

## THE COLOR OF THE AUDIO SYSTEM

Assuming a good record??, the turntable, mounting bass, motor drive, and support must be quiet and not talk. The arm must be free of disturbing resonances and peaks. With the cartridge and stylus mounted, the whole system has to be a neutral color - gray, yet possess the purity and transparency of distilled water.

The pre-amp must possess the silence, the band width, balance, articulation, speed, and the fine and invisible gray mist to match the incoming gray colorless signal matt from an imperfect electro-mechanical devise - the pick-up system. It cannot have odd color or harmonics, grain, egg, steel, losses, poor RIAA treatment, phase problems, filters, glitches, poor output drive capability, unstable power supply, etc., to pass on to the power amp.

A low capacity, low distortion, high band width cable must connect these fragile signals to the power amplifier.

The power amplifier is the neutral gray battleship or "boat anchor" of the system. It must possess many of the attributes of the pre-amp. In addition, it must possess great stability, instant power reserve, strength, openness, flow, thrust, speed, ability to start and stop large currents fast without ringing and with absolute transient purity. No glass, ground or otherwise, no face powder, no mud, no color or signature of its own, no bits and pieces, no hum, no AC or DC feedback problems, just a good, solid, neutral system that stays out of the way.

Coupling with wide band cables out to the speaker system, the loudspeaker must present a nondescript, black matt finish for the musical bouquets to be displayed upon. Instantly returning to quiet black during rests and between short notes, the neutral gray of the amplifiers acts as a music carrier to the wide range black matt finish of the speaker. Besides having to possess many of the attributes of the amplifiers, the speakers additional job is to re-create and project to the listener in different environments, the correct spacial imagery, the proper front to back depth, the illusive fourth dimension of escapement from the speaker itself, and the size of the Z-axis in cubic feet. It is also necessary for the speakers to project the height and width of the walls, floor and ceiling where the recording was made. The speaker must also display the placement of voices and instruments within this area, the correct phase, transients, consonants, vowels, and color of each event or group of events as recorded. It must also preserve and present the correct perspective of the artists, the correct size or scale of each instrument or group, the ability to separate and/or identify each when necessary, and to create the excitement and dynamics of actually being there when the music is played.



FMI has developed a unique system for use as a guide to better listening. We have identified the color, the consonant, and the vowel sounds of the human voice, of each instrument of the orchestra, and the proper color of the complete audio system. We trust this information will become a mnemonic device, etched into your mind to give you a point of reference and the assurance to correctly ascertain whether an audio system is performing musically or otherwise, removing subjectivity once and for all.

THE COLOR AND SOUND OF MUSICAL INSTRUMENTS

BRASS

|                   | <u>Color</u>            | <u>Consonants and vowels</u>                 |
|-------------------|-------------------------|--|
| 1. Upright Bass   | Deep purple             | Bbauh broad grunt                            |
| 2. Sousaphone     | Navy blue               | Baeh sharp grunt                             |
| 3. Bass trombone  | Magenta                 | Bzaah blap                                   |
| 4. Tenor trombone | Maroon                  | Baeh pah paah powerful, great carrying power |
| 5. Baritone       | Buff                    | Warm ba pha                                  |
| 6. French horn    | Antique ivory           | Beeoh  |
| 7. Flugel horn    | Dark brass              | Tdoh   |
| 8. Cornet         | Pure gold               | Tkda lyric                                   |
| 9. Trumpet - Bb   | Lavender                | Ta tu te dee powerful great carrying power   |
|                   | Mute - wood or aluminum | Watru re he ke                               |
|                   | C<br>Lilac              | Teh  |
|                   | D<br>German silver      | Pe ke  |
| Herald trumpet    | Purple and nickel       | Tphae  |
| 10. Flute         | Silver                  | Round pure airy tooooh                       |
| 11. Piccolo       | White blue              | Trwe bite and fire, hard chrome              |

REEDS

|                    |                     |                              |
|--------------------|---------------------|------------------------------|
| 12. Contra bassoon | Burgundy            | Bzlau                        |
| 13. Bassoon        | Rust                | Ho ou                        |
| 14. English horn   | Bronze              | Thozeh haunting, lush, snarl |
| 15. Oboe           | Copper              | Rhei vivid liquid            |
| 16. Saxophone      | Auburn              | Twee bwohynk                 |
| 17. Bass Clarinet  | Dark green          | Tou                          |
| 18. Bb Clarinet    | Aqua                | Tiou                         |
| 19. Eb Clarinet    | Pastel green        | Tiiou                        |
| 20. Accordion      | Chartreuse and ruby | Twiou twee                   |

PERCUSSION

|                    |                            |                          |
|--------------------|----------------------------|--------------------------|
| 21. Tympany        | Dark grey                  | Brroung                  |
| 22. Bass drum      | Charcoal                   | Bang zhuohmm dhuubd oonh |
| 23. Snare drum     | Pewter                     | Di dot tot               |
| 24. Bell lyre      | Hard crystal, glass goblet | Pding                    |
| 25. Vibes          | Walnut & opal              | Wang bung doeing boung   |
| 26. Wooden blocks  | Cherry                     | Bonk cunk                |
| 27. Chimes         | Oak, chrome, grey          | Roing doing              |
| 28. Triangle       | Sapphire                   | Tdi eng                  |
| 29. Cymbals        | Crystal                    | Cxrwissh!                |
| 30. Finger cymbals | Cellophane                 | Zee ihnngh               |
| 31. Wire brush     | Pink dust                  | Tiny rain drops pizstt   |
| 32. Xylophone      | Indigo                     | Tdrggnk                  |

We would like to identify and characterize the four bad colors that can so alter the audio spectrum as to make listening a chore, a bad experience, or even a nightmare.

### BAD COLORS - RANGE - DEFINITION

**BROWN** Bass and Upper Bass Region  
13hz - 190hz  
Heavy handed bass information that is larger than life size, generally run together and without proper form, detail, time, or identification. The proper harmonic structure and relationship of the bass chord of any musical composition is instantly ruined.

**ORANGE** Midrange  
190hz - 2400 hz  
A pumpkin-like layer of glop, akin to a wet woolen blanket, a layer of fine silt or mud, or in mild cases, a dense lace curtain. An homogenized, distant perspective with bad vowel structure, and sometimes smaller than life images, never real.

**YELLOW** Upper Midrange  
2400hz - 6000hz  
Another of the putrifying colors that will contaminate this part of the audio spectrum by smearing. An unnatural interlocking together of the upper harmonic structure of the beautiful midrange, making it difficult or impossible to tell if a flute or a piccolo is being played!

**CHALKY WHITE** Highs  
6000hz - 50,000hz  
A frazzling irritant that overlays the beautiful air and liquidity of this upper work that could give us proper sibilance, articulation, blending, speed and transient purity in this area that is demanded by music of all types.

### ATTRIBUTES - EFFECTS

Fat, overly ripe, bulbous, thumping, booming, humming, crunching, punching, wallowing, clunking, rumbling, rambling, formless, klutzing, blatting, continuous, pear-shaped, semi-circular, flabby, indistinguishable, obese, thuddy, honk, barrel, kawunk, and elongated, adnauseam. SWELLS THE EAR'S PERSPECTIVE OF SIZE AND FORM.

A heavy smog, a thickening glime with poor imagery, shallow, snapping, poor definition, resolution, articulation, and delineation. Butterscotch like, loss of proper dimension, two-dimensional, a kazoo like awk-nasal presentation. STRETCHES THE EAR BY ELONGATING CERTAIN VOICES AND RECESSING THE PERSPECTIVE OF THE OTHERS.

Steel wool, light smog, brash, wax paper, peaking, poor dispersion, plays limited and self contained, poor placement, megaphonic, blurred, never escapes from speaker, shredded aluminum, can have a brittle glint, angular instead of round, screech, large hunks of grain, a little shine on something that doesn't belong. CONFUSES AND DISTORTS THE EAR'S ABILITY TO SEPARATE AND IDENTIFY THE PROPER SIGNATURES OF DIFFERENT INSTRUMENTS OR GROUPS.

Ground glass, sizzle, grain, face powder, hot spots, high listening fatigue over a short period of time - especially in women, overly bright, hard, frying bacon, caustic, buzz, rattles, stings and laser-like beams, rings, pointed instead of smooth. PIERCES, IRRITATES AND FATIGUES THE EAR BY CALLING ATTENTION TO SOMETHING THAT SHOULD NOT BE THERE IN THE FIRST PLACE.

## STRINGS

|                 |                      |                            |
|-----------------|----------------------|----------------------------|
| 33. String Bass | Orchid               | Gbroanmm dran <del>g</del> |
| 34. Cello       | Tan                  | Zahl                       |
| 35. Viola       | Beige                | Ohn                        |
| 36. Violin      | Antique white        | Soinge schew peeick        |
| 37. Harp        | Rainbow              | Trinke whoalghe            |
| 38. Mandolin    | Maple walnut         | Fwang                      |
| 39. Guitar      | Maroon and gold      | Pang tang thark            |
| 40. Banjo       | Parchment and nickel | Tring trwoingk crummk      |

## KEYBOARD

|                      |                                 |   |
|----------------------|---------------------------------|---|
| 41. Grand piano      | Iron                            | Pte baong tlong, different size<br>dog barks, chops, growls,<br>"snarls" (Steinway) polka dots                |
| 42. Harpsichord      | Antique gold                    | Twa cli ang een speckled  |
| 43. Electronic organ | Yellow & brown                  | Newspaper (Funny section"?) thung<br>ork barf   |
| 44. Synthesizer      | Egg shell, tin, &<br>orange     | Toingze, fr, meee, owr  |
| 45. Pipe organ       | Royal blue, platinum<br>and red | Re bph ooh oah, boundless width,<br>depth, height, air, power and<br>majesty. The stereo of the<br>old world. |

## THE HUMAN VOICE

|                   |                        |
|-------------------|------------------------|
| 46. Soprano       | Ice blue               |
| 47. Mezzo soprano | Cameo                  |
| 48. Contralto     | Packard blue velvet    |
| 49. Alto          | Golden wheat           |
| 50. Tenor         | Medium emerald green   |
| 51. Baritone      | Platinum on scarlet    |
| 52. Basso         | Midnight blue medalion |

Together these voices become opalescent.

The music director takes these colors and skillfully blends them together in order to make beautiful bouquets of rare beauty and splendor for us to enjoy. Dare we do anything to stifle, displace, discolor, (brown, orange, yellow, chalky white) or obstruct the flow of such an illusive experience?