The voice, like all acoustic instruments such as the guitar, trumpet, piano, or violin, has its own special chambers for resonating the tone. Once the tone is produced by the vibrating vocal cords, it vibrates in and through the open resonating chambers, activating the four primary colors (resonances):

1) chest, 2) mouth, 3) nasal (or mask) and 4) head.

Think of the various resonances as vocal colors in a continuous spectrum, from dark or chest resonance to bright or head/nasal resonance. We may call this spectrum a resonance track. In the lower range, the chest resonance or dark color predominates; in the middle range, the mouth-nasal resonance is dominant; in the higher range, the head-nasal resonance (bright color) predominates.

The objective is to have command of all the colors of the spectrum, which allows you, the artist, greater scope of emotional expression. The emotional content of the lyric or phrase suggests the color and volume of the tone and is the personal choice of the artist.

HEAD RESONANCE should not be confused with head register or falsetto. It is used primarily for softer singing in either register throughout the range.

MOUTH RESONANCE is used for a conversational vocal color in singing and, in combination with nasal resonance, it creates forward placement or mask resonance.

CHEST RESONANCE adds richer, darker, deeper tone coloring for a sense of power, warmth and sensuality. It creates a feeling of depth and drama in the voice.

NASAL or MASK RESONANCE is present at all times in a well-produced tone, except, perhaps, in the instance of the pure head tone or at very soft volume. Nasal resonance is bright and edgy and is used in combination with mouth resonance to create forward placement (mask resonance). In an over-all sense, it adds overtones that give clarity and projection to the voice.

There are some singers who are recognized by their pronounced nasal quality and others noted for a deep, dark and chesty sound and still others for their breathy or heady sound ... and so on. In part, such individuality depends on the structure of the singer's vocal instrument, that is, the inherent shape and size of the vocal cords and resonating chambers.

The quality or color of your voice also depends on your ability to develop and use various resonances by controlling the shape and size of the chambers through which the sound flows. It has been demonstrated electrographically in the form of "voice-prints" that, like fingerprints, no two voices are exactly alike.
Exercises for Placement

Head Resonance

Yawn and feel the open sensation in your throat as the soft palate lifts and the space widens between the back of your tongue and the roof of your mouth. Don't pull your tongue back or lift the back of your tongue. The tip of the tongue should rest behind the lower teeth except to move away momentarily to articulate consonants like "t", "d", "l", "n", "sh", etc.... The yawn feeling assists in relaxing the focusing strength of the cords for softer tones.

EXERCISES

1. Feel as though you are aiming the tone straight up behind an arched soft palate. Keep your tongue relaxed and forward and with the yawn sensation. Listen for a sound that is light, heady and clearly focused (not breathy). Use a firm, steady, out and down support but very little air pressure. Feel the cords vibrate and call out gently:
   
   a) "hey!" (like a far-away calling-out sound)
   b) "ooooo" (like an owl in the distance)
   c) "eeeeee" (with the same quality)

2. In lower chest voice using head resonance, very softly,

Sing: (low voice) (Tech CD trk 23)

3. In the upper chest voice for men and medium range chest voice for women, using head resonance,

Sing: (high voice)

4. Use your head voice or soprano (falsetto for men).

Sing:
5. On a comfortable pitch in *head voice* and using the *delayed vibrato*,

**Sing:**

"*oo*" (as in *moon*):

\[
\begin{align*}
\text{Moo}& \quad \text{oo...oo...fa - a - a - a - a - a - a - a - ar} \\
\text{See}& \quad \text{ee...ee...fa - a - a - a - a - a - a - a – ar}
\end{align*}
\]

After you establish these head tones, try other vowel sounds, then words. When a word starts with a vowel, begin the tone with a *silent H* to avoid a *glottal attack*.

6. Match the heady quality of the "*oo*" and "*ee*" in the vowel of the word that follows.

"*ah*" vowel sound (as in *far*)

\[
\begin{align*}
\text{oo...oo...fa - a - a - a - a - a - a - a - ar} \\
\text{ee...ee...fa - a - a - a - a - a - a - a – ar}
\end{align*}
\]

7. Now use the word "*Hello*".

\[
\begin{align*}
\text{oo...oo...hello - o - o - o - o - o - o - o - o - oh} \\
\text{ee...ee...hello - o - o - o - o - o - o - o - oh}
\end{align*}
\]
8. With head resonance,

Sing:

![Music notation]

9. Continue, using the practice phrases on page 46.

**Nasal and Mask Resonance**

"Singing in the mask" and "forward placement" are (synonyms) vocal terms that have been used for years by countless vocal specialists, both singers and teachers alike. **Mask resonance** includes the bony structure around the nose, eyes and cheekbones. Since nasal resonance is vitally important in achieving mask resonance, we must isolate the nasal resonance at first.

The pure nasal tone is very rarely used except for character voices or special effects. Even when emphasizing another resonance, such as chest resonance, the mask resonance must still be present to bring out the overtones that help to enrich and project the voice.

It is interesting to note here that a singer or speaker with a cold is often said to sound "nasal" when in fact the sound is “de-nasal”. The air is not flowing through the blocked nasal passage.

To assist in accomplishing the forward placement (mask resonance), place your fingertips gently alongside your nose and aim the vocal tone as if to vibrate against you fingers. It is also helpful to aim the tone as if to push outward against the top front teeth.

**EXERCISES:**

The "aa" vowel sound (as in at) is the vowel sound most conducive to opening the nasal resonance and achieving forward placement. The consonants "N", "M" and "NG" assist the process since they require nasal opening.

1. Think the sound "ng" (as in angle) and say:

"aaaaa, aaaaa, aaaaa"

**Sing:** (Tech CD trk 23)

![Music notation]

2. Now an octave higher in **head voice** / soprano / falsetto.
Notice that thinking "ng" brings the tongue closer than necessary to the soft palate, but this allows the nasal resonance to be felt more easily since the tone is partly channeled through the nasal passage.

3. On a comfortable pitch using pure nasal resonance with 9 pulses of vibrato,

**Sing** aa - (as in hat):

<table>
<thead>
<tr>
<th>nya - a - a - a - a - a - a - a - a</th>
</tr>
</thead>
<tbody>
<tr>
<td>na - a - a - a - a - a - a - a - a</td>
</tr>
</tbody>
</table>

4. Using "aa" to establish the mask resonance, sing various words containing the "aa" vowel. Use 9 pulses of vibrato.

**Sing:**

<table>
<thead>
<tr>
<th>la - a - a - a - a - a - a - a - a</th>
</tr>
</thead>
<tbody>
<tr>
<td>gra - a - a - a - a - a - a - a - a - a</td>
</tr>
</tbody>
</table>

5. Using "aa...aa..." as a set-up for the placement, change the vowel to "eh" (as in end) and keep the placement the same.

**Sing:**

<table>
<thead>
<tr>
<th>Aa___ aa___ eh___ and</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gra___________________ aass</td>
</tr>
</tbody>
</table>

6. Continue with other vowel sounds using the list on page 21.

**Sing:**

<table>
<thead>
<tr>
<th>Now and then and now and then and now</th>
</tr>
</thead>
</table>
Sing: (low voice) (Tech CD trk 25)

8. An octave higher.

Sing: (high voice)

9. And in the head voice / falsetto.

Sing:

10. Continue with the list of practice phrases on page 46, maintaining mask resonance.

**Mouth Resonance**

1. With a natural, hearty *speech-like quality*, say "Hi!" through a smiling mouth.

Feel the open vowel sound vibrating against the upper front teeth. An open mouth, as if you are about to bite an apple, slightly baring the upper teeth, facilitates a clear vowel and forward placement. This mouth position prevents "covering" or trapping the sound.

2. Say: "Hey!" aiming the sound against the teeth.

3. In mouth resonance,

Sing: (low voice) (Tech CD trk 26)

4. An octave higher.

Sing: (high voice)
5. And in head voice.

**Sing:** (low and high voices)

6. Move on to other vowel sounds using the practice phrase on page 46. Speak these sounds at first with a natural, hearty quality and then go on to sustain a tone on a single pitch. When emphasizing the mouth resonance, you should feel the presence of the other resonances, particularly nasal and chest.

**Chest Resonance**

The chest resonance, not to be confused with chest register or chest voice, is the darkest of the vocal colors and can be used throughout the entire vocal range.

When you emphasize the chest resonance, you add depth and richness to your tone. To increase chest resonance, open your throat wide as in a yawn. A yawn-like feeling widens the throat resonating space, lowering the larynx and lifting the soft palate. Do not press the tongue down or pull it back in your throat as sometimes happens in a real yawn. Be careful not to relax focusing strength when increasing the resonating space. Maintain a good balance of air pressure and focusing strength to keep the buzz of mask resonance in the sound.

Feel the vibrations in the chest area while the tone projects out through and mixes with the mask resonance. You will feel the back of your tongue lower if you think an "uh" (as in love) sound but don't let it pull back into the throat. It may take some time, patience and practice to learn to focus well and not de-nasalize the very dark tones. In chest resonance, the higher overtones of the forward placement wonderfully balance the richness of the chest color to keep brightness and clarity in the tone.

1. Using a dark, angry calling-out-like tone, think the sound "uh" (as in under) and call out: (Tech CD trk 27)

   **Hey!**

   Now repeat in your head voice.

   **Hey!**
3. Now add the chest resonance to the head, nasal and mouth colors.

**Sing:** (low voice) (Tech CD trk 28)

When bringing the chest resonance into the higher range, you create the "legit" or Classical sound. For most other singing, allow the resonance to shift along the resonance track to the brighter resonances.

4. Using chest resonance, an octave higher,

**Sing:** (high voice)

5. Now with a shift to the brighter resonances at the top of the scale emphasizing the nasal and head colors.

**Sing:**

6. Using *head voice* (falsetto), emphasize the chest color.

**Sing:**
7. Here's an exercise that begins with the head resonance, then adds nasal, then mouth, then chest.

**Sing**: (low voice)

8. And an octave higher

**Sing**: (high voice)

9. And in head voice.

**Sing**: 

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55
10. In the following exercise, use medium volume. Beginning on a comfortable, low pitch, sing the sound "nyaah" ("aa" as in hat) and glide your voice on a siren-like tone, beginning in the chest resonance and moving upward in pitch along the resonance track. Gradually allow each resonance to predominate by changing to mouth resonance, then nasal resonance, then head resonance and back down. Keep forward placement and a pure "aa" vowel throughout.

Sing:

Even when only one color is being emphasized, it is natural and appropriate for all the resonances to be present. A skillful singer emphasizes and blends the vocal colors to suit the emotional expression of the song.

HELPFUL HINTS

1. When emphasizing the chest resonance on higher and louder notes, be careful not to push the air pressure beyond the limits of good balance.

2. When emphasizing chest color in the higher range, there is a tendency to sing under the pitch, so take extra care to stay on top of the pitch.

3. When practicing volume control in each resonance, keep the vocal color constant. For example, there is a tendency to add chest color when singing louder and a tendency to go to pure head color when singing softer. You can sing from soft to loud in any of the resonances except for the pure head resonance which is always soft. Volume and resonance are actually independent variables.

4. Adding chest resonance can help you create a "larger sound".

5. Don't confuse resonances with registers. Resonance refers to the tone-colors of the voice, while register refers to the distinct vocal qualities and sensations of the upper versus lower ranges of the voice.