

## UNIT 3: INTERVALS

## A. INTERVAL NAMES

An interval is the distance between two pitches. Each interval has two names: general name and specific name. The GENERAL name is the numerical designation such as seconds, thirds, fourths, etc.

## Example 3.1

1                    2                    3                    4                    5                    6                    7                    8

## Drill 3.1

Give the general name for each of the intervals.

The SPECIFIC name describes the general name, thereby explaining the kind of second, the kind of third, etc. All the intervals illustrated below sound differently and are of different sizes. Since each interval is built with F and G as letter names, they are all considered to be seconds. Because of the accidentals, the specific name will vary.

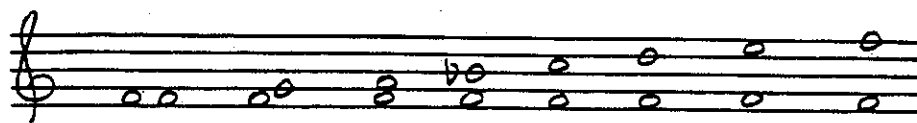
## Example 3.2

Maj. 2                    Aug. 2                    Min. 2                    Dbly. Aug. 2

The remainder of this section pertains to the method of determining the specific name of the interval.

There are two families of intervals: Perfect and Major. The general name determines the family to which an interval belongs. PERFECT are intervals of primes, fourths, fifths, and octaves. MAJOR are intervals of seconds, thirds, sixths, and sevenths. In addition, an interval is considered major or perfect if the top note is in the scale of the bottom note.

## Example 3.3



Perfect Prime    Maj. 2    M 3    P 4    P 5    M 6    M 7    P 8

In Example 3.3 the top note of each interval is in the scale of the bottom, that is F Major. Also note the Perfect 4. A Perfect 4 above F requires a Bb because Bb is the note in the scale of F Major. If the flat was not included, the distance from F to B would still be a fourth, but the specific name would no longer be Perfect.

## Drill 3.2

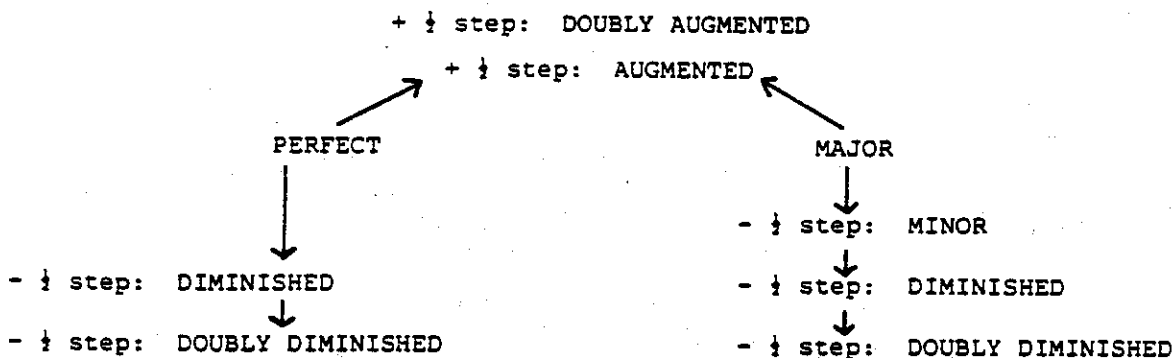
Write the Major and Perfect intervals above the note given. Abbreviations: P means Perfect, M means Major. BE SURE TO DETERMINE THE ACCIDENTALS ACCORDING TO THE KEY OF THE BOTTOM NOTE.



P4    M6    P5    M7    M2    P8    M3    P1

Become familiar with the sound of the intervals by playing them on a piano. Begin with the perfect intervals in different keys. Then practice differentiating between the major intervals. Apply all exercises from paper to keyboard as an aid to ear training.

Intervals may be made larger or smaller by raising the top note or lowering the bottom note. When this process is done through accidentals only, then the general name remains the same and the specific name changes. The following chart illustrates the procedure of adjusting the size of intervals.



## ABBREVIATIONS:

P means Perfect    M means Major    m means Minor    A means Augmented  
 D means Diminished    DA means Doubly Augmented  
 DD means Doubly Diminished

The process for making intervals larger is the same for both families. When Perfect and Major intervals are enlarged by  $\frac{1}{2}$  step they become Augmented. When Augmented intervals are enlarged by  $\frac{1}{2}$  step (or a total of 1 whole step from Perfect or Major) they become Doubly Augmented.

## Example 3.4

Both notes altered

P5    A5    DA5    or    P5    A5    D5

M6    A6    DA6    or    M6    A6    DA6

The process for making Perfect and Major intervals smaller involves different terminology.

When Perfect intervals are made smaller by  $\frac{1}{2}$  step they become Diminished. When Diminished intervals are made smaller by  $\frac{1}{2}$  step (or 1 whole step from Perfect) they become Doubly Diminished.

When Major intervals are made smaller by  $\frac{1}{2}$  step they become Minor. When Minor intervals are made smaller by  $\frac{1}{2}$  step (or 1 whole step from Major) they become Diminished. When Diminished intervals are made smaller by  $\frac{1}{2}$  step (or  $1\frac{1}{2}$  steps from Major) they become Doubly Diminished.

Observe carefully the difference in the Perfect and Major families when reducing the size of an interval because this is where confusion may occur.

## Example 3.5

P5    D5    or    P5    D5

M6    m6    D6    or    M6    m6    D6

Before doing the following drill, review the steps for determining an interval.

1. Find the pitches for the general name.
2. Make interval Major or Perfect.
3. Adjust by means of accidentals the appropriate number of half steps to make the interval requested.

### Example 3.6

Directions: Write a Dim 7 above D.

1            2            3            D

7            M7            m7            D7            ANSWER

Always keep the same letter names even though another letter name will sound the same. D to C $\flat$  ascending and D to B ascending sound the same but the names are different. (They are enharmonic to each other.) D to C $\flat$  is a D7 whereas D to B is a M6.

### Drill 3.3

Write the requested interval above the given note. DO NOT CHANGE THE GIVEN NOTE.

P5            m3            A7            P4            A5

M6            D7            m2            D8            M2

## B. INVERSION

The Interval Inversion is applied in three situations: interval, melodic, and chordal or harmonic. The first two will be addressed in this unit. Harmonic inversion will be included in the unit on triads.

### 1. Interval Inversion

The bottom note is shifted up an octave to become the top note. In so doing the general and specific name of the interval changes.

Example 3.7



The following table applies to the inversion of intervals:

GENERAL NAME

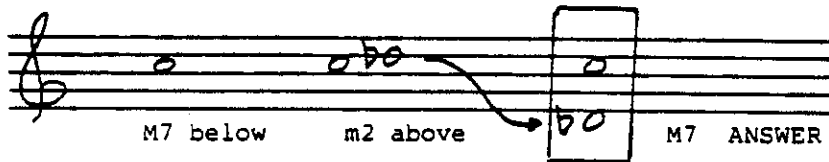
Primes when inverted become Octaves.					
2nds	"	"	"	7ths.	[or vice versa]
3rds	"	"	"	6ths.	
4ths	"	"	"	5ths.	

SPECIFIC NAME

Major when inverted become Minor.					
Perfect	"	"	"	Perfect.	[or vice versa]
Augmented	"	"	"	Diminished.	

This information is useful when determining an interval below a given note. For example, to find a Maj. 7 below C, find a min. 2 above it and drop the pitch down one octave.

Example 3.8



Drill 3.4

Write the requested interval BELOW the given note. DO NOT CHANGE THE GIVEN NOTE.

Two musical staves for interval drills. The top staff is in treble clef and the bottom staff is in bass clef. Each staff contains five notes with intervals written below them.

Top Staff (Treble Clef):

- Note: Bb (flat), Interval: P5
- Note: A (natural), Interval: m3
- Note: G# (sharp), Interval: M7
- Note: Fb (flat), Interval: M2
- Note: E (natural), Interval: A2

Bottom Staff (Bass Clef):

- Note: Bb (flat), Interval: D6
- Note: A (natural), Interval: P4
- Note: G (natural), Interval: M3
- Note: F (natural), Interval: m6
- Note: E (natural), Interval: D5

2. Melodic Inversion

In this case, the interval remains the same, but the pitches change. To invert the pitches C up to E, keep the Major 3 but reverse the direction and the result is C down to Ab.

Example 3.9

Given                      Inversion

M3 above C              M3 below C

This is also known as mirror inversion because of the image it produces.

Drill 3.5

Invert each melodic interval.

Given

Inversion

A melodic inversion of a melody is accomplished in the same manner, doing a mirror image of each successive melodic interval.

Example 3.10

Given Melody

Melodic Inversion

P5 D4 m2 D5 m2 D4 m2 P4 m2

P5 D4 m2 P5 m2 D4 m2 P4 m2

Drill 3.6

Do a melodic inversion of each melody. Begin the inversion on the same note as the given melody.

Melody #1

Melody #2

C. TRANSPOSITION

In transposing a melody to another key, determine the position of the first note within the key of the composition. For example, the composition is in A Major and the first note is E. Since E is the fifth scale step of A Major, the transposed melody should begin on the fifth scale step of the new key. If the melody is to be transposed to the key of F Major, then the first note will be C.

After determining the beginning note, there are two ways to proceed.

1. Outline the intervals involved in the melody and then simply reproduce them in that scheme beginning with the first note of the new key.

or

2. Determine the distance (interval) separating the beginning notes of the two keys, and reproduce that interval throughout the composition.

Example 3.11

Given Melody

Method #1

Method #2

All notes are a major third down from the original with all pitches in the key of F major.

