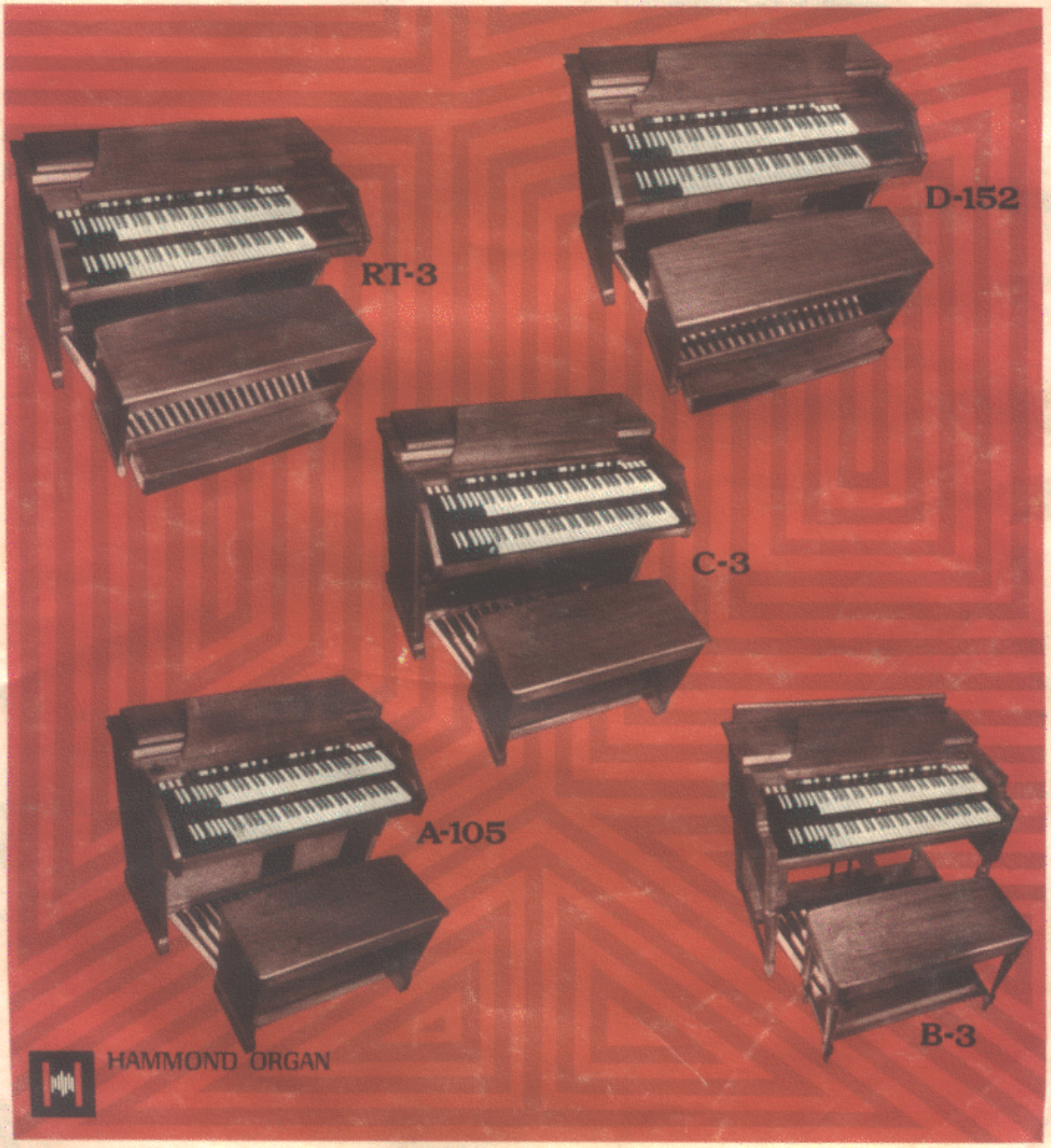
Locking Top Consoles

owner's playing guide

for home, church, institutions



HAMMOND ORGAN

You own a HAMMOND- the world's most popular ORGAN

Welcome to the exclusive circle of Hammond Organ owners. We're proud you recognize the distinctive quality that makes Hammond the choice of beginners, "buffs," churches, institutions and professionals.

Send Your Warranty Card In Now: Put your valuable instrument under Hammond warranty protection. Complete the enclosed Hammond warranty card and return it to Hammond Organ Company now.

Get The Hammond Times: Your completed warranty card gets you the Hammond Times . . . a 16 page, 2-color magazine published quarterly. You'll learn new playing techniques, as well as the latest Hammond happenings. It's informative, entertaining, and fun to read.

Have Fun With Your Hammond: Play it! Discover its exciting sound. Ask your Hammond dealer about Hammond Concerts. Meet new friends and learn some playing tips by joining the local Hammond Organ Society. You'll reach new levels of enjoyment with your Hammond.

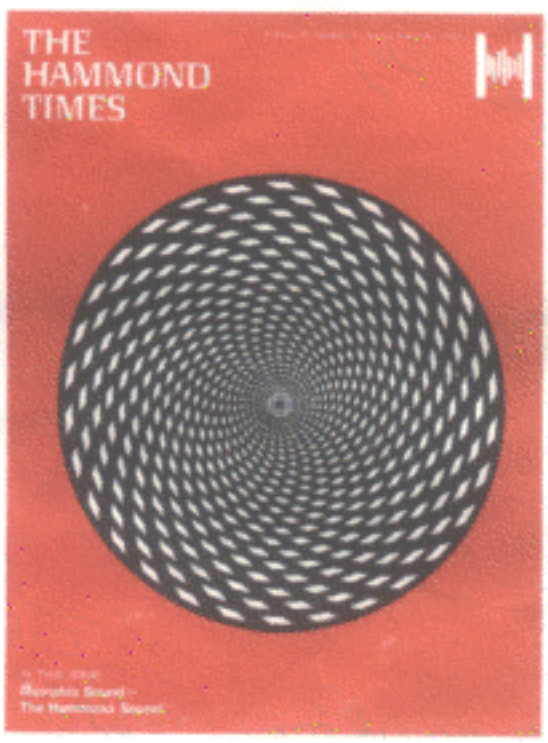


TABLE OF CONTENTS

Locking top console models

B-3

B-3:

Most responsible for the popularity of organ sound today. It's never out of style. It's found in homes, restaurants, radio and TV stations, schools, churches, and orchestras throughout the world. The PR-40 tone cabinet complements the B-3.

D-152 & RT-3

D-152 & RT-3:

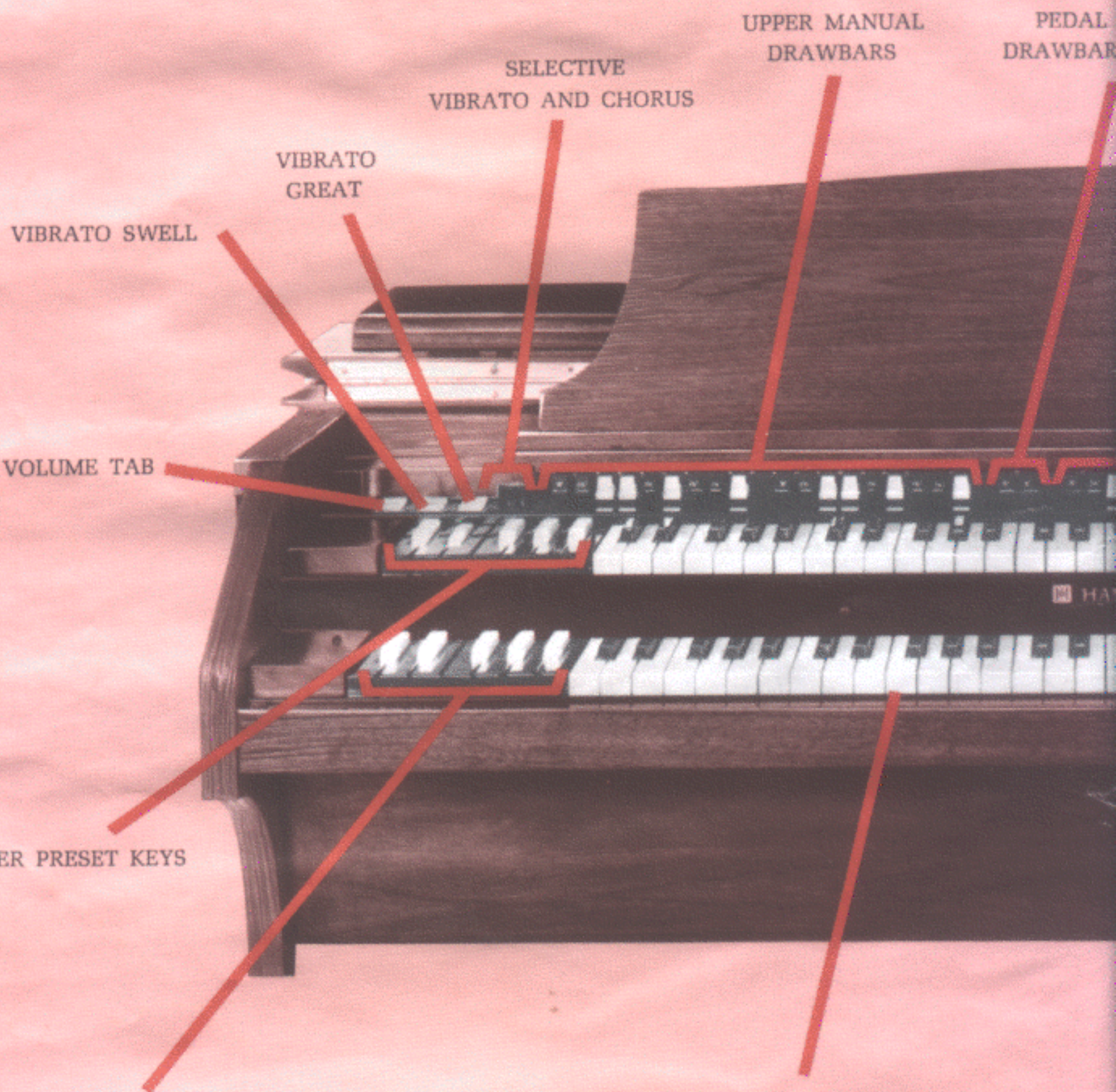
Found in gracious homes, great cathedrals and wherever organ music is demanded. D-152 has a built-in sound system; the RT-3 depends on tone cabinets (PR-40 and QR-40).

A-105 & C-3

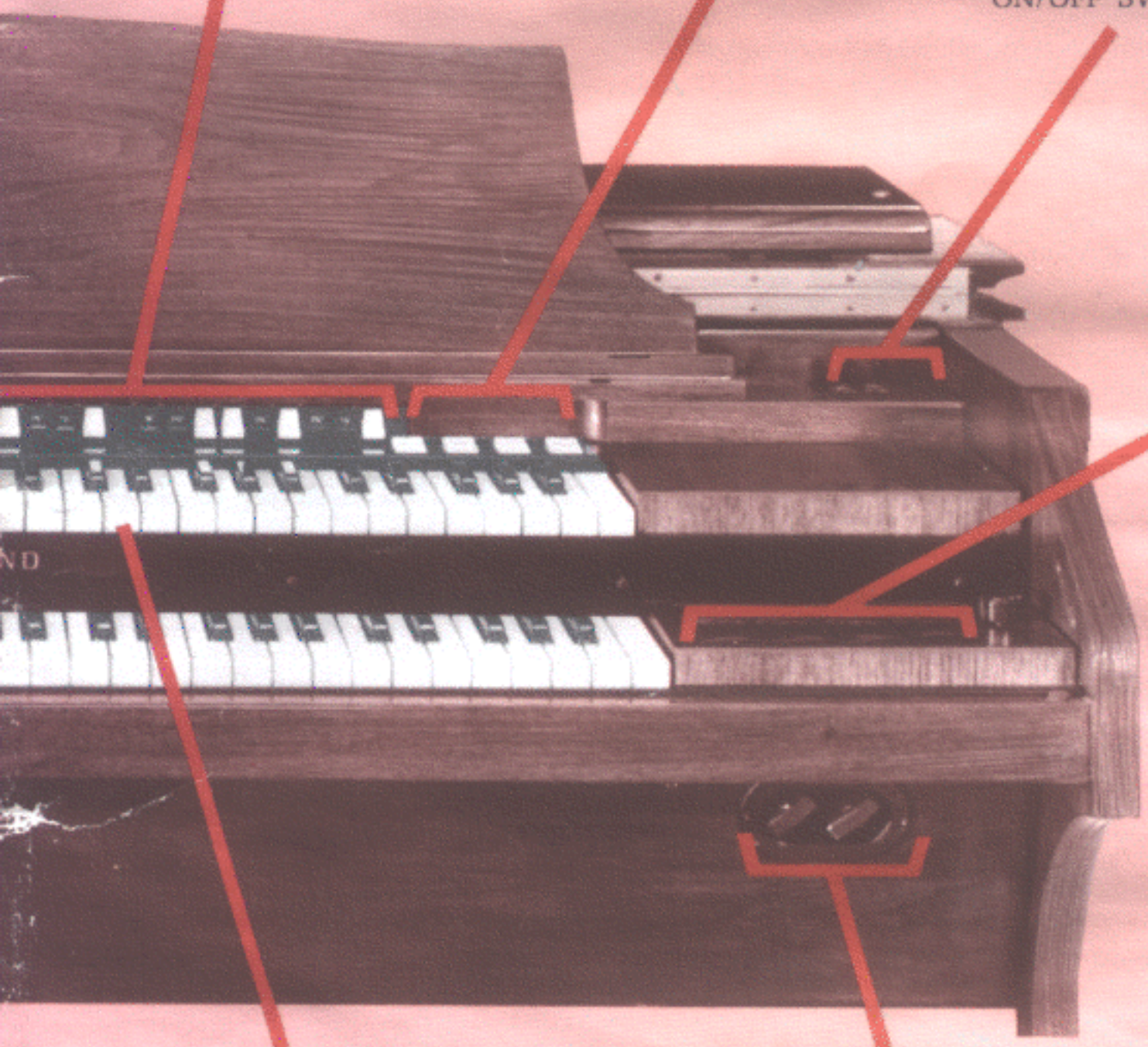
A-105 & C-3:

Widely used in churches and auditoriums. They have great power and simple dignified beauty. The A-105 has a built-in sound system; the C-3 depends on the use of tone cabinets (PR-40 or QR-40).

FEATURE


UPPER MANUAL DRAWBARS
PEDAL DRAWBAR
SELECTIVE VIBRATO AND CHORUS
VIBRATO GREAT
VIBRATO SWELL
VOLUME TAB
UPPER PRESET KEYS
LOWER PRESET KEYS
LOWER MANUAL (61 KEYS)

CALL-OUT



LOWER MANUAL
DRAWBARS

TOUCH-RESPONSE
PERCUSSION TABS

ON/OFF SWITCH

SOLO PEDAL TABS
(D-152 & RT-3 ONLY)

UPPER MANUAL (61 KEYS)

STEREO REVERBERATION
CONTROLS
(D-152 & RT-3 ONLY)

COMPARE CONSOLE FEATURES

Features	A-105	C-3	B-3	D-152	RT-3
Selective Vibrato (3 degrees of true vibrato, 3 degrees of vibrato chorus available on both manuals, separately or simultaneously).	•	•	•	•	•
Built-in Reverberation System* (echo)	•			•	
(three 12″ speakers)	•				
(two 12″, two 8″)				•	
Stereo Reverberation (patented). 3-channel amplifier drives 4 speakers: two 12″, two 8″. Each channel has reverberation control.				•	
Touch-Response Percussion	•	•	•	•	•
Two Full 61-Note Manuals:	•	•	•	•	•
Tonal Controls 9 pre-set keys with customized tone selection for each manual	•	•	•	•	•
2 sets of 9 adjustable harmonic drawbars for each manual	•	•	•	•	•
4 touch-response percussion tablets	•	•	•	•	•
2 adjustable pedal drawbars	•	•	•	•	•
32-Note Concave Radiating Pedalboard, A.G.O. Spec.				•	•
25-Note Flat Radiating Pedal board	•	•	•		
Solo Pedal System (32′ to 1′ pitches, tunable to preference; also tablets for "mute control," "pedal solo on," and continuously variable volume balancer)				•	•
Expression Pedal (with normal & soft volume control)	•	•	•	•	•
Illuminated Pedalboard	•		•	•	•
Locking Top	•	•	•	•	•
Tudor Styling in Oak & Walnut	•		•	•	•
Traditional in light Cherry & Walnut		•			
Full Decorative Rear Panel	•	•	•	•	•

*Dependent upon tone cabinet for models B-3, C-3 & RT-3.
Reverberation Control for the A-105 model is located above the Volume tab.

CONSOLE SPECIFICATIONS

Model	Dimensions*	Weight	Music Pow Output
A-105	49″ W. 47″ D. 46″ H.	525 lbs.	27 watts
B-3	49″ W. 49½″ D. 46″ H.	425 lbs.	dependent up tone cabinets
C-3	49″ W. 47″ D. 46″ H.	450 lbs.	dependent up tone cabinets
D-152	57″ W. 48″ D. 47″ H.	543 lbs.	50 watts
RT-3	57″ W. 48″ D. 47″ H.	525 lbs.	dependent up tone cabinets
PR-40** (QR-40) Tone cabinet	31½″ W.18″ D.37½″H.	130 lbs.	50 watts

*with pedalboard and bench.
**Three Channel Amplification: Bass amplifier drives two 15″speakers: treble reverb amplifier drives lower 12″ speaker; treble amplifier drives upper 12″ speaker.

PR 40 TONE TONE CABINET

Three separate speaker channels produce a beautiful live reverberation (echo) effect (three dimensional tone). Reverberation controls on the side of the cabinet make it easy to control the degree of reverb. There are separate controls for the treble and bass channels. Each can be adjusted to off, low, medium, and high. An optional switch kit may be installed on the console, permitting the organist to control the reverb while sitting at the keyboard. PR-40 has decorator styling and is available in walnut, oak, and cherry. (The QR-40 with lacquered surfaces is also available for out-of-sight placement.)

COMPARE CONSOLE FEATURES

Features	A-105	C-3	B-3	D-152	RT-3
Selective Vibrato (3 degrees of true vibrato, 3 degrees of vibrato chorus available on both manuals, separately or simultaneously).	•	•	•	•	•
Built-in Reverberation System* (echo)	•			•	
(three 12″ speakers)	•				
(two 12″, two 8″)				•	
Stereo Reverberation (patented). 3-channel amplifier drives 4 speakers: two 12″, two 8″. Each channel has reverberation control.				•	
Touch-Response Percussion	•	•	•	•	•
Two Full 61-Note Manuals:	•	•	•	•	•
Tonal Controls 9 pre-set keys with customized tone selection for each manual	•	•	•	•	•
2 sets of 9 adjustable harmonic drawbars for each manual	•	•	•	•	•
4 touch-response percussion tablets	•	•	•	•	•
2 adjustable pedal drawbars	•	•	•	•	•
32-Note Concave Radiating Pedalboard, A.G.O. Spec.				•	•
25-Note Flat Radiating Pedal board	•	•	•		
Solo Pedal System (32′ to 1′ pitches, tunable to preference; also tablets for "mute control," "pedal solo on," and continuously variable volume balancer)				•	•
Expression Pedal (with normal & soft volume control)	•	•	•	•	•
Illuminated Pedalboard	•		•	•	•
Locking Top	•	•	•	•	•
Tudor Styling in Oak & Walnut	•		•	•	•
Traditional in light Cherry & Walnut		•			
Full Decorative Rear Panel	•	•	•	•	•

*Dependent upon tone cabinet for models B-3, C-3 & RT-3.
Reverberation Control for the A-105 model is located above the Volume tab.

CONSOLE SPECIFICATIONS

Model	Dimensions*	Weight	Music Pow Output
A-105	49″ W. 47″ D. 46″ H.	525 lbs.	27 watts
B-3	49″ W. 49½″ D. 46″ H.	425 lbs.	dependent up tone cabinets
C-3	49″ W. 47″ D. 46″ H.	450 lbs.	dependent up tone cabinets
D-152	57″ W. 48″ D. 47″ H.	543 lbs.	50 watts
RT-3	57″ W. 48″ D. 47″ H.	525 lbs.	dependent up tone cabinets
PR-40** (QR-40) Tone cabinet	31½″ W.18″ D.37½″H.	130 lbs.	50 watts

*with pedalboard and bench.
**Three Channel Amplification: Bass amplifier drives two 15″speakers: treble reverb amplifier drives lower 12″ speaker; treble amplifier drives upper 12″ speaker.

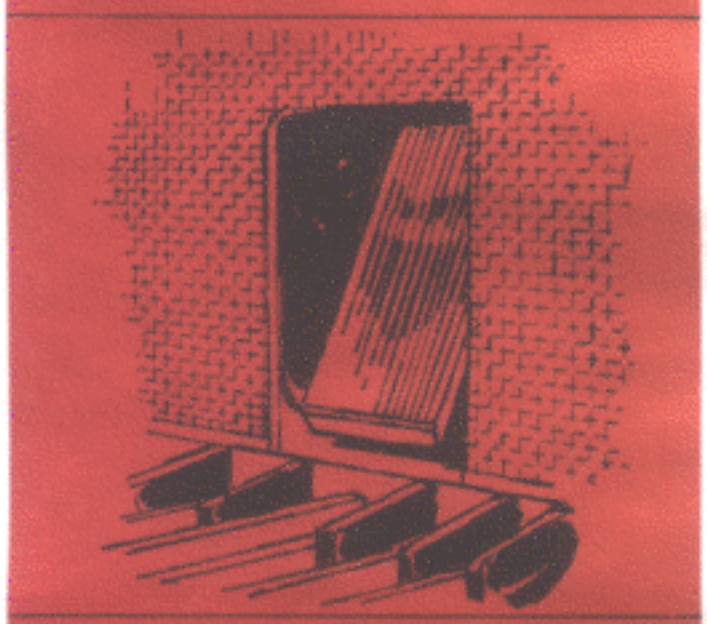
PR 40 TONE TONE CABINET

Three separate speaker channels produce a beautiful live reverberation (echo) effect (three dimensional tone). Reverberation controls on the side of the cabinet make it easy to control the degree of reverb. There are separate controls for the treble and bass channels. Each can be adjusted to off, low, medium, and high. An optional switch kit may be installed on the console, permitting the organist to control the reverb while sitting at the keyboard. PR-40 has decorator styling and is available in walnut, oak, and cherry. (The QR-40 with lacquered surfaces is also available for out-of-sight placement.)

Console Controls

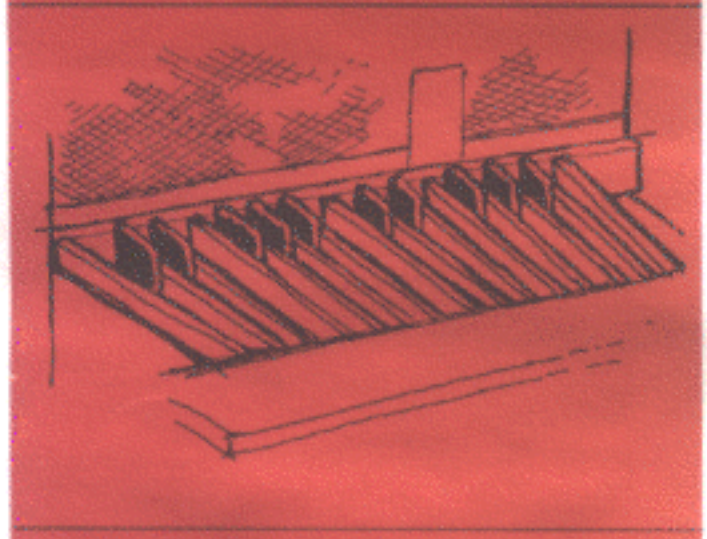
ON/OFF SWITCH

With the **Run** switch in off position, push the **Start** switch to start. Hold the **Start** switch and count to 8 slowly. Then, while still holding the **Start** switch, push the **Run** switch to run position. Hold both switches in position and count to 4 slowly. Release the **Start** switch. The organ will be ready to play in 30 seconds. Repeat this procedure each time you start the organ. Push the **Run** switch to its off position to turn the organ off. Note: **Loosen generator bolts when installing. Follow instructions on installation card inside the organ bench.**



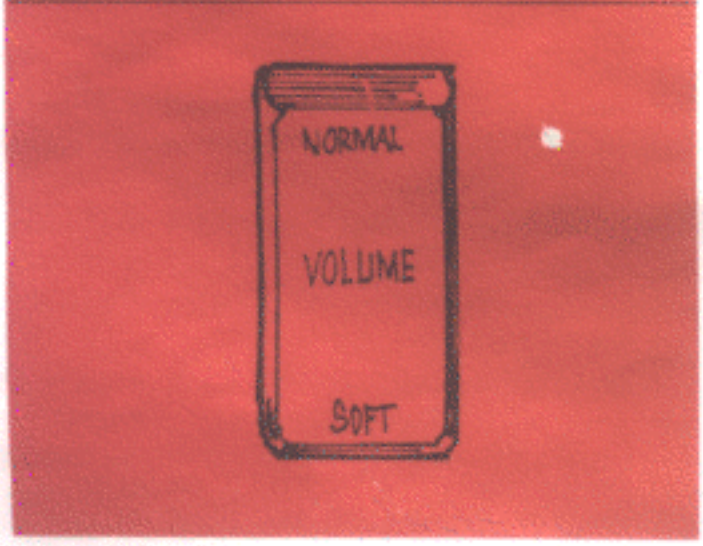
EXPRESSION PEDAL:

Played with the right foot, the expression pedal controls the sound volume. Push forward with right foot toe to increase volume. Rock foot back to decrease volume.



PEDALS:

The pedalboard (or pedal clavier) sounds the bass tones, adding depth, body and rhythm to melody and accompaniment. Use the pedal drawbars to adjust pedal volume and tone. The left pedal drawbar controls the low, deep tones (16′); the right pedal drawbar controls brightness (8′). Note: **The 32-note pedalboard (D-152 & RT-3) is played just like the standard 25 note pedalboard.**



VOLUME:

Lets you play either at normal or soft volume. It reduces volume while giving you the entire range of the expression pedal.

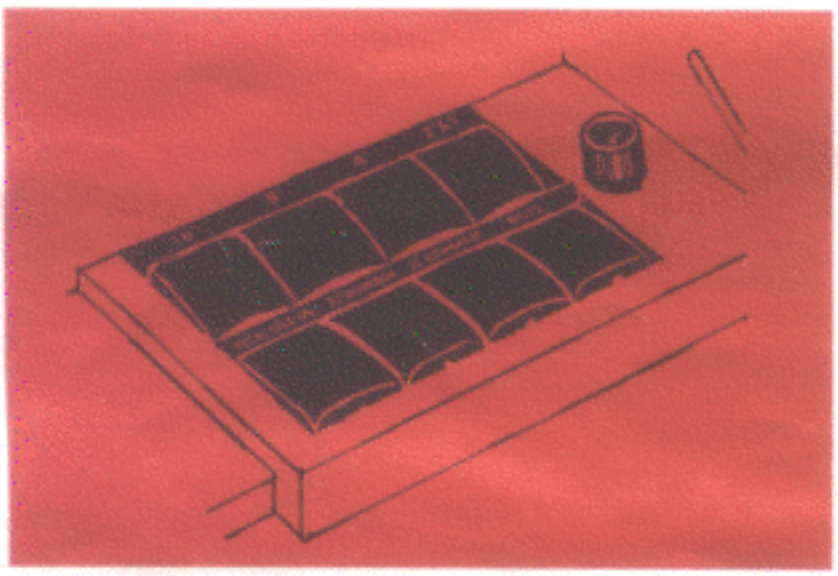
VIBRATO SWELL AND VIBRATO GREAT:

A pulsating effect . . . a regular variation of pitch. It adds warmth of your music and expresses emotional intensity. Vibrato may be used with any one or a combination of tones; it gives you full orchestral effect. And it's seldom used when playing church music. Vibrato Swell affects the upper keyboard; Vibrato Great the lower manual.

VIBRATO AND CHORUS CONTROL:

You can select any one of six positions of vibrato and vibrato chorus: 3 degrees of vibrato; 3 degrees of vibrato chorus. Each is different. V-1 is "small"; it corresponds to the normal vibrato of most orchestral solo instruments. V-2 adds great tonal warmth. And V-3 adds a "theatrical" feeling.

Vibrato Chorus is a "celeste-like" effect. Vibrato and non-vibrato tones are mixed in equal amounts. This is desirable when a French horn (without vibrato) is played with a violin (with vibrato). Chorus, when playing single notes, gives the effect of several solo instruments playing together. V-1 is the accepted amount of vibrato for church music. C-1 is sometimes used for hymns and postludes.



HERE ARE SOME WAYS TO USE VIBRATO:

1. Use Swell vibrato only and set:
   Upper: violin — 00 2444 443 V-3
   Lower: 00 3322 000 No vibrato

2. Use Great vibrato only and set:
   Upper: English Horn 00 3744 320 No Vibrato
   Lower: 00 3322 000 V-1

3. Contrast ensemble timbres:
   Play four bars of a familiar tune (both hands on lower manual)
   Lower 00 5324 022 No Vibrato
   Play the next four bars like an echo (both hands on upper manual)
   Upper Vox Humana 00 2200 232 V-3 Vibrato

SOLO PEDAL UNIT

(D-152 & RT-3 only): It augments the 16′ and 8′ pedal drawbar tones with additional pitches—32′, 16′, 8′, 4′, 2′, & 1′. A volume knob controls the balance. Use it to play hymns and classical music which need a full, rich bass foundation.

PRESET THEATER VOICES

Upper Manual

Preset Keys	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	Theater 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 Theater Brass 16′
A#	Adjust drawbars in 1st Group, Upper Manual	
B	Adjust drawbars in 2nd Group, Upper Manual	

Lower Manual

Preset Keys	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 drawbars in 1st Group, Lower Manual	
B	Adjust drawbars in 2nd Group, Lower Manual	

PRESET STANDARD VOICES

Upper Manual

Preset Keys	Drawbar Setting	Tone Quality	Dynamic Value
C		Cancel	
C#	00 5230 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 drawbars in 1st Group, Upper Manual		
B	Adjust drawbars in 2nd Group, Upper Manual		

Lower Manual

Preset Keys	Drawbar Setting	Tone Quality	Dynamic 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 drawbars in 1st Group, Lower Manual		
B	Adjust drawbars in 2nd Group, Lower Manual		

PRESET KEYS:

There are twelve preset keys to the left of each manual and they are used only one at a time on each manual. The first key (C) on each group of preset keys is a cancel key. Depressing the cancel key releases any preset key previously depressed. The cancel key is not normally used but is needed in case several keys are inadvertently depressed.

The next nine preset keys, C# through A, let you quickly change from a soft solo to a full liturgical sound at the touch of a finger. The keys are graduated in volume from soft to loud (left to right). Generally, the white preset keys are solo, instrumental voices, while the black preset keys are ensemble voices. The preset voices provide almost unlimited registration flexibility instantly.

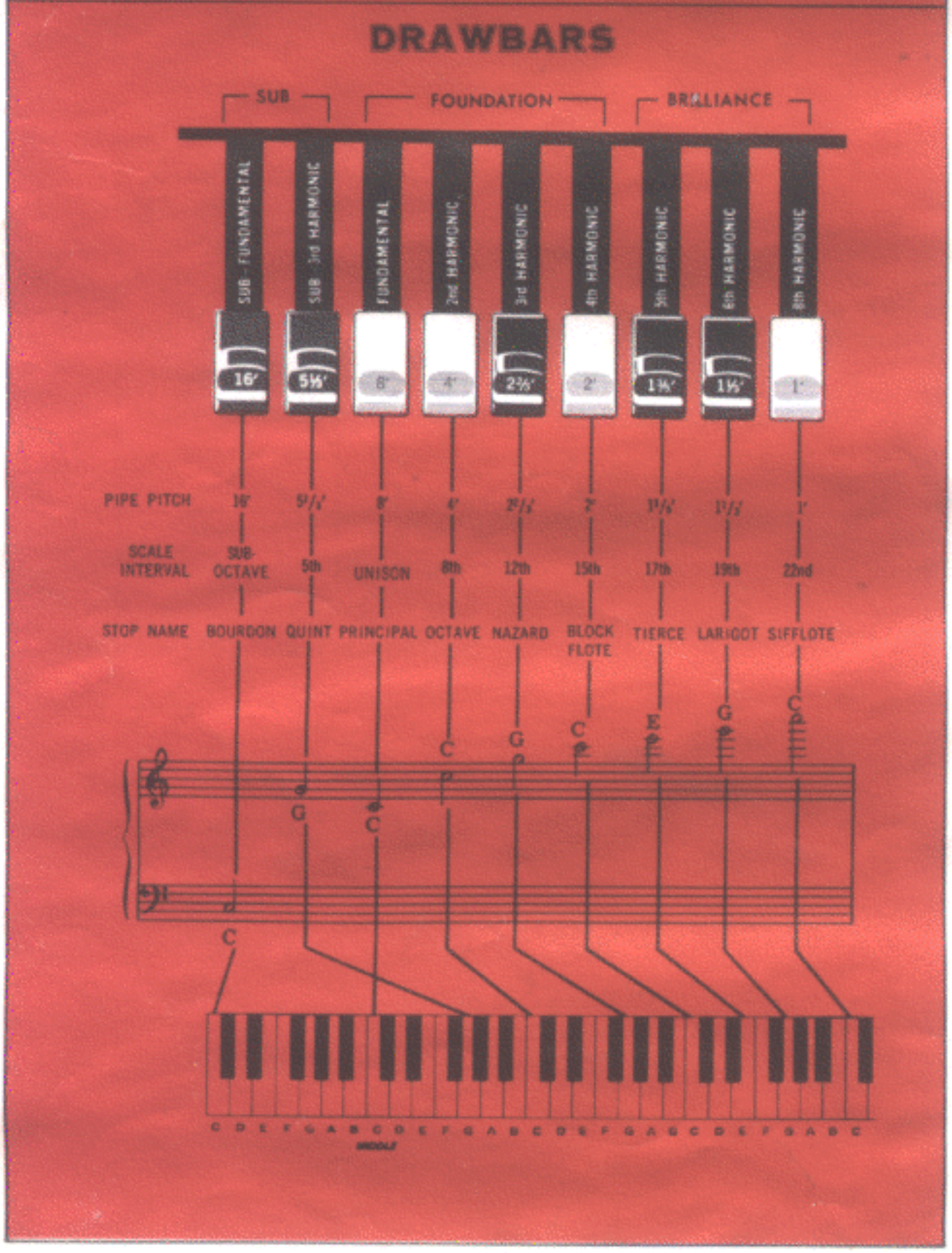
The last two preset keys for each manual select the tones set up on the drawbars. Swell A# selects drawbar group one. Swell B selects drawbar group two and percussion voices. Great A# selects drawbar group four. Great B selects drawbar group five.

Hammond preset tones can be changed to suit the organist's style of playing or the type of music being played. Changing preset tones requires little more effort than changing stations on your push-button car radio. Make a note of your favorite registrations. At the rear of the organ, in the upper right hand corner, is the "customizing" recorder panel. A simple instruction sheet nearby explains how to reset your tones. The only equipment needed is a screw-driver.

How harmonic drawbars provide thousands of beautiful tones

Drawbars and Pipe Organ Terminology

You will note that the fundamental drawbar is marked "8′ " and the sub-fundamental (one octave below) is marked "16′." This is pipe organ terminology indicating that the pipe used to produce the fundamental tone on a pipe organ is actually eight feet high while that used for the octave below is sixteen feet high and that for the octave above is only half the size of the fundamental, or four feet high.



To take the fullest advantage of the wonderful harmonic drawbars of the Hammond organ, it is necessary to understand what "music" really is. All sounds, musical or otherwise, are created by sending impulses or vibrations through the air. These are "felt" or "heard" in the sensitive mechanism of our ears. You may think you hear a single sound. Actually each sound, or musical note, consists of a "fundamental" or basic tone and a number of "harmonics" or overtones, the latter being different when the same note is played on different instruments.

If you have a source of sound which will provide the fundamental sound of each note on the keyboard, plus a source of a large number of harmonics, you are in a position to combine these fundamentals and harmonics into musical tones similar to those of almost any instrument. And that is just what the harmonic drawbars of the Hammond organ do for you.

WHITE DRAWBARS

The first white drawbar for each manual represents the fundamental tone. All the other white drawbars are octave intervals of the fundamental tone. When you play the organ with the fundamental drawbar alone and then, one by one, add the white drawbars in sequence you will hear the addition of the same note an octave higher in each case. The tonal brilliance is greatly increased by adding white drawbars but the harmonics added are always in "consonance" or harmony.

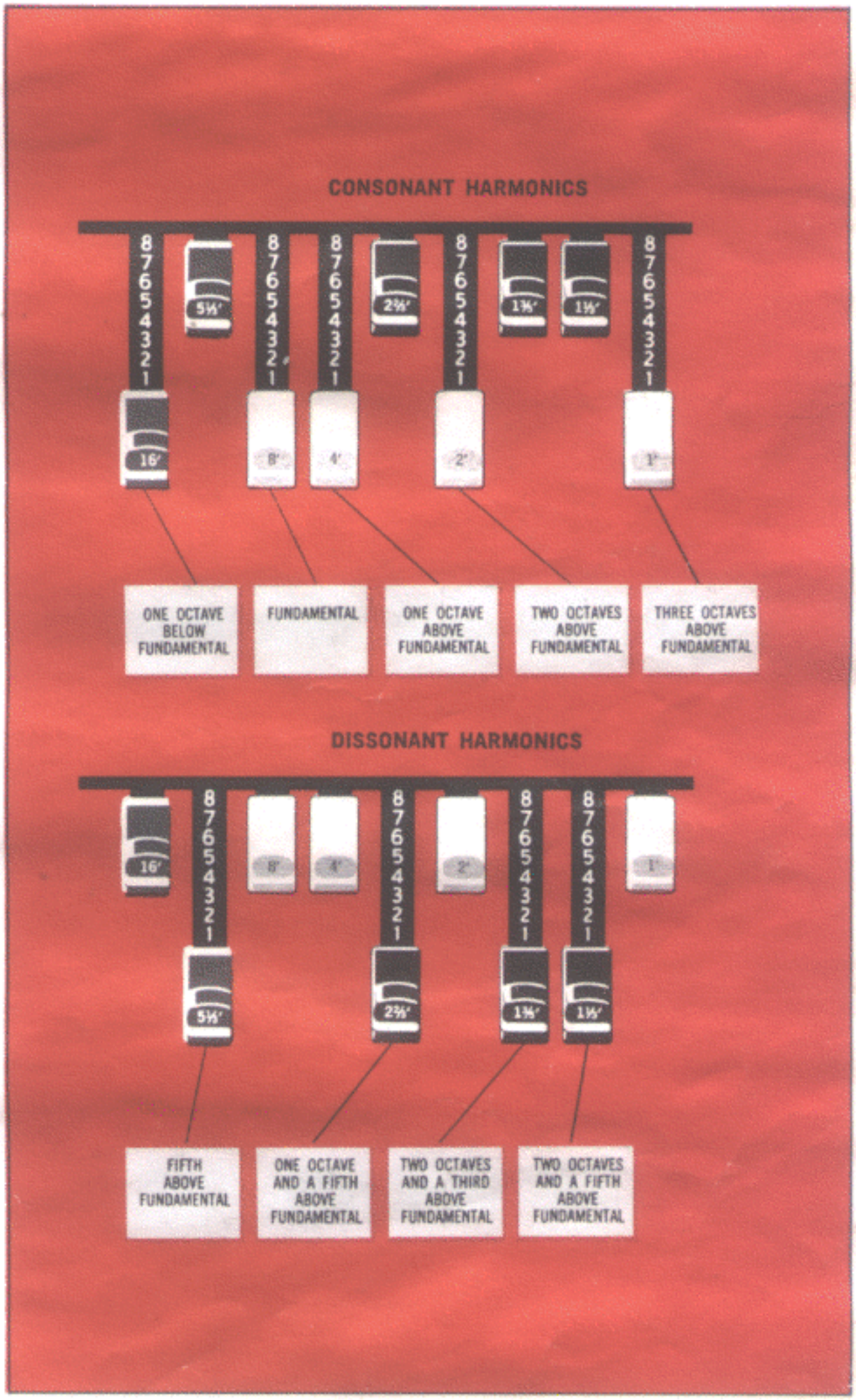
BLACK DRAWBARS

The black drawbars on the Hammond organ represent the dissonant harmonics which are also necessary in building rich tone colors. It must not be assumed that the dissonant harmonics are unmusical. They are found in varying degrees in many organ and orchestral voices. For instance, the mellowness of a horn, the pungency of strings, and the brilliance of reeds all owe much of their character to the presence of these harmonics in different degrees.

In general, however, the black drawbars should not be emphasized strongly above the white drawbars.

BROWN DRAWBARS

In addition to the white and black drawbars, there are two brown drawbars. They produce "sub-octave" effects. The first brown drawbar is the sub-octave of the fundamental. The second is the third harmonic of the sub-octave. They add depth and richness to drawbar registrations.



Registering tone families by shape

1. FLUTE FAMILY. Chiefly fundamental and 2nd harmonic drawbars; occasional small use of 3rd harmonic drawbar.

2. REED FAMILY. Emphasis on middle drawbars, often with more of 3rd harmonic than of the fundamental itself.

3. DIAPASON FAMILY. Strong fundamental and 2nd harmonic drawbars, relatively weak upper harmonics.

4. STRING FAMILY. Relatively weak fundamental and 2nd harmonic drawbars; strong upper harmonics.

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. For instance, the string family includes such voices as Violin, Cello, Viola, Aeoline, etc. The reed family includes such voices as Oboe, Clarinet, Bassoon, English Horn, etc.

Tone families may be quickly set up on the harmonic 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 is the use of registrations which have been worked out by fine organists, such as those published on most organ music. The second, 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. Mark your music with those you like best. Don't always play the same selection with the same registration. Explore other new tones. You can play each musical piece in hundreds of different ways on the Hammond organ.

GETTING THE EXACT TONES YOU WANT

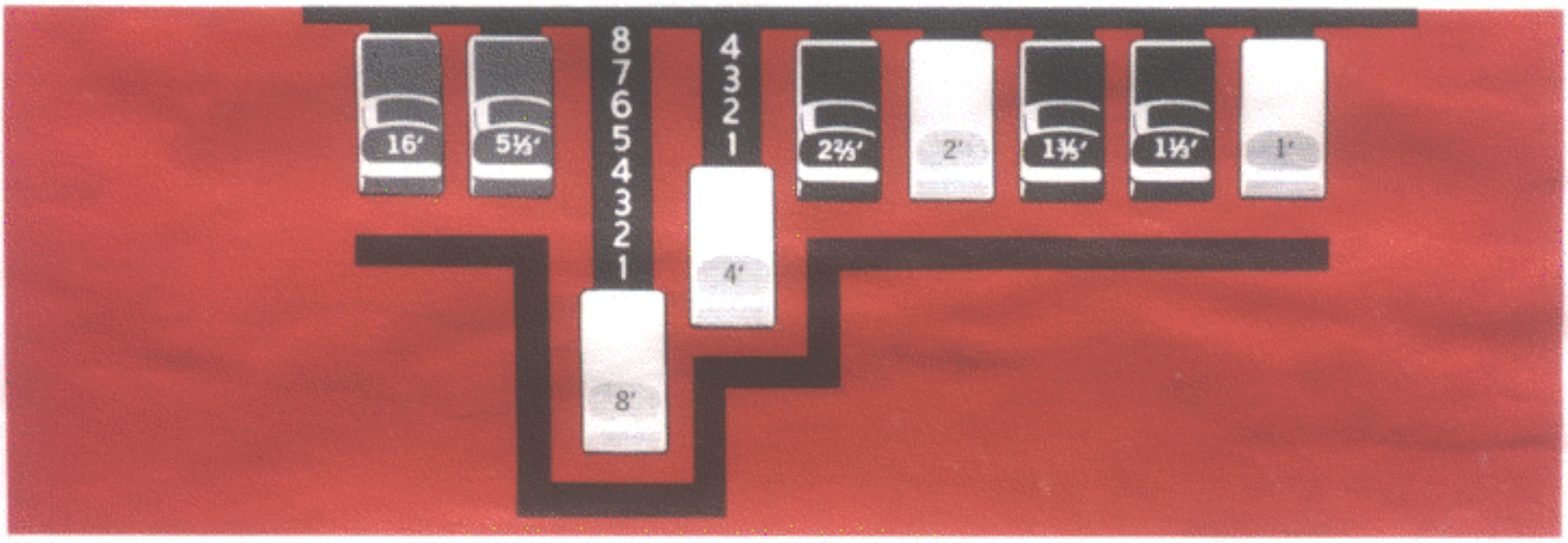
It might happen that a trumpet quality registration suggested in a musical selection is not exactly the tone you have in mind. If you were playing on an organ on which all the "stops" had been set up at the factory, you would have to be satisfied with one or a few trumpet tones.

The Hammond organ, however, allows you not only to set up any tonal effect you want, but also to make many fine variations of the tone. Only on the Hammond organ 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.

The matter of the right shade of tone for every enclosure is very important, because the acoustics of the room in which you play have much to do with the beauty of your music. So important is this matter of acoustics of the church or hall that expensive custom-built organs are "voiced" after they are installed in order to adapt the tone of the pipes to the acoustics of the church or hall.

With the Hammond organ, 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. In fact, exactly right. Great musicians declare this to be one of the most wonderful of the many exclusive features of the Hammond organ.

Flute family (2 step pattern)



FLUTE TONES

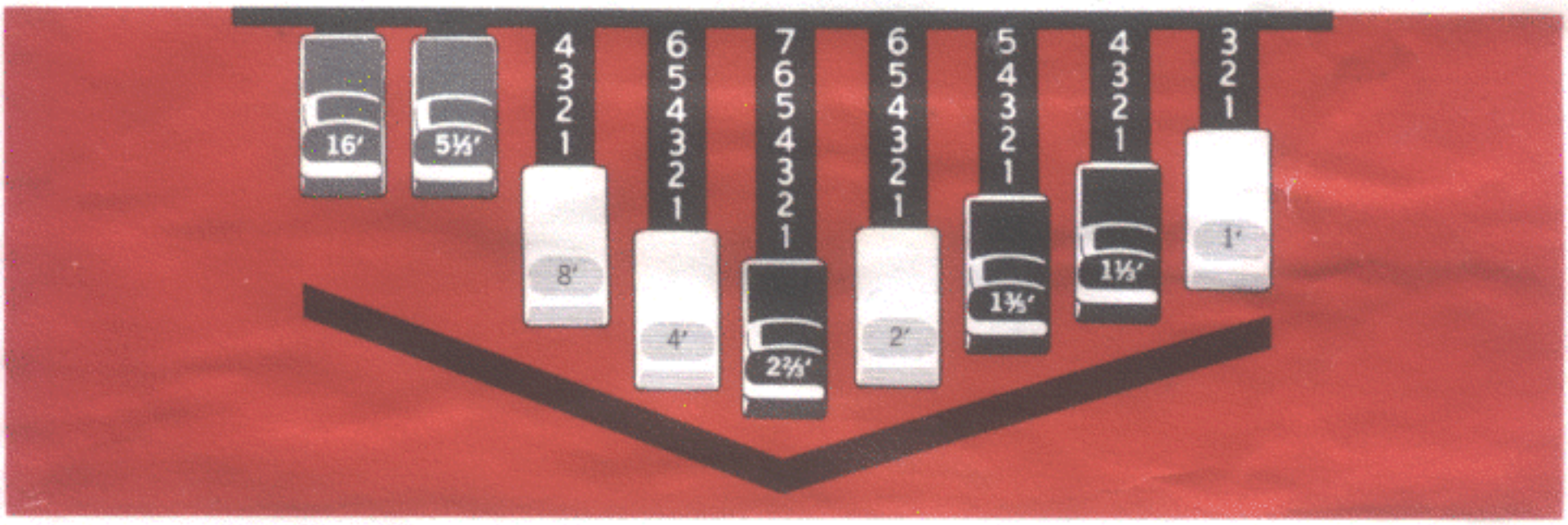
Chorus of Flutes	80 8605 002
8′ flute	00 6201 000
4′ flute	00 0602 000
2′ flute	00 0006 004
Soft flutes	00 4000 000
Stopped flutes	00 5020 000
Tibias (theater)	80 8605 004
Light Concert flute	00 3700 000

A BASIC FLUTE TONE

There are literally hundreds of flute tones available on the Hammond organ, in contrast to any other type of organ on which you can play only the one or perhaps two or three tones which are set up at the factory. By simply changing the relative positions of the third and fourth drawbars to 00 3700 000 you can create a light concert type of flute. Or by closing the fourth drawbar altogether and adding a little of the fifth drawbar plus a heavier fundamental, you can get a solo tibia — 00 8020 000. This should be used with Vibrato off.

Any combination of white drawbars provides various flute tones; first brown drawbar adds depth.

Reed family (triangle pattern)



REED TONES

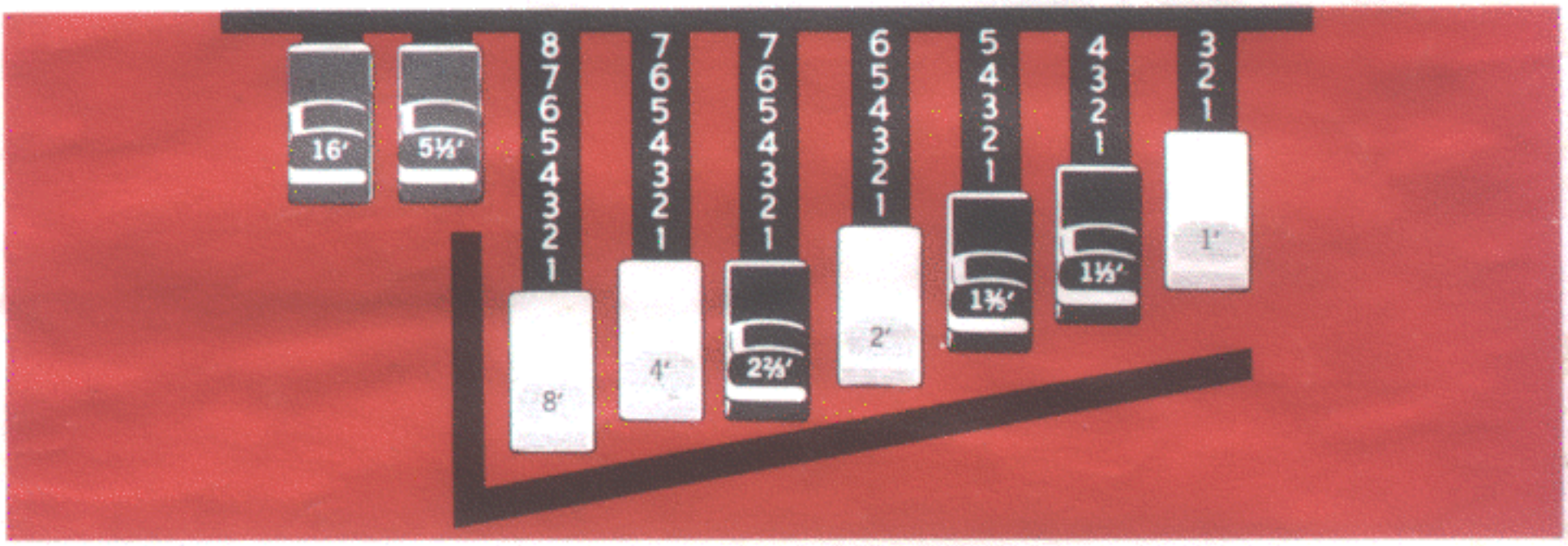
Chorus Reed (trumpet)	00 6876 540
English Horn	00 3678 660
Oboe	00 4764 210
Clarinet	00 6260 210
	00 6070 540
Trumpet	00 6777 770
Bassoon 8′	08 7500 000
Bassoon 16′	04 7400 000
French Horn	00 7654 321
Bass Horn	06 7888 800

A BASIC REED TONE

Reed tones include the brasses and woodwinds. The tones of the latter 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 on the great manual.

Diapason family (right angle pattern)



DIAPASON TONES

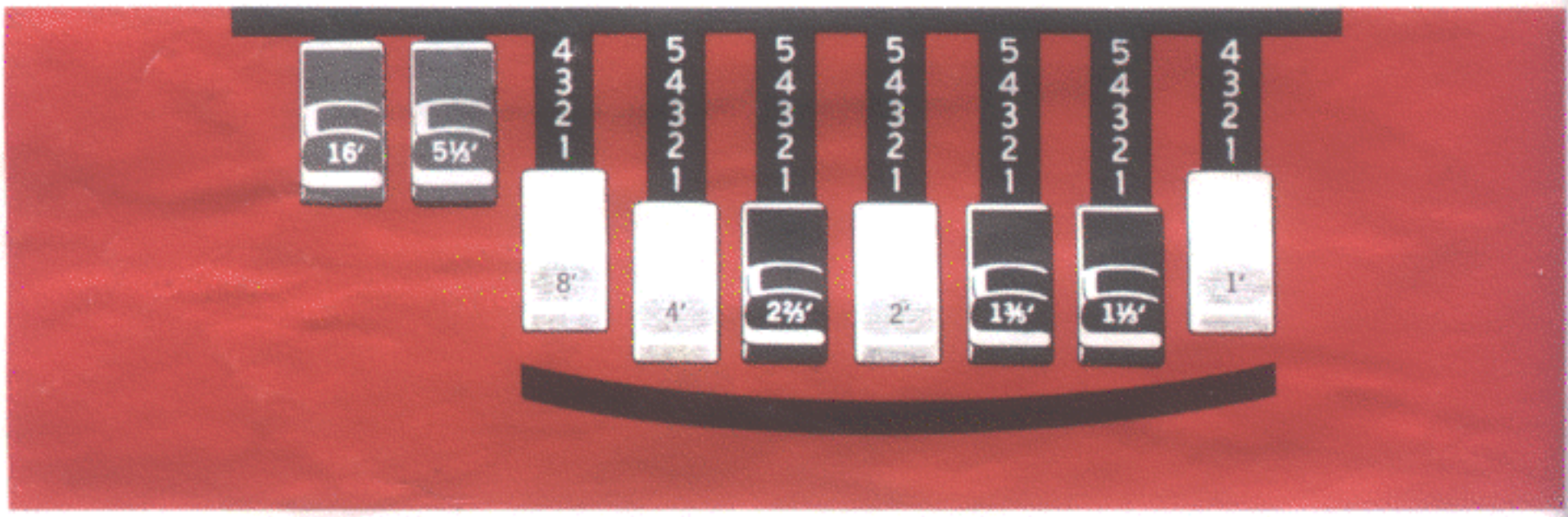
Diapason Chorus	00 5756 254
Full Organ	54 7878 766
Bright Diapason	00 8777 666
Full Organ Theater Type Vibrato Normal	87 8766 553

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 fluty 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 characterized by strong upper harmonic development.

String family (bow pattern)



STRING TONES

String Chorus	12 3333 444
Salicional	00 2343 332
Aeoline	00 1222 221
Gamba	00 3484 443
Violin	00 4345 554
Vox Celeste	00 2434 432
Vox Humana	00 1300 400
Soft Strings	00 1324 321

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 may be relatively weak. This 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, used as solos or accompaniments.

Drawbar registrations

It is well to keep in mind that all organ tones are characterized not only by their individual harmonics but by the loudness with which they are played and the range in which they are used. String tones, for instance, should be played softly. You cannot open the expression pedal so that a string registration sounds as loud as a tuba and expect it to sound like a string! If you play a violin registration low on the keyboard it may be beautiful but it will not sound like a violin. Here are some suggestions for the range in which to play various instrumental effects, counting the lowest octave on the keyboard (C to C) as 1, the second octave as 2, etc.

Clarinet	2nd, 3rd and 4th octaves
French horn	2nd and 3rd octaves
Muted horn	2nd and 3rd octaves
Trumpet	2nd, 3rd and 4th octaves
Orchestral oboe	2nd, 3rd and 4th octaves
English horn	2nd, 3rd and 4th octaves
Flute	entire range
Tibia	2nd, 3rd, 4th, 5th octaves
Orchestral flute	2nd, 3rd, 4th, 5th octaves
Grosse flute	3rd, 4th and 5th octaves
Flute 8′ & strings	entire range
Flute 16′ & strings	2nd, 3rd, 4th, 5th octaves
Oriental tone	2nd and 4th octaves

A good general rule is to play only single notes (not chords) in the 1st octave on tones not using the 2 brown drawbars or in the 1st and 2nd octaves on tones using the 2 brown drawbars.

COMBINING DRAWBAR REGISTRATIONS

Just as the full organ effect is achieved by adding the "voices" of the organ together, you can very easily combine any tones you wish on the Hammond organ. It is simpler than arithmetic. Let's say that you want to combine the following:

01 6788 540
00 8210 000
00 1354 321

In order to get a registration which will sound as if all three of these tones are being played together, you take the largest figure for each drawbar, making the result:

01 8788 541

Another example:

Tibia 8′	00 8240 000
Vox Humana 8′	00 2423 321
The Two	00 8443 321

THEATER ORGAN REGISTRATIONS

Tibia 16′	72 0020 000	Vox Humana 8′	00 3400 332
Bourdon 16′	54 3100 000	Oboe Horn 8′	00 4763 000
Diapason 16′	64 3322 000	Saxophone 8′	00 2478 500
Solo Strings 16′	25 4421 000	Clarinet 8′	00 8382 700
Contra Viol 16′	24 3210 000	English Horn 8′	00 3577 540
Contra Celeste 16′	23 4321 000	Tuba 8′	00 5680 400
Vox Humana 16′	14 3110 000	Flute 4′	00 0803 030
Oboe Horn 16′	47 5430 000	Piccolo 4′	00 0600 000
Saxophone 16′	27 3210 000	Octave 4′	00 0545 321
Clarinet 16′	35 2000 000	Solo Strings 4′	00 0436 555
English Horn 16′	25 3442 100	Viol 4′	00 0344 232
Ophicleide 16′	47 7600 000	Octave Celeste 4′	00 0324 220
Tibia 8′	00 8240 000	Vox Humana 4′	00 0433 042
Concert Flute 8′	00 6421 000	Oboe Horn 4′	00 0606 031
Diapason 8′	00 5642 110	Clarion 4′	00 0515 230
Solo Strings 8′	00 2366 542	Tibia 2′	00 0006 001
Viol d'Orchestre 8′	00 2444 322	Piccolo 2′	00 0005 111
Viole Celeste 8′	00 2323 211	Twelfth	00 0060 020

Pop music registration

Melodies (single or double-note)

00 4680 006	00 5288 822
00 3460 704	00 1478 630
00 5070 052	00 6080 808
00 3558 808	00 8005 005
00 6005 700	36 0000 008
00 2268 888	08 6000 808
00 4678 333	07 5646 006

Melody

Tibia 8′	00 8240 000
Oboe Horn 8′	00 4763 000
Saxophone 8′	00 2478 500
Krumet 8′	00 0185 786
English Horn 8′	00 3577 540
Solo Strings 8′	00 2366 542
Vox Humana 8′	00 3400 332
Oboe Horn 16′	47 5430 000

Ensembles and Accompaniments

04 3508 863	00 5334 003
05 7800 006	00 6654 321
20 3004 845	00 2353 221
46 8080 008	35 8857 004
00 5006 006	00 1377 865
00 5000 345	00 3500 420
00 5505 403	52 4660 055 (8 va.)

Accompaniments

Vox Humana 8′	00 3400 332
Viole Celeste 8′	00 2323 211
Soft Tibia	00 6130 000
Soft Tibia	00 5120 000
Concert Flute 8′	00 6421 000
Concert Flute 8′	00 6403 000
Soft Concert Flute	00 4210 000
Viole Celeste	00 2323 211

TRY YOUR OWN DRAWBAR REGISTRATIONS

Part of the fun of playing your Hammond organ is experimenting with your own drawbar arrangements. It is not essential that you use the registrations set up on music you may have. These registrations merely represent the preference of the composer or arranger and may not be your choice of tonal color at all. You may also find that the acoustics of the room in which you are playing may make it desirable to vary slightly the registrations used. You may especially wish to supply a little more or a little less "brilliance" by varying the amount of the upper drawbars used.

Do not hesitate to experiment with tonal colors on your Hammond organ — there are many thousands of beautiful tones in the instrument and part of its enjoyment lies in creating new and lovely tones to make your music more interesting.

Usually arrangements with Hammond organ registrations illustrate the arranger's preference for a great many changes of tonal colors. Sometimes these suggested changes are very "contrasty" in character and may come at places in the music where it is difficult to make them without a break in your music. These suggested registration changes are a matter of taste and need not be made. Many fine organists point out that it is usually undesirable to make drastic changes of tonal color.

It is suggested that you practice making very simple drawbar changes — one drawbar or two, at most, which you can do in a split second. This will give you a noticeable change of tone yet one that is a natural transition from the tone you have been using.

You will enjoy creating tonal colors yourself, and will want to keep your favorites in a little notebook or mark them on your music.

Classical organ registration

SWELL

Gedeckt 8′	00 5141 100
Salicional 8′	00 3433 110
Vox Celeste 8′	00 2322 110
Principal 4′	00 0515 031
Harmonic Flute 4′	00 0804 011
Piccolo 2′	00 0006 132
Siffloete 1′	00 0000 005
Mixture 3 ranks	00 0087 064
Contra Fagotte 16′	17 5321 000
Trumpet 8′	00 6786 530

GREAT

Quintadena 16′	23 0000 000
Principal 8′	00 5754 210
Hohl Flute 8′	00 6320 000
Octave 4′	00 0626 121
Mixture 4 ranks	00 0064 064

CHOIR

Gedeckt 8′	00 5030 100
Flute d'Amour 4′	00 0603 020
Principal 2′	00 0006 002
Quint 1⅓′	00 0000 060
Clarinet 8′	00 4262 421

COMBINATIONS

00 5433 110	Gedeckt & Salicional
00 5844 111	Gedeckt & Harmonic Flute
00 5545 131	Gedeckt & Principal
00 5845 131	Gedeckt, Prin. & Harm. Flute
00 5846 132	Gedeckt, Prin., Harm. Flute & Piccolo
00 6886 532	Ged., Prin., Harm. Fl., Picc. & Trumpet
00 6887 554	Full Swell with Mix.

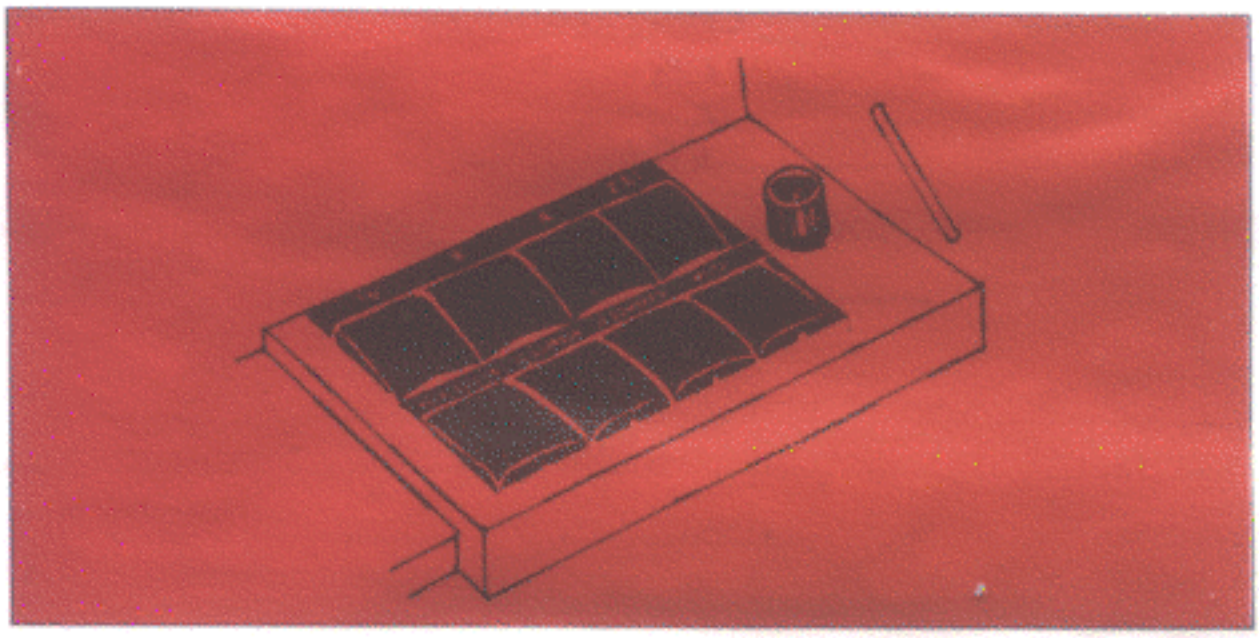
COMBINATIONS

00 5756 221	Principal & 4′ Octave
00 5757 223	Principal & 4′ & 2′ Octaves
23 5767 264	Full Great with Mix.
23 6887 564	Full Organ Coupled

COMBINATIONS

00 5633 120	Gedeckt & Flute d'Amour
00 5666 122	Gedeckt, Flue d'Amour & Principal
00 5036 102	Gedeckt & Principal
00 0606 022	Flute d'Amour & Principal
00 5666 162	Ged., Fl. 4′ Prin., Quint

Here's how to use the solo pedal unit (D-152 & RT-3 ONLY)



Do not use the pedal solo stops as a substitute for the Pedal drawbars. You can get the 16′ and 8′ foundation tones (diapason) only by using the pedal drawbars. The pedal solo stops are voiced in contrasting tones to simulate the pedal solo reeds (tuba, trombone, bombarde, etc.).

32' STOPS:

The 32′ Bourdon and Bombarde stops let the player get deep bass notes in the second octave of pedals. The use of these two stops makes it difficult to determine the pitch of notes played below G#. The Bourdon Stop gives an effect which is "felt" as a very low bass undulation when playing low in the first pedal octave. The Bombarde is used with higher pitched stops. When played alone on the low half of the lowest pedal octave, the extremely low pitch makes it of little musical use.

PEDAL SOLO ON STOP:

It serves as a pedal preset control. A player can instantly turn on or off any solo combination registered with the other stops. For example: The pedal drawbar combination 64 is set. The pedal solo is preset with 16′, 8′, 4′ and the volume is adjusted for solo bass. Flip on Pedal Solo On to hear pedal solo registration and drawbar registration. Flip off Pedal Solo On to hear only accompanimental bass sound of pedal drawbar registration.

MUTE PEDAL STOP:

This stop can be used with all pedal solo stops. It makes tones more mellow, less brilliant.

PEDAL VOLUME CONTROL:

Pedal solo volume is controlled by the small knob to the right of the solo stops. Turn to right to increase volume. The volume of the pedal 16′ and 8′ foundation tones is controlled by pulling the pedal drawbars out towards you or by sliding them in.

Bass pedal registrations

ACCOMPANIMENT PEDAL TONE:

Use drawbar combinations like 62 or 53. Do not use Solo Pedal Stops; they'll detract attention from the manual melody.

FULL ORGAN PEDAL TONE:

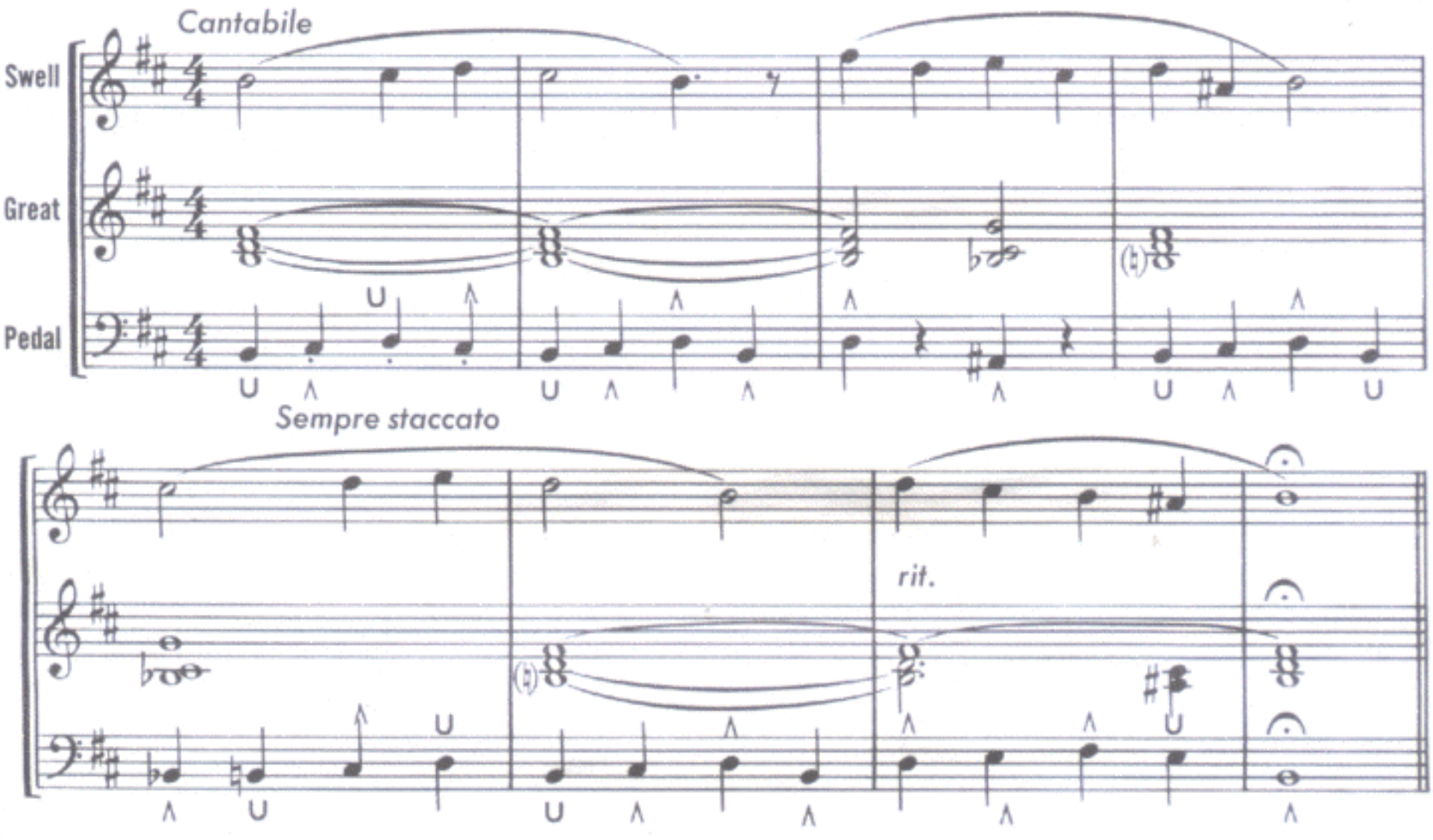
This type of bass is used generally for congregational singing, and concert organ music. Melodic interest is shared equally by pedals and manuals. A typical combination: pedal drawbars at 75; 16′, 8′, 4′, 2′ and 1′ solo stops.

SOLO PEDAL TONE:

This type of bass is used for special purposes and may or may not lie in the bass range. For instance, a violin solo effect may be produced in the pedals with the 4′ or 2′ and 1′ stops using vibrato. You can get other horn and solo reed effects with the vibrato off and only one stop set.

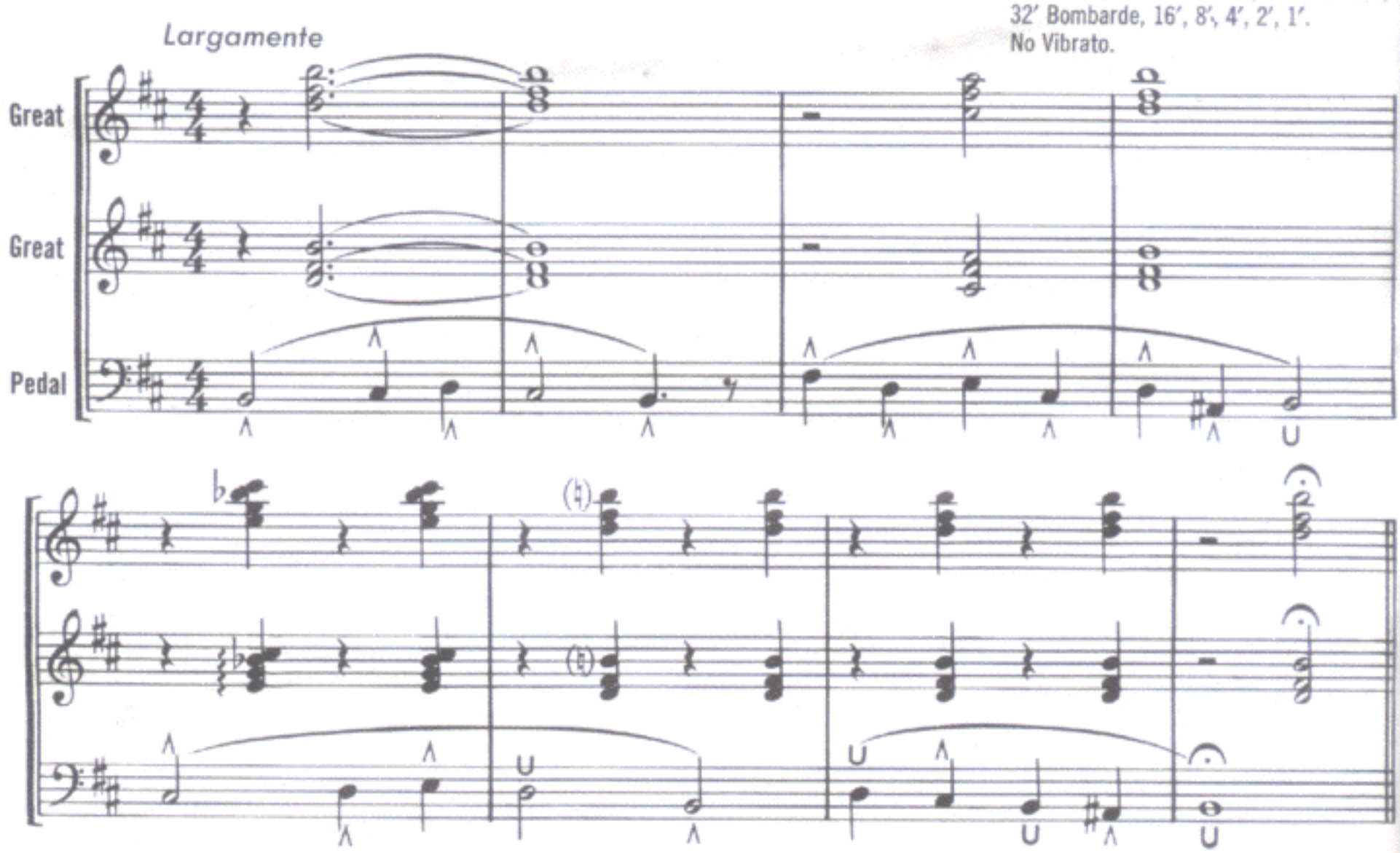
Accompaniment Bass

UPPER MANUAL: F#
LOWER MANUAL: E
PEDAL 51: No Solo Stops, Vibrato C-1



Full Organ Bass

LOWER MANUAL: A# 76 8887 655
PEDAL 53, Pedal Solo On, 32′ Bourdon, 32′ Bombarde, 16′, 8′, 4′, 2′, 1′.
No Vibrato.

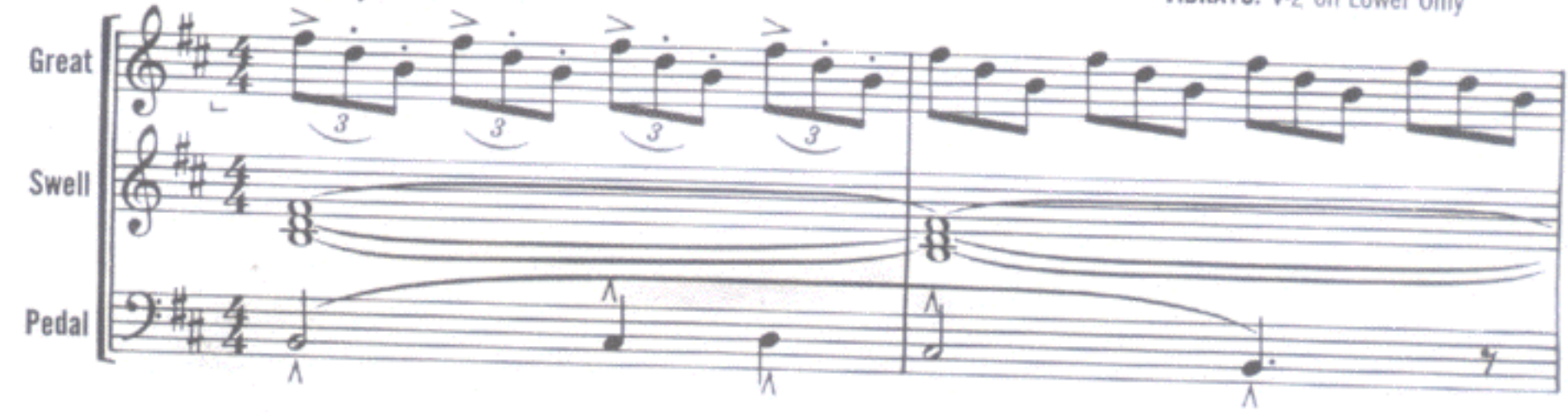


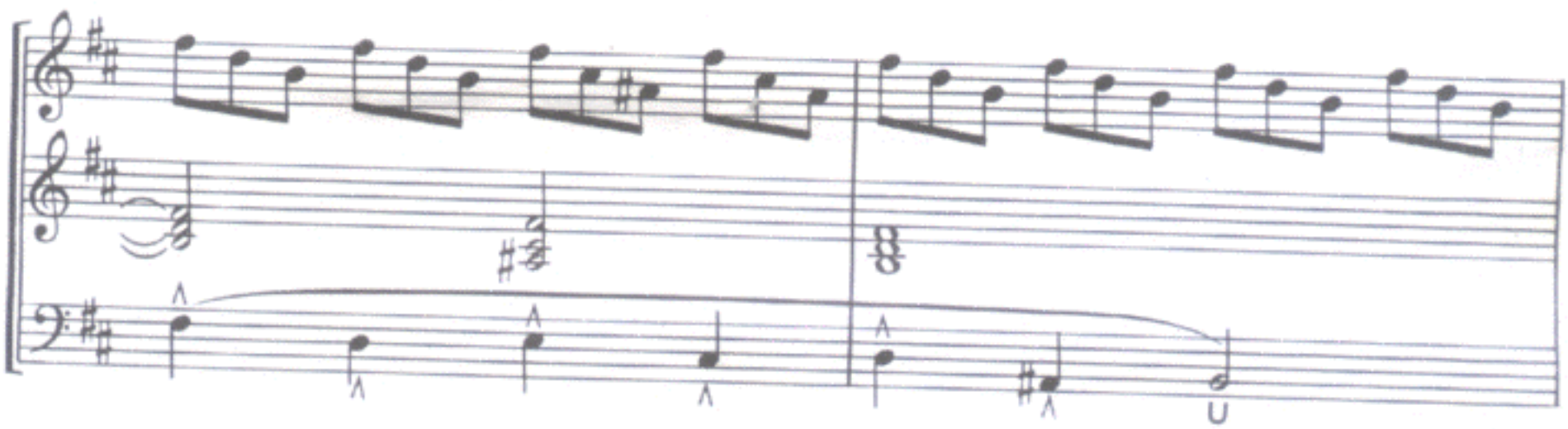
Solo Bass

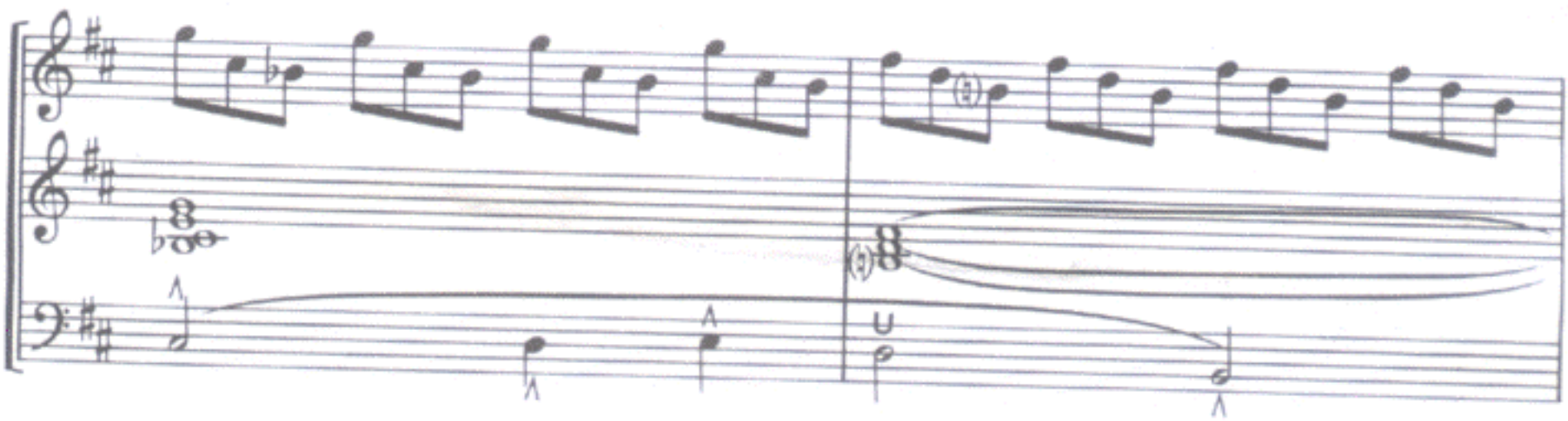
UPPER MANUAL: (F)
LOWER MANUAL: [B] 00 7007 000
PEDAL 00: Pedal Solo On, 4'
VIBRATO: V-2 on Lower Only

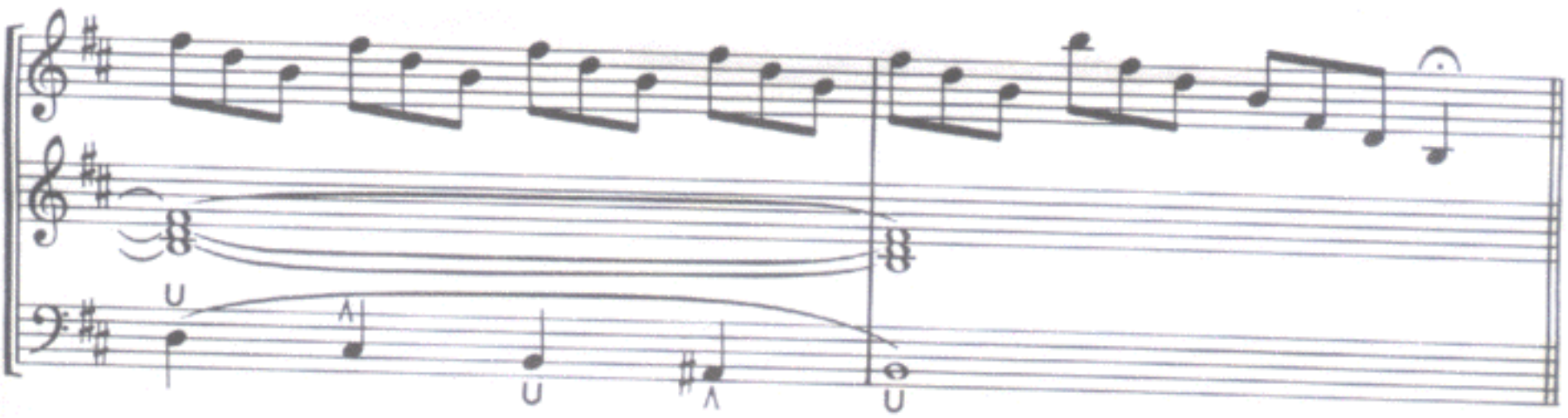
Andante
sempre staccato

Great
Swell
Pedal









Fun with percussion

Touch response percussion lets you accent some righthand melody notes while others remain sustained. Tones will sound percussive only if you play the keys in a detached (non-legato) manner. Release the first key before pressing the second key.

Percussion is most effective when used to "flavor" the drawbar combinations set on the upper manual. It does not affect the lower manual.

PERCUSSION ON/OFF:

Percussion operates when the percussion tab is in on position and the preset key (R) is on. All of the second group of upper drawbars work normally except for the 8th harmonic drawbar. This drawbar works only when percussion is off.

PERCUSSION VOLUME:

Regulates the volume of percussion. At "normal," percussion is prominent compared to tones produced by the upper manual drawbars. At "soft," percussion is less prominent.

PERCUSSION DECAY:

In "slow," percussive tones decay slowly like a chime. In "fast," percussive tones decay rapidly like a xylophone or marimba.

PERCUSSION HARMONIC SELECTOR:

This tab determines the pitch of the percussion tones. At "second," the pitch sounds an octave above the fundamental drawbar. At "third," the pitch sounds an octave and a fifth above the fundamental drawbar.

How to use percussion

Percussion tones are rarely used alone, and should be used sparingly. The more effective percussion registrations provide great tonal contrast between percussion and sustained tone.

Here are some suggestions:

1. Use the full V-3 vibrato on both manuals to give the percussion tone (with no vibrato) solo prominence.
2. Do not use too many drawbars. If more than four drawbars are used, percussive tone will be "masked" by the greater harmonic development of the sustained tone.
3. Use even-numbered drawbar combinations if the percussion harmonic is odd, and vice versa. For example: If the third harmonic percussion is used, the most effective drawbars are the second and fourth harmonic drawbars. If the second harmonic percussion is used, then the third and fifth harmonic drawbars are most effective.

SUB FUNDAMENTAL DRAWBAR:

If the music registration involves the brown drawbars (or 16′ stops), play the notes as written. If the registration does not involve this pitch, play the music up an octave from that shown. Then add the sub-fundamental drawbar to get the same pitch intended by the composer. This technique separates percussive tone from sustained tone.

Special percussive effects

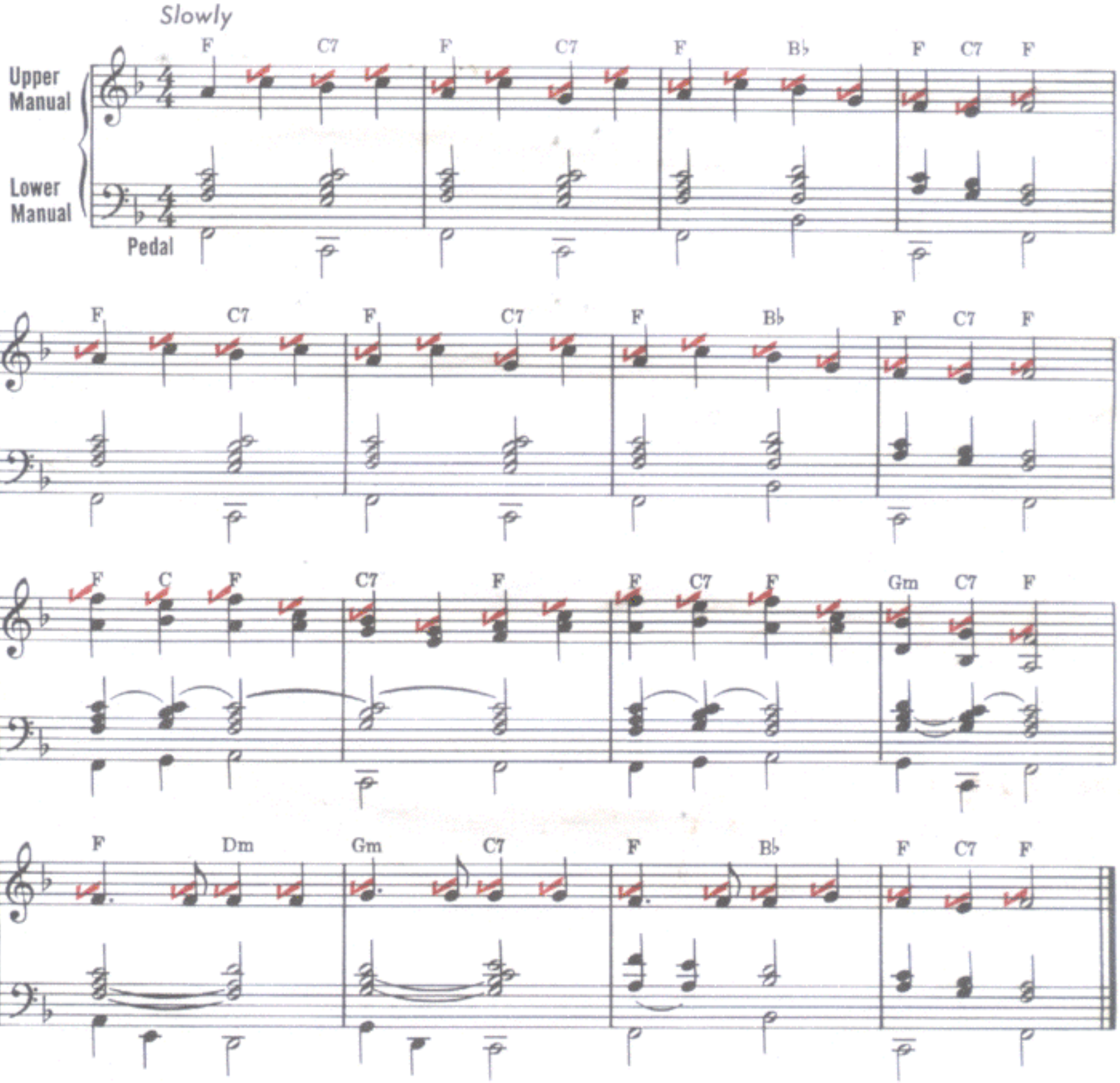
	DRAWBAR SETTING	PERCUSSION SETTING		
Portamento	76 8331 000	Normal	Slow	Second
A New Tone	00 0600 000	Normal	Slow	Second
Triple Tone Color	80 8600 000	Normal	Slow	Second

INSTRUMENTAL EFFECT	DRAWBAR SETTING	ACCOMPANIMENT	PERCUSSION SETTINGS
Orchestra Bells	00 4544 430	00 3012 000	Normal Slow Second
Celeste	00 3402 000	00 3012 000	Normal Slow Second
Xylophone	00 5533 110	00 4423 220	Soft Fast Third
Vibraphone	00 4700 000	00 4232 000	Normal Slow Second
Chimes	00 4803 000	00 3202 011	Normal Slow Second
Glockenspiel	84 8848 440	00 4423 222	Normal Fast Second
Bell Lyra	84 8848 440	00 4423 222	Normal Slow Third

Vesper hymn

First play through this piece with the Percussion Harmonic Selector tab set at "Third." Then play it at "Second." You'll hear a very strong and desirable tonal contrast in chime-like percussion.

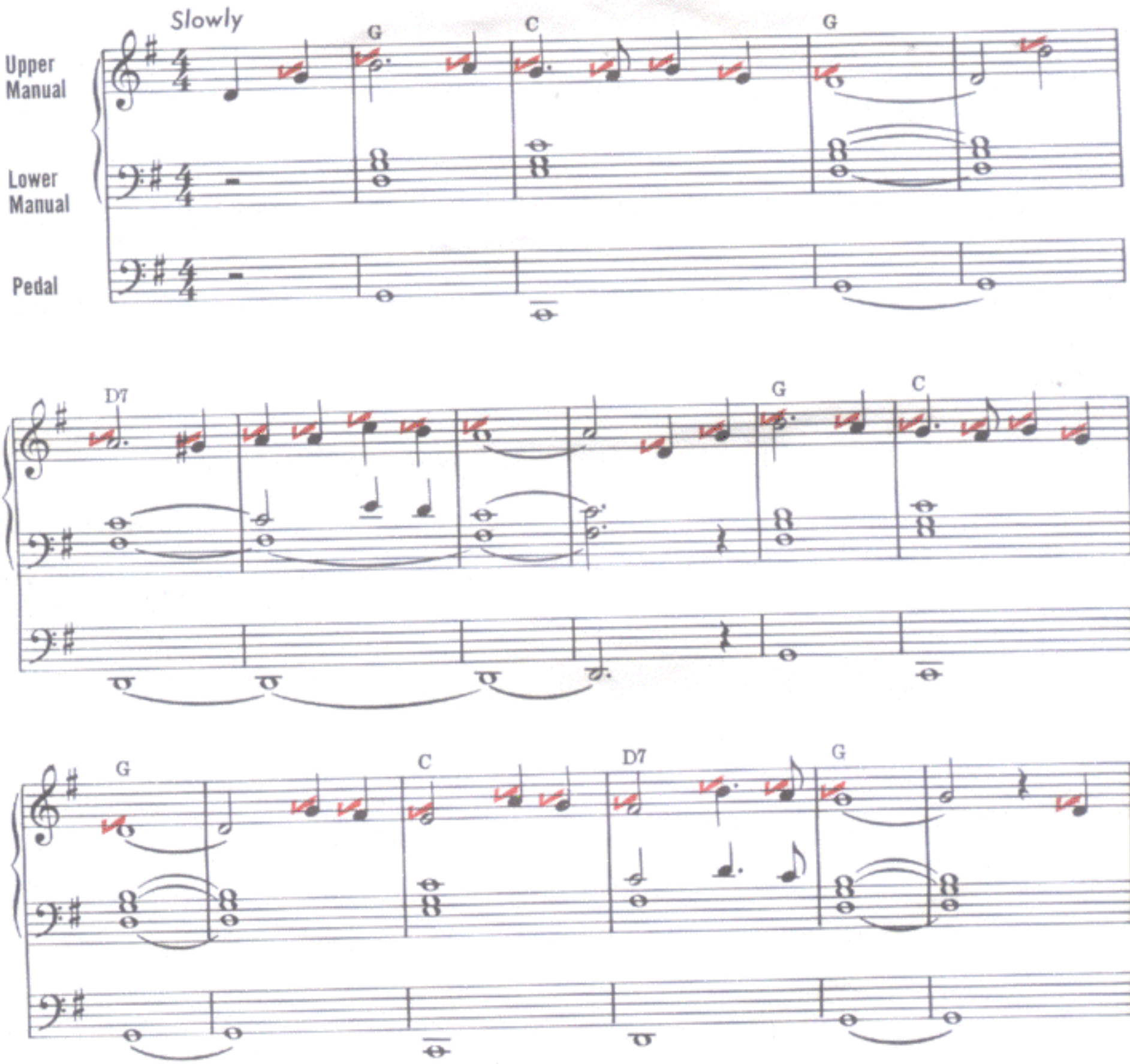
UPPER MANUAL: (B) 00 8650 000
LOWER MANUAL: A# 00 0422 000
PEDAL: 32
PERCUSSION: ON, NORMAL, SLOW, THIRD
VIBRATO: V-3

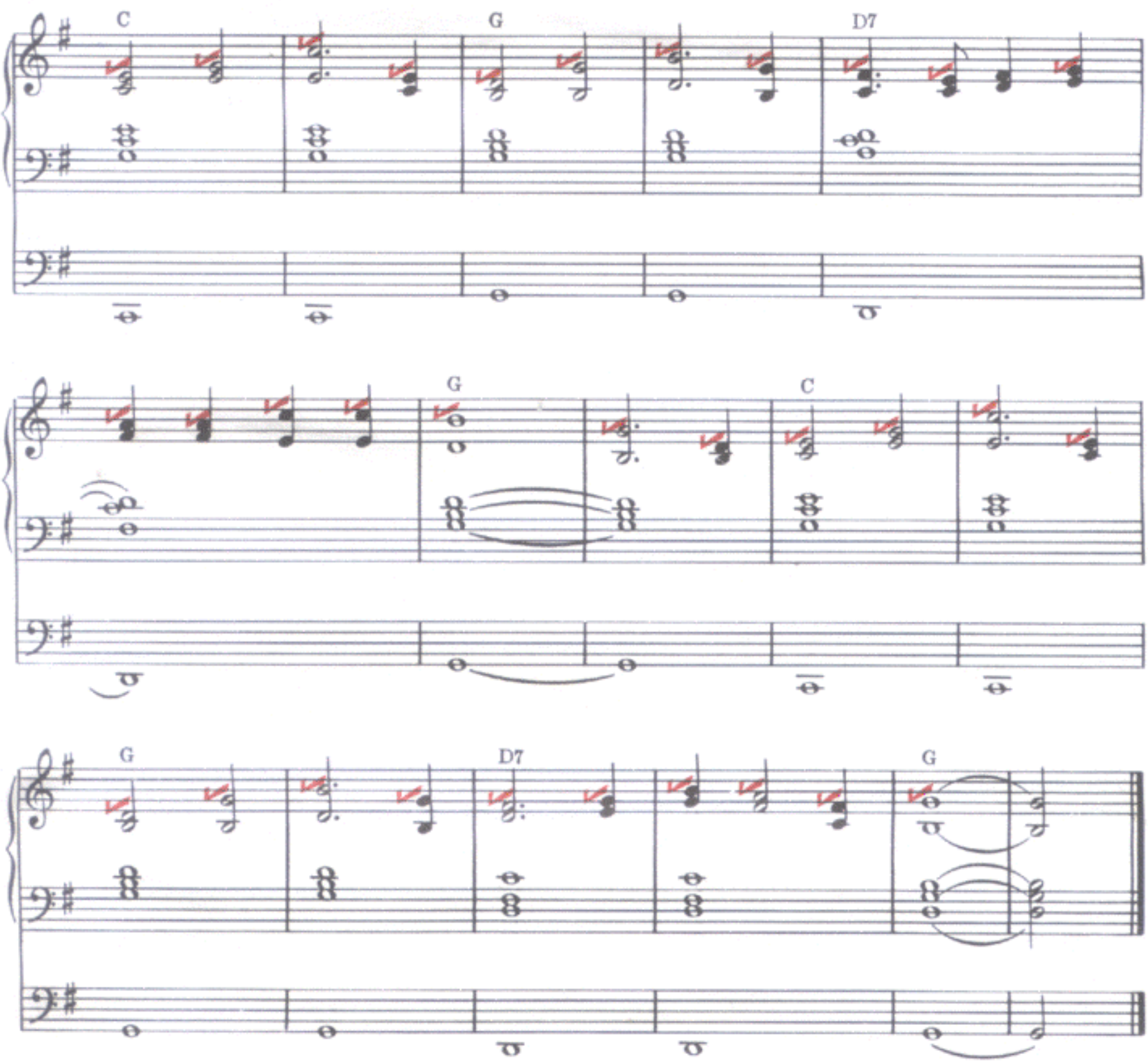


Aloha oe

Play the entire right-hand melody on the verse with the second finger. It will automatically produce the detachment needed for percussion tone. Then repeat, playing the melody part in the usual manner with slight detachment. You'll hear the same percussive tone even though you're playing in a very slightly detached manner.

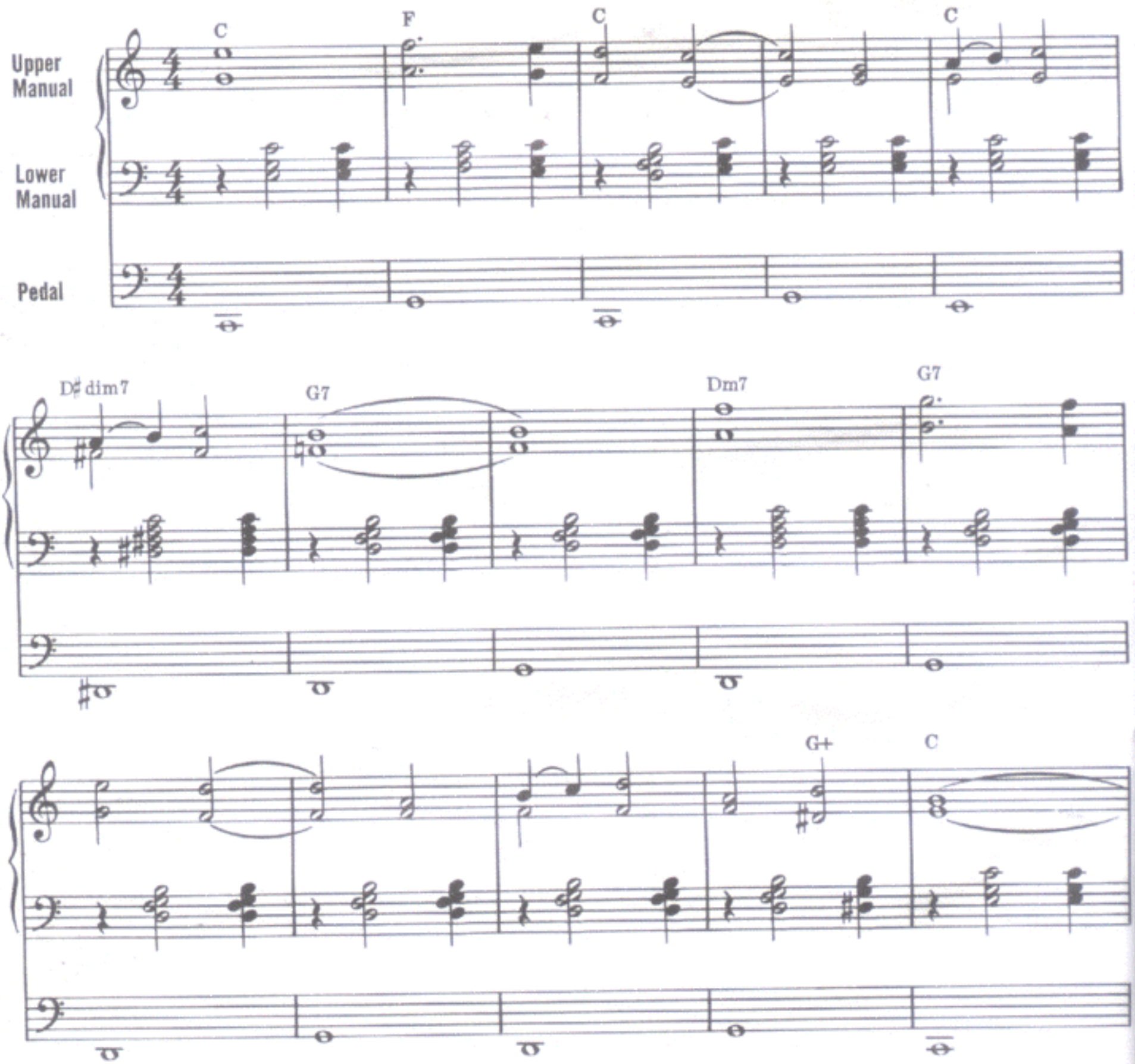
UPPER MANUAL: (B)00 8800 000
LOWER MANUAL: [B]00 5422 000
PEDAL: 32
PERCUSSION: ON, NORMAL, SLOW, SECOND
VIBRATO: V-3

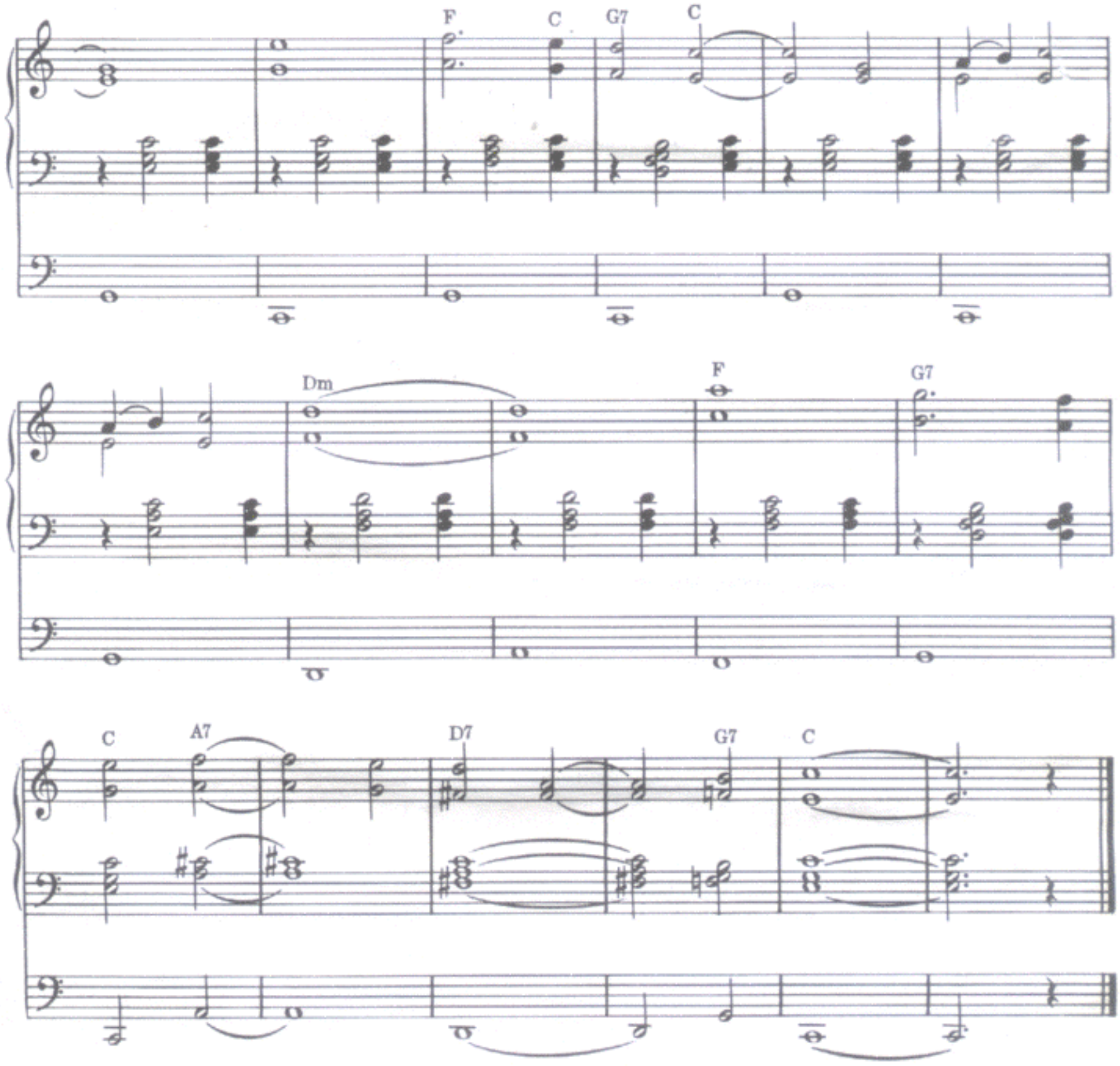



C
G
D7
G
C
G
D7
G

Andantino

UPPER MANUAL: (B) 80 8800 000
LOWER MANUAL: [A#] 00 4434 112
PEDAL: 54
VIBRATO: V-3



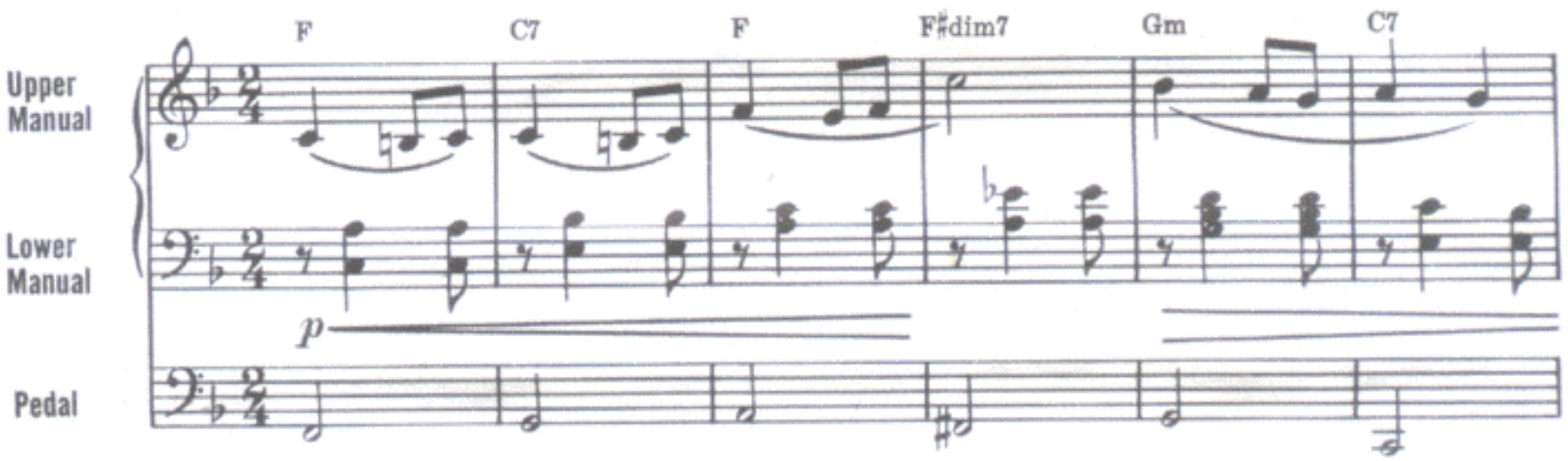

F
C
G7
C
Dm
F
G7
C
A7
D7
G7
C

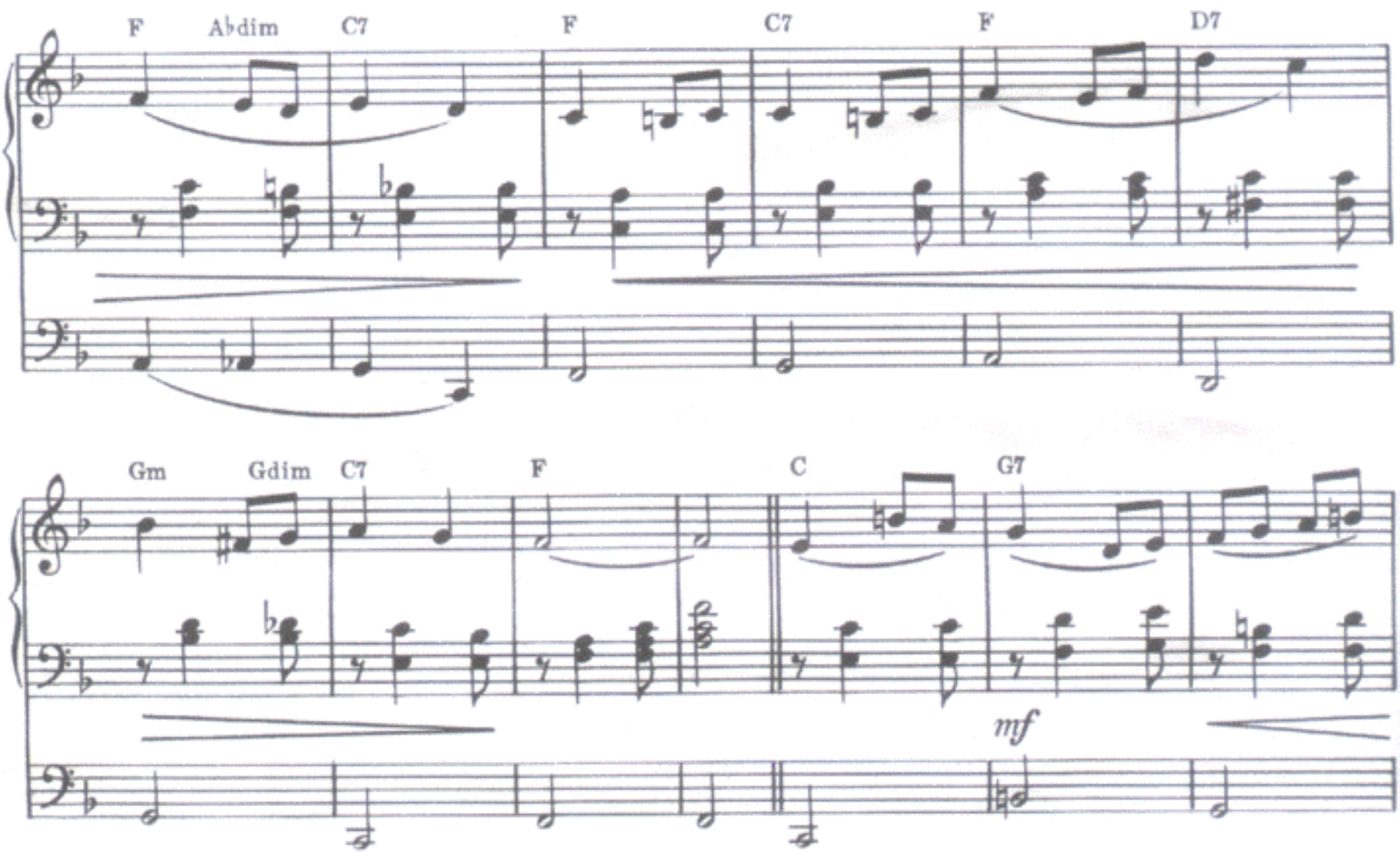
Melody in F

This is a simple, left-hand rhythm accompaniment. The chord detachment must be as slight as possible.

UPPER MANUAL: A# 00 8655
LOWER MANUAL: B 00 8855 866
A# 00 6434 111

PEDAL: 43
VIBRATO: V-3





C G7 C Fm

f

C Fm C Fm C Fm C Fm C

rit.

Change Upper Manual to Preset (B)

Tempo 1

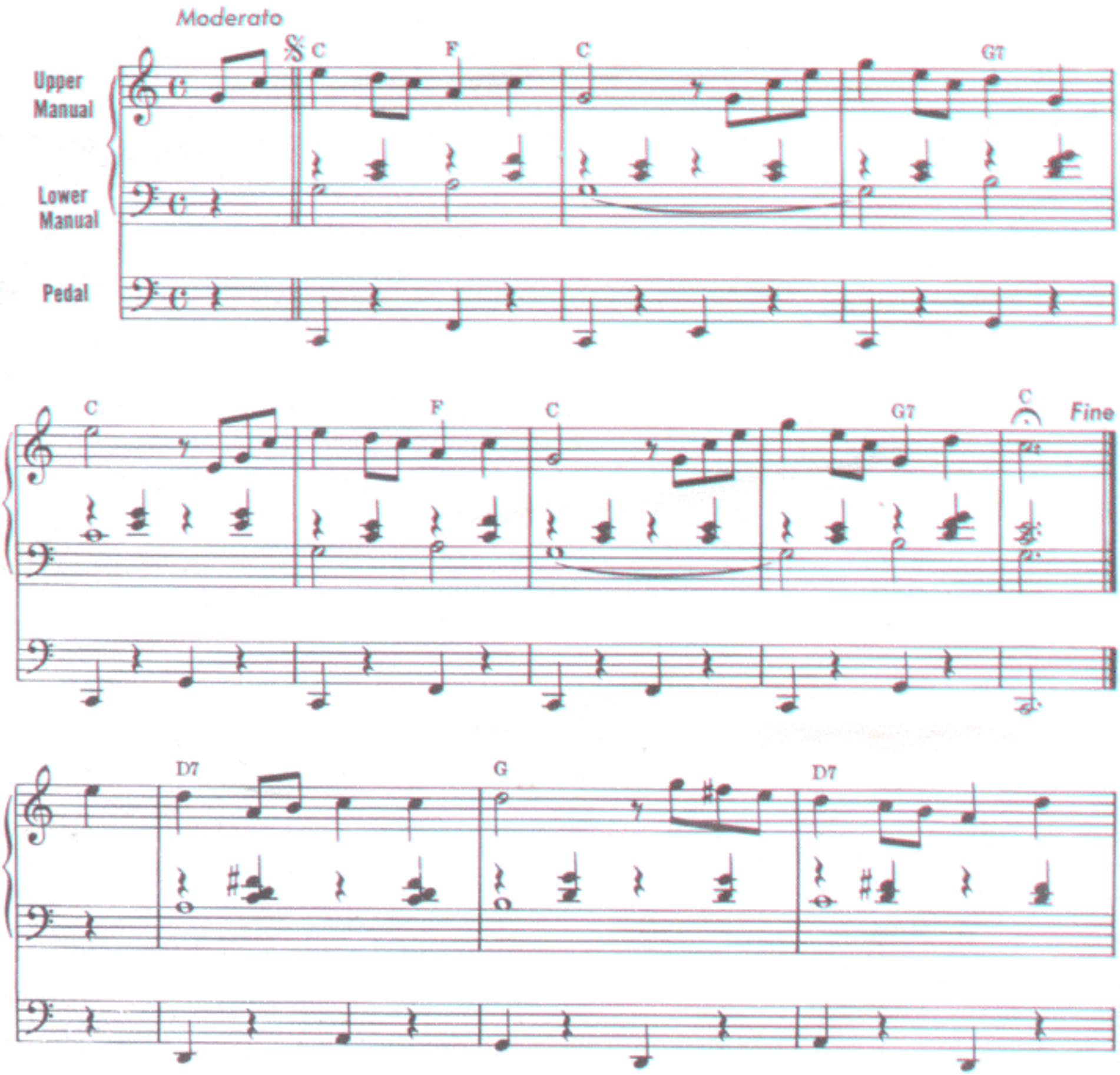
F C7 F D7 Gm C7 F A♭dim C7

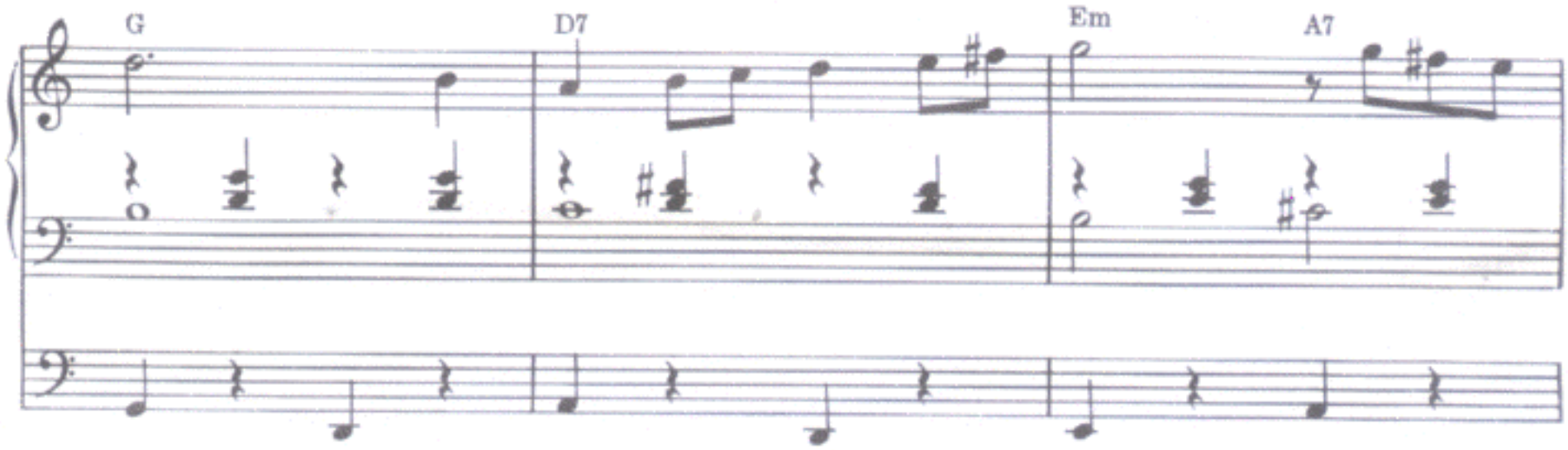
p

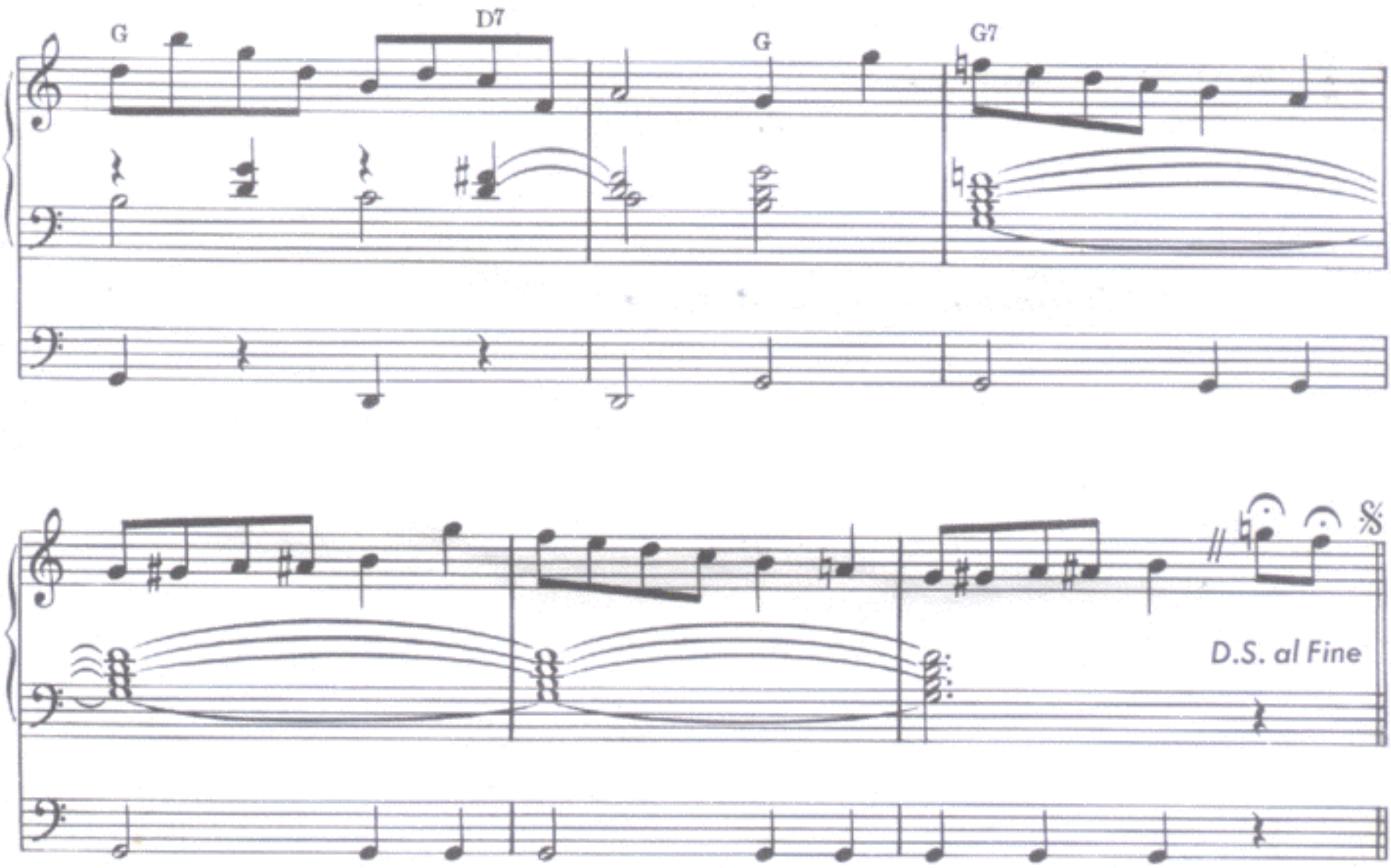
F C7 F D7 Gm C7 F

Forget-me-not

UPPER MANUAL: F
LOWER MANUAL: B 00 4433 221
PEDAL: 43
VIBRATO: V-3



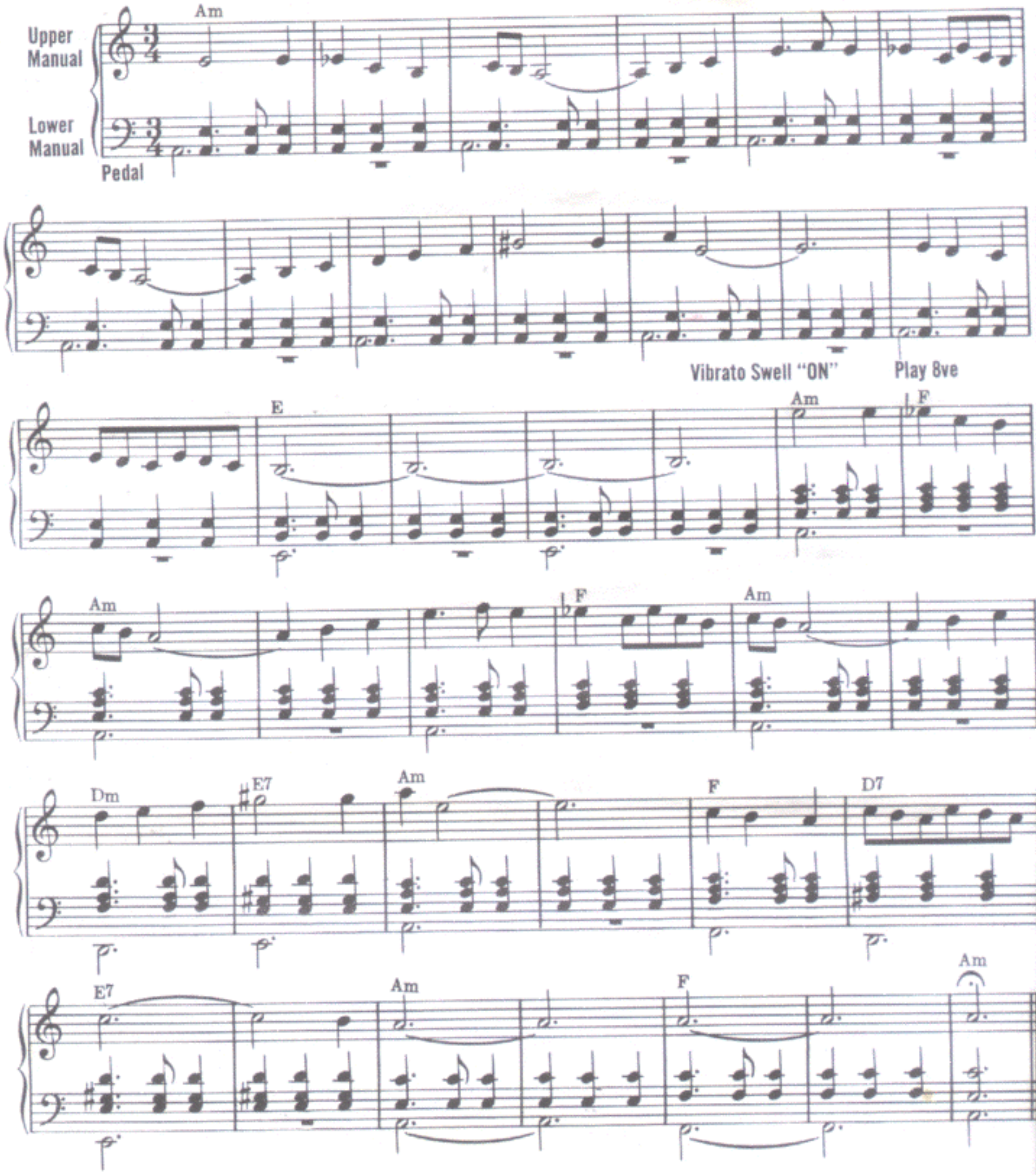

G
D7
Em
A7


G
D7
G
G7
D.S. al Fine

Orientale

Let's "orchestrate" by starting with a horn solo played in the register usually used by orchestral horns. Then change to a gypsy violin solo by playing one octave higher and using vibrato swell.

UPPER MANUAL: A# 00 5788 643
LOWER MANUAL: A# 00 8050 300
PEDAL: 53.
VIBRATO: V-3 (Start without vibrato swell and vibrato great)



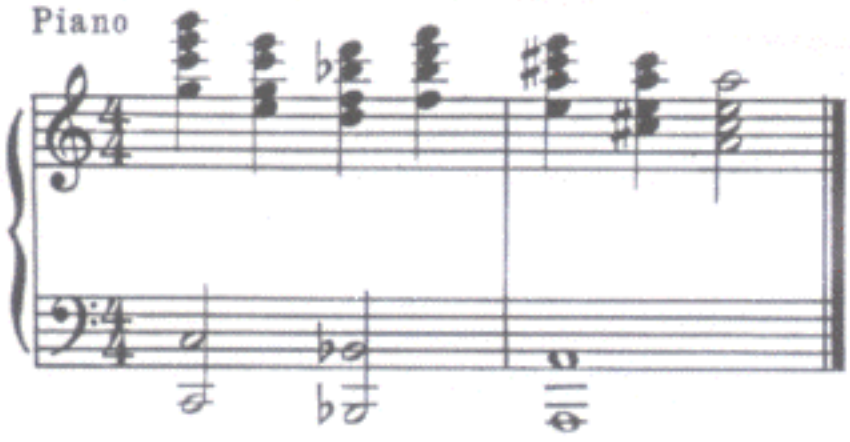
How to transpose piano music to organ music

Since accompaniments for soloists and choirs are generally for piano, piano music must be rearranged for organ. This simply means simplifying the music. The big difference between organ music and piano music is piano's sustaining pedal. Piano music features octaves, octave chords, arpeggios, long jumps from bass to treble, etc. All are impossible to perform on an organ. The organist must sustain tone with his fingers. Here are several tips on how to simplify piano arrangements.

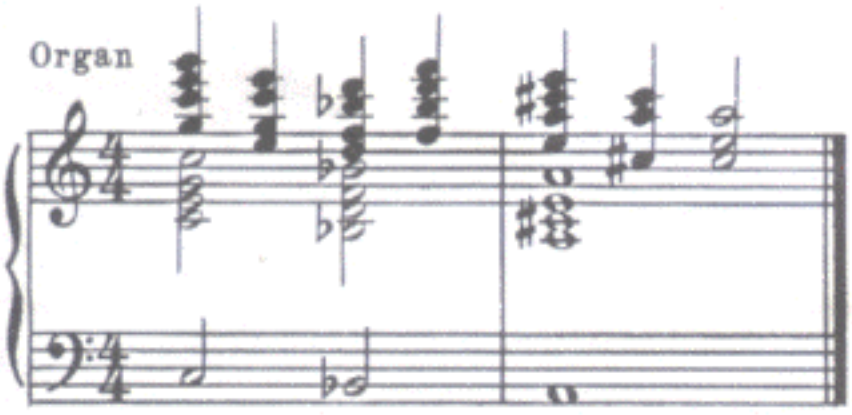
SUSTAINED CHORDS

a. Don't play music low on bass clef.

Piano



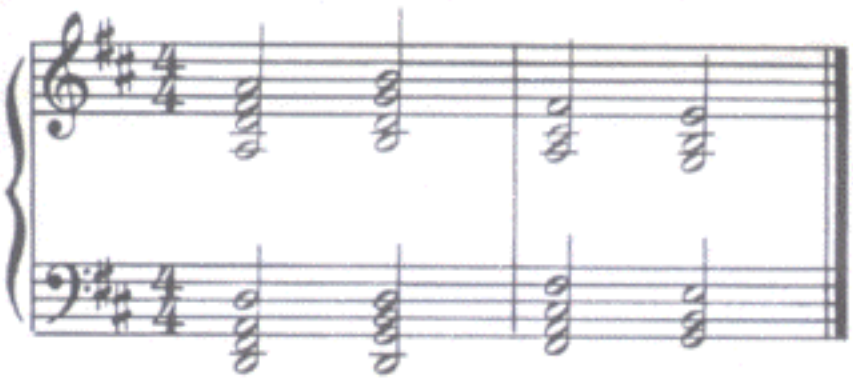
Organ



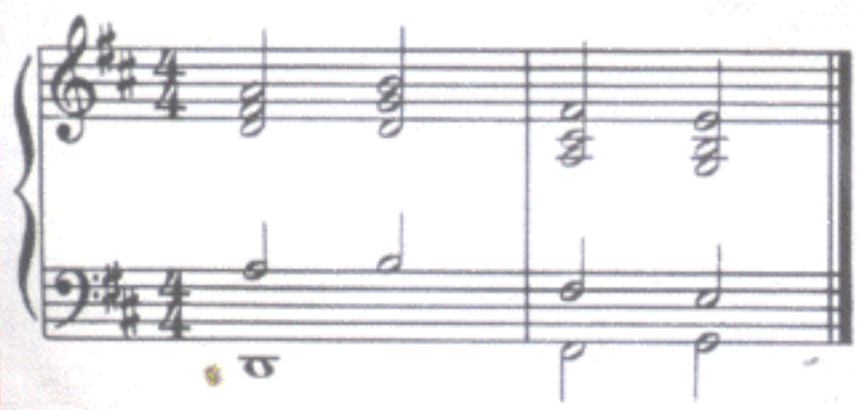
Ped.

b. Play extreme upper range chords in middle range.

Piano

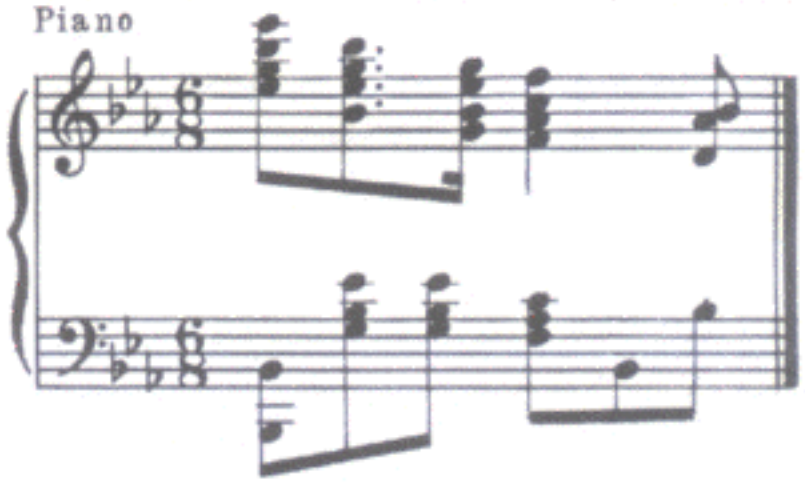


Organ



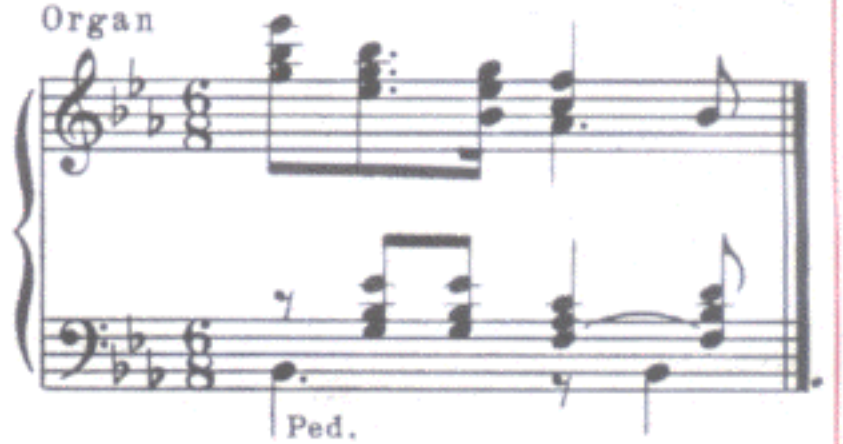
OCTAVE CHORDS

Piano



a. Drop bottom note.

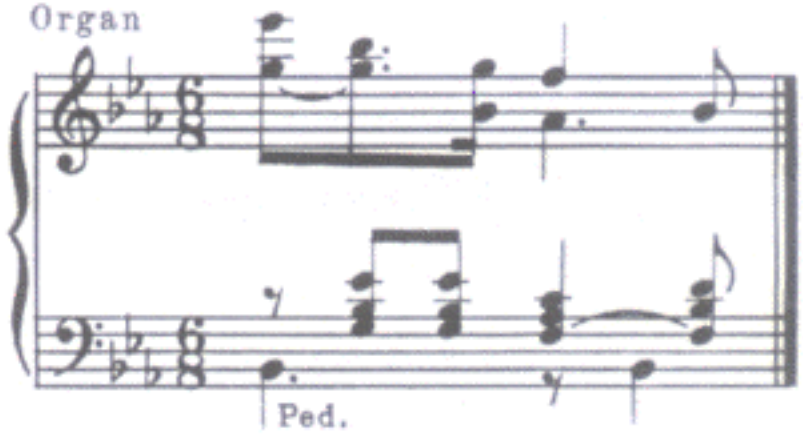
Organ



Ped.

b. Play only 2 notes as a duet.

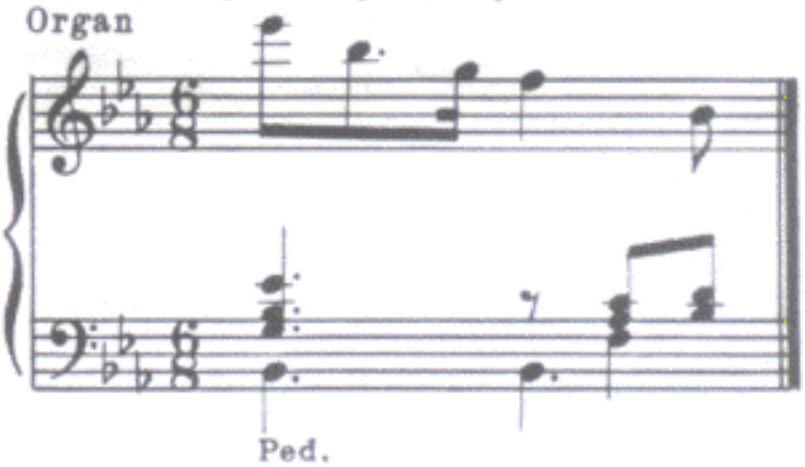
Organ



Ped.

c. Play only the top melody note.

Organ



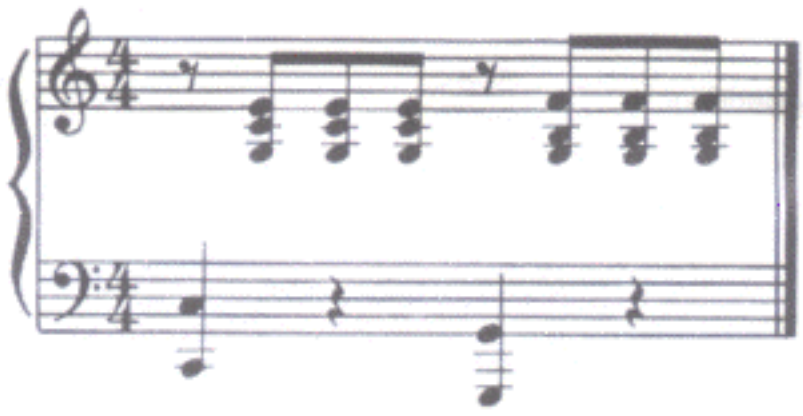
Ped.

How to transpose piano music (continued)

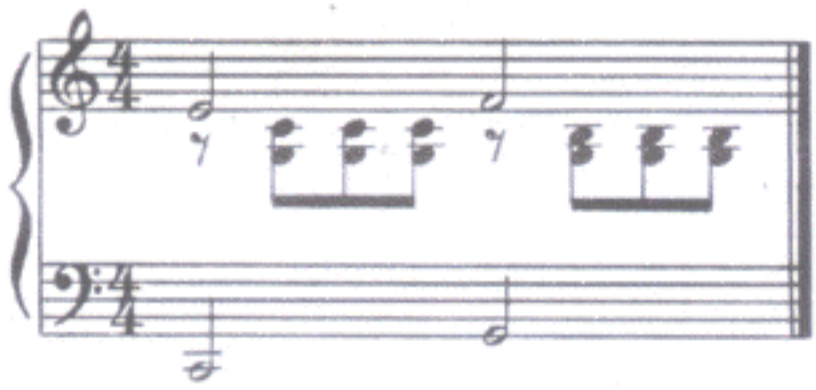
REPEATED CHORDS

a. Sustain top note; repeat remaining notes.

Piano

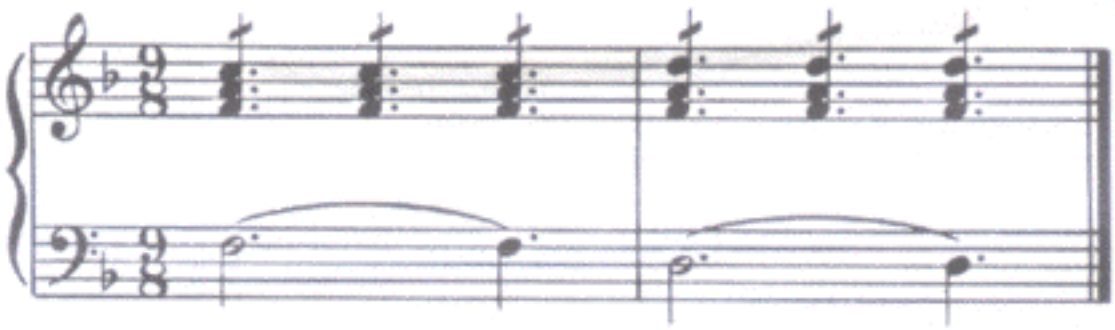


Organ

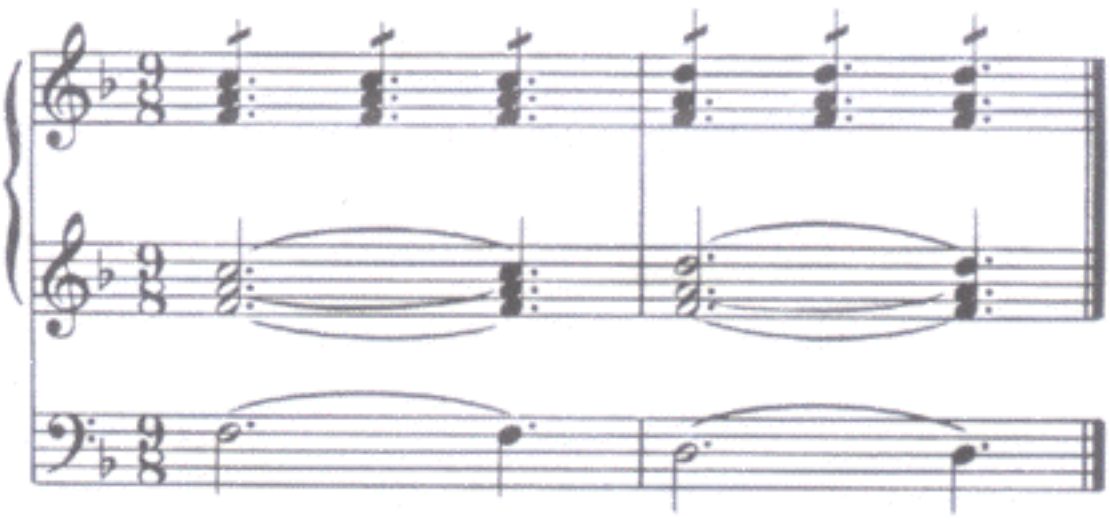


b. Sustain harmony on a "sustain tone"with the other hand.

Piano



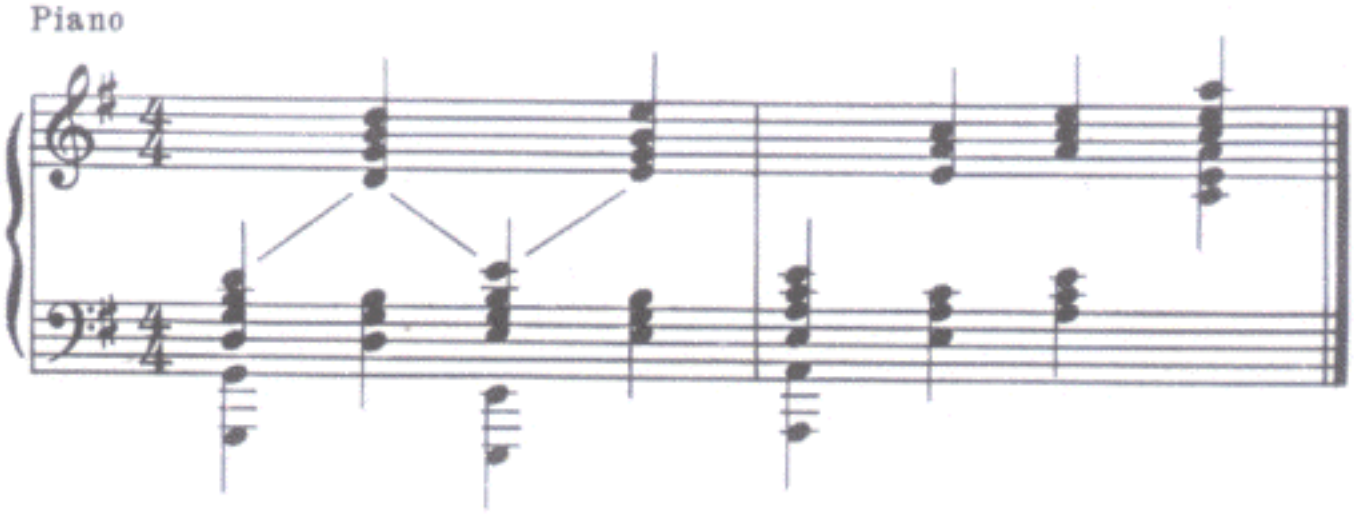
Organ



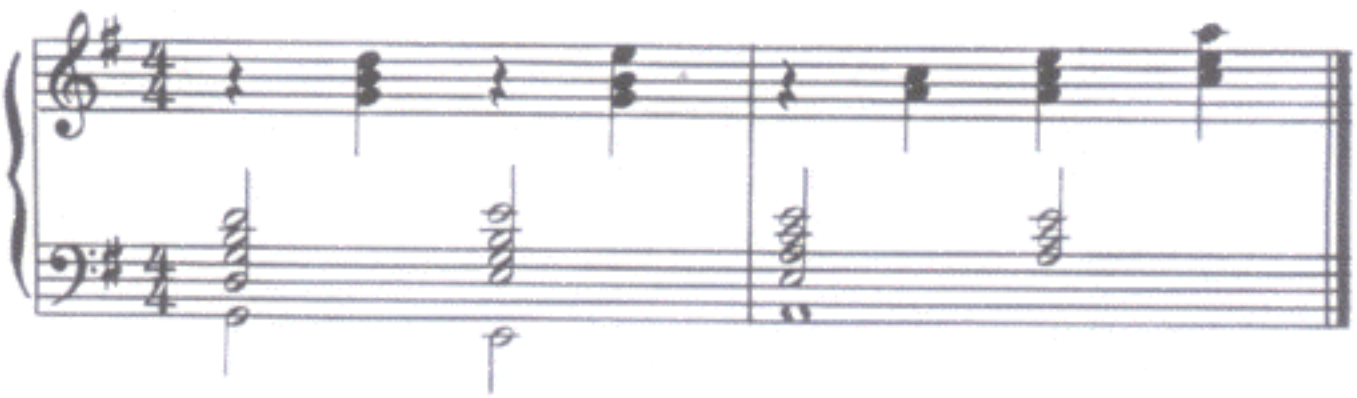
LONG JUMPS

a. Play the bottom chord with the left hand and sustain. Play top chord with the right hand.

Piano



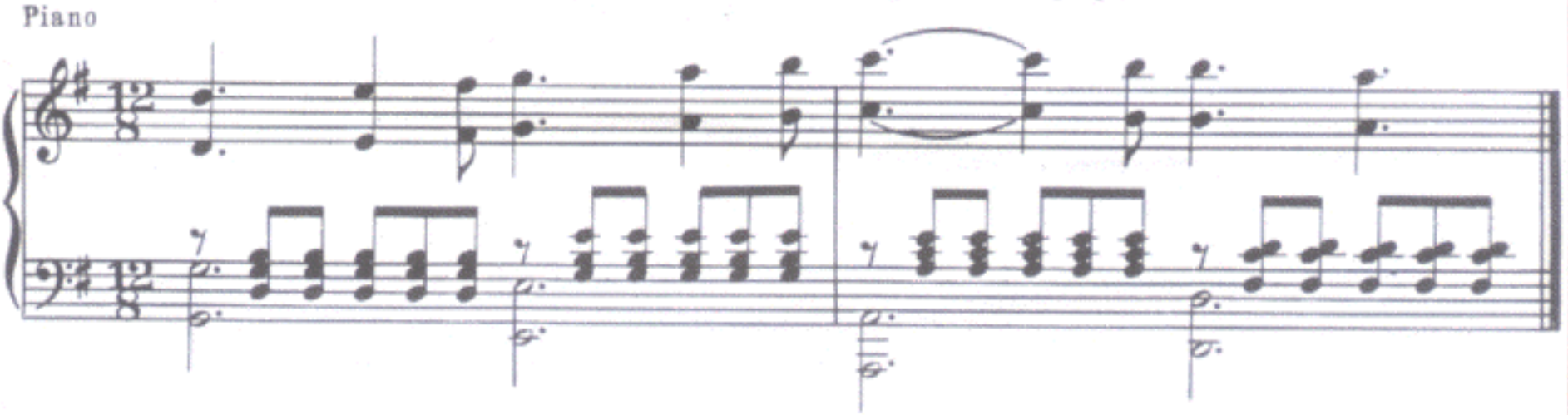
Organ



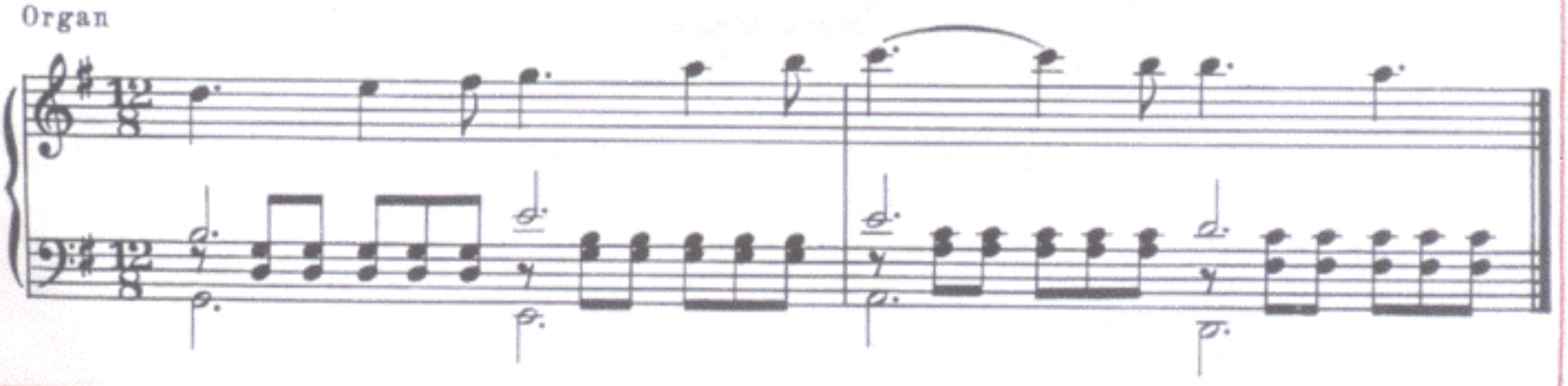
OCTAVES

a. Play only one of the notes. When playing top note, use a full 16′ and 8′ tone. Sub-octave drawbars are used so that the lower note of the octave sounds even though it's not played.

Piano



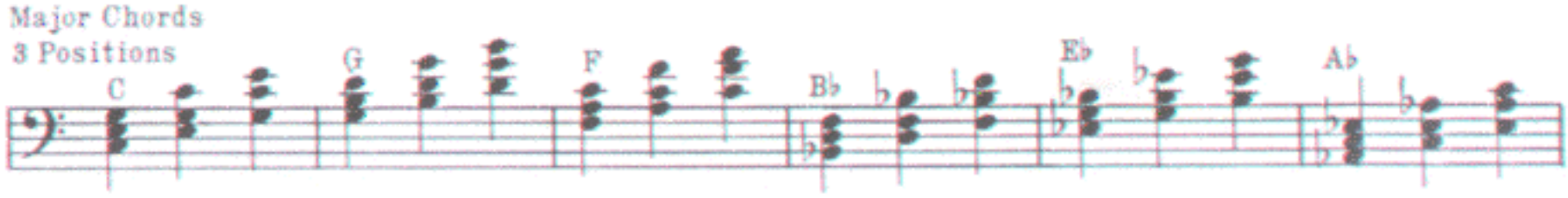
Organ



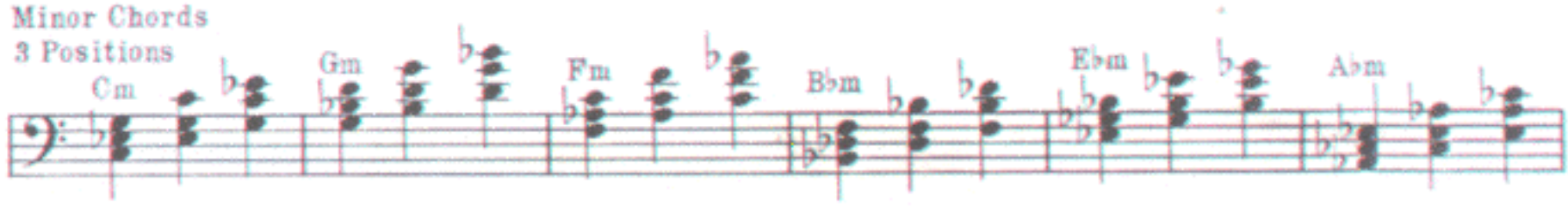
All about chords

CHORD CHART Root Position, First and Second Inversions

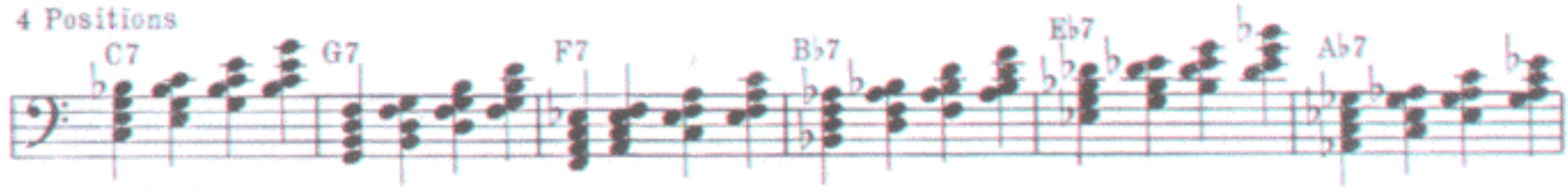
Major Chords
3 Positions



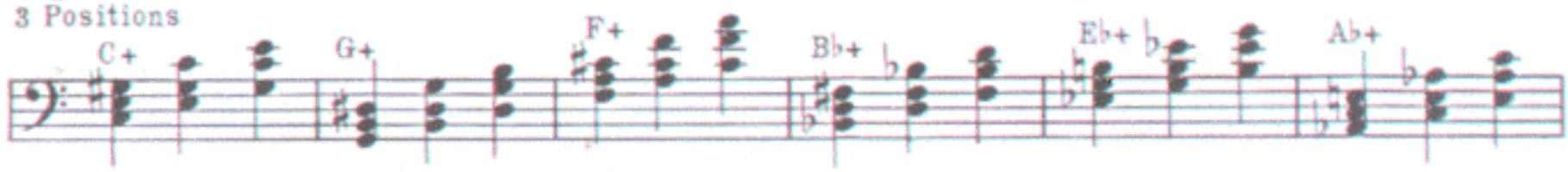
Minor Chords
3 Positions



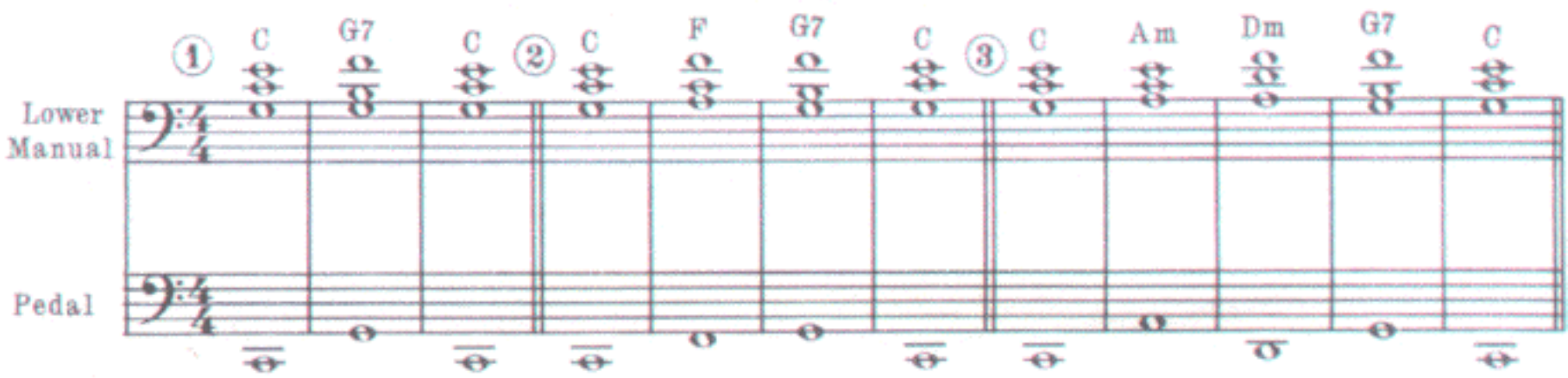
7th Chords
4 Positions

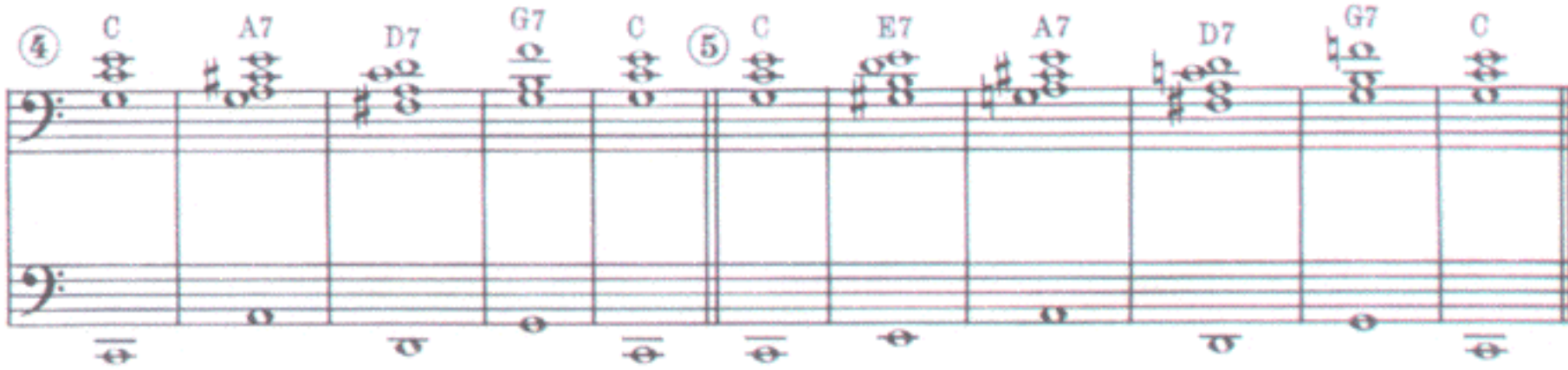


Augmented Chords
3 Positions



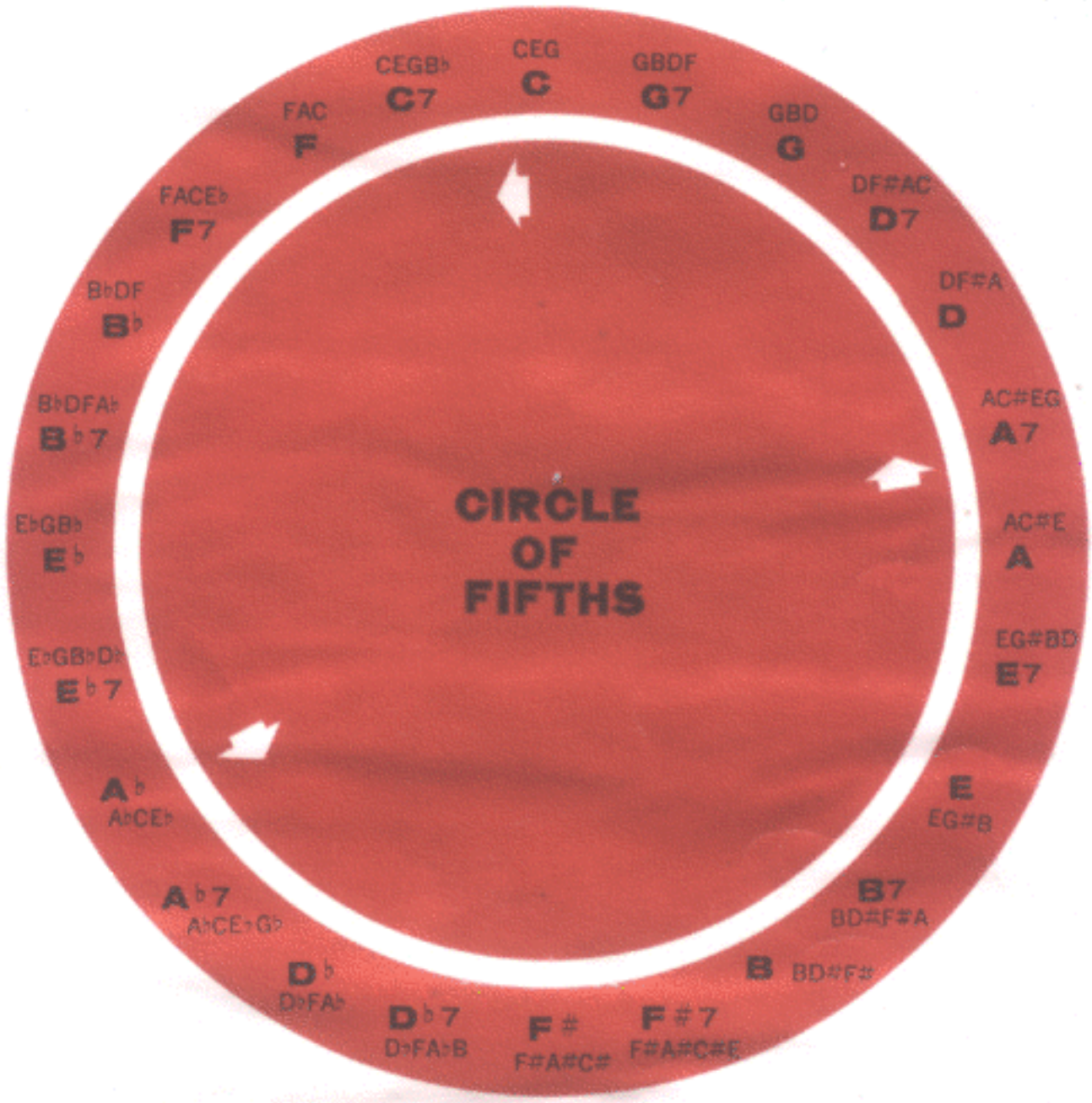
FIVE CHORD PATTERNS





CHORD MODULATION

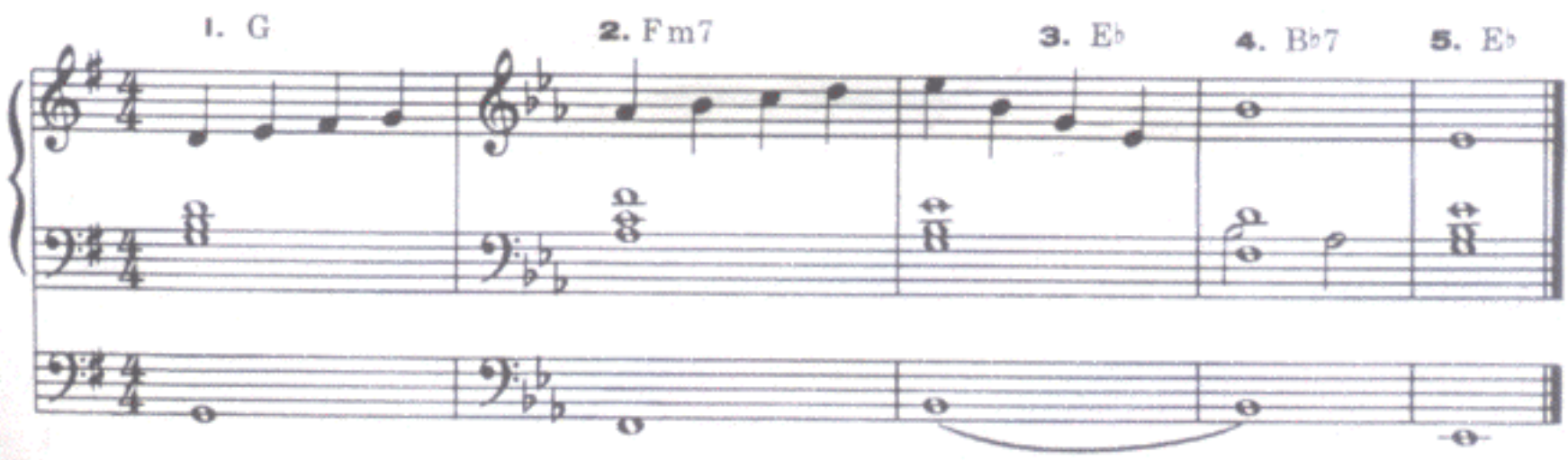
The key is the Seventh Chord. Study this Chord Wheel. The Wheel shows every major chord in its root position, and resolving to the Seventh. The Seventh Chords move constantly counter-clockwise. Play through the Wheel starting with C. You'll modulate to every key, and end on C, where you started.



A MODULATION FORMULA

Let's try going from the key of G to the key of Eb.

1. Play the G chord.
2. Go to the minor chord in the second degree—Fm7.
3. Then to the tonic (major) of Eb with the 5th in the bass.
4. Next, to the Dominant 7th—Bb7.
5. Then to the tonic. And you have the new key—Eb.



Musical terms

A cappella — Choral music without instrumental accompaniment.

Accelerando — Becoming faster.

Accidental — Sign of chromatic alteration, momentarily introduced for single notes or measures.

Adagio — Slow, tranquil.

Agogic — Denoting all the subtleties of performance achieved by modification of tempo.

Alla marcia — In march style.

Allegretto — Quite lively, moderately fast (faster than Andante, slower than Allegro).

Allegro — Lively, rapid.

Andante — Moving, moderately slow.

Andantino — A little faster than Andante.

Appoggiatura — Note of embellishment, grace note.

Attack — The speed with which an organ speaks; time between the playing of a note and the resulting tone.

Augmented interval — Interval increased by a half step.

Aria — An elaborate solo song.

Arpeggio — Notes of a chord when played one after another.

A tempo — Return to the original rate of speed.

Cantabile — In a singing style.

Chromatic scale — Composed of successive half steps.

Coda — A concluding section added to a composition.

Con brio — With vigor and spirit.

Con moto — With movement.

Consonance — A combination of tones in agreement of sound.

Counterpoint — A study of melodies and their interrelationships.

Da capo al fine — Repeat from the beginning to the end (D.C.).

Dal Segno al fine — Repeat from the sign (𝄋) to the end (D.S.).

Decay — The time during which one or more sustained notes die away.

Diminished interval — Interval decreased by a half step.

Diapason — A flue-pipe work of the organ which forms the backbone of each manual; the characteristic full (foundation) sound of the organ.

Diatonic — Denoting the natural scale consisting of five whole steps and two half steps, e.g. as it is produced on the white keys of the keyboard.

Dissonance — A combination of tones in disagreement, unrestful, needing a consonance to follow for completeness.

Dolce — Sweet, soft.

Duet — Composition for or rendition by two performers.

Dynamic marks — Words, signs, etc., indicating degree of sound volume.

Etude — A study, primarily designed to aid the student in the development of his mechanical and technical ability.

Fine — Close, end.

Flat — Sign (♭) which indicates lowering the pitch of a note by a half step.

Forte (f) — Loud.

Fortissimo (ff) — Very loud.

Glissando — The execution of rapid scales by a sliding movement of the hand or finger over the keys.

Half Step — Next adjacent key up or down.

Harmonics — Over-tones (or integral multiples of fundamental frequency) that make up tone color.

Il canto ben marcato — The melody played very distinctly.

Largo — Extremely slow, broad.

Lento — Slow.

Legato — Connected, smooth.

Ledger lines — Lines added above or below the staff for those notes too high or low to be represented on the staff.

Meno — Less.

Mezzo — Half.

Mezzo forte (mf) — Moderately loud.

Mezzo piano (mp) — Moderately soft.

Misterioso — In a style suggestive of mystery.

Moderato — Moderate rate of speed.

Molto — Much.

Non tanto — Not so much.

Octave — Interval embracing eight diatonic tones; e.g. C to C, up or down.

Percussion — Pertaining to those instruments which are sounded by striking or shaking.

Perdendo — Gradually dying away.

Perfect Interval — The unison, 4th, 5th, and octave which retain the same character when inverted.

Pesante — Heavy.

Piano (p) — Soft.

Pianissimo (pp) — Very soft.

Poco a poco — Little by little.

Presto — Very quick.

Prestissimo — As fast as possible.

Primo — First.

Rallentando — Gradually growing slower (rall.).

Rinforzando — A sudden stress applied to a single note or chord.

Ritardando — Gradually growing slower (rit.).

Ritenuto — Immediate reduction of speed.

Root — That note on which a chord is built.

Secondo — Second.

Semplice — Simple.

Sempre — Always.

Senza — Without.

Sforzando (sfz) — A sudden and strong accent on a single note or chord.

Sharp — The sign (#) which indicates a raising of a note by a half step.

Smorzando — Dying away.
Solfeggio—Singing the degrees of the scale by syllables (usually DO, RE, MI, etc.).
Sopra — Above.
Sotto — Under.
Strepitoso — Noisy.
Stringendo — Quickening.
Subito — Suddenly.
Syncopation — Any deliberate upsetting of the normal pulse of meter, accent, and rhythm.
Tacet — Is silent.
Tanto — Much, so much.
Tempo — Rate of speed of a composition.
Teneramente — Tenderly.
Tenuto — Hold, sustain.
Timbre — The color or quality of tone.
Timoroso — Timid, fearful.
Tremolo — A continuous fluctuation of amplitude used to increase the emotional quality of tone (sometimes denotes a light fluctuation of pitch, i.e. vibrato).
Tremulant — A mechanical organ device which produces pulsations of tone.
Triad — Three-toned chord: root, third, and fifth.
Troppo — Too much.
Turn — An embellishment consisting of four or five notes (usually a principal note played in alternation with its higher and lower auxiliary).
Una corda — In piano, a direction to use the left (soft) pedal.
Unison—The pseudo-interval formed by a tone and its duplication.
Veloce — Quick.
Vibrato—A continuous fluctuation of pitch used to increase the emotional quality of tone.
Vivace — Lively, brisk.
Vivo — Lively.
Whole step — Two half steps.

Musical symbols

Crescendo — Increasing in loudness.

Decrescendo or Diminuendo—Decreasing in loudness.

Slur — Curved line spanning two or more different notes to show they are played legato.

Tie— Curved line spanning same notes, meaning hold for total count of notes.

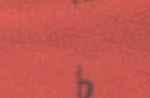
Hold — Prolong time value of note or rest at performer's discretion.

Time signature

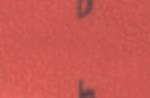
Treble clef sign

Bass clef sign

Sharp sign



Flat sign



Natural sign

Staccato — Played detached.

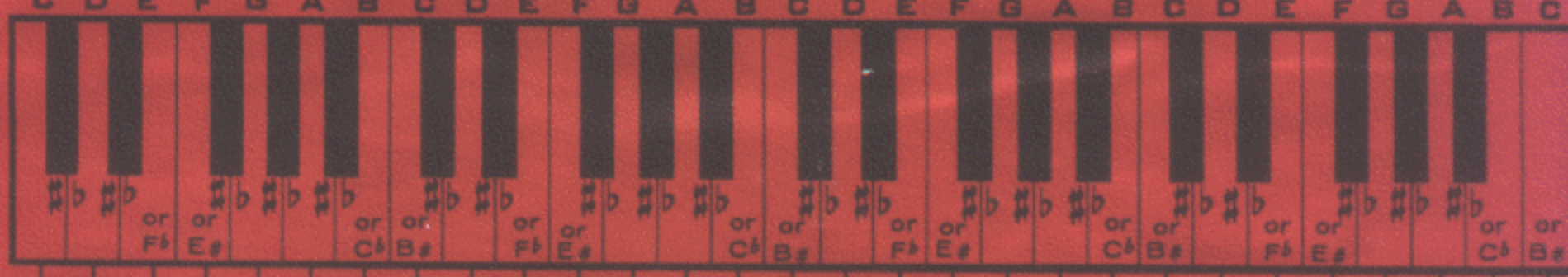
Triplet—Three notes played in the count of one note of the next higher value.

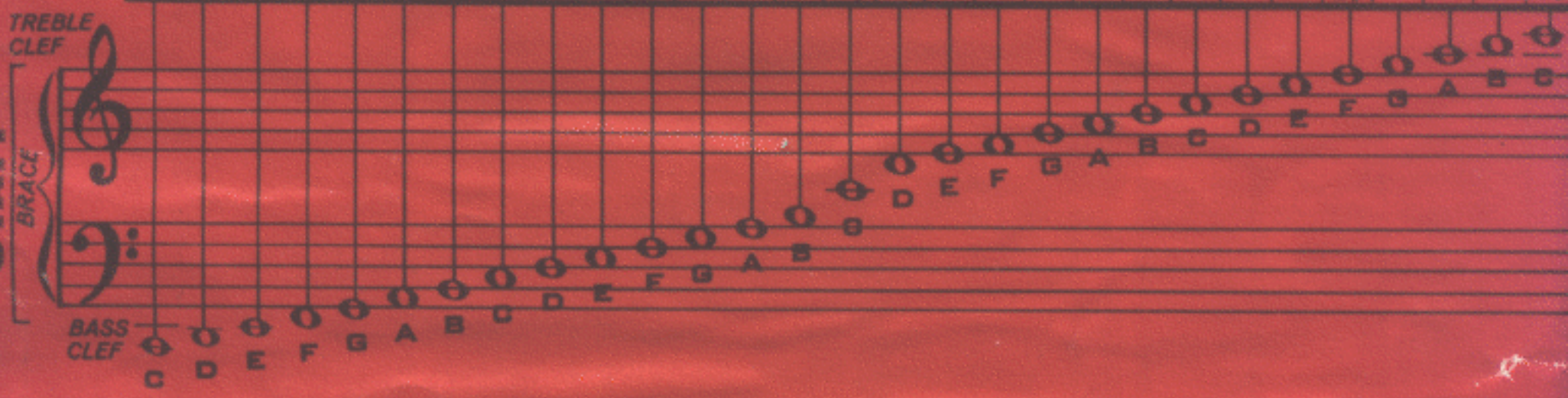
Grace Note — Short appogiatura.

Repeat Signs — See "Dal Segno al fine."

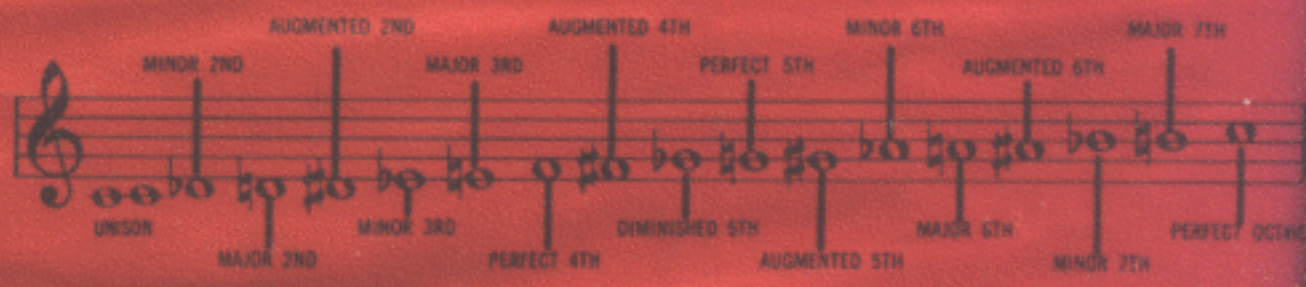
THE LANGUA

THE KEYBOARD





INTERVAL: the difference in pitch between two notes (here shown relative to middle C)



TRIADS

MAJOR: 1-3-5 AUGMENTED: 1-3-♯5
MINOR: 1-♭3-5 DIMINISHED: 1-♭3-♭5

MOST USED CHORDS

I or TONIC
IV or SUBDOMINANT
V or DOMINANT

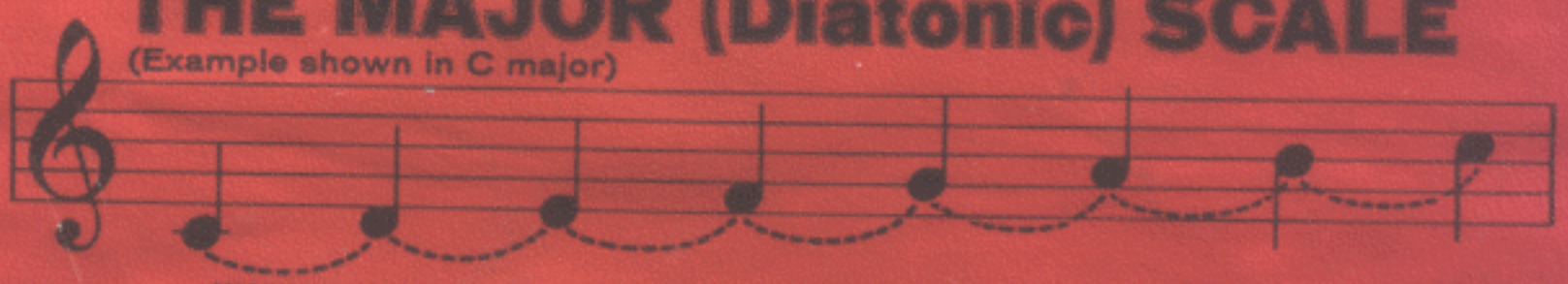
SCALE DEGREES

I	Tonic	V	Dominant
II	Supertonic	VI	Submediant
III	Mediant	VII	Leading Tone
IV	Subdominant		

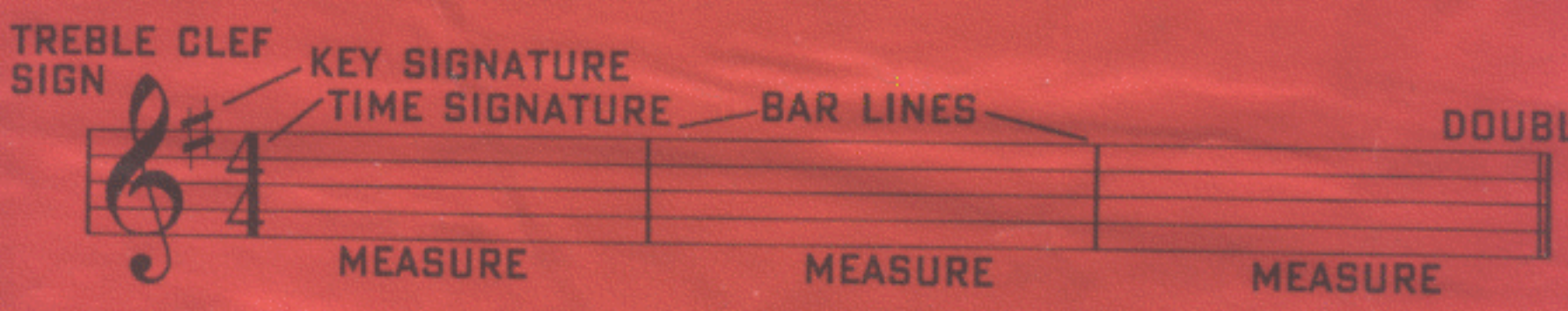
GE OF MUSIC

THE MAJOR (Diatonic) SCALE

(Example shown in C major)



PATTERN	WHOLE STEP	WHOLE STEP	HALF STEP	WHOLE STEP	WHOLE STEP	WHOLE STEP	HALF STEP
ALPHABET	C	D	E	F	G	A	B	C
SOLFEGGIO	DO	RE	MI	FA	SOL	LA	TI	DO
NUMBERS (Denoting degrees of scale)	1	2	3	4	5	6	7	8(1)
ROMAN NUMERALS (Denoting chord, harmony)	I	II	III	IV	V	VI	VII	I



TIME SIGNATURES

Upper number determines counts per measure.

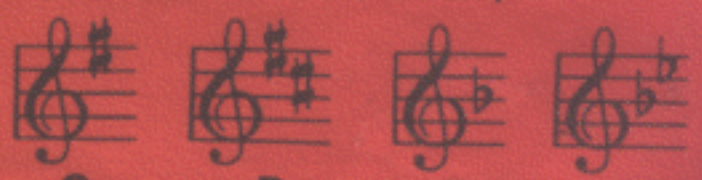
Lower number determines value of note getting one count.

The letter "C" (or C) following the clef sign means "common time" or 4/4.

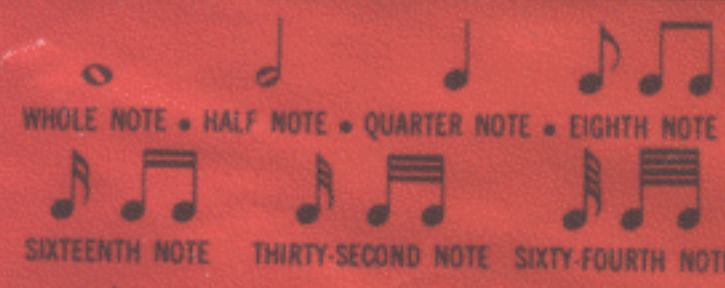
$\frac{4}{4}$ $\frac{3}{4}$ $\frac{2}{4}$ $\frac{6}{8}$ $\frac{3}{8}$ $\frac{3}{2}$ $\frac{9}{8}$

KEY SIGNATURES

The sharps (♯) or flats (♭) appearing at the beginning of each staff indicate the key of the composition. For example:

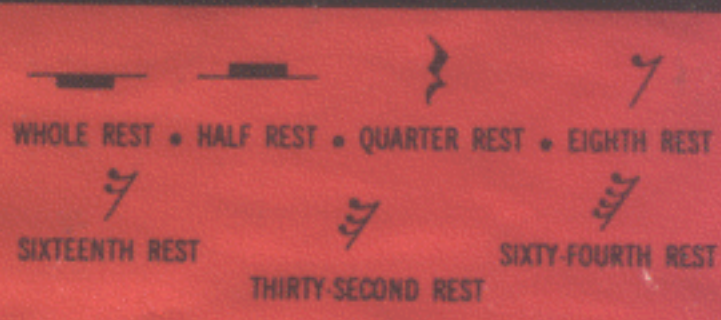


NOTE VALUES



A dot ♩. following a note augments its value by one-half.

RESTS



How to care for your Hammond

POWER: Connect your organ to any 117 volt AC convenience outlet.

TUNING: Your tonewheel organ never requires tuning. And temperature and humidity do not affect it.

PLASTIC KEYS & TABS: Clean lightly with a soft cloth or chamois slightly dampened. Do not use a dry cloth. It builds up an electrostatic charge which attracts dust particles from the air.

PEDALS: Clean the same as plastic keys and tabs.

FINISH: Dust with soft damp cloth or chamois. Use mild soap and lukewarm water if necessary. Apply it with a soft cloth. Remove it with a clean, soft cloth slightly dampened. Dry thoroughly; rub with grain. Excessive rubbing in one spot or at edges may damage the finish. Use a good grade of liquid furniture wax.

SHIPPING Arrange to have your organ properly packed by your Hammond Organ dealer if not by a regular furniture mover. Don't risk damage to your valuable instrument by letting inexperienced movers handle it.

NOTE: Please make certain you send in your Warranty Card today to insure your instrument's warranty protection. You'll also enjoy receiving your quarterly issue of the colorful and informative Hammond Times.