

Week 6:

Melodic Intervals

Once you have established what you need to correct the pitch, very gradually over a few minutes (or longer) try to build your way back up to the regular speed. Just don't go any faster than you can handle while staying on pitch!

Listening

Another common issue is that the singer can become so wrapped up in the message of the lyric they are singing or the experience of the song in general that they forget to listen to the music itself - specifically, they forget to listen to their reference of certain instruments to stay on pitch with the melody. Be careful you don't get so caught up in your emotional experience that you forget to listen to and align your voice with the actual music!

The Melody's Tonal Center

If you struggle with maintaining pitch it's helpful to find the melody's "tonal center". This is the place that all the notes in the melody revolve around, leave from, and go back to. It creates a point of reference in your mind as you sing your melody.

Most melodies have as their tonal center the tonic, or the first degree (note) of the song's scale or key. You can quickly work out what note that is by searching for the key of the song you are singing on a search engine. The tonic will be the same note as the key of the song. For instance, if the key of the song is in A major, the tonal center for the melody will likely be the A note. If you have access to a keyboard (there are many free, digital ones online) and hit the A either below or above middle C, you will notice how the melody of the song seems to revolve around that pitch. Holding that pitch squarely in your mind will give you a strong reference point for your singing and improve your ability to stay on pitch.

Level of Difficulty

If you experience pitch issues that are not related to your coordination of your critical bridge or your awareness of the music it's likely that you

have chosen a song with a melody that has difficult intervals or other complex musical elements. In that case, you should choose a song with a simpler melody, or do some basic interval training, explored in the next section.

Intervals

The distances between notes in a melody change constantly in songs. Often when singing from one note to another, we may not sing the spaces or distances between them exactly right, causing us to “miss” the note. Missing a note, even slightly, can be difficult to bear in modern singing. To help us with this dilemma, it’s helpful to hone your skill in identifying and singing intervals in music so you can refine your ability to be more precise with the notes you sing.

An interval in music is a combination of two notes played either together or in sequence (one after the other). The distances between notes are the building blocks of melody. In western music, we distinguish the different possibilities of intervals by their quality (major, minor, diminished, or augmented) and number (unison, second, third, fourth, etc), and whether the notes are in ascending or descending order. Common intervals that are used in melodies are minor thirds and major thirds, for instance.

Nursery rhymes can have repeating intervals that are easy to grasp. For example, in the beginning of the nursery rhyme “Frere Jacques”, the intervals ascending are spaced out by seconds, before dropping a third back to the beginning again (see the chart below). Having a better understanding of intervals can help you to sing with greater precision.

Without going too much into music theory, it’s important to begin to build an understanding of how intervals in music sound in songs. This can take some practice and time, so allow yourself some time practicing identifying the differences. For more help with exploring intervals check out some of the many fantastic resources available online, such as musictheory.net

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Interval	Ascending	Descending
Minor second (Dissonant)	Jaws theme song A Hard Days Night (Beatles) Stormy Weather (Arlen/ Koehler)	Für Elise (Beethoven) Joy To The World Shall We Dance (The King and I)
Major second (Dissonant)	Silent Night; Do-Re-Mi (Sound of Music) Rudolph The Red-Nosed Reindeer Frère Jacques	Yesterday (Beatles) Mary Had a Little Lamb Three Blind Mice The First Noël
Minor third (Consonant)	So Long, Farewell (Sound Of Music) Oh Canada Bad (Michael Jackson) Oh Where, Oh Where Has My Little Dog Gone	Hey Jude (Beatles) Frosty The Snowman This Old Man Misty (Erroll Garner)
Major third (Consonant)	Kumbaya Morning Has Broken Oh When the Saints	Summertime Man In the Mirror Swing Low Sweet Chariot
Perfect fourth (Consonant or Dissonant)	Amazing Grace Here Comes The Bride Love Me Tender (Elvis Presley)	Oh Come all ye faithful Born Free (John Barry)
Tritone (Dissonant)	"The Simpsons" theme song Maria (West Side Story)	Blue Seven (Sonny Rollins)
Perfect fifth (Consonant)	Twinkle Twinkle Little Star Star Wars Theme song Scarborough Fair Can't Help Falling In Love (Elvis Presley)	It Don't Mean a Thing (Duke Ellington) Feelings (Richard Clayderman) Have You Met Miss Jones
Minor sixth (Consonant)	She's a Woman (Beatles)	Please Don't Talk to Me When I'm Gone
Major sixth (Consonant)	My Bonnie Lies Over The Ocean My Way (Frank Sinatra) Angels (Robbie Williams)	Nobody Knows the Trouble I've seen The Music of The Night (Phantom of the Opera) Man In The Mirror (Michael Jackson)
Minor seventh (Dissonant)	Somewhere (West Side Story) Star Trek Theme	Lady Jane (Rolling Stones)
Major seventh (Dissonant)	Take Me On (A-Ha) Don't Know Why (Norah Jones)	I Love You (Cole Porter)
Octave (Consonant)	Somewhere Over The Rainbow (Wizard Of Oz) I'm Singing In The Rain	Willow Weep For Me

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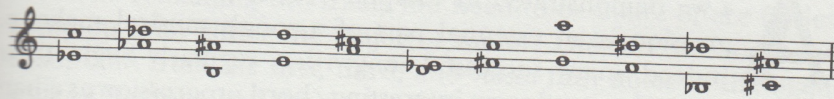
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Learning to Hear Intervals

Becoming familiar with these intervals is extremely important in writing melodies, because each one has a characteristic sound that can be used to create a particular melodic effect. You can learn to identify the sound of different intervals by thinking of songs that feature them in prominent places. That way, when we discuss them in the chapters on melody writing, you will understand them aurally as well as theoretically.

The interval between the first two words of the chorus of the Fine Young Cannibals' "She Drives Me Crazy," for example, is a major third, while Larry Henley and Jeff Silbar's "The Wind Beneath My Wings" (which was both a country hit for Gary Morris and a pop hit for Bette Midler) begins on a major sixth ("It must . . ."). Leonard Bernstein's musical *West Side Story* provides us with an abundance of memorable melodies that begin with specific intervals, such as "Tonight" (perfect fourth), "Maria" (augmented fourth), and "Somewhere" (minor seventh).

Play or sing and identify the following intervals, remembering to base your identification on the major scale of the lower note. Check your results against those in the appendix.



Wrap-Up

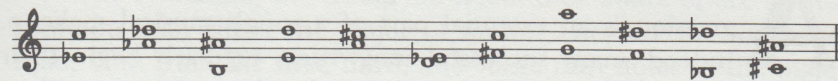
In this chapter we have explored how the pitches we discussed in Chapter 4 combine to form major scales and intervals, from which the melodies of songs are created. In the next chapter we're going to complete our inquiry into the theoretical basis for hit songwriting by looking at the chords derived from those scales.

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HEARING INTERVALS

Interval recognition is vital to hearing and writing music. Fortunately, our music is made up of comparatively few intervals. We use those same intervals in infinite combinations every day to create music, so it is imperative that we are able to distinguish one from another.

If you are familiar with each interval, you may move ahead to the next section or just review. **If you have not become intimate with each interval, devote enough time to each so that you will never confuse one with another.** Your time invested now will pay off every day for the rest of your life.

In this section, each interval is investigated in its isolated state. In SECTION 6, we'll see how they interact in combinations, in musical context. **The uniqueness of each will become apparent as you apply the tools—**comparing the attributes of *tonality*, *span* and *resonance*.

We approach the intervals in pairs, those sharing similarities of sound and function. We'll note the similarities, then learn to discern the differences in each pair. Most errors in perception are a result of interchanging a pair of intervals, a fifth for a fourth or a major second for a minor second. Accurate interval identification is essential for the correct perception of music.

In the discussion and exercises in this chapter, music notation is purposely avoided, as we are concentrating on hearing—tones, rather than notes. The exercises are configured with diatonic scale-tone numbers, using # or ♭ for chromatic alterations. Start each exercise at any pitch that is comfortable for your voice.



TIPS FOR LEARNING INTERVALS

- ◆ Commit yourself to learning each interval intimately: the sound, the structure, the personality.
- ◆ Concentrate on one interval at a time until it feels very solid and secure, until you *own* it.
- ◆ VISUALIZE intervals as large, even huge, so the contrast of similar intervals is exaggerated.
- ◆ Create each interval with your voice, singing with another person or instrument, or against a constant pitch, such as a buzz or hum from a machine, motor or electronic device.
- ◆ Produce each interval accurately. An interval retains its characteristic sound as it moves up and down the pitch spectrum. Sing or play the intervals at different pitches; experience each interval in different registers.
- ◆ Using a stringed instrument, create each interval by plucking one string while tuning an adjacent string.
- ◆ Develop a physical connection with the interval, fingering an instrument. You don't need the actual instrument. The physical memory of playing an interval will help you produce it mentally.
- ◆ Listen for intervals as they come to you throughout the day *out of the blue*, as you listen to music casually.
- ◆ Take time to INTERNALIZE an interval until you have identified it. MATCH your internal voice with the external source.
- ◆ If you have a problem with a particular interval, study its characteristics again and devote more attention to it.
- ◆ Spend as much time as necessary with each interval; the goal is immediate recognition of all intervals.



THE OCTAVE: NATURE'S FOUNDATION

◆ OCTAVE

The primary interval. Its component tones are harmonically linked, blending into what is often perceived as one voice. The octave is often felt, rather than heard. A composer or orchestrator who adds a voice at the octave is merely reinforcing what is already there in the natural harmonic.

TONALITY **The octave is the embodiment of tonality.** Two tones forming an octave—even when produced by unlike instruments—may blend into what we perceive as one tone. The result of octave reinforcement is one of tonal authority.

SPAN **The pitch difference of an octave is twice the frequency.** The simple ratio bonds the two tones (harmonically) by only one generation. **Vertically**, the span of an octave is the path of least resistance, as natural and effortless as the flow of water or electric current. **Melodically**, the opposite—the difference of frequency results in a tremendous leap requiring great energy. An octave is quite dramatic in a melody.

RESONANCE **Purest of intervals**, the octave is free of resistance (interference beats). The transparency of the octave allows us to perceive subtle differences of timbre, attack and vibrato in the participating instruments.

◆ UNISON

Unison (1:1) is the phenomena of two or more voices sounding at the same pitch. The discernment of unison or octave is one of the most challenging decisions in the perception of music.

Unison doubling of similar instruments adds weight or authority to a melodic line. Doubling of unlike instruments produces a timbre of their combined colors. Orchestral blending can result in unique, rich and interesting unisons.



FIFTH & FOURTH: ESSENCE OF TONALITY

The second octave of the harmonic series divides to produce the 3rd harmonic. This natural division creates the intervals 3:2 and 4:3, the fifth and fourth respectively.

Each of these second generation intervals suggests their derivation from the generating tone that produced them; **each contains the essence of tonality within their sound.** The fifth “points” to its lower tone as its fundamental or root, whereas the fourth “points” to its upper tone as its root. (see page 57) These intervals contain an inherent resolution, reflecting their respective positions in the harmonic series. Thus the concept of tonality is born: the fundamental relationship of all musical sounds. This relationship with the harmonic source is inescapable, even in abstract or “atonal” music.

Tonality, like gravity, is an aspect of nature that influences art. All humans seem to respond to the mathematical relationships of the primary intervals. Pythagoras discovered the eloquence of simple ratios that form the primary intervals: the fifth, fourth and major third. In each of these intervals, the non-root tone (odd-numbered harmonic) seems to “point” to the root tone (even-numbered harmonic). As you listen to each interval, do you hear the fundamental tone as the root? The primary intervals have strong tonal references, as each reflects its position in the harmonic series. Throughout history, acoustic instruments have been constructed on the principles of tonality. Review page 49 as needed when studying the intervals on the following pages.

▶ FIFTH

The tonic/fifth relationship is the essence of tonality. Two tones a fifth apart create a natural blend, as they are emulating the 2nd and 3rd harmonics. They are so closely linked that they often sound like one tone. Since every tone produces or implies a strong 3rd harmonic, the same tone played by another instrument reinforces what is already there and validates the fundamental tone. The presence of the 3rd harmonic (the interval of the 5th or 12th) is subtle in most instruments, but most obvious in the feedback of an amplified instrument. The root/fifth (no third) sonority is known as the *power chord*.

TONALITY Associate the tonic/fifth relationship with the concept of tonality. **A clear visualization of the fifth's position within the octave** provides a secure framework in which to perceive all other intervals.

SPAN Experience by singing up and down from the root to the fifth, starting at any comfortable pitch. Feel the amount of energy required to produce a melodic fifth. **You must be able to sing a solid fifth before proceeding to the other intervals.**

RESONANCE The characteristic sound of the fifth is stable, open, free of interference beats. In the appendices of Helmholtz: *On the Sensations of Tone*, there are tables of temperaments gathered from music of the world (Arabic, Chinese, Greek, Indian, Japanese, Persian) reflecting ancient, medieval and modern eras. A survey of tunings reveals **a universal preference for the natural** (*just* or Pythagorean) **fifth**.

EXERCISE 14

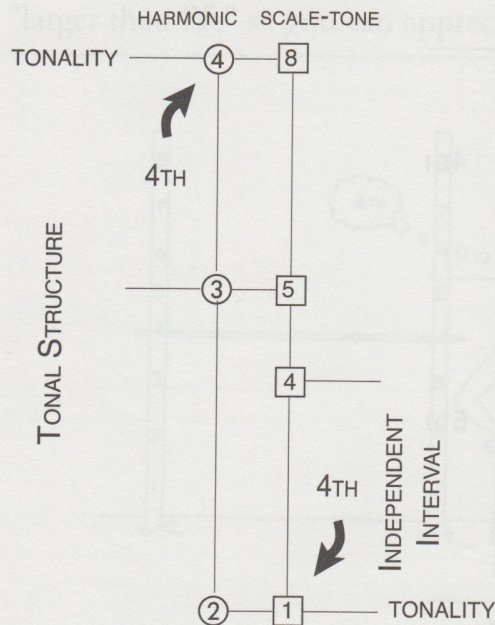
Sing an ascending fifth until comfortable and stable. Be able to produce a fifth at any time. Notice how the presence of a fifth solidifies the fundamental tone.

EXERCISE 15

Sing a descending fifth. A fifth below the tonic coincides with the 4th scale degree. This symmetry is the source of much confusion so it is imperative that you have a clear visualization of the fifth/fourth relationship.

◆ FOURTH

The fourth is the complement of the fifth: In the harmonic series, the fifth occupies the lower half of the octave and the fourth the upper half. The fourth is part of the *tonal structure*, the initial division of the octave.



TONALITY Everyone hears the lower tone of a fifth as the root. However, a fourth may be perceived with the root above, as it appears in the harmonic series, or with the root on the bottom, independent of harmonic context. This ambiguity has caused theorists to disagree for centuries over the function of the fourth. However, we need not be concerned with the role of the fourth. Our goal is to **recognize the sound of the interval in any situation.**

EXERCISE 16

Independent context: sing 1-4-1.

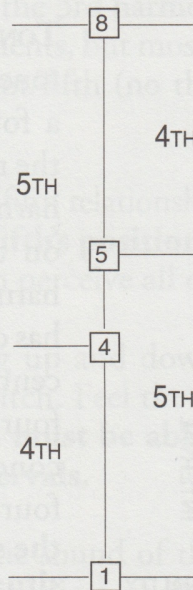
Harmonic context: sing 5-8-5.

SPAN Learn to hear the fourth as an independent entity as well as in the context of harmonic structures.

RESONANCE The fourth shares the openness and clarity of the fifth.

◆ FINE TUNING

The fifth and fourth share the closest relationship of all intervals. Similar in span and resonance, they are often confused. The tonality of the fifth is definite while the tonality of the fourth is ambiguous. The difference in tonality helps us to distinguish between the fifth and fourth.



EXERCISE 17

Sing up and down the scale tones: tonic, fourth, fifth, octave, watching the diagram. Become very familiar with the 1, 4, 5, 8 structure.

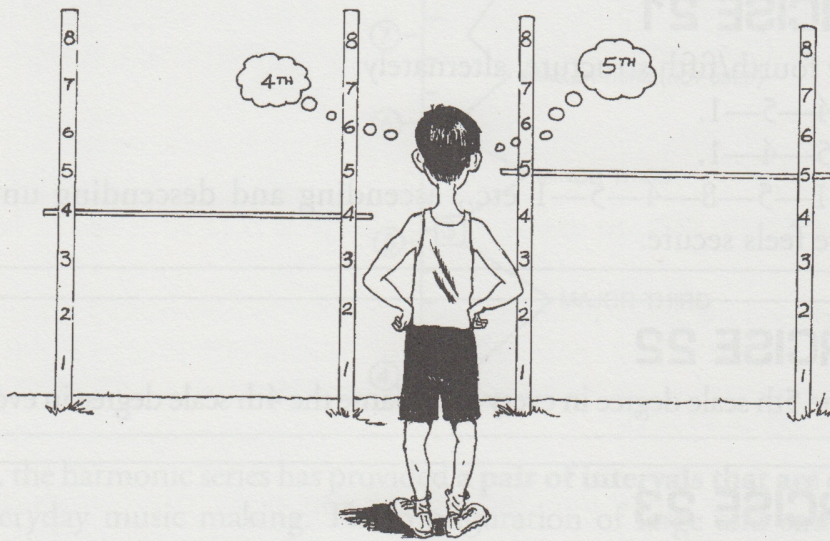
TONALITY The fifth and fourth are complementary; together they span an octave. Both intervals contain a strong sense of tonality due to their prominence and their shared function of dividing the octave. **The inherent tonality of the fifth and fourth is a characteristic feature of these intervals.**

RESONANCE Both intervals produce an open, tension-free sound. The difference in vertical resonance (3:2 and 4:3) is subtle, but **the fifth is decisively more transparent, closer to the octave sound.**

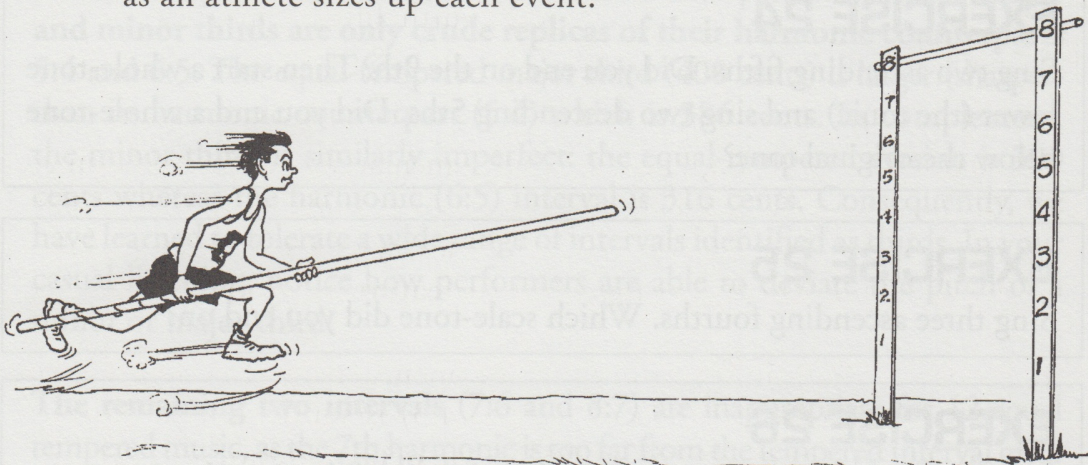
SPAN There is a definite distinction between the fifth and fourth in melodic span.

EXERCISE 18

Vocalize an ascending fourth; then experience the extra energy required to span an ascending fifth. Visualize each interval's relation to the octave "larger than life" so you can appreciate the difference.



Measure the span of each interval before you sing or play, as an athlete sizes up each event.



EXERCISE 19

Sing (ascending) 1—5, feeling the span of a fifth; then 5—8, feeling the span of a fourth.

EXERCISE 20

Sing (descending) 8—5 feeling a fourth; then 5—1, feeling a fifth.

EXERCISE 21

Sing the fourth/fifth structure, alternately:

1—5—4—5—1.

1—4—5—4—1.

1—4—1—5—8—4—5—1 etc., ascending and descending until the structure feels secure.

EXERCISE 22

Name the 5th scale degree in every key. Name the 4th scale degree in every key.

EXERCISE 23

Listen for the 5th (or 12th) scale degree in the harmonics of various instruments.

EXERCISE 24

Sing two ascending fifths. Did you end on the 9th? Then start a whole-tone lower (the tonic) and sing two descending 5ths. Did you end a whole-tone below the original tone?

EXERCISE 25

Sing three ascending fourths. Which scale-tone did you end on?

EXERCISE 26

Sing three descending fourths. Which scale-tone did you end on?