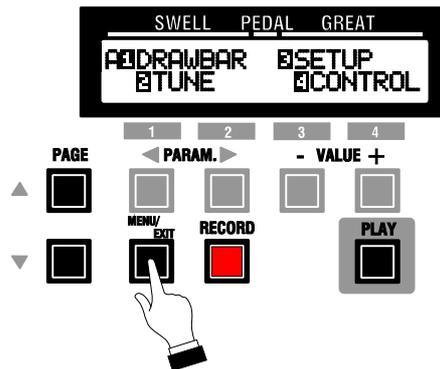
2.   Touch the PAGE " • " Select Touch Button <u>three</u> times to display the <u>D</u> Menu:
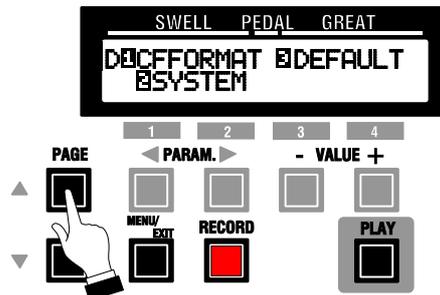
3.   Touch the Number 3 Select Touch Button <u>once</u> to select the **DEFAULT** Menu:
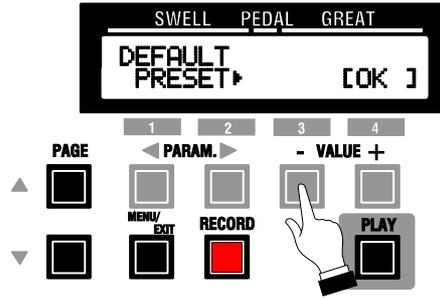
4.   Now select the option you wish by doing the following:

Use the PARAM Select Touch Buttons to select which portions of the organ you want to Reset. The data chart below shows the options that you may select.

DEFAULT SETTINGS	
Setting	**Description**
PRESET	This will reset the Presets.
GLOBAL	This will reset the Global Parameters.
ALL	This will reset the entire organ.

5.   After you have made your selection, touch the Number 4 [OK] Select Touch Button <u>once</u> to Reset the organ to the settings you have chosen. If you DO NOT wish to Reset, touch either the MENU / EXIT or the PLAY Select Touch Button.

TRY THIS - to Reset the organ quickly:

1.   If the organ is "ON," turn the power "OFF."

2.   Touch and Hold the RECORD Touch Button.

3.   While holding the RECORD Touch Button, turn the power to the organ "ON."
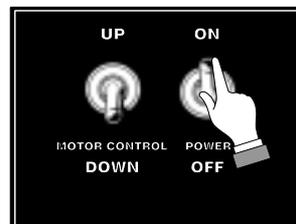
4.   Continue to hold the RECORD Touch Button until the opening message finishes displaying. The PLAY Screen will appear, and your Hammond Organ is now Reset with the factory settings.
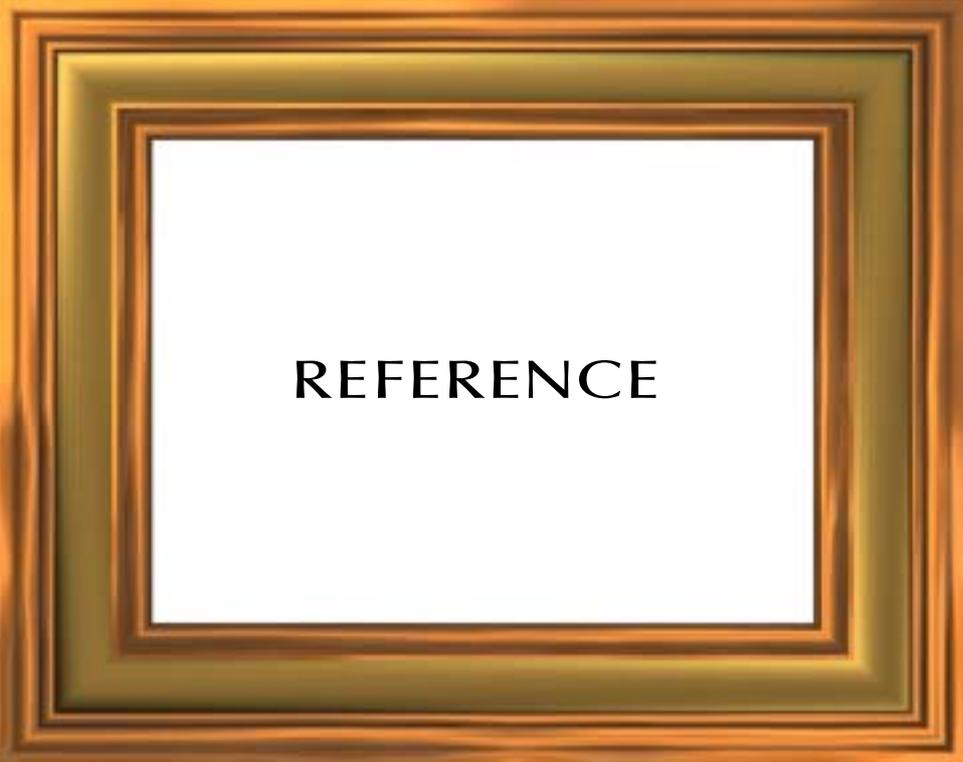
REFERENCE

REFERENCE

The Accessory Panel is located inside the organ on the right side facing the back. To see the Accessory Panel, remove the back by rotating the two thumbscrews counter-clockwise by hand. You will see a diagram on the bottom shelf showing a mirror image of the jacks.
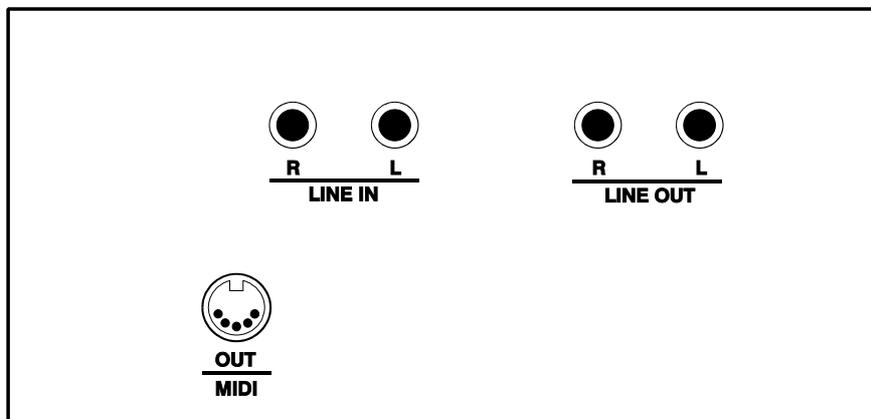
Ë **INPUT**

LINE IN L & R (Left & Right) -

Use to connect the organ to the LINE OUTs of an external sound device, such as a keyboard or a tape recorder. The volume of the external sound device can be controlled by the MASTER VOLUME Rotary Control.

Ë **OUTPUT**

LINE OUT L & R (Left & Right) -

Use to connect the organ to the LINE IN of an external amplifier.

Ë **MIDI Jack**

Use the MIDI jack to connect to outboard MIDI instruments such as synthesizers, sound modules and other devices.

Ë Appendix A - Global Parameter List

Category	Global Parameters		
	Parameter	Value	Default
Tune	Transpose	-6 - 0 - 6	0
	Master Tune	430 - 440 - 450	440
Expression	Minimum	Soft / Zero	Soft
	Curve	1, 2, 3	1(B-3Curve)
Foot Switch	Foot Sw (Exp. Pedal)	Off Leslie Fast(alternate) Leslie Fast(momentaly) Swell Vib On(momentaly) Damper Extra Swell Damper Extra Great Damper Extra Pedal	Leslie Fast (alternate)
Preset Load *each* *Swell, Great*	Extra Zone	Off / On	Off
Reverb	Rev. Type	Room 1 - 3, Hall 1, 2, Plate, Church, Cathedral	Hall 1
Vibrato	Vibrato Rate	6.1 - 7.25Hz	6.83Hz
Swell/ Great Drawbar Voice	Voice Type	B-Type / Mellow	B-Type
	Fold Back Low	1C - 2C	2C
	Fold Back High	4G - 5C	4G
Pedal Drawbar Voice	Voice Type	Normal / Muted	Normal
	Pedal Sustain	Off / On	Off
	Sustain Length	Off, 1 - 5	3
Percussion Voice	Level Normal	1 - 8	7
	Level Soft	1 - 8	3
	Drawbar 1' Cancel	Off / On	On
	Drawbar Level	0 / -3dB	-3dB
	Decay Rate Slow	1 - 16	10
	Decay Rate Fast	1 - 16	5
Extra Zone *each* *Pedal 1,* *Pedal 2,* *Pedal 3*	Part On	Off / On	On, Off, Off
	Bank MSB	0 - 127	0
	Bank LSB	0 - 127	0
	Program	1 - 128	1
	Volume	0 - 127	100
	Pan	Left - Center - Right	Center
	Vel. Curve	Off	Off
	Reverb Send Level	0 - 127	0
	Chorus Send Level	0 - 127	0
	Octave Shift	3E - 40 - 42 (-2 - 0 - +2)	0
	Key Range Low	1C - 3C	1C
	Key Range High	1C - 3C	3C
Extra Damper	Swell 1	Off / On	On
	Swell 2	Off / On	On
	Swell 3	Off / On	On
	Great 1	Off / On	On
	Great 2	Off / On	On
	Great 3	Off / On	On
	Pedal 1	Off / On	On
	Pedal 2	Off / On	On
	Pedal 3	Off / On	On

Ë Appendix B - Preset Parameter List

Category	Parameter	Value
Drawbar Registration (Swell & Great)	16'	0 - 8
	5 1/3'	0 - 8
	8'	0 - 8
	4'	0 - 8
	2 2/3'	0 - 8
	2	0 - 8
	1 3/5'	0 - 8
	1 1/3'	0 - 8
	1'	0 - 8
Extra Zone (Swell 1, Swell 2, Swell 3, Great 1, Great 2, Great 3)	Part On	00, 01 (Off/On)
	Bank MSB	00 - 7F (0 - 127)
	Bank LSB	00 - 7F (0 - 127)
	Program	00 - 7F (1 - 128)
	Volume	00 - 7F
	Pan	00 - 40 - 7F (Left - Center - Right)
	Vel. Curve	00 - 05 (Off, Normal - String)
	Reverb Send Level	00 - 7F
	Chorus Send Level	00 - 7F
	Octave Shift	3E - 40 - 42 (-2 - 0 - +2)
	Key Range Low	24 - 5F
	Key Range High	25 - 60

Ë Appendix C - System Parameter List

Category	Parameter	Value	Default
PEDAL MODE	Poly Mono	Poly / Mono	Poly
LESLIE TYPE	Tube,SolidState	Tube / Solidstate	Tube
MIDI TRANSMIT CHANNEL	Swell 1	1 - 16, Off	1
	Swell 2	1 - 16, Off	2
	Swell 3	1 - 16, Off	3
	Great 1	1 - 16, Off	4
	Great 2	1 - 16, Off	5
	Great 3	1 - 16, Off	6
	Pedal 1	1 - 16, Off	7
	Pedal 2	1 - 16, Off	8
	Pedal 3	1 - 16, Off	9

Ë Appendix D - Real-time Parameter List

Category	Parameter	Value
Preset Key	Swell	C# - A (C=OFF) + A# + B
	Great	C# - A (C=OFF) + A# +B
Pedal DB	16'	0 - 8
Registration	8'	0 - 8
Volume	Soft	00, 01 (Off/On)
Drawbar Effect	Vibrato On Swell	00, 01 (Off/On)
	Vibrato On Great	00, 01 (Off/On)
	Vibrato Mode (6-position knob)	00 - 05 (V1 - C3)
Percussion Voice	Percussion On	00, 01 (Off/On)
	Harmonic	00, 01 (Second/Third)
	Decay	00, 01 (Fast / Slow)
	Soft / Normal	00, 01 (Soft / Normal)
Controller	Master Volume	
	Expression Pedal	
	TONE Bass	
	TONE Treble	
	Reverb	
	Overdrive	
	Leslie Switch Jack (Ring)	Leslie Chorale / Stop / Tremolo
	Leslie Main / Echo Jack	Main / Echo
	Exp Foot Switch	Assignable
OUT	HEAD PHONE JACK	
IN	Leslie 11PIN JACK LINE OUT L/R JACK MIDI OUT JACK LINE IN L/R JACK	

Ë Appendix E - MIDI Implementation Chart

New B-3   8/20/2002   Version1.0

Function		Transmitted		Recognized		Remarks	
Basic Channel	Default	1 - 16 *1		X		*1: Swell = 1, Great = 4,	
	Changed	*****		X			Pedal=7
Mode	Default	3		X			
	Messages	X		X			
	Altered	*****		X			
Note Number		36 - 97 *2		X		*2: Swell&Great = 36 - 97	
	: True Voice	*****		X			Pedal = 36 - 60
Velocity	Note ON	O		X			
	Note OFF	X		X		9xH, vv=00h	
After Touch	Key's	X		X			
	Ch's	X		X			
Pitch Bender		O		X			
Control Change	32	O		X		Bank Select	
	7	O		X		Volume	
	10	O		X		Pan	
	11	O		X		Expression	
	64	O		X		Damper (Off: 00H, On:7FH)	
	91	O		X		Reverb Send Level	
	93	O		X		Chorus Send Level	
	121	O		X		Reset All Controllers	
Program Change		O	0 - 127	X			
	: True #	*****		X			
System Exclusive		X		X			
System Common	: Song Position	X		X			
	: Song Select	X		X			
	: Tune	X		X			
System Real Time	: Clock	X		X			
	: Commands	X		X			
Aux Messages	: Local On/Off	X		X			
	: All Notes Off	O		X			
	: Active Sense	O		X			
	: Reset	X		X			
Mode 1:	OMNI ON, POLY		Mode 2:	OMNI ON, MONO			O: Yes
Mode 3:	OMNI OFF, POLY		Mode 4:	OMNI OFF, MONO			X: No

Ë **Specifications**

KEYBOARDS	Swell and Great 61 keys each
PEDALS	25-note, radiating, detachable
PRESET KEY	12keys Mec-3/7hanical Latch
HARMONIC DRAWBARS	
SWELL(UPPER) GREAT(LOWER) PEDAL	9 pitches 2 sets 9 pitches 2 sets 2 pitches
PRESET MEMORY	CompactFlash card
KEYING METHOD	Direct Analog Keying
KEY CONTACT	10-Mechanical contacts ＋Rubber contacts w/velocity
POLYPHONY	Full Polyphony
GENERATOR(Manual)	96-Digital Tone Wheels
GENERATOR(Pedal)	VASE II
PERCUSSION	Harmonic Selector Second/Third, Decay Slow/Fast, Volume Soft/Normal
VIBRATO/CHORUS	V1, V2, V3, C1, C2, C3, SWELL ON, GREAT ON
LESLIE	SLOW, STOP, FAST
CONTROL	Expression Pedal w/Foot Switch REVERB, OVERDRIVE
TONE CONTROL	BASS , TREBLE
TERMINAL	11P LESLIE SOCKET (Main ,Echo) , HEADPHONE LINE IN , LINE OUT , MIDI OUT
EXT MEMORY SLOT	COMPACT FLASH CARD
DISPLAY	20x2 digits LCD
WEIGHT	209lbs（95kg）
DIMENSION	48"(w) x 29"(D) x 38"(H), 123(W) x 73(D) x 97(H)cm
ACCESSORY	Compact Flash Card HCF-32, Leslie Speed Switch

Ё **Instrument Care**

AC Power

Be sure to turn the instrument "OFF" after use, and do not turn the unit "ON" and "OFF" in quick succession, as this places an undue load on the electronic components.

Cabinet And Bench

As with any piece of furniture, direct sunlight can damage the finish of your instrument. Use a soft dry cloth for dusting. To remove fingerprints or dulling film, use a soft cloth slightly moisten with water and a little mild soap. Immediately wipe dry with a soft dry cloth.

Keys And Buttons

To clean keys and buttons, use a clean soft cloth moistened with water. Do not use any solvents, thinners or dryers such as alcohol, gasoline, lighter fluid, carbon tetrachloride, etc. These solutions may affect the letters and/or finish on the buttons and keys.

Moving Your Instrument

It is not necessary to bolt or fasten any parts of the instrument when moving. Careful consultation with your mover will assure you of a satisfactory moving job.

Ё **Troubleshooting**

If you encounter the following conditions, please check the following points before calling for service:

A   **Entire instrument fails to play**

* Is the Power Switch "ON?"
* Is the AC plug inserted into a wall socket?
* Is the Leslie cable connected?
* Is the AC plug of the Leslie Speaker connected to a wall socket?
* Is the MASTER VOLUME Rotary Control (underneath the manuals on the left side) turned up?
* Is a Preset Key selected?
* Are headphones connected?

A   **Sound is distorted**

* Is the OVERDRIVE Rotary Control on Rotary Control Panel (underneath the manuals on the left side) turned up? If so, please turn the control all the way to the left.

A   **Key Click noise when pressing or releasing a manual key**

* When a key is depressed, ten (10) small switch contacts are closed - one for each of the nine Drawbars (plus an additional contact to allow MIDI transmission). Therefore, there will be a slight "click" or "pop" when keys are depressed and released. This is done on purpose to duplicate the performance of a Hammond tone-wheel organ, which used a similar keying system. Since it is an inherent characteristic of the New B-3 and New C-3, and since it is mechanical, it cannot be deleted. However, the unique "Key Click" sound is considered to be an important and indispensable part of the "B-3" tonal identity. However, it is possible that dust may settle on the key contacts, resulting in an intermittent or "scratchy" sound. If this occurs, the contact can be "self-cleaned" by pressing and releasing the keys several times (10 or 20 times).

If the problem persists, please contact your Hammond Organ dealer.

Ë Important Note - Battery

Your New B-3 / New C-3 Hammond Organ uses a battery-backed RAM to remember your changes to the Preset and Global parameters. When the battery voltage becomes low and the power is "ON," the Information Center Display will show this message for a few seconds:

```
  SWELL   PEDAL   GREAT
 _____
  !!  ATTENTION  !!
  <  LOW BATTERY  >
```
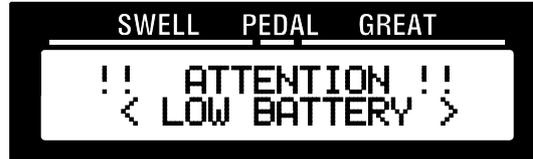
If you see this message, you should immediately back up your parameter changes, if you have made any, and please contact your Authorized Hammond Dealer for Service assistance and ask them to exchange the battery.

If the battery is completely dead, the information Center Display will show this message:

```
  SWELL   PEDAL   GREAT
 _____
  !!!  WARNING   !!!
  < CHANGE BATTERY >
```

```
  SWELL   PEDAL   GREAT
 _____
 ALL DATA Initialize
     Please Wait
```

After the above message is displayed, the organ will re-initialize itself, and the factory default settings will be restored. Therefore, it is a good idea to periodically back up data. Please contact your Authorized Hammond Dealer for Service assistance and ask them to exchange the battery.

Manufacturer assumes no responsibility for loss of memory caused by damage to the unit after purchase, such as power surges, battery replacement, repair, etc.

Hammond maintains a policy of continuously improving and upgrading its instruments and therefore reserves the right to change specifications without notice. Although every attempt has been made to insure the accuracy of the descriptive contents of this Guide, total accuracy cannot be guaranteed. Should the player require further assistance, inquiries should <u>first</u> be made to your Authorized Hammond Dealer. If you still need further assistance, contact Hammond at the following addresses:

Technical materials are available and can be obtained by mailing a request to the appropriate address listed above marked ATTENTION: SERVICE DEPARTMENT.

ACKNOWLEDGMENTS

In appreciation of the many fine players who have made their contributions to Hammond over the years: