

CAPITAL ACCORD CHORUS

DIRECTOR'S CHALLENGE 2007



Know Your Craft

That good old barbershop style – what is “lock and ring” and how can you get some of your very own? Try these projects and see if you can hear the overtone!

The Payoff

Nothing makes a song exciting like the ring of the overtone. It's what the barbershop sound is all about. If that's not enough of its own reward for you, it's also what gets points at competitions, and makes audiences scream for more, even if they don't know why!

Steps to Achievement

1. **What makes it “barbershop”?** Well, here's the definition from the Barbershop Harmony Society (italics added).

Barbershop harmony is a style of *unaccompanied* vocal music characterized by consonant four-part chords for every melody note in a predominantly homophonic texture. The *melody is consistently sung by the lead*, with the tenor harmonizing above the melody, the bass singing the lowest harmonizing notes, and the baritone completing the chord. The melody is not sung by the tenor except for an infrequent note or two to avoid awkward voice leading, in tags or codas, or when some appropriate embellishing effect can be created. Occasional brief passages may be sung by fewer than four voice parts.

Barbershop music features songs with understandable lyrics and easily singable melodies, whose tones clearly define a tonal center and imply major and minor chords and *barbershop (dominant and secondary dominant) seventh chords* that resolve primarily around the circle of fifths, while making frequent use of other resolutions. Barbershop music also features a balanced and symmetrical form, and a standard meter. The basic song and its harmonization are embellished by the arranger to provide appropriate support of the song's theme and to close the song effectively.

Barbershop singers adjust pitches to achieve *perfectly tuned* chords in just intonation while remaining true to the established tonal center. Artistic singing in the barbershop style exhibits a fullness or expansion of sound, precise intonation, a high degree of vocal skill, and a high level of unity and consistency within the ensemble. Ideally, these elements are natural, unmanufactured, and free from apparent effort.

The presentation of barbershop music uses appropriate musical and visual methods to convey the theme of the song and provide the audience with an emotionally satisfying and entertaining experience. The musical and visual delivery is from the heart, believable, and sensitive to the song and its arrangement throughout. The most stylistic presentation artistically melds together the musical and visual aspects to create and sustain the illusions suggested by the music.

“Yeah, but what makes it barbershop?” In a nutshell, barbershop is characterized by:

- Major triad or dominant seventh chords
- Harmony line above the lead (tenor)
- English-language lyrics sung by all parts (no “pips”), generally of American popular music
- The “lock and ring” of the chords (more on this below)

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Try This! Get a Lesson from the Best

View/hear a discussion of the style from barbershop arranging god David Wright on the Resources page. For better playing, feel free to download it to your computer first.

2. **What's all this about ringing chords?** Wikipedia gets it right in this excerpt from their Barbershop Harmony entry:

The defining characteristic of the barbershop style is the ringing chord. This is a name for one specific and well-defined acoustical effect, also referred to as expanded sound, the angel's voice, the fifth voice, or the overtone. (The barbershopper's "overtone" is not the same as the acoustic physicist's overtone, but is known as heterodyning).

The physics and psychophysics of the effect are fairly well understood; it occurs when the upper harmonics in the individual voice notes, and the sum and difference frequencies resulting from nonlinear combinations within the ear, reinforce each other at a particular frequency, strengthening it so that it stands out separately above the blended sound. The effect is audible only on certain kinds of chords, and only when all voices are equally rich in harmonics and very precisely tuned and balanced. It is not heard in chords sounded on keyboard instruments, due to the slight tuning imperfection of the equal-tempered scale. It is for this reason that barbershoppers typically use a pitchpipe for tuning instead of keyboard instruments, though some are known to use a tuning fork.

What is prized is not so much the "overtone" itself, but a unique sound whose achievement is most easily recognized by the presence of the "overtone." The precise synchronization of the waveforms of the four voices simultaneously creates the perception of a "fifth voice" while at the same time melding the four voices into a unified sound. The ringing chord is qualitatively different in sound from an ordinary musical chord e.g. as sounded on a keyboard instrument.

Most elements of the "revivalist" style are related to the desire to produce these ringing chords. Performance is a cappella to prevent the distracting introduction of equal-tempered intonation, and because listening to anything but the other three voices interferes with a performer's ability to tune with the precision required. Barbershop arrangements stress chords and chord progressions that favor "ringing," at the expense of suspended and diminished chords and other harmonic vocabulary of the ragtime and jazz ages.

The dominant seventh-type chord... is so important to barbershop harmony that it is called the "barbershop seventh..." [SPEBSQSA (now BHS)] arrangers believe that a song should contain dominant seventh chords anywhere from 35 to 60 percent of the time (measured as a percentage of the duration of the song rather than a percentage of the chords present) to sound "barbershop."

Historically barbershoppers may have used the word "minor chord" in a way that is confusing to those with musical training. [To barbershoppers] it was "a shorthand for chord types other than major triads," and says that the use of the word for "dominant seventh-type chords and diminished chords" was common in the late nineteenth century.

[Barbershop author Gage] Averill notes the hints of rapture, "quasi-religion" and erotic passion in the language used by barbershoppers to describe the emotional effect. He quotes Jim Ewin as reporting "a tingling of the spine, the raising of the hairs on the back of the neck, the spontaneous arrival of 'goose flesh' on the forearm.... [the 'fifth note' has] almost 'mysterious propensities...' It's the 'consummation' devoutly wished by those of us who love Barbershop harmony. If you ask us to explain ... why we love it so, we are hard put to answer; 'that's where our faith takes over.'" Averill notes too the use of the language of addiction, "there's this great big chord that gets people hooked."

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3. **The math behind the ring...** is hotly debated around the world. For baritones and other Music Theory nerds, the most common assertion is that leads use Pythagorean Tuning and all other parts use variants of Just Intonation, and they use complicated formulas to figure out how to “bend” the pitch to re-inforce the harmonic resonance of a chord.

P-theory for Dummies – in a nutshell, it goes like this: sound waves make different pitches. For example, an A=440 Hertz. To get an A an octave above that, you’ll need to double the frequency (880 Hertz). An octave lower, cut it in half (220 Hertz). To get the notes in between, you space them evenly along the scale in between. (**Note:** my resident music nerd reminds me that the notes in between are subtly de-tuned to allow for playing in all keys, but that the basic example is sound. For a good explanation of that, see <http://www.precisionstrobe.com/apps/pianotemp/temper.html>)

Every note sounded, by a string or a human voice, will resonate at the frequency sung, and if sung with the proper vocal timbre and resonance (sometimes called the “singer’s formant”), it will ring at the corresponding frequencies above. Also, this frequency will reinforce the frequencies of other notes with appropriate mathematical relations – for example, intervals at thirds and fifths. However, the number you get when you arbitrarily divide an octave into eight chunks isn’t the frequency that most perfectly resonates with the original tone, so you have to adjust it slightly.

If the thought of doing complicated math on the fly gives you the willies, you’ll be happy to know that with practice, we can learn to tune “by ear” as we go. Here’s the cheat-sheet for when you know something’s wrong but don’t know what to do about it – figure out what the chord is, and where your note falls within that chord – in the most “ringable” chords, you’ll be on the root, the third, the fifth or the seventh. If you are:

On the Root: sing the truest tempered note you can, to give the other parts the frequency to tune to.

On the Third: sing the note higher, and slightly lighter (less “full”) than you would sing the root.

On the Fifth: sing the truest tempered note you can, since the fifth inherently needs less adjustment.

On the Seventh: sing the note lower, and a little fuller than you would sing the root.

*Note that these are **subtle** adjustments. For example, on the seventh, you’re not actually “flattening” the note, you’re just bending it ever so slightly.*

How will I ever be able to do this on the fly in the middle of a song? The good news is that most of us do it automatically, because we’re naturally inclined to listen for the “ring.” People with absolute pitch or perfect pitch have more trouble with this, because they’re wired to know where a given note is at any time, not how the pattern of the music fits together (like the rest of us with relative pitch).

Try this! Hear the Ring

On the Resources page, there are six examples of barbershop tags that have “ring.” Listen to them in order – they start with men singing, with lower, more easily heard overtones. You may hear overtones and assume that someone is singing them. With the men, it’s easy to know that nobody is singing the overtone note.

These examples are all of “tags”, the ends of barbershop songs, because that’s the easiest place to find a sustained chord with a really obvious ring, but many great barbershop songs ring all the way through. An example of that from these clips is the Ritz quartet’s version of “Sweet Adeline”, where you can hear the ring on many many chords in the middle of the song, once you’re used to listening for it.

Try this! Make the Ring

Many of us have been to men’s barbershop events, where a common pastime is “tag singing”...four guys stand (usually in a cube) and sing the last few measures of a song over and over, usually at the top of their

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voices. To the uninitiated, this would seem to be a ritual akin to the butting of antlers among moose, but they're actually not trying to part each others' hair vocally, they're trying to re-create the ring that you find in a great barbershop performance.

If you ever get the chance, find some guys who are doing this well, and stand in the middle of the cube. You won't just hear the overtone, you'll feel it bouncing off of you like percussion waves from a marching band.

Now it's your turn – pick a tag from the “Fun Sing Book” or the “Classic Tags for Women” – posted on the Resources page, and learn a part in it. Get three other people to learn parts, and sing the tag together. When you've got the hang of it, teach it to the chorus!

Rules for “Make the Ring”

1. You can't teach a tag that someone else has already taught – so pick early for the best selection.
 2. When you're ready to teach the tag, let Sherry know and she'll put room on the schedule for you, probably the following week – so be sure that all four of you are there the week that you teach. Only the people who actually teach get “credit” for making the ring.
4. **To be a great writer, you've got to love to read, to be a great chef, you've got to love to eat...** it's an axiom of the arts that in order to be a great maker of art, you've got to be an enthusiastic consumer of that art. Barbershop harmony is no different.

“I don't know much about art, but I know what I like...” also applies to the performing arts. Consider the elements that make a performance exciting for you. In an up-tune, tempo is an important element in audience enjoyment – does it swing, does it rock, is it syncopated? In any song, the message is a key element – does it express a feeling you like, or a sentiment you find worthwhile?

Try this! Desert Island Picks

Listen to at least five barbershop albums, of men or women. The challenge is this – if you were stranded on a desert island, and you had an iPod with just five barbershop songs on it, which five songs would you pick and why? When you give them to us, we'll post them on the Resources page. See other people's picks there now for an example.

Rules for Desert Island Picks:

1. For each song, tell us the name of the song, the name of the arranger (if you know it – it's usually listed on the album cover), the group that's singing it, and the album we can hear it on.
2. For each pick, give us a sentence or two about why you chose this – you can choose a song for *any* reason – it has delicious ringing chords, it's the first one you ever got a ribbon singing in a contest, it's funny, etc. You need to let us know why it's special to you.
3. No more than two songs can come from the same album; try not to give us more than two from the same group if possible, even if you're a diehard groupie.

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Beyond the Badge – a Springboard to Even More!

Ken Hatton, experienced barbershop educator, has a theory on why men get better gigs than women...and he's no sexist. He says it's about the root of the chord! See if you agree:

<http://www.mixedbarbershop.com/2c.gsrage.html>

Check out a comparison of overtones in four a capella traditions on the internet, which submits an interesting theory on the singer's formant (basis of the overtone) and changes in the brain that cause a "natural high".

<http://www.malzkorn.com/oberton/MUH%205505%20-%20Overtone%20Report.htm>

Above and Beyond Try this! Woodshedding

Now that you "get it" about the ring, the next step to strengthening your ringing power is knowing where you should be in the chord. This is something that takes a short time to learn and a lifetime to master (as great arrangers know).

The Ancient and Harmonious Society of Woodshedders (AHSOW) explain woodshedding on their web-site:

"Woodshedding is how our Society began: three individual voices (Tenor, Bari & Bass) harmonizing to a Lead's melody without reference to any written arrangement. An intensely pleasurable experience for the four singers involved, woodshedding is meant for their ears only rather than for general audiences'. Of course, anyone wishing to become more adept at the art of woodshedding is welcome to listen.

As the idea of woodshedding is to ring chords rather than "sing songs," the best "woodshed" melodies strongly imply many Barbershop-7th chords and are readily harmonized by those with a fair sense of our style's chord progressions and the production of overtones. There are so many existing and undiscovered "woodsheddable" melodies that we will always have a great variety of material to enjoy! Also, woodshedders are free to pitch songs where the singing is comfortable.

The "Director's Challenge Resource" page has a list of "woodsheddable" songs for anyone who would like to try this sub-cult of our larger barbershop cult.

Resources

www.barbershop.org – the home of the men's Barbershop Harmony Society. These guys have a lot to say about barbershop and good singing, and you'll find a lot of useful advice, especially at the Singing Skills section at http://www.barbershop.org/web/groups/public/documents/pages/pub_singing_skills_home.hcsp.

Judging Categories Description Book, Sweet Adelines International. As a judge told chorus directors in a regional briefing, "we'll give you any score you want...all you have to do is sing for me the sound of the score you want, and if I get the message, I'll give you that score." Furthermore, they tell us in great detail what it is they're looking for. This is must-see reading for anyone singing in a quartet, and good reading for everyone who sings barbershop competitively.

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5. **So ring, is that all there is to it?** Of course not – all of the elements that make any other vocal performance exciting also come into play in barbershop singing. The emphasis on the ring is just what makes it barbershop.