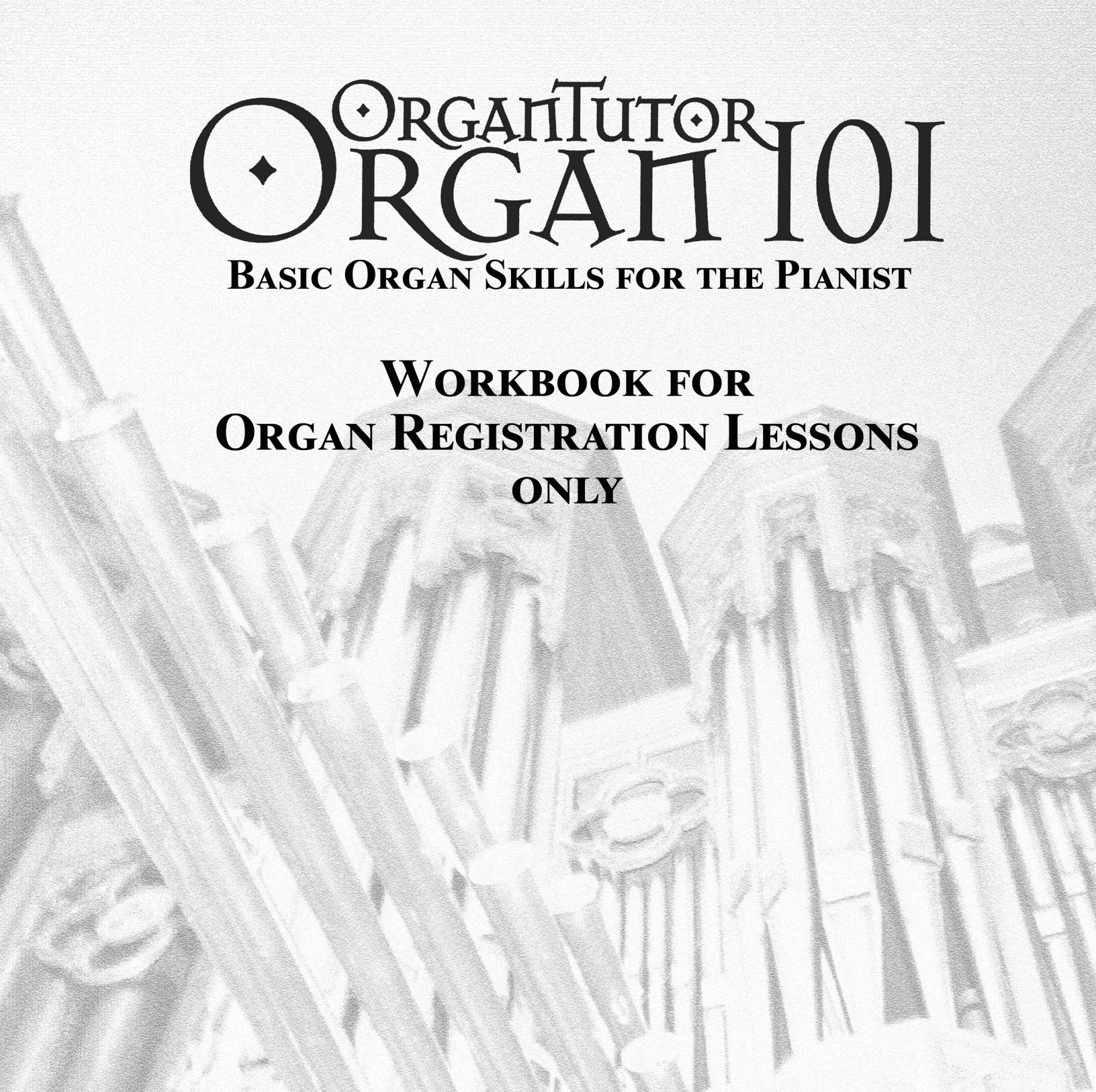
OrganTutor Organ 101

Basic Organ Skills for the Pianist

Workbook for Organ Registration Lessons only



A workbook containing written exercises & instructions
to be used with the OrganTutor Online tutorial
organ registration lessons only

by Dr. Don Cook
Associate Professor of Music
Brigham Young University

OrganTutor Registration Workbook Version 3.3

Ard Publications
ardpublications.com

OrganTutor Organ 101 Online Tutorial Version 4.0

organtutor.byu.edu

Registration lessons licensed for members of the American Guild of Organists
agohq.org (The New Organist)

Creative Works Office
3760 HBLL
Brigham Young University
Provo, Utah 84602
creativeworks.byu.edu/catalog
organtutor.byu.edu

This workbook contains supporting materials for the Organ Registration lessons of the OrganTutor Organ 101 online tutorial. These lessons were taken from the Organ Registration unit of that tutorial.

ORGAN REGISTRATION

RESOURCES

COMMON STOP NAMES LISTED BY PIPE CATEGORY AND FAMILY OF ORGAN TONE

See the OrganTutor lesson, "Families of Organ Tone."

Study goal: if you see one of these stop names, know immediately to which family of organ tone it belongs. For some helpful electronic flash cards, visit flashcardmachine.com and find "Organ Stops by Family2".

FLUE pipe category

Flute family

Blockflöte
Bourdon (– doux, Contre –)
Chimney flute
Clarabel(la)
Copula
Cor de nuit
Doppelflöte
Fife
Flachflöte
Flautino
Flauto dolce
Flûte (– à bec, – à fuseau, – bouchée, – celeste, – harmonique, – ouverte)
Gedackt (Gedeckt) (– flûte)
Harmonic flute
Hohlflöte
Holzgedackt
Koppelflöte
Larigot
Lieblich gedeckt
Melodia
Nachthorn
Nazard (Nasard, Nasat)
Octavin
Open flute
Orchestral flute
Piccolo
Pommer
Quintatön (Quintadena)
Quintflöte
Rohrflöte
Sifflöte
Spillpfeife
Stopped diapason
Subbass
Tibia
Tierce (Terz)
Traverse flute
Waldflöte
Zauberflöte

Principal family

Choral bass
Diapason
Double diapason
Doublette
Dulciana
Fifteenth
Montre
Octave (Oktav)
Open diapason
Prestant
Principal (Prinzipal)
Quint(e)
Spitz prinzipal
Super octave
Twelfth

Chorus mixtures:
(Plein jeu, Mixture, Fourniture, Cymbal, Scharf, Acuta)

String family

Aeoline
Cello
Echo gamba
Fugara
Gamba
Salicet
Salicional
Unda maris
Viola
Viola da gamba
Viola celeste
Viola pomposa
Violone (Contre violone)
Voix celeste

Solo mixtures--Cornet II or III, Sesquialtera II (These are usually flutes unless they are found on the Great, in which case they are usually Principals)

Hybrid stops (share characteristics of more than one family)
Erzähler
Geigen (– diapason, – principal)
Gemshorn, Gemshorn celeste
Spitzflöte

REED pipe category

Reed family

Chorus reeds
Basson (Contre –)
Bombarde
Clairon (Clarion)
Doucaine
Dulzian
Fagotto (Fagott) [bassoon] (pronounced "fuh-GOT")
French trumpet
Hautbois [oboe]
Oboe
Posaune [trombone]
Rankett
Tromba
Trompette (Trompete)
Trumpet
Waldhorn

Solo reeds
Clarinet
Cromorne
English horn (Cor Anglais)
Festival trumpet
French horn
Horn
Krummhorn
Regal
Rohrkrummhorn
Rohr schalmei
Schalmei
Tuba (– mirabilis)

Other reeds
Vox humana (Voix humaine)

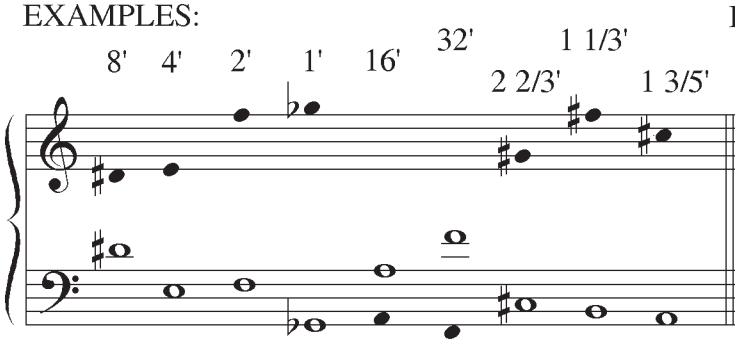
Some stop names that can easily be identified with the wrong family are underlined.

WORKSHEET: PITCHES OF ORGAN STOPS

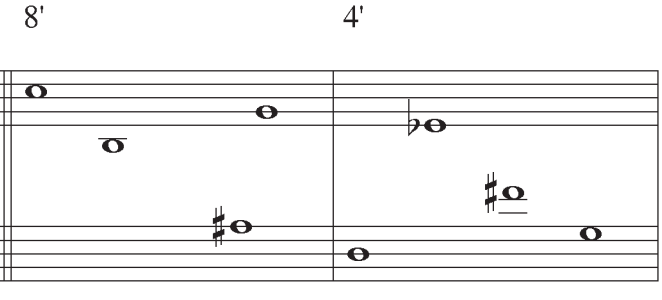
See the OrganTutor lesson, "Pitches of Organ Stops."

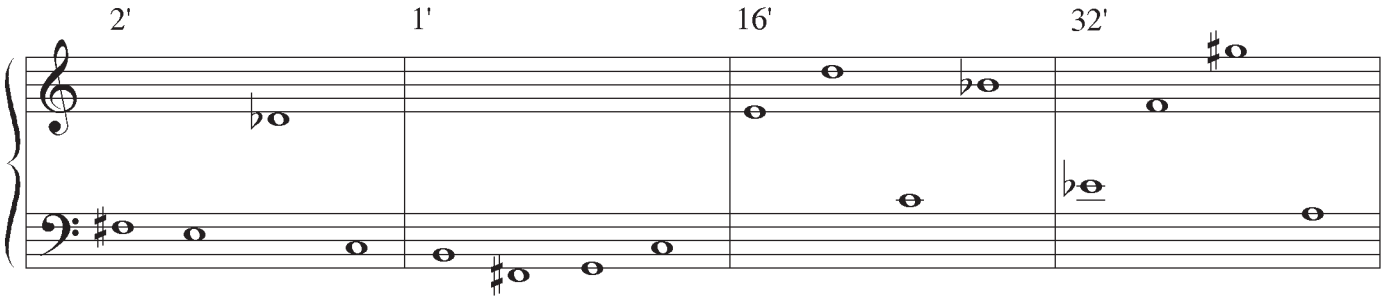
A note is played (shown as a whole note) and a stop is engaged (see the pitch designation above the staff). Write a solid notehead above or below each whole note to indicate the pitch that is heard.

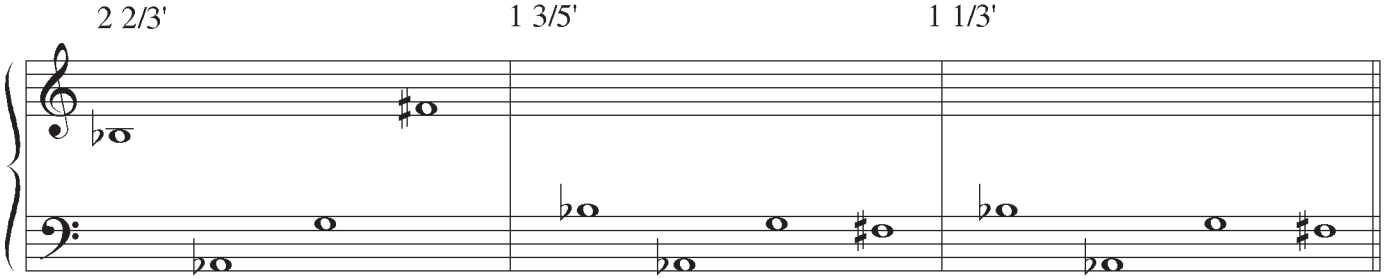
EXAMPLES:

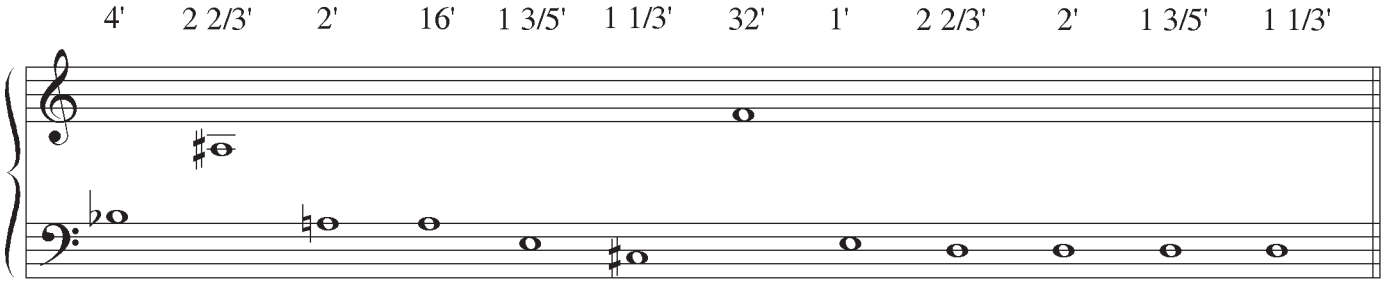


EXERCISES (four items per measure through system 3):



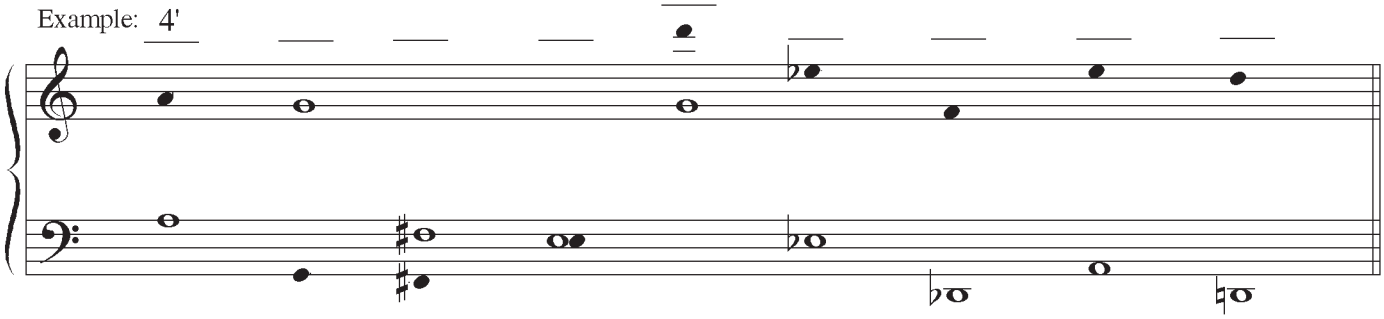






Write the PITCH DESIGNATION of the stop that must be pulled in order to hear the indicated pitch (solid) when the given note is played (hollow).

Example: 4'



STOP CLASSIFICATION EXERCISE

This exercise requires an understanding of the main concepts in all OrganTutor Registration lessons through "Non-Speaking Stops."

An organist who is completely familiar with each stop of an instrument is more likely to use those tonal resources more fully. As you are faced with an array of stops offered by an unfamiliar instrument, evaluate the instrument as you are about to do in the following exercise. This stoplist is typical of a large two-manual pipe organ or a small 2-manual electronic organ. Complete each of the following steps carefully, in order.

1. Write "MUT" next to any mutation stop.
2. Write "S M" for solo mixture or "C M" for chorus mixture next to any mixture stop.
3. Write INTRA for intra-manual coupler, INTER for inter-manual coupler, or if neither, "NON" for other non-speaking stop.
4. Place an asterisk(*) to the left of <u>the five ranks (only) within any division</u> that make up the CORNET.
5. Place the name and pitch designation of each and <u>every speaking stop</u> in its appropriate place on the table.

<u>GREAT</u>	<u>SWELL</u>	<u>PEDAL</u>
Violone 16'	Bourdon 8'	Diapason 16'
Principal 8'	Gemshorn 8'	Subbass 16'
Rohrflöte 8'	Viola 8'	Octave 8'
Flauto Dolce 8'	Viola Celeste 8' [II]	Gedackt 8'
Flute Celeste 8' [II]	Prestant 4'	Choral Bass 4'
Octave 4'	Koppelflöte 4'	Fagott 16'
Spitzflöte 4'	Nazard 2 2/3'	Great to Pedal 8'
Super Octave 2'	Blockflöte 2'	Swell to Pedal 8'
Quint 1 1/3'	Tierce 1 3/5'	Swell to Pedal 4'
Cornet II	Plein Jeu IV	
Mixture IV	Contre Basson 16'	
Tuba 8'	Trompette 8'	
Cromorne 8'	Hautbois 8'	
Swell to Great 16'	Swell to Swell 16'	
Swell to Great 8'	Swell Unison Off	
Swell to Great 4'	Swell to Swell 4'	
Tremulant	Tremulant	

	FLUE PIPES			**REED PIPES**	
	Flute Family	**Principal Family**	**String Family**	**Reed Family**	
	(position "hybrids" on either dashed line)			(chorus reeds)	(solo reeds)
GREAT					
SWELL					
PEDAL					

THE THREE PRIMARY TYPES OF ORGAN REGISTRATION

See the OrganTutor lesson, "Three Primary Types of Organ Registration."

Occasionally a composer or editor includes specific registration indications in a piece of music. In that case, the organist may come close to fulfilling the original intent. More often, however, there are few if any registration indications, leaving the choice of stops to the organist alone. When this is the case, the nature of the music itself, such as the musical texture and its form, are valuable registrational guidelines.

MUSICAL TEXTURE refers to the nature of the horizontal and the vertical elements--that is, the lines and the chords--and the way that they interact. In organ registration, one can focus on a single musical element: relative prominence and nature of the parts. The word "parts" usually refers to the horizontal lines—the instrumental equivalent of the various choral parts (soprano, alto, tenor, bass). In some cases, a "part" can also refer to a series of chords. "Relative prominence and nature of the parts," then, means "should one part be brought out? And is the nature of each part melodic or harmonic?"

Each *type of musical texture* is best suited to a particular *type of organ registration*. The three primary types of organ registration combinations are as follows:

1. CHORUS registration (all upper parts are played on a single manual, plus a balancing pedal part)
2. SOLO AND ACCOMPANIMENT registration (a part is played on a prominent solo sound on one manual, with an accompaniment played on an chorus-type registration (see above) on another manual, and the pedal is balanced to the accompaniment)
3. TRIO/DUO registration (two parts are played on different manuals and a third part appears in the pedal; a duo omits the pedal)

The following table will guide you through a process for determining the appropriate registrational type based on: 1. the number of manual parts, and 2. the relative prominence and nature of the parts. 3. A description of the pedal function follows. (Note: read the table left to right.)

1. What is the number of manual parts?	2. Describe the relative prominence and nature of the parts	Result: Use this registrational type	3. And this will be the pedal function	4. Here are some examples of types of pieces that often call for each registrational type
If there are TWO PARTS OR MORE (two or more manual parts plus pedal or with no pedal)—	and you decide that NO PART is prominent or more melodic in nature—	then use CHORUS registration—	and any pedal part will function as a bass part (normally build on a 16' foundation).	Hymns with pedal playing bass Preludes and fugues The interlude sections of many hymn preludes
	and you decide that ONE PART is prominent or more melodic in nature, and it would be feasible to play it on its own manual—	then use SOLO AND ACCOMPANIMENT registration—	and any pedal part will function either as a bass part (normally build on a 16' foundation) or as the solo part (use a 16', 8', or 4' foundation).	Hymns with soprano or tenor solo Some simple hymn preludes The hymn-melody sections of many hymn preludes So-called Trios that have one or two prominent parts
If there are ONLY TWO MANUAL PARTS (only two manual parts plus pedal or with no pedal)—	and you decide that BOTH of the two manual parts could be considered prominent or melodic in nature (or both manual parts AND the pedal part)—	then use TRIO/DUO registration—	and any pedal part will function either as a bass part (normally build on a 16' foundation) or as a third independent melodic part (use a 16', 8', or 4' foundation). (no pedal in duos)	True trios and duos

CHORUS REGISTRATION

See the OrganTutor lesson, "Chorus Registration."

FOR WHAT KINDS OF PIECES DOES ONE USE CHORUS REGISTRATION?

Chorus registration is used in music where all voices are equally important and no one voice predominates. Texture is chordal or layered, with both hands generally playing several voices at a time *on a single manual.* Congregational hymns played in their normal arrangement nearly always employ chorus registration, as do Bach preludes, toccatas, and fugues.

RULES FOR FORMULATION OF CHORUS REGISTRATIONS

1. Stops of the principal (diapason) family are preferred. If no principal stop is available at the desired pitch, or if you prefer a softer chorus, a clear flute stop such as a Gedeckt may be used. Chorus mixtures are an important element of most chorus registrations.

2. Choruses are built upwards from a foundation of 8' pitch on the manuals and 16' pitch in the pedals. They usually consist of at least two stops of different pitch. In rare cases where extra gravity is desired, the 16' manual stops and 32' pedal stops may be used. A brilliant chorus might include 8', 4', 2' stops plus a mixture. A chorus of moderate strength might include 8', 4', and 2' stops. A milder chorus would include only 8' and 4' stops.

3. Where clarity is important, build vertically, using only one stop at each pitch level (e.g., 8' Principal, 4' Octave, 2' Fifteenth). Where richness is more important, use a "pyramid" configuration, with more than one stop at lower pitch levels (e.g., 8' Principal, 8' Bourdon, 4' Octave, 4' Flute, and 2' Flute). Lean towards clarity for Baroque music (17th and 18th centuries), and richness for Romantic music (19th century).

4. Avoid gaps between octave pitches as you build up. For example, 8'/4'/2' and 16'/8'/4' are preferable to 8'/2' and 16'/4' (although the latter can be quite useful in solo lines where color is desirable).

5. Reed stops may be used to augment a chorus of flue stops. The reed will blend best when a mixture is also contained in the chorus. For example, you may add an 8' trumpet to a combination consisting of 8', 4', and 2' principals and mixture. Reed stops are particularly appropriate at climactic points in the music (e.g., on the last verse of a jubilant hymn).

6. Avoid soft stops which make little or no difference to the sound. Especially avoid celeste stops, which are intentionally detuned and take away from the clarity of the ensemble.

AESTHETIC CONSIDERATIONS FOR CHORUS REGISTRATIONS

1. The chorus should be of the appropriate volume for the music being played. Festive music calls for a bright and loud chorus including higher stops, mixtures, and possibly reed stops. More reflective music calls for a softer chorus consisting primarily of 8' and 4' principals or flutes.

2. Balance between the manuals and pedals is very important, as is balance between the individual stops. For example, a chorus registration made up of gentle flutes on the manuals and strong principals in the pedal will allow the manual parts to be swamped by the pedal part. A chorus of 8' flute, 4' flute, and 2' principal may be "top-heavy" and possibly shrill, while a chorus of 8' principal, 4' flute, and 2' flute might be "bottom-heavy" and lack clarity.

3. Clarity is critical since all of the voice parts or melodies will be played on the same sound. Listen carefully and be sure that all voices can be heard clearly. If not, consider thinning out the combination.

SOME TYPICAL CHORUS REGISTRATIONS	• (mf-f): 8' principal, 4' principal, 2' principal
• (mp): 8' flute, 4' flute	• (f): 8' principal, 4' principal, 2' principal, mixture
• (mf): 8' principal, 4' flute	• (ff): 8' principal, 4' principal, 2 2/3' principal, 2' principal, mixture, 8' reed
• (mf): 8' principal, 4' principal	• (fff): 16' flute, 8' principal, 4' principal, 2 2/3' principal, 2' principal, mixture, 8' reed, 4' reed

CHORUS REGISTRATION: EXAMPLES

EXAMPLE 1. Hymn, "Joy to the World" (George F. Handel)

EXAMPLE 2. "Fugue in C Major" (BWV 553) from Eight Short Preludes and Fugues (J. S. Bach)

EXAMPLE 3. Hymn, "Lord We Ask Thee Ere We Part" (Benjamin Milgrove, arr. Ebenezer Beesley)
(Register for organ solo, not for congregational accompaniment.)

EXAMPLE 4. "O Welt, ich muss dich lassen," Op. 122, No. 11 (Johannes Brahms)

CHORUS REGISTRATION: EXERCISE

1. In the first six columns create six different chorus-type registrational combinations on the Great, building from mezzo piano to fortissimo. In each column, first construct a Great combination *without couplers*, and then balance the Pedal accordingly. Using pencil, mark “X” to indicate your stop choices.

2. Next, as a separate exercise, build six chorus-type combinations on the Swell that increase in volume, independent of Great and Pedal.

3. Finally, create one combination for each example on the “Chorus Registration: Examples” page. Be sure to use the principles of chorus registration described in the OrganTutor lesson “Chorus Registration.” (The division from which borrowed stops are taken are indicated in parentheses.)

Rodgers T788L	*mp* - *ff*						ex. 1	ex. 2	ex. 3	ex. 4
PEDAL—Contre Bourdon 32’										
Principal 16’										
Subbass 16’										
Bourdon Doux 16’ (Swell)										
Octave 8’										
Gedeckt 8’										
Choralbass 4’										
Mixture IV										
Bombarde 16’										
Trumpet 8’										
Great to Pedal 8’										
Swell to Pedal 8’										
SWELL—Bourdon Doux 16’										
Geigen Principal 8’										
Viola 8’										
Viola Celeste 8’										
Bourdon 8’										
Prestant 4’										
Flûte 4’										
Nazard 2 2/3’										
Piccolo 2’										
Tierce 1 3/5’										
Plein Jeu IV										
Basson 16’										
Trompette 8’										
Oboe 8’										
Tremulant										
GREAT—Violone 16’										
Diapason 8’										
Gemshorn 8’										
Chimney Flute 8’										
Harmonic Flute 8’										
Flute Celeste II 8’										
Octave 4’										
Spitzflöte 4’										
Super Octave 2’										
Fourniture IV										
Trumpet 8’										
Cromorne 8’										
Tremulant										
Swell to Great 8’										

GUIDELINES FOR HYMN REGISTRATION IN CONGREGATIONAL SINGING

Don Cook

See the OrganTutor lesson, "Hymn Playing—Registration"

IN GENERAL

1. **Support** the congregation with confidence, but do not overpower.
2. The **principal chorus** (especially the 8' principal) should form the basis for registration in congregational singing. Start with the 8' principal and work up from there.
3. In **meditative hymns**, stops from the flute chorus might be substituted in place of principal stops to minimize sharpness, especially at the 4' and 2' level.
4. **8' and 4' pitches** are minimum for the manual; 16' and 8' are minimum for the pedal.
5. The Great to Pedal and Swell to **Pedal couplers** provide homogeneity between all voices; avoid them if independence in the pedal line is desired.
6. For **clarity**, build upward with only one stop per pitch.
7. For **fullness**, build outward then upward in pyramid fashion.
8. Use **economy** of means; add a stop only if it contributes to the ensemble. Celestes, for example, are not effective for congregational accompaniment.
9. Use 8' (and possibly 4') **reeds** to add fire to a bright principal chorus, or 8' and light 16' reeds to add gravity to a more foundational principal chorus.
10. The normal **position for the expression pedal** ("swell pedal") is fully open. The normal position for the **crescendo pedal** is fully closed.
11. If the **crescendo pedal** and the **sforzando ("tutti") reversible** have been regulated properly, use them when appropriate. If not, either have them regulated until they are useful or avoid using them.

AVOID

12. Generally avoid **thick, heavy** 16' or 8' manual stops and sub-couplers.
13. Avoid overusing **full organ**.
14. Never use the **tremulant** for congregational accompaniment.

TO INSPIRE MORE SINGING

15. Note the message of the **hymn text** in general and the message of each verse. Let them guide the registrational plan for the hymn.
16. Use text-directed **changes of registration** primarily at ends of verses (or between a verse and chorus). However, a change is not necessary following every verse of every hymn. Occasionally it might even be appropriate to play the entire hymn very simply–with no registration change.
17. If the text fails to suggest a registrational direction, **build upward** gradually as the hymn progresses to encourage increased congregational singing. Using another effective approach, **diminish** the organ after the congregation gains strength, and then build the organ again for the final verse.
18. When using **solo lines** in congregational accompaniment, avoid softer solo stops; use large reed or principal stops or combinations to lead out. Be sure the accompanimental combination (as well as the solo combination) is supportive enough for the congregation.
19. Use **manual-only** playing as a contrast to constant deep pedal tone. When the second-to-last verse is played manual only, the impact of the pedal entrance on the last verse is increased.

SOLO AND ACCOMPANIMENT REGISTRATION

See the OrganTutor lesson, "Solo and Accompaniment Registration."

I. FOR WHAT KINDS OF PIECES DOES ONE USE SOLO & ACCOMPANIMENT REGISTRATION?
Solo and accompaniment registration is employed in music where one voice predominates and the other voices are in a subordinate (accompanying) role. In most cases, one hand (or sometimes the feet) will have a single-note melody, while the other hand plays chords.

II. HOW TO BUILD SOLO AND ACCOMPANIMENT REGISTRATIONS

1. It is easiest to determine the registration of the solo voice first, then decide on the accompaniment.

2. The best way to achieve contrast between the solo voice and the accompaniment is to employ colorful stops for the solo part. The two most colorful registrations are: a. a single reed stop, and b. a synthetic solo (a combination of flue stops at various pitches, including mutations).

3. Synthetic solo registrations depend extensively on the following pitches of flue stops: 8', 4', 2 2/3', 2', 1 3/5', 1 1/3', and 1'. A synthetic registration is one where independent parts form a cohesive whole. Many different permutations of the above pitches are possible, each of which has a distinct color. Most will be based on an 8' stop. Some possibilities are: 8', 4', 2 2/3'; or 8', 2 2/3', 1 3/5'; or 8', 2'; or 8', 2', 1 1/3'. Experiment with as many permutations as you can discover.

4. A single principal or flute stop also works effectively as a solo registration.

5. The tremulant can often be used to good effect with a solo registration, provided it is well regulated and does not oscillate too fast or too deeply.

6. Some pieces call for an 8' or 4' stop to play a melody ("cantus firmus," "c.f.") in the pedal. In most cases a reed stop, if available, will work best.

7. The accompaniment is generally best played on smaller ensembles of flutes, strings, and hybrids. In most cases one should stick to 8' and possibly 4' stops. Celestes often work well where clarity and historical authenticity are not an issue.

8. When the pedal is part of the accompaniment, it should be balanced with the manual accompaniment. Use either soft 16' and 8' stops or a single 16' stop with the manual accompaniment coupled to the pedal.

III. AESTHETIC CONSIDERATIONS FOR SOLO AND ACCOMPANIMENT REGISTRATIONS

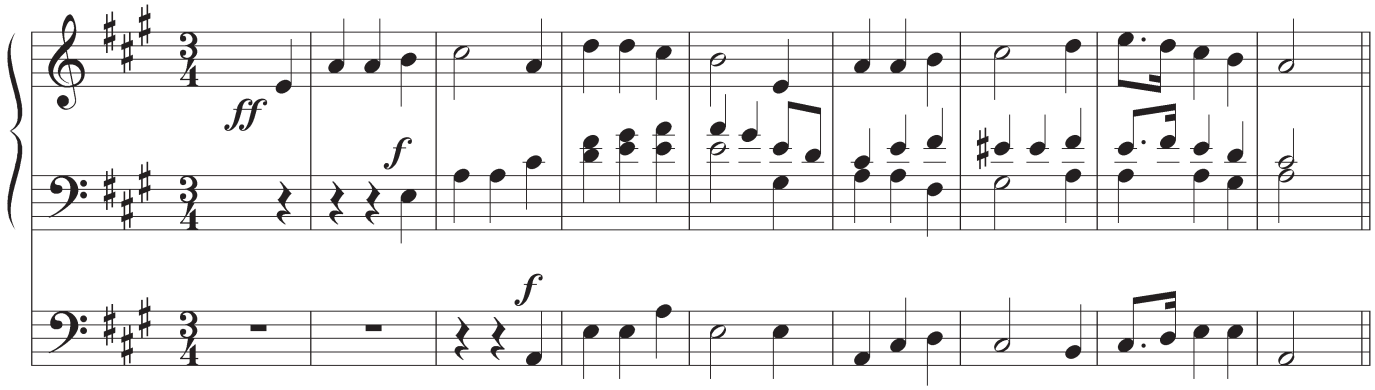
1. Solo registrations should be determined in part by the range of the melody. Reed solo registrations work best in the middle range of the keyboard (C2 to G4). Synthetic solo registrations work best above middle C because of the tendency for mutation stops to "separate" in the lower range of the keyboard. A single 8' principal can be very lovely in the lower range of the keyboard. A single flute will be heard more clearly in the upper range of the keyboard.

2. Both balance and contrast are essential to a good solo and accompaniment registration. The melody should predominate but not overwhelm. A trumpet solo will call for a much stronger accompaniment than would a flute solo.

SOME TYPICAL SOLO AND ACCOMPANIMENT REGISTRATIONS	
MELODY IN RIGHT HAND: • RH: 8' oboe; LH: 8' flute; PED: 16', 8' flutes • RH: 8', 4', 2 2/3', 2', 1 3/5' flutes (the "cornet," pronounced "cor-NAY"); LH: 8', 4' flutes; PED: 16' flute, LH to PED • RH: 8' flute; LH: 8' string & celeste; PED: 16' flute, LH to PED • RH: 8' trumpet; LH: 8', 4', 2' flutes or light principals; PED: 16', 8', 4' flutes or light principals	MELODY IN LEFT HAND: • LH: 8' principal; RH: 8' flute; PED: 16', 8' flutes • LH: 8' reed; RH: 8', 4' flutes; PED: 16', 8' flutes MELODY IN PEDAL: • PED: 4' reed; LH & RH: 8' flute, 4' principal • PED: 8' reed: LH & RH: 8' principal, 4' & 2' flutes

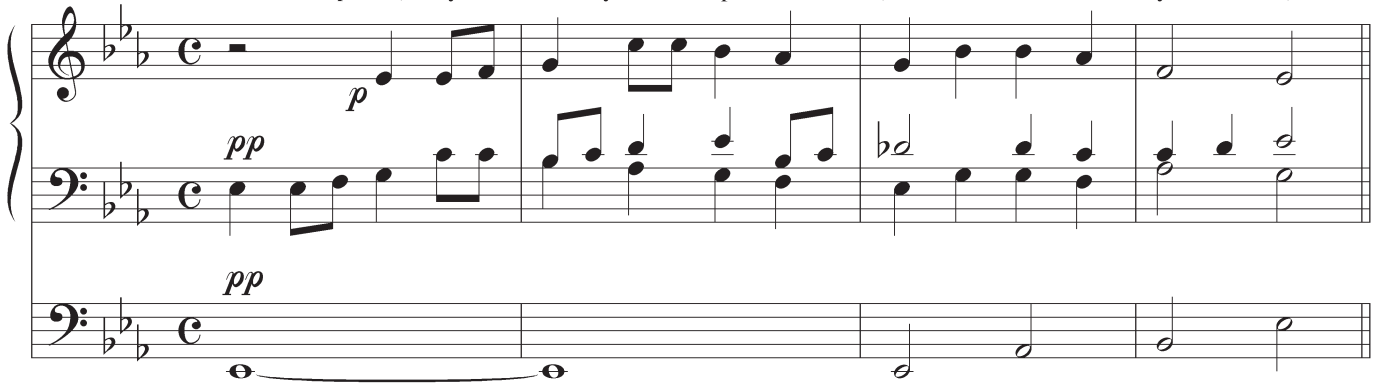
SOLO AND ACCOMPANIMENT REGISTRATION: EXAMPLES

EXAMPLE 1. Treble solo (*fortissimo*). Hymn, "How Wondrous and Great" (attr. Johann Michael Haydn, arr. Don Cook).



EXAMPLE 2. Treble solo (*forte*). "Der Tag, der ist so freudenreich," BWV 605 (J. S. Bach).

EXAMPLE 3. Treble solo (*piano*). Hymn, "Cast Thy Burden upon the Lord" (Felix Mendelssohn, arr. by Don Cook).



EXAMPLE 4. Tenor solo (*mezzo forte*). Hymn, "Cast Thy Burden upon the Lord" (Felix Mendelssohn, arr. by Don Cook).

SOLO AND ACCOMPANIMENT REGISTRATION: EXERCISE

Create two different solo and accompaniment-type registrational combinations for each of the four examples on the "Solo and Accompaniment Registration: Examples" page. Using pencil, mark "S" for solo combination stops and "A" for accompaniment stops (including Pedal, which is part of the accompaniment in these examples and should be balanced accordingly). Be sure to match your choices with the spirit of the piece and any dynamic indications, and to use the principles of solo and accompaniment registration described in the OrganTutor lesson "Solo and Accompaniment Registration."

Allen LD34b	example 1		example 2		example 3		example 4	
PEDAL—Contre Bourdon 32'								
Diapason 16'								
Bourdon 16'								
Lieblichgedackt 16' (Swell)								
Octave 8'								
Flute 8'								
Choralbass 4'								
Mixture III								
Contre Posaune 32'								
Posaune 16'								
Waldhorn 16' (Swell)								
Clairon 4'								
Great to Pedal								
Swell to Pedal								
SWELL—Lieblich Gedackt 16'								
Gedeckt 8'								
Viole 8'								
Viole Celeste 8'								
Octave 4'								
Nachthorn 4'								
Nasard 2 2/3'								
Piccolo 2'								
Tierce 1 3/5'								
Fourniture IV								
Waldhorn 16'								
French Trumpet 8'								
Oboe 8'								
Tremulant								
GREAT—Violone 16'								
Diapason 8'								
Gemshorn 8'								
Harmonic Flute 8'								
Erzähler Celeste II 8'								
Octave 4'								
Spitzflöte 4'								
Fifteenth 2'								
Mixture IV								
Tromba 8'								
Tremulant								
Swell to Great								

TRIO/DUO REGISTRATION

See the OrganTutor lesson, "Trio/Duo Registration."

I. FOR WHAT KINDS OF PIECES DOES ONE USE TRIO/DUO REGISTRATION?

Trio/duo registration is employed in music where all voices are equally important and yet independent, and where each hand is playing in single-note melody. Many pieces employing trio/duo registration are labeled as "trios" or "duos." Trio/duo registrations are especially common in music of the Baroque era (roughly 1600-1750).

II. HOW TO BUILD TRIO/DUO REGISTRATIONS

1. Since each voice is fulfilling the role of a solo part, rules pertaining to the construction of solo registration apply to trio/duo registrations. Reeds, synthetic solos, and single stops all work well in different situations.

2. Unless specified otherwise by the composer, each manual registration should be based on 8' tone. The pedal may be based on 16' tone, 8' tone, or 4' tone, depending on its character. If it fulfills the role of a more slowly-moving bass part, 16' tone should be satisfactory. If it moves more quickly or has a more melodic role, it may be best to avoid 16' tone and build on 8' tone. If the pedal is marked "c.f." or "cantus firmus," it will often sound best if played on a single 4' stop (usually a reed).

3. "Gap" registrations often work very well in trio/duo compositions. "Gap" registrations are a form of synthetic solo where adjacent pitches (e.g., 8', 4' or 4', 2 2/3' are avoided. Examples of "gap" registrations would be: 8', 2' flutes; 8', 2 2/3', 1 3/5' flutes.

III. AESTHETIC CONSIDERATIONS FOR TRIO/DUO REGISTRATIONS

1. As in solo and accompaniment registrations, both balance and contrast are important aesthetic considerations. No one part should predominate, and no two voices should sound alike to the point where their independence is destroyed.

2. It is generally best to place the higher-pitched stops in the highest voice (usually the right hand). Otherwise, the texture will become confused and the listener will not be able to sort out the individual voices.

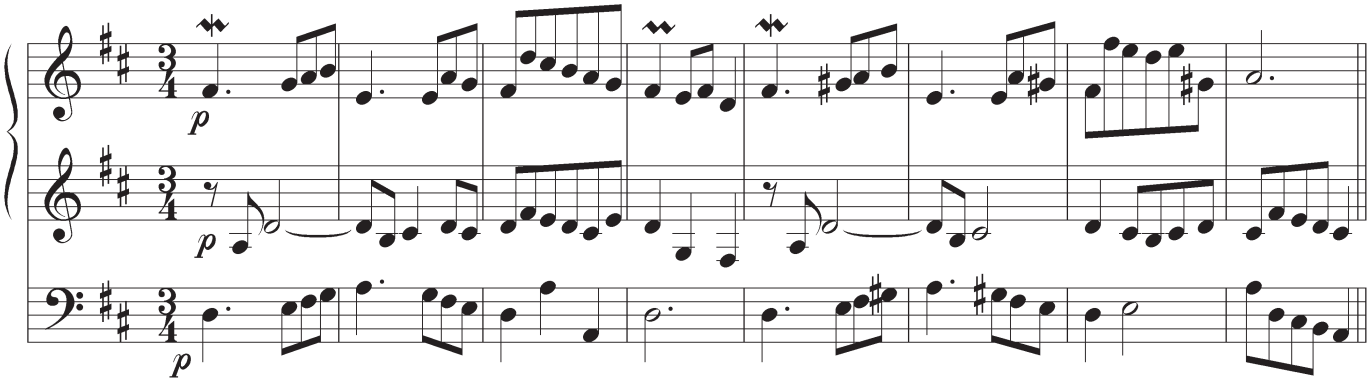
3. Many trios and duos involve quick-moving lines with short note values. It is best to avoid using more slowly-speaking stops (reeds, 8' principals, and strings) in rapidly-moving voice parts.

SOME TYPICAL TRIO/DUO REGISTRATIONS	
DUO: • RH: 8' reed (if notes do not move too quickly); LH: 8', 4' flutes • RH: 8', 2' flutes; LH: 8' principal • RH: 8', 2 2/3', 1' flutes; LH: 8' flute, 4' principal • RH: cornet (8', 4', 2 2/3', 2', 1 3/5' flutes); LH: 8', 4' flutes	TRIO: • RH: 8'. 2' flutes; LH: 8'. 4' flutes; PED: 8' principal • RH: 8', 2', 1 1/3' flutes; LH: 8' flute, 4' principal; PED: 16', 8' flutes • RH: 8', 2 2/3', 1' flutes; LH: 16' flute, 8' principal; PED: 4' reed (melody in pedal)

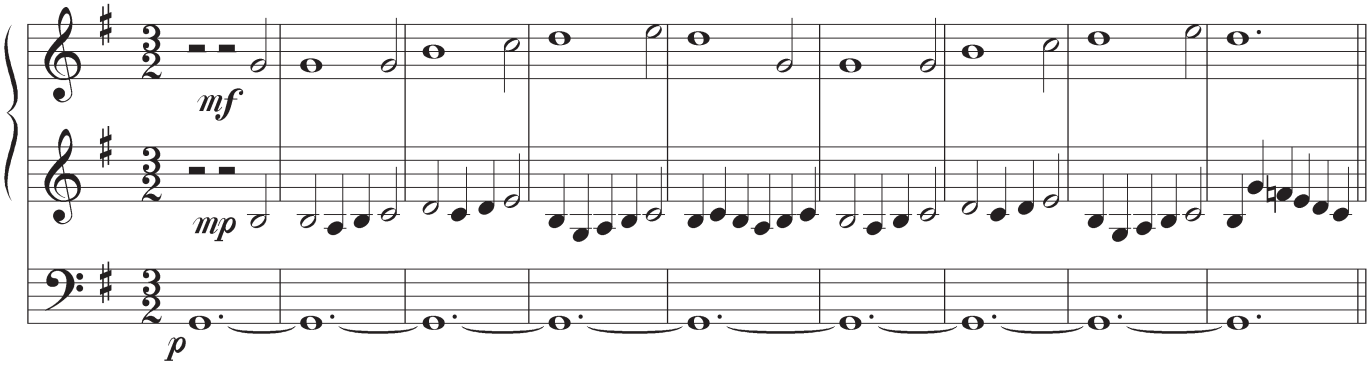
TRIO/DUO REGISTRATION: EXAMPLES

EXAMPLE 1. Hymn melody in right-hand part. "Nearer, My God, to Thee" (Lowell Mason, arr. by Don Cook).

EXAMPLE 2. A true trioÐthree equal parts. "Andante" (Johann Ludwig Krebs).



EXAMPLE 3. Hymn melody in right hand; counter melody in left; pedal point. "In dulci jubilo" (attr. J. S. Bach).



EXAMPLE 4. Hymn melody in pedal; right and left hands equal. "Vom Himmel hoch da komm' ich her" (Johann Pachelbel)

TRIO/DUO REGISTRATION: EXERCISE

Create two **different** trio-type registrational combinations for each of the four examples on the "Trio or Duo Registration: Examples" page. **Using pencil**, mark "R" for right-hand stops, "L" for left, and "X" for Pedal stops. Be sure to match your choices with the spirit of the piece and any dynamic indications, and to use the principles described in the OrganTutor lesson "Trio/Duo Registration."

Johannus WM44-LDS	example 1		example 2		example 3		example 4	
PEDAL—Contra Violone 32'								
Open Diapason 16'								
Bourdon 16'								
Echo Bourdon 16'								
Octave 8'								
Bass Flute 8'								
Choral Bass 4'								
Mixture III								
Contra Trombone 32'								
Trombone 16'								
Fagotto 16'								
Trumpet 8'								
Clairon 4'								
Great to Pedal								
Swell to Pedal								
SWELL—Gemshorn 16'								
Diapason 8'								
Gedeckt 8'								
Flute Celeste 8'								
Viola di Gamba 8'								
Voix Celeste 8'								
Principal 4'								
Chimney Flute 4'								
Nasard 2 2/3'								
Piccolo 2'								
Tierce 1 3/5'								
Mixture IV								
Double Trumpet 16'								
Trumpet 8'								
Oboe 8'								
French Horn 8'								
English Horn 8'								
Clarion 4'								
Tremulant								
Octave Coupler								
GREAT—Bourdon 16'								
Open Diapason 8'								
Stopped Flute 8'								
Claribel Flute 8'								
Gemshorn 8'								
Gemshorn Celeste 8'								
Octave 4'								
Harmonic Flute 4'								
Octave Quint 2 2/3'								
Super Octave 2'								
Full Mixture IV								
Cromorne 8'								
Posaune 8'								
Tremulant								
Swell to Great								

REGISTRATION MECHANICS

INTRODUCTION

LEADING UP TO THIS SECTION

The following lessons in the Organ Registration unit of OrganTutor Organ 101 serve as a basic overview of the organ. After studying these lessons, you should have a basic familiarity with most of the standard components on modern organ consoles:

- Introduction to the Organ Console
- Organ Types and Components
- Using Console Devices

Registrational planning requires a working understanding of basic registrational concepts, covered in the remaining seven lessons in the Organ Registration unit of OrganTutor.

In addition, the following lesson includes some helpful ideas on making registration indications in the score:

- Score Preparation

In this section, it will be assumed that you are familiar with the concepts covered in the lessons mentioned above. If you feel that you could benefit by reviewing them, take the time to do it before proceeding.

THE REGISTRATION PROCESS

As an organist learns a piece of music, he or she should seek to understand its musical characteristics. In addition to its overall character (often revealed by any text that might be associated with it), matters of form, phrase structure, harmony, and melody are important. As these characteristics are reflected in the organist's choice of combinations, the music becomes more meaningful and interesting to the listener. The historical context of the piece should also be studied, and reflected in the performance to whatever degree appropriate.

Fine organ playing occurs when the organist knows the instrument well enough to "clothe" the musical characteristics of a piece with an effective combination of available stops–this is organ registration. Just as the orchestrator learns and uses the instruments of the orchestra to achieve a good musical result, the organist gets to know each stop and how it participates in various combinations to make good music.

But, unlike the orchestrator, the organist must also execute the plan. Confidence in learning the music, planning the registration, and making the registrational changes are essential skills of all organists.

General Guidelines

After notes are learned, "orchestrating" them through registrational planning at the console can be a most rewarding experience. To hurry through this step is to miss seeing the forest because of the trees. Most organs offer some beauty of tone that is under-utilized because of hasty registrational planning–or none at all.

Here are a few general guidelines for registrational planning:

- BE TRUE TO THE COMPOSER FIRST. If the composer has given registrational instructions, try realizing them on your instrument as faithfully as possible. This may require some research, but it is usually well worth the effort. If modifications are needed, as is often the case, try to reproduce the "spirit" of the composer's intentions in some other way.

- USE ECONOMY OF MEANS. Strike the balance between the extremely simple and the very complex. If a piston can be used at more than one point in the piece, reuse it and avoid setting an unnecessary duplicate piston. Use divisional ("local") combination pistons and reversibles instead of general pistons where possible.
- MAKE NOTE OF EASILY-ACCESSIBLE THUMB PISTONS AND TOE STUDS. These will come in very handy when very quick registration changes are required. In those situations, plan to use pistons and toe studs that are near the previous or next location of the hands or feet.
- BE AWARE OF MECHANICAL PROBLEMS. When some detail of the combination action fails during practice, make note of it. Bring it to the attention of the technician, and think twice about using it in that manner for the performance.

Common Approaches

How do you approach the registration of a piece of music or a section of it? There are several common approaches. Your choice should be based on the particular needs of the piece, the organ, the occasion, registrational style, etc.

- FRONT TO BACK. Often it is feasible simply to start from the beginning and plan each registrational change to the end.
- BUILDUP. When the registrational plan is a buildup in volume, you might begin by setting the either the softest or both the softest and largest combinations. Next, determine the number of dynamic increments that will be needed throughout the buildup. Plan a registrational "step" for each increment, adjusting the size of each step as needed to take its proper place within the buildup.
- TAKEDOWN. This is actually the reverse of the "buildup" approach. Begin by setting the largest combination. Proceed backwards, retiring one or more stops for each registrational "step." This approach is especially useful in hymn playing, where the largest combination that can be used tastefully leaves out some of the loudest stops.
- POINT TO POINT. There may be particular points in a piece that call for specific combinations. It may be wise to begin by registering each of those points. Finally, plan the registrational changes as you approach and leave each of those points.

REGISTRATION MECHANICS

This section is designed to offer help in executing registrational plans for organ music and hymns. Practical ideas are given on making stop changes by hand, then by making use of the combination action. The use of the expression pedals is then discussed, followed by the operation of the crescendo pedal. Finally, a number of helpful approaches to registration planning and executing are presented.

REGISTRATION BY HAND—A BASIC SKILL

No one can possibly know when organ builders began to dream of a mechanism that could engage or retire numerous stops in a single instant–as is possible on modern instruments. Organists had pulled stops by hand for over five hundred years before a rudimentary combination action ever came into use.

In modern times it remains a valuable skill to make stop changes without relying on the combination action. Several reasons account for this. Combination actions can be less than totally reliable. Combinations can be changed by mistake. Organists can easily forget which piston to press, or which memory to use. There may be insufficient time to set combinations in advance of a performance.

To an organist who is skilled at changing stops by hand, even an unfamiliar organ will seem less than formidable to play. It requires three simple steps:

1. Get free
2. Make the change
3. Pre-locate and play

►1. GET FREE

There is no real secret to registration by hand: a hand or foot must get free in time to make the stop change and return to the keyboard. This is possible under several circumstances:

- a rest appears in the music
- one hand can play all manual notes, freeing up the other hand
- one foot can play all pedal notes, freeing up the other foot
- only rarely–and as a last resort–would you omit notes to make a registrational change by hand

The amount of time that the hand or foot is free will determine how complex a change can be made. If there is ample time, stop changes on several manuals and pedals might be possible–there may even be time to set a piston! If only a moment is available, there may scarcely be time for a single change.

►2. MAKE THE CHANGE

How to engage or retire a single stop or coupler is discussed in another lesson.

If a stop must be changed very quickly, the eye may need some help finding it in time. Applying a small removable sticker (perhaps even color-coded) directly onto the stop can draw the eye and hand immediately to their destination. Of course, this sticker should be removed immediately following the performance.

The timing of a registration change is critical, and often must occur within a time frame of only a fraction of a second. It must occur AFTER the notes prior to the change have been released. Otherwise, a "chirp" may occur as the registration change is made at the tail end of the "old" notes. It must also occur BEFORE the attack of the new notes.

►3. PRE-LOCATE AND PLAY

Returning to the keys AFTER making a change is usually the most difficult and under-practiced step of the hand-registration process. Note errors can easily occur as the hand returns to the notes immediately following a registration change–particularly if a hand "dives" into the key. Instead, pre-locate the hand(s), if only for an instant, over the key(s) that immediately follow a stop change.

To prevent making these kind of errors, practice pre-locating in this manner at every point where a registration change occurs. This motion should be practiced repeatedly just as you would practice a technically challenging passage of music.

COMPENSATING FOR DELAYS IN THE STOP ACTION

A purely mechanical stop action will make the rank audible at the instant the stop is completely drawn. However, when pneumatics (air-driven components), motors, and even electrical connections are involved, there may be a slight delay between the time the stop is pulled and the sound is heard. A good organist must compensate for any delay in the stop action.

Try this experiment to determine if there is a delay. Pull an 8' principal stop on the Great. Prepare the fingers to play a chord on the Great, and prepare to pull a 4' principal stop on the Great. Pull the stop and

play the keys at the same instant. Did you hear the 8' principal alone before the 4' principal engaged? Try it several times, listening for ANY delay in the speech of the 4' principal.

In order to time your registration changes properly, you must always make stop changes EARLY by the exact length of that delay in order to avoid audible late stop entries. This skill can only be gained by trial and error in practice on the actual instrument.

USING THE COMBINATION ACTION—A BASIC SKILL

As organs have grown in the number of stops, particularly since the nineteenth century, a means of changing numerous stops in an instant has become an increasingly important feature. If an organ is equipped with a user-adjustable combination action, the organist should become familiar with its operation, capacity, advantages, and limitations.

A reliable combination action offers the luxury of immediate recall of even complex registrational combinations. However, its operation requires a few more steps (underlined, below) than are required when registering by hand:

1. Plan and set combinations
2. Double-check combinations
3. Get free
4. Make the change
5. Pre-locate and play

►1. PLAN AND SET COMBINATIONS

Setting Combinations

The procedure for setting common "capture"-type registrational combinations is described in the "Organ Types and Components" section of this workbook and in the OrganTutor lesson, "Using Console Devices."

If you experience problems setting or recalling a combination, check the following:

- FACTORY PRE-SETS. Some older or less expensive organs include only factory pre-set combinations. The user cannot change them. The absence of a set button or of a combination lock key may indicate factory pre-sets.
- COMBINATION LOCK-OUT. Many organs come with a means of locking the combinations once they are set, mainly to avoid accidental loss of combinations. This may appear as a keyed lock, a sequence of piston-pressing, a menu choice, a toggle switch, etc. Be sure that the memory or pistons on which you are working is unlocked.
- GENERALS vs. LOCALS. It is easy to mistake local (divisional) combination pistons for generals. Setting and attempting to recall a large combination on a Great Local will set and recall only the Great stops, leaving the Pedal, Swell, and other divisions unchanged.
- MEMORY CONFUSION. On organs with more than one memory level, it is easy to set pistons on one memory then try to recall them on another. A common scenario: Power up the organ, change to Memory B, set a combination on General 1, turn off the organ to go to lunch, return and power up the organ (and organ defaults to Memory A), attempt to recall General 1, and your combination appears to have been lost. The solution: indicate on your score which memory is used, and remember to change to that memory each time you play the piece.

►2. DOUBLE-CHECK COMBINATIONS

An organist sets combinations on Friday. On Sunday morning, much to her horror, the very piston that had previously engaged warm and soothing strings for the end of the prelude music now recalls a battery of trumpets! Rather than learn your lesson the hard way, arrive a few minutes early for the service or performance, check each and every piston that you plan to use, and enjoy some peace of mind.

►3. GET FREE

Just as in hand registration, a hand or foot must get free in time to make the stop change and return to the keyboard. However, the location of thumb pistons and toe studs in close proximity to the keyboards allows for quicker changes when using the combination action than when registering by hand. In addition to the situations mentioned above, registration changes with pistons or toe studs are even possible when both hands and feet are busy–a thumb can reach a general or local piston under a manual keyboard.

►4. MAKE THE CHANGE

►5. PRE-LOCATE AND PLAY

Follow the same procedure for making the change, pre-locating, and playing as when registering by hand.

COMPENSATING FOR DELAYS IN THE COMBINATION ACTION

Nearly all combination actions involve a degree of delay from the moment the piston or toe stud is pressed to the moment the sound is heard. This delay is usually longer than the delay in the stop action, since the combination action usually operates the stop action physically. Since the combination action uses electrical, magnetic, pneumatic, or even motorized mechanical means to accomplish this, the length of the delay varies from a few miliseconds to large fractions of a second. A good organist must compensate for any delay in the combination action.

Try this experiment to determine if there is a delay. Set a large Great combination on a general combination piston. Cancel all stops on the Great. Play a chord on the Great (there should be silence), then press the general combination piston. How long was the delay before sound was heard?

In order to time your registration changes properly, you must always make piston or toe stud changes changes EARLY by the exact length of that delay in order to avoid audible late stop entries. This skill can only be gained by trial and error in practice on the actual instrument.

DYNAMIC EXPRESSION VIA THE EXPRESSION PEDALS

The basic concepts related to the expression pedals were described in the “Organ Types and Components” section of this workbook, and in the OrganTutor lessons titled “Introduction to the Organ Console” and “Using Console Devices.”

EXPRESSION PEDAL TYPES

Expression pedals come in a variety of common types:

- Mechanical: the pedal drives a direct mechanical linkage that operates the shutters collectively.
- Pneumatic: the pedal controls the flow of air into bellows that operate the shutters individually or collectively.

- Motorized mechanical: the pedal controls motors that drive the shutters collectively.
- Electronic: the pedal controls the volume of electronically-produced organ tone.

It is wise to learn as much as possible about the type of expression pedal on your instrument.

IMPORTANT CHARACTERISTICS

Even more important than to know the type of expression pedal is to understand how it operates–its characteristics. There are so many variables that it would be impractical to explore all the possibilities in this lesson. It is critical, however, to GET TO KNOW the most important characteristics of the expression pedal at your disposal:

- LOCATION. Is the Swell expression pedal located in the "standard" position above pedals E and F?
- CONTENT. What ranks of the organ does it control? On which divisions?
- DYNAMIC RANGE. How soft do the various ranks and combinations sound when it is closed? How loud when opened?
- RATE OF CHANGE. At what point(s) in its range of motion does the majority of volume change occur? Does it become rather suddenly louder as it first begins to open, then only very gradually louder as it continues to open? Does it remain soft until part-way through the pedals stroke?
- EASE OF MOTION. Does the pedal require much weight to operate? Can you "throw" it open by using inertia, or must the foot follow through the entire length of the stroke?

SET POSITION

Normally the expression pedals are set in the fully open position, as explained in another lesson. However, several circumstances in the music MAY indicate that one or more expression pedals could be used in a SET position throughout an entire piece or a section:

- BALANCE. Especially in solo and accompaniment registration, either the solo or accompaniment could be softened to adjust the contrast between them.
- GENERAL VOLUME. If the organ has been voiced too large for the circumstance, the expression pedal could be partially closed to adjust the volume. This is particularly useful on some electronic organs where a single expression pedal adjusts the volume of the entire organ. It is also useful in ensemble playing (accompanying voice, instruments, choirs, or playing with orchestra or piano).

VARIABLE POSITIONS FOR MUSICAL EXPRESSION

Some music calls for a type of dynamic expression that is made possible by using the expression pedal(s). A musical phrase may be "shaped" by opening the pedal as the phrase begins and closing (partially) as it ends. An expression pedal can create a short crescendo, and a longer grand crescendo can occur through a combination of stop additions and expression pedal opening.

Try this combination:

Swell: Full to mixture, chorus reed 8', Swell expression pedal closed

Great: foundations 8' and 4', Swell to Great

Play a chord on the Swell. After a few seconds, gradually open the Swell expression pedal. Now move the chord to the Great. Add Great Principal 2'. Then add Great Mixture. Finally, add Swell chorus reeds 4' and 16'.

ORGANTUTOR REGISTRATION LESSON OBJECTIVES

This section may be photocopied for the instructor.

The main objectives for each of the OrganTutor Organ 101 Registration lessons are given below. The objectives for each lesson are listed in the same order in which the corresponding topics appear on screen for your convenience in taking notes. The lessons themselves are listed in a suggested order of completion.

Each of these "Study Lessons" presents a registration topic through study screens accompanied by Quick Review questions and a Lesson Test. As you study a lesson, take notes in these Lesson Objectives pages to help you focus on the main points. Answer the Quick Review questions at the end of each topic to test your understanding, and then take the Lesson Test when you feel that you understand the entire lesson. Do not refer to your notes during a Quick Review or Lesson Test. Complete any written assignment then review it with your instructor. Apply what you learn immediately and often in order to internalize the concept.

In parentheses after each lesson title will be found the page number of any written assignment from the workbook (see "Pitches of Organ Stops," for example).

INTRODUCTION TO THE ORGAN CONSOLE

1. What is the control center of the organ?

2. Identify the location of the various manual keyboards on a two-, three-, and four-manual organ.

3. Name and briefly describe three different *types* of pipework divisions (*not* Swell, Great, Pedal).

4. Describe characteristics of the Swell division, the Great division, and the Pedal division.

5. Identify the normal location of the Swell expression pedal relative to the pedal keys.

6. Identify the normal position (open or closed) of an expression pedal.

7. Describe some of the possible functions of the expression pedal on a digital organ.

8. Identify the normal position (open or closed) of the crescendo pedal, and its function.

9. Identify the normal location of the crescendo pedal relative to the expression pedals.

10. Identify middle C and tenor C on the pedal and manual keyboards.

11. Identify three different types of stop controls.

12. Locate on an organ console the set button and the cancel button.

13. On a large organ console, point out the usual location of the following:
    a. coupler rail

    b. general and local thumb pistons

    c. toe studs

ORGAN TYPES AND COMPONENTS

1. Identify the two main components of a pipe organ.

2. Identify the two main configurations in which organs appear.

3. Compare and contrast the pipe organ and the digital organ.

4. Describe the components and function of the wind system.

5. Describe the function of the stop action, and identify at least two types.

6. Describe the function of the combination action and the multi-level memory.

7. Compare and contrast three different types of key action.

USING CONSOLE DEVICES

Perform the following tasks, in sequence:

1. Start up the organ properly.
2. Engage Great and Pedal stops, and play on Great and Pedal.
3. Set your Great and Pedal combination on a general thumb piston, cancel, and then recall the combination by using the thumb piston. Play again on the Great and Pedal. If general combination toe studs are present, cancel, and then recall the combination now by using the toe stud.
4. Add stops for the Swell to your combination, and then play on the Swell.
5. Set the entire combination on a general thumb piston on another memory (if available), cancel, and then recall the combination by using the thumb piston. Play again on the Swell.
6. If there is a Great and Pedal expression pedal on your organ: use it to execute a crescendo and diminuendo while playing.
7. Use the Swell expression pedal to execute a crescendo and diminuendo while playing.
8. Open the expression pedals. If there is a Crescendo Pedal on your organ, cancel, and then set a very soft combination on the Great and Pedal. Play on the Great as you use the crescendo pedal to make a gradual crescendo, and then make a gradual diminuendo.
9. Add two or three stops on the Great. Set your combination on a Great local piston, cancel, and then recall the combination by using the thumb piston. Play on the Great.
10. Set a soft combination on the Swell. Couple it to the Great. Couple it to the Pedal.
11. If there is a Great to Pedal **reversible** (not **coupler**) on your organ: engage it and begin playing on the Great and the Pedal. Engage the reversible again and play on the Swell and Pedal. Pause, engage the Great to Pedal coupler by using the reversible, then return to playing on the Great.
12. Determine whether any tremulants on your organ are divisional or general.
13. If there is a Sforzando (Tutti) reversible on your organ, play on the Great and Pedal, pause, then engage the Sforzando reversible and continue playing. Pause, retire the Sforzando by using the reversible, and then continue playing.

PITCHES OF ORGAN STOPS (Complete "Worksheet: Pitches of Organ Stops")

1. Describe **in general** the meaning of the Arabic numerals on a stop knob or tab.

2. Which two of these three parts of a pipe define the speaking length? (toe, mouth, top)

3. Which pipe of a rank determines the pitch designation?

3. Name each of the most common octave-sounding pitches.

4. For each pitch that corresponds to a partial from the harmonic series, identify the interval between a note (on a staff) being played and the pitch that is heard (for example: 4' pitch is one octave higher).

5. Describe two general ways in which the harmonic series functions in organ registration.

6. Name each of the three most common mutations.

7. Describe the meaning of the Roman numerals on a stop knob or tab.

8. Describe and give examples of two different kinds of compound stops.

9. Describe the nature and function of chorus mixtures.

10. Describe the nature and function of solo mixtures.

11. Identify the five pitches that make up the cornet.

12. Identify the two stop names commonly associated with solo mixtures.

13. Given any **two** of the following items, be able to supply the third (as in "Worksheet: Classification of Organ Stops by Pitch"):
    a. note (on a staff) being played
    b. pitch designation
    c. pitch that is heard

FAMILIES OF ORGAN TONE

1. Describe each of the following terms: rank, stop, stop nomenclature.

2. Tell the number of pipes in a pedal rank, and then in a pedal rank.

3. Find an appropriate corollary (comparison) from the orchestra to a rank of pipes in the organ.

4. Identify and describe the two categories of organ pipe.

5. Describe how a pipe from each of the two categories of organ pipe produces tone.

6. Name the four families of organ tone, and identify the category of organ pipe to which each belongs.

7. Describe pipe scale, and describe the general tonal characteristics of wide-, medium-, and narrow-scaled pipes.

8. Describe each family of organ tone by the five given categories:

	Flute	Principal	String	Reed
a. Describe the tone				
b. Identify the scale				
c. Identify the volume range				
d. Identify any common characteristics in the stop nomenclatures				
e. Describe the main pipe characteristics				

9. Tell how a two-rank string celeste is created, describe its tone, and tell when it may and should not be used.

10. What is a "stopped pipe," and what two tonal changes happen to a pipe when it is stopped?

11. Describe hybrid stops, and identify their most important characteristics and functions.

12. Compare and contrast the characteristics and functions of solo and chorus reeds.

13. Given the name of any stop listed in the workbook page "Common Stop Names Listed by Pipe Category and Family of Organ Tone," be able to identify its family of organ tone.

NON-SPEAKING STOPS (See "Summary" below)

1. Explain the difference between a non-speaking stop and a speaking stop.

2. Name the three main types of non-speaking stops.

3. Identify and explain two components ("factors") of a tremulant.

4. Identify two appropriate uses of the tremulant in classical organ playing, and several INappropriate uses.

5. Describe the function of each of the following types of couplers:
   Intermanual couplers

   Intramanual couplers

   MIDI couplers

6. Identify each of the following couplers with one of the types listed in the preceding objective:

Swell to Swell 16'	Swell to Pedal 4'
Swell to Great 8'	Great to Pedal 8'
Swell to Swell 4'	MIDI on Great
Swell to Pedal 8'	Great to Pedal 4'

7. Describe the function of supercouplers and subcouplers.

8. Describe the function of the Unison Off, and identify two common applications.

Summary of PITCHES OF ORGAN STOPS, FAMILIES OF ORGAN TONE, and NON-SPEAKING STOPS ("Stop Classification Exercise")

Complete the "Stop Classification Exercise" in the workbook, and be able to identify the following from any stoplist:

1. the octave-sounding stops and the mutations
2. the stops from the cornet of any manual division
3. the solo mixtures and chorus mixtures

4. the family of any speaking stop that is included on the table in the textbook entitled "Common Stop Names Listed by Pipe Category and Family of Organ Tone"
5. the intermanual couplers, the intramanual couplers, and the other non-speaking stops

THREE PRIMARY TYPES OF ORGAN REGISTRATION

1. Name the three primary types of organ registration.

2. Name two musical characteristics upon which you can focus when evaluating the musical texture for purposes of registration.

3. Describe how those two musical characteristics appear in each of the three types of musical texture described in the OrganTutor lesson.

	The number of manual parts	The relative prominence and nature of the parts
Chorus		
Solo & Accompaniment		
Trio/Duo		

4. Recognize and understand the meaning of the various main types of manual indications.

5. Given passages of various types from hymns or organ music, identify the number of parts, determine which (if any) is most prominent, and identify the most appropriate registrational type.

6. Name at least four types of musical form that allow for registration change.

CHORUS REGISTRATION ("Chorus Registration Exercise")

1. Name two important elements of musical texture that call for chorus registration.

2. Describe three important standards in chorus registration.

3. Compare building for clarity with building for richness in chorus registration.

4. Give examples of bright, moderate, and gentle combinations of the CLEAR type.

5. Describe the use of pure choruses compared with mixed choruses.

6. Identify two ways in which balance should be applied in chorus registration.

7. Describe two different ways of balancing the pedal combination with the manual combination.

8. Discuss the use of each of the following mutations in chorus registration:
   2 2/3'

   1 3/5'

   1 1/3'

9. Be able to create an effective buildup from soft to very loud using one manual and pedal.

10. Use chorus reeds effectively in chorus registration.

11. Describe at least three forms of reed chorus.

12. Describe the typical "full organ."

13. Given a piece of music with the appropriate musical texture, apply an effective combination using chorus registration. Consider clarity or richness, volume, timbre, and balance.

HYMN PLAYING—REGISTRATION

Become thoroughly familiar with all nineteen of the "Guidelines for Hymn Registration in Congregational Singing." Apply an appropriate chorus-type combination for one or more verses of a given hymn. Observe all of the nineteen guidelines discussed in the OrganTutor lesson that are pertinent to the situation.

SOLO AND ACCOMPANIMENT REGISTRATION ("Solo and Accompaniment Registration Exercise")

1. Describe in general terms solo and accompaniment registration, and compare this to chorus registration.

2. Name two important elements of musical texture that call for solo and accompaniment registration.

3. Describe three important standards in solo and accompaniment registration.

4. Discuss the procedure for building a solo and accompaniment registration.

5. Describe the general nature of the solo part.

6. Construct solo combinations with various ranges, volumes, and timbres.

7. Describe the general nature of the accompaniment part.

8. Describe in general terms various ways of achieving contrast between solo and accompaniment.

9. Given music with the right musical texture, apply an effective combination using solo and accompaniment registration. Considering the written range of the solo, use an appropriate pitch foundation, volume, and timbre. Use appropriate contrast in volume and timbre in the accompaniment.

TRIO/DUO REGISTRATION ("Trio/Duo Registration Exercise")

1. Describe in general terms trio/duo registration.

2. Name two important elements of musical texture that call for trio/duo registration.

3. Describe each of the three important aesthetic ideals of the trio or duo.

4. Compare the "true" trio with other types.

5. Compare trio/duo registration with solo and accompaniment.

6. Described three important standards in trio/duo registration.

7. Discuss the procedure for
   a. building a trio/duo registration in general

   b. registering the first part (tremulant?)

   c. registering the other parts

8. Discuss some of the considerations for the Pedal in trio/duo registration.

9. Given a piece of music with the right musical texture, apply an effective combination using trio/duo registration. Considering the written range of the solo, use an appropriate sounding range, volume, and timbre. Use appropriate contrast in volume and timbre in the other parts.

CONTINUING YOUR ORGAN STUDY

Any serious course of organ study should be thought of as only one step in a lifetime of exploration. The long history and diverse types of organ music have inspired students, performers, and scholars to devote great energy to organ study. Today's student enjoys easy access to editions, books, articles, and recordings.

Following are listed various ways of extending organ study beyond the OrganTutor lessons. Specific references to Brigham Young University (BYU) courses may be considered examples of the types of courses that might be found in other colleges and universities where full music programs are offered.

PRIVATE STUDY

No method book, periodical, video, or computer can offer the customized feedback of which a private organ teacher is capable. Finding a competent teacher should be the highest priority. The following guidelines may be of some assistance:

1. The teacher should have a Bachelor of Music degree from an accredited institution, or
2. He or she should have passed any of the exams of the American Guild of Organists (AGO), the Royal Canadian College of Organists (R.C.C.O.), the Music Teachers National Association (MTNA), or another reputable institution.

To find a teacher, you may wish to ask a respected organist for recommendations. If you are in a larger city, you will probably be able to find well-trained organists associated with colleges, universities, or larger churches. The local chapter of The American Guild of Organists (AGO) is probably best suited to make recommendations. For a list of the nearest chapter to your area, visit the web page of the AGO at agohq.org

BRIGHAM YOUNG UNIVERSITY ORGAN COURSES for non-organ majors

For information on any of these BYU courses, contact Prof. Don Cook (doncook@byu.edu or 801-422-3260) or Prof. Neil Harmon (naharmon7@gmail.com or 801-422-3159). See also the Organ Study at BYU website: organ.byu.edu

Basic Organ Skills (Music 115) (2 credits; offered fall and winter semesters, spring term) Training for pianists in basic organ manual and pedal technique, organ registration, and hymn playing. Prerequisite: adequate piano training.

Organ Techniques & Literature (Music 116R) (2 credits; offered fall and winter semesters) Continuation of Music 115, with emphasis on more advanced hymn playing, registration, repertoire playing, and accompanying skills. Prerequisite: Music 115, or other formal organ study and consent of instructor.

Private Organ Instruction (Music 160R) (1 credit; extra fee required; offered fall and winter semesters, and spring term for 0.5 credits) Private study with organ instructor; 1 to 2 hours practice per day required; audition may be required.

Organ Registration (Music 166) (2 credits; offered fall semesters) Organ stops and their application to various performance styles. Prerequisite: concurrent private or group instruction in organ or consent of instructor.

BRIGHAM YOUNG UNIVERSITY COURSES FOR OFF-CAMPUS ORGANISTS

BYU Independent Study Organ Courses (Including Organ Certification)

BYU Independent Study and the School of Music organ faculty offer a variety of organ courses designed to provide motivation and instruction for organists to improve their skills by working toward specific goals. Traditional instruction is offered through books and online lessons, while performance instruction is coordinated with qualified organ instructors in person (in the vicinity of the student) or online.

Six levels of courses are offered. Levels 1 and 2 appear in a **free non-certification/non-credit** form of the course (Continuing Education courses–Music 71 and 72). Levels 1-6 also appear in a **certification/non-credit** version (visit elearn.byu.edu, and then click Catalog > Continuing Education Courses, and then find Organ Performance, Level 1, etc. ($150). Levels 1-6 also appear in a **certification/credit** version (University courses–Music 399R sections 1-6 http://is.byu.edu/site/courses/index.cfm?-school=univ). Each credit course offers between two and five hours of college credit (fee: $398-$995).

All these courses emphasize the following skills: organ technique, organ repertoire, hymn playing, organ registration, music theory, sight-reading, transposition, and accompaniment (plus piano technique as needed). They can lead into the Service Playing or Colleague exams of the American Guild of Organists at about Level 4 or 5 (see following page, or visit https://www.agohq.org/certification). Each level can be completed within one year if the appropriate keyboard proficiency is present.

Students, in consultation with their instructors, enroll in the level that best suits their needs. Upon passing, students may enroll for the next level. Level 1 is for pianists and organists who have little or no formal organ training.

To see the requirements for levels 1-2, visit organ.byu.edu/orgcertlev1-2.pdf, and for levels 3-6 visit organ.byu.edu/orgcertlev3-6. The requirements are of two types: 1) written assignments and exams on organ technique, organ registration, and music theory, and 2) played assignments on specified exercises, organ repertoire, hymn playing, sight-reading, transposition, and accompaniment. The written assignments are graded online. Played assignments are passed off with an approved evaluator (or the instructor, with BYU faculty approval) or possibly with a member of the BYU organ faculty. Some may be submitted by video recording.

A student should seek out a private organ instructor (in person or online) who is willing to assist in meeting the course requirements. In addition, instruction customized for each level is offered during the BYU Organ Workshop (organworkshop.byu.edu). Other instructional materials are available at organ.byu.edu, for some levels through BYU Independent Study, and certain materials and information are available on the internet (see the web site addresses below).

For more information, follow the links above, visit http://organ.byu.edu, email indstudy@byu.edu, or call 801-422-4044.

The BYU Organ Workshop

The BYU Organ Workshop (organworkshop.byu.edu) offers four days of instruction in organ playing skills. Whether you use your skills in the church service, for teaching, or for your own enjoyment, up to five classes are scheduled every hour to meet the needs of beginning to advanced organists. More than a dozen seasoned instructors offer personal attention and will encourage you to new levels of progress.

Supervised Practice Sessions (no fee) and Private Instruction ($30-60) provide an opportunity to play hymns hymns or organ pieces for an instructor and receive personalized feedback, instruction, and mo-

tivation. Most organists prepare hymns or organ repertoire pieces one of the six organ instruction levels from the Independent Study Organ courses. To see the hymns and repertoire for levels 1-2, visit organ.byu.edu/orgcertlev1-2.pdf, and for levels 3-6 visit organ.byu.edu/orgcertlev3-6. However, any form of organ performance preparation is acceptable. The instructors then provide motivation, instruction, and feedback towards improving organ-playing skills.

Return home from this intensive four-day workshop with the seeds of new skills and with the motivation to follow through with organ study throughout the year. Use this workshop as a springboard for lifelong learning in organ. If you wish, enroll in a BYU Independent Study organ course to help you along during the year. Return the following year and take workshop classes that will prepare you for the next level of study. The fee is $275-$375.

For more information, visit http://organworkshop.byu.edu, call 801-422-7692, email ce@byu.edu, or follow the link on the BYU Organ Study web site at organ.byu.edu.

THE AMERICAN GUILD OF ORGANISTS

The American Guild of Organists (AGO) is a non-profit organization that furthers the cause of organs and organ playing in the United States and abroad. Some of the benefits of membership follow:

- Local chapters provide support for members by sponsoring and organizing recitals, workshops, and social activities (usually monthly).
- Members of the AGO receive a copy of The American Organist magazine each month. Each issue includes reviews of books, recordings, and music, as well as informative articles on a wide variety of organ-related topics.
- The AGO has produced a large amount of educational materials, mostly online, available either free or at a nominal cost to both members and non-members.
- Each summer, guild members have the opportunity to attend national or regional conventions. These offer recitals by prominent organists on significant instruments as well as classes and workshops on a wide spectrum of topics related to church music and organs.
- The AGO professional certification program provides members with educational goals and with the motivation to expand their range of skills and knowledge. Examinations administered by the Guild include the Service Playing Test, the Colleague Exam, the Choir Master Exam, the Associate Exam, and the Fellowship Exam. The Achievement Awards offer a chance to learn basic organ topics such as the organ console, organ registration, technique, harmony, and transposition. Visit agohq.org and click the “Education” tab.

For information on the AGO or for a membership application, write or call:

The American Guild of Organists
475 Riverside Drive, Suite 1260
New York, NY 10115

Phone: (212) 870-2310
Fax: (212) 870-2163
agohq.org

ADDITIONAL STUDY MATERIALS

The following is a list of a few interesting sources for each of the OrganTutor Organ 101 units.

METHOD BOOKS (including Manual Technique and Pedal Technique)

Davis, Roger. *The Organist's Manual.* New York: W. W. Norton, 1985.
An excellent organ method book with exercises and studies, a good selection of repertoire, and well written text.

Gleason, Harold. *Method of Organ Playing.* 8th ed. Englewood Cliffs, NJ: Prentice-Hall, 1995.
A time-honored organ method book representing a thorough approach to organ playing. The volume has experienced the refinement of eight editions.

Peeters, Flor. *Ars Organi.* 3 vols. New York: C. F. Peters, 1953.
A very thorough approach to organ playing.

Ritchie, George and Stauffer, George. *Organ Technique: Modern and Early.* London: Oxford, 2000.
This relatively recent volume approaches organ playing from a stylistic and historical perspective. The changes in performance style are explored, with exercises and studies in both earlier and later styles. The written text on performance-related historical matters is noteworthy.

ORGAN REGISTRATION

Engel, James. *An Introduction to Organ Registration.* St. Louis, MO: Concordia, 1986.
This small paperback takes a very concise approach to basic organ registration.

Geer, E. Harold. *Organ Registration in Theory and Practice.* Glen Rock, NJ: J. Fischer, 1957. (Out of print)

Goode, Jack C. *Pipe Organ Registration.* Nashville, TN: Abingdon Press, 1964. (Out of print)

Sumner, William Leslie. *The Organ: Its Evolution, Principles of Construction, and Use.* 4th ed. New York: St. Martin's Press, 1973.

Williams, Peter. *A New History of the Organ.* Bloomington: Indiana University Press, 1980. (Out of print)

Woolard, Margot Ann. *A Mini-Course in Basic Organ Registration.*
This booklet and cassette are listed in the "AGO Resources" section of The American Organist. (See "The American Guild of Organists" on the previous page for more details on this publication.)

HYMN PLAYING

Belnap, Parley L. *Hymn Studies for Organists.* Rev. ed. Provo, UT: Brigham Young University Creative Works Office, 1992, 2004.
A progressive study into the basics of hymn playing.

Cook, Don. *Easy Organ Hymn Settings.* Provo, UT: Jackman, 1992.
Twenty-nine hymns in three parts: the original soprano and bass lines, and a new middle part. Fingering and pedaling in legato style are supplied.

Lovelace, Austin C. *The Organist and Hymn Playing.* Rev. ed. Carol Stream, IL: Agape, 1981.

Woolard, Margot Ann. *A Mini-Course in Hymn Playing.*

Ferguson, John. *A Mini-Course in Creative Hymn Playing.*

These booklet and cassette sets are listed in the "AGO Resources" section of The American Organist. (See "The American Guild of Organists" on the previous page for more details on this publication.)

GENERAL

The American Organist. (The monthly magazine of the American Guild of Organists, 475 Riverside Dr., Suite 1260, New York, NY 10115).

In addition to its regular articles, this organization publishes many useful materials that are listed in each issue near the front under the title, "AGO Resources."

Apel, Willi. *Harvard Dictionary of Music, Second Revised and Enlarged Edition.* Cambridge, MA: Harvard University Press, 1972.

This is a standard comprehensive reference book for musical terms, with in-depth definitions and descriptions.

Arnold, Corliss Richard. *Organ Literature: A Comprehensive Survey.* Third Edition. Metuchen, N.J.: The Scarecrow Press, 1992.

This is a standard reference for organists, containing detailed information on composers, compositions, and historical background.

Bush, Douglas and Richard Kassel, eds. *The Organ: An Encyclopedia.* Oxford: Routledge, 2006.

This large volume (696 pages) includes articles on the organ family of instruments, including famous players, composers, instrument builders, the construction of the instruments, and related terminology.

BYU Organ Studies Home Page (organ.byu.edu)

Diapason. (Write to Diapason, 380 Northwest Highway, Des Plaines, IL 60016).

This periodical has published materials pertinent to the organ world for over seventy years.

Hurford, Peter. *Making Music at the Organ.* Oxford: Oxford University Press, 1988.

This book extends beyond the techniques, nuts, and bolts, and into the nuances of artistry at the organ console.

Keller, Hermann. *Phrasing and Articulation.* Trans. Leigh Gerdine. New York: W. W. Norton, 1965.

Kohut, Daniel L. *Musical Performance: Learning Theory and Pedagogy.* Champaign, IL: Stipes Publishing, 1991.

With its valuable insights and practical ideas on learning and teaching, this book is an excellent guide for both the student and the instructor.

OrganMaster Shoes. 282 Stepstone Hill, Guilford, Connecticut 06437. organmastershoes.com (203) 453-1973

OrganTutor Organ 101 Online units and lessons

This page may be photocopied as needed.

OrganTutor Organ 101 Registration includes only the eleven lessons listed below under the "Organ Registration" unit and "Hymn Playing--Registration." The other listed lessons are included in the complete version of OrganTutor Organ 101. For information, visit organtutor.byu.edu

---

MANUAL TECHNIQUE

(not included in OrganTutor Organ 101 Registration)

Manual Technique—Introduction
Independence—One Part in Each Hand
Direct Fingering
Finger Crossing
Finger Substitution
Redeemer of Israel—soprano & tenor
How Gentle God's Commands—soprano & tenor
Finger Glissando
Thumb Glissando—Inward
Independence—Two+ Parts in One Hand
Thumb Glissando—Outward
Redistribution of the Inner Part
Efficiency of Various Fingering Techniques
Independence—Three Parts in Two Hands

PEDAL TECHNIQUE

(not included in OrganTutor Organ 101 Registration)

Organ Shoes
Pedal Technique—Introduction
Groups 1-2: Precise Attack & Release; Alternate Toes on Sharps
Group 3: Alternate Toes on Sharps—Spanning 2nd & 3rd
Group 4: Single Foot on Naturals & Natural/Sharp Combinations
Group 5: Single Foot on Naturals & Natural/Sharp Combinations
Group 6: Alternate Toes on Sharps—Spanning 2nd, 3rd, 4th
Group 7: Alternate Toes on Natural/Sharp Combinations
Group 8: Alternate Toes on Naturals
Group 9: Independent Feet on Sharps
Group 10: Toe-Heel of a Single Foot on Sharps & Naturals
Group 11: Single Foot on Sharps
Group 12: Toe-Heel of a Single Foot—Half- & Whole-Steps, 3rds
Group 13: Heel Slide; Toe-Heel of a Single Foot on Naturals
Group 14: Toe Glissando—Sharp to Sharp & Sharp to Natural
Group 15: Substitution Between Two Feet
Group 16: Single Foot on Naturals & Natural/Sharp Combinations
Group 17: Toe Crossing on Naturals & Natural/Sharp Combinations
Group 18: Toe-Heel Crossing on Naturals & Natural/Sharp Combinations
Group 19: Scales Using Various Techniques
Group 20: Arpeggios
Marking Challenging Pedal Parts

GENERAL CONCEPTS

(not included in OrganTutor Organ 101 Registration)

Nature of Organ Tone
Listening Skills for Practice
Practice Techniques
Correct Position at the Organ
Touch
Score Preparation

ORGAN REGISTRATION

(Included in OrganTutor Organ 101 Registration)

Introduction to the Organ Console
Organ Types and Components
Using Console Devices
Pitches of Organ Stops
Families of Organ Tone
Non-Speaking Stops
Three Primary Types of Organ Registration
Chorus Registration
Solo and Accompaniment Registration
Trio/Duo Registration

HYMN PLAYING

(four lessons not included in Organ 101 Registration)

Hymn Playing—Introduction
Hymn Playing—Phrasing
Hymn Playing—Repeated Notes
Hymn Playing—Tempo
Hymn Playing—Registration (included)

PROJECTS

(not included in OrganTutor Organ 101 Registration)

Hymn Project 1: 3-Part Hymn With Easy Pedal
Hymn Projects 2 & 3: 3-Part Hymns
Left Hand and Pedal Studies
Hymn Project 4(&5): 4-Part Hymn

SYSTEM REQUIREMENTS: OrganTutor Organ 101 is an Internet-based (online) tutorial for desktop and laptop computers, tablets, and smartphones capable of downnloading and running YouTube videos, displaying standard high-resolution graphics, and mp3 audio files.