The Essential Home Theatre Resource™
Widescreen Review
NEWSLETTER

ISSUE 126 on newsstands soon! SUBSCRIBE TODAY!

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WELCOME!

Wow, November already. Where did the year go? Now that it's dark earlier and much cooler in most parts of the country (it still feels like the middle of summer here in Southern California), many of you will be spending more and more time indoors. So, why not kick back and....read a magazine! It's that time of year when *Widescreen Review* offers their special Holiday subscription rate, and you don't want to miss out. Subscriptions are now available for U.S. Residents for only $20 for 12 issues and $30 for 24 issues. Canada and Mexico readers can get their subscriptions for $25 for 12 issues and $40 for 24 issues, and our other international friends can get their copies for $45 for 12 issues and $85 for 24. These prices are much lower than our regular rates and are good for new subscriptions and renewals. If it's not time for you to renew yet, don't worry, we will just add the extra issues to whenever your subscription is due to expire.

In the meantime, please enjoy this month's online Newsletter. I think you'll find the archived On Screen interview with Michael Green and Bob Hodas, Wizards of Room Tuning, to be informative and valuable. And don't forget to sign up for the huge DVD giveaway on page 8!

Gary Reber
Editor-In-Chief, *Widescreen Review*

NOW AVAILABLE ON NEWSSTANDS

Issue 126, December 2007 of *Widescreen Review*:

- 2007 Holiday Gift Guide
- "Toshiba 52LX177 1080p REGZA™ LCD" By Danny Richelieu
- "IsoTek Systems Power Conditioners" By Doug Blackburn
- "ADA PTM-8150 Amplifier" By Danny Richelieu
- "DISH Network ViP 722 HDTV DVR" By Charles Wood
- "Audience aR1p Power Conditioner" By Doug Blackburn
- "Digital Performance Testing Raises The Bar For HDMI™" By Jeffrey Boccaccio
- "The Hijacking Of HDTV" By Charles Wood
- Over 40 Blu-ray Disc, HD DVD, and DVD picture and sound quality reviews
- And more...

ATTRACTIONS

Recent News

Here are some of the recent headlines that have made it to the News section of WidescreenReview.com, which is now updated daily as our Web staff finds worthy home theatre-related stories and press releases. Visit WidescreenReview.com throughout the day to find out what's going on in the world of Home Theatre.

Toshiba Sells 90,000 Units Of HD-A2 HD DVD Players Last Weekend (Tech Whack)

"Toshiba's low cost HD DVD player HD-A2 was being offered at a price of USD 99 at some of the largest retailing stores in the US market last weekend.

This sale was huge as the company managed to sell as many as 90,000 units from Friday to Sunday..."

Click Here To Continue Reading

Philips Hints At Selling More Stake In LCD Joint Venture (Korea Times)

Dutch electronics giant Philips may sell more of its stake in LG.Philips LCD (LPL), a joint venture LCD maker, as the company seeks to strengthen its presence in the smaller home appliances market centered around the lucrative healthcare and lifestyle sectors.

'For now, we don't have detailed plans to reinforce the TV business,' Kim Tae-young, CEO of Philips Electronics Korea, said in a meeting with reporters in central Seoul, Thursday..."

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Sony CEO Sees 'Stalemate' In Disc Fight (Associated Press)

"The head of Sony Corp., Howard Stringer, said Thursday that the Blu-ray disc format the company has developed as the successor to the DVD is in a 'stalemate' with the competing HD DVD format, chiefly backed by Toshiba Corp. and Microsoft Corp.

'It's a difficult fight,' said Stringer, speaking at the 92nd Street Y cultural center in Manhattan..."

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Da-Lite Adds High Contrast Matte White Surface To Picture King®

"Da-Lite Screen Company is pleased to announce the addition of the High Contrast Matte White Screen surface to the Picture King® tripod screen line. The High Contrast Matte White surface provides a gain of 1.1 and a 50° viewing angle with the ability to clean the surface when needed..."

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Image Entertainment And The Criterion Collection Sign New Multi Year Agreement

"Image Entertainment, Inc. today announced the signing of a new exclusive home video distribution agreement for North America with the Criterion Collection, extending the term through July 31, 2013. This agreement replaces the existing exclusive distribution agreement dated August 1, 2005."

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WHV Inks Deal With Paramount And DWA To Fight Piracy In China

"At a press conference on November 7 in Beijing Warner Home Video (WHV) announced it has signed an agreement with Paramount and DreamWorks Animation to distribute DVDs in China. WHV will leverage its distribution infrastructure and expertise to provide high quality, studio-authorized copies of these blockbuster films on DVD."

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I Want To Know

The Studio Scoop

Rumors, Reports, & Ramblings

Stacey Pendry

There was very little in the way of new and creative flicks to draw audiences into the cinema this year. It is no wonder that sales/rentals of DVDs are down considerably from previous years. It would take a very strong fourth quarter to break even with 2006's total takings.

With this in mind, I am casting my attention to the future and highlighting some projects currently in production. It is my sincere intention to provide our readers with a glimmer of hope for the coming year. PS...all information below is current at this time, but is subject to change.

Disney/Buena Vista

Old Dogs

Currently filming in Bridgeport, CT, this comedy stars John Travolta, Robin Williams, Seth Green, Matt Dillon, Kelly Preston, and the A-list goes on and on!

John Travolta will be reunited with Director Walt Becker (*Wild Hogs*) in this project.

A basic outline of the plot is: two friends and business partners have their lives turned upside-down when they become placed in the care of seven-year-old twins.

The Chronicles Of Narnia: Prince Caspian

In production since February of this year, this sequel to *The Lion, The Witch And The Wardrobe* is due to be released in May 2008. It sees the Pevensie siblings return to Narnia, and they are enlisted once again to help ward off an evil king. The cast includes Liam Neeson, Ben Barnes, Warwick Davis, William Moseley, Anna Popplewell, Skandar Keynes, and Peter Dinklage.

Wall-E

Pixar's newest in-the-works project is set in the year 2700. Wall-E is a robot who spends every day, day in and day out for the past 700 years, doing what he was programmed to do. But he soon discovers he was meant for much more. Voice talents in this film include Fred Willard, Jeff Garlin, and Ben Burtt.

Warner Bros.

The Dark Knight

Filming since mid-April 2007 at locations in London, England this action flick pairs Batman with James Gordon. The two join forces with Gotham's new District Attorney, Harvey Dent, to thwart a deadly bank robber known as The Joker. Due to be released in July 2008, this flick stars Christian Bale, Heath Ledger, Maggie Gyllenhaal, Gary Oldman, and Morgan Freeman in its all-star cast.

Watchmen

This DC Comics production began filming in Vancouver, Canada this past September. Starring Patrick Wilson, Malin Akerman, Billy Crudup, Jeffrey Dean Morgan, Jackie Earle Haley, and Matthew Goode, the release date is still up in the air.

Briefly, an ex-superhero is murdered prompting a vigilante named Rorshach to begin an investigation into the murder. He soon finds that there may be a more terrifying conclusion to his investigation than just murder.

Yes Man

Starring Jim Carrey and Zooey Deschanel, this comedy is about a guy who challenges himself to say 'yes' to everything...for an entire year. David Iserson penned the screenplay, which began filming in October 2007.

Harry Potter And The Half-Blood Prince

The gang at Hogwarts is back in this adaptation of J.K. Rowling's wildly popular novel series. Due to be released over the 2008 Thanksgiving Holiday, the sixth installment in the franchise sees the return of all the principle cast members: Daniel Radcliffe, Emma Watson, Rupert Grint, Tom Felton, and Jim Broadbent. And in this installment, beloved Harry learns more about Lord Voldemort's dark past when he discovers a book marked mysteriously "This book is the property of the Half-Blood Prince."

Paramount/Dreamworks

Lovely Bones

Mark Wahlberg, Rachel Weisz, and Susan Sarandon star in this upcoming drama, which began filming in Wellington, New Zealand in October 2007. The exact release date has yet to be announced, but is slated to hit the big screen sometime in 2008.

Adapted from the Alice Sebold novel, and produced and directed by Peter Jackson, this film is about a young girl who is brutally raped and murdered. Now in heaven, she watches the effect her death has on her family, especially her father, as he becomes obsessed with vengenace, which slowly creates a rift between husband and wife.

Love Guru

This comedy began filming this past September in Toronto, Canada with a tentative release date of June 2008.

Written by and starring Mike Myers as Pitka, he plays the part of an American boy raised outside of the U.S. by gurus. He returns to his country of birth to break into the self-help market. Pitka's first challenge is to settle romantic troubles and performance issues of a star hockey player whose wife has recently left him.

In addition to Myers, the all-star cast includes Ben Kingsley, Jessica Alba, Justin Timberlake, Vern Troyer, and Romany Malco.

The Duchess

Some of Britain's finest thespians star in this upcoming drama about the life of an 18th Century aristocrat, Georgina, The Duchess of Devonshire, who is an ancestor of Princess Diana. The Duchess was celebrated and reviled for her extravagant lifestyle and political views.

This project began filming in Bath, Somerset England on September 17, 2007, with no firm release date yet announced. Directed by Saul Dibb and based on the Amanda Foreman novel, this project stars the lovely Kiera Knightley as the Duchess and the dashing Ralph Fiennes as the Duke of Devonshire.

Paramount/Dreamworks

Indiana Jones And The Kingdom Of The Crystal Skull

Steven Spielberg is back at the helm of the next installment of the *Indiana Jones* franchise. Starring Harrison Ford, Shia LaBeouf, Cate Blanchett, the dreamy Ray Winstone, Jim Broadbent, and John Hurt. This chapter of *I.J.* began filming at Universal Studios, Los Angeles in June of this year with a tentative release date of May 22, 2008. The screenplay was written by David Koepp with the story written by the almighty George Lucas. It was widely speculated that this fourth installment in the adventure series was to rely heavily on computer-generated effects (C.G.). But the production crew has stated that it will be filmed in much the same way as the previous *Indiana Jones* films were, using stunt men in place of C.G.

Tropic Thunder

In this Dreamworks comedy, a series of freak events force the actors of a big-budget war film to become the soldiers they are portraying.

Starring Ben Stiller, Robert Downey Jr., Jack Black, Nick Nolte, Matthew McConaughey, and sadly missing previous star, Owen Wilson (who dropped out of the film while recovering from a reported suicide attempt), this flick began filming in Hawaii this past July and is due to be released July 2008.

Madagascar: The Crate Escape

This sequel to the Dreamworks animated hit, finds the New York Zoo animals still stranded on the African island of Madagascar. Alex the Zebra, Melman the Giraffe, and Gloria the Hippo make their way to the wilderness of the African mainland. There Alex meets his long-lost family, but finds communication difficult after spending so many years in the New York Zoo.

Directed by Eric Darnell and Tom McGrath and featuring the voice talents of Ben Stiller (when does this guy sleep?), David Schwimmer, Jada Pinkett Smith, Chris Rock, Cedric the Entertainer, and Andy Richter, this animated franchise began production in June 2006 and is tentatively slated for release in November 2008.

Universal

The Incredible Hulk A.K.A Hulk 2

This sequel to the 2003 *Hulk* began filming in August of this year with a reported release date of June 2008. Directed by Louis Leterrier and written by Jack Kirby, this latest installment in the Marvel Enterprises series, boasts an entirely fresh creative staff, due to the disappointing performance of the first *Hulk* film. Starring Edward Norton, Liv Tyler, Tim Roth, and William Hurt in the key roles.

The Hulk is still searching for a cure to the condition that turns him into an enormous green monster when angered. The sequel finds Bruce Banner, *a.k.a The Hulk*, hiding out in Siberia, when he is captured by the Russian government. He eventually escapes, but not before the evil regime collects enough of his DNA to create a monster of their own. The monster, known as the "Abomination," is sent to retrieve *The Hulk* in hopes of returning him to his previous captors.

The Changeling

Clint Eastwood directs this upcoming mystery, with J. Michael Straczynski penning the screenplay, about a mother's prayer for her kidnapped son to be returned home is answered. It soon becomes evident to the mother that the police have given her a child that is not hers. The mother must then confront the corruption in the Los Angeles Police Department. The story is based upon events in the 1920s in Los Angeles.

Starring Angelina Jolie, Amy Ryan, and John Malkovich, this film began production in October with a tentative release date of November 2008.

Hellboy 2: The Golden Army

This sequel to the 2004 Columbia-Tristar *Hellboy* began filming this past June in Budapest, Hungary, with a tentative release date of July 2008. Universal purchased the franchise, after Sony put the rights up for sale, believing it to be an unprofitable venture.

Ron Perlman reprises his role as *Hellboy*, and stars alongside John Hurt, Selma Blair, Doug Jones, and Jeffrey Tambor in this fantasy adventure.

It is up to *Hellboy* and his friends to save Earth from creatures in the mythical world, who have started a rebellion against humanity.

Sony/Columbia

Hancock

Filming of this fantasy action adventure began in Los Angeles in May of this year and is due to be released in July 2008.

The plot revolves around a hard-living superhero who enters into a relationship with the wife of a public relations professional hired to repair the superhero's flagging image. The cast includes Hollywood heavy-hitters Will Smith, Charlize Theron, and Jason Bateman.

You Don't Mess With Zohan

Written by Judd Apatow, the hilarious mind behind *The 40 Year Old Virgin* and *Knocked Up,* this comedy stars real-life pals Adam Sandler and Rob Schneider. Filming began this year in New York City and is due in theatres in June 2008.

A brief synopsis of the plot is a Mossad Agent (The Israeli government's Intelligence Agency) fakes his own death so he can re-emerge as a hairdresser in New York City.

Step Brothers

In another Apatow Production currently filming in Los Angeles and due out in July 2008, two spoiled guys become competitive stepbrothers when their single parents marry one another. This film is set to star Will Ferrell, John C. Reilly, Mary Steenburgen, and Adam Scott.

This project is being directed by Adam McKay and was co-written by Apatow and Ferrell.

MGM

Management

In this project, which is currently filming and due out in September 2008, America's girl-next-door, Jennifer Aniston, is back to her romantic comedy roots. She plays a traveling art saleswoman who is plagued by a motel manger (played by Steve Zahn), who has fallen for her and will not leave her alone.

Written by Stephen Belber, not much information is available regarding the other key role holders in this film.

The Reader

This film is set in post-war Germany where a young man's decades-long obsession with an older woman runs headlong into a war crimes trial, where he learns an awful truth.

In production since October of this year, the film is slated for release in December 2008. Starring in this romantic drama is Nicole Kidman, Ralph Fiennes, Bruno Ganz, Karoline Herfurth, and Volker Bruch.

Dead Like Me

In this big screen adaptation of Showtime's hit series of the same name, Rube Sofer departs and a new head grim reaper named Cameron Kane takes over. The new boss is a slick businessman who couldn't care less about helping the newly dead, as his predecessor had previously done. George and Reggie reconnect when George is sent to reap a friend of Reggie. Daisy and Mason, not happy with the current management, begin to drink heavily, again. This project is currently filming in Montreal, Canada and was to be released late this year, however I have not been able to uncover a more accurate release date.

Directed by Stephen Herek and written

by Stephen Gadchaux and John Masius, the film stars Ellen Muth as George, Henry Ian Cuscik as Cameron Kane, Callum Blus as Mason, and Sarah Wynter as Daisy.

20th Century Fox

Avatar

Now filming in Hawaii and due to be released to the big screen in May 2009, this sci-fi adventure stars Michelle Rodriguez (the former *Lost* star currently on probation for drunk driving), Zoe Saldana, Sigourney Weaver, and Giovanni Ribisi.

In this film, a group of humans are pitted against the indigenous aliens of a distant planet. Nothing new there, but James Cameron is directing this film (a.k.a Project 880),which was developed as a parallel project to his other endeavour, *Battle Angel*. Both films will use the same digital 3-D camera system developed by Vince Pace and virtual production studio developed by Robert Legato.

What Happens In Vegas...

This rom-com stars Cameron Diaz and Ashton Kutcher as two people who find themselves married after a night of drunken debauchery in Sin City. One of the newly-weds wins a huge jackpot after playing the other's quarter in a slot machine. The unhappily married pair then set out to undermine one another in order to get their hands on the winnings. Also starring is Queen Latifah, Michelle Krusiec, Lake Bell, and Krysten Ritter.

Directed by Tom Vaughan and written by Dana Fox, this film is currently being filmed and is due to be released to the cinemas at the end of June 2008.

Space Chimps

Currently filming and due to be released in May 2008, this Vanguard Animation project features the voice talents of Kristin Chenoweth, Patrick Warburton, Stanley Tucci, Cheryl Hines, Jeff Daniels, and Andy Samberg, and is directed by Kirk De Micco, who also shares writing credits with Simon Goltsman, David Goetsch, and Jason and Ross Venolur. The music is set to be created by The Blue Man Group.

The plot features Hamm III (Samburg), the grandson of the first chimp astronaut, who is blasted into space by an unscrupulous Senator (Tucci). The fun-loving chimp must soon get serious and tackle the mission at hand—to rid a distant planet of its evil leader (Daniels). With the help of his two simian colleagues (Hines and Warburton) he tackles the challenge in earnest.

I hope you've enjoyed reading about the 2008 upcoming movies in this month's newsletter (which will inevitably make it to your home theatre). With a little luck and a lot of creativity, perhaps 2008 will outshine this year in film releases....fingers crossed!

Full HD
1920x1080

Focus on: *my pursuit of perfection*

JVC reaches new heights with the HD-100 Projector, featuring the World's Highest Native Contrast Ratio, an astounding 30,000:1. With the HD-100, you can count on brighter whites, velvety blacks and clarity beyond compare. And because it's 2.35:1* Cinemascope capable, your entertainment is larger than life. Which should make your life more entertaining.

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*A separate lens adaptor which is not included is required for 2.35:1 playback.

Coming Soon...
To A Retailer Near You

Danny Richelieu

New Video

SIM2 C3X 1080

SIM2 recently introduced their newest DLP®-based 1080p projector, the **C3X 1080**, one of the first to utilize Texas Instruments' latest DarkChip™ 4 DMD. The three-chip, 17-inch-square, 22-pound projector features a high-gloss, sculpted cabinet and all-new, all-glass optics with SIM2's proprietary ALPHAPATH™ light engine incorporated into the design. The projector is said to have a 10,000:1 contrast ratio and incorporates 10-bit video processing and a newly developed, more advanced color management system. The C3X 1080 includes two HDMI with HDCP inputs and its RS-232 and USB ports allow for increased flexibility with control and firmware updates. Four color options are available (gunmetal, black, red, and gold), and it is selling for $30,000.

SIM2 *954 442 2999* *www.sim2usa.com*

New Electronics

LG BH200

LG Electronics unveiled its second-generation Super Blu™ Blu-ray Disc and HD DVD combination player, the **BH200** ($1,000). Unlike the first-generation player, the BH200 fully supports the HD DVD specification, including HDi interactivity, and is also compatible with Blu-ray Disc's Profile 2.0, otherwise known as BD-Live. Picture-in-picture compatibility is available for Blu-ray Disc and HD DVD titles that feature the advanced interactivity, and the HDMI v1.3-compatible player can deliver 1080p24/30/60. The player features QDEO™ video processing for scaling standard-definition DVDs up to 1080p.

LG Electronics *800 243 0000* *www.lgusa.com*

New Loudspeakers

Definitive Technology Mythos Ten

Definitive Technology introduced the newest addition to their Mythos line—the **Mythos Ten** ($900). The wall-mountable loudspeaker can be positioned either horizontally or vertically to be used as a left-, center-, or right-channel, and is tuned to match the Mythose SuperTowers as a dedicated center channel. Employing two racetrack-shaped 5-inch by 8-inch drivers, two 5.25-inch midrange drivers, and a pure aluminum dome tweeter, the 93 dB per watt per meter loudspeaker has a frequency response from 31 Hz to 30 kHz (±3 dB) and can handle from 10 to 300 watts of power.

Definitive Technology *800 228 7148* *www.definitivetech.com*

JL Audio began shipping their **Gotham** powered subwoofer, featuring two of their 13.5-inch woofer drivers, which boast a 4-inch peak-to-peak excursion envelope and have been optimized specifically for the Gotham. The subwoofer includes a built-in 3800-watt switching amplifier. Each cabinet requires one full month to fabricate from beginning to end, constructed entirely out of fiberglass with extensive internal bracing and a wall thickness exceeding 1.1 inches throughout. A full suite of signal-processing features is built into the subwoofer, including variable slope and frequency for the low-pass filter, an ELF (Extreme Low-Frequency) trim control, and ARO automatic room equalization. The 34-inch high subwoofer weighs 360 pounds and is selling for $11,000.

JL Audio Gotham

JL Audio *954 443 1100* *www.jlaudio.com*

Phoenix Gold® introduced their Super Bessel Array **IHI100** in-wall loudspeaker system recently. Featuring six 76-millimeter midwoofers, able to move effectively the same amount of air as a single 8-inch driver, and a 1-inch silk dome tweeter, the loudspeaker has a frequency response of 75 Hz to 20 kHz. Selling for $250 and available January 2008, the IHI100 has a power handling rating from 15 to 150 watts and has a nominal impedance of 6 ohms.

Phoenix Gold IHI100

Phoenix Gold *503 978 3321* *www.rodinaudio.com*

Meridian F80

Meridian, in conjunction with Ferrari (yeah, that Ferrari), has introduced the **F80** desktop audio system. The F80 includes internal AM/FM tuners, a CD player (with "more than a strong hint of Meridian's top 'hi-fi reference' products inside") and the capability to playback DVD-Video discs. Using three power amplifiers to deliver a total of over 80 watts to the two front loudspeakers and integrated rear subwoofer. The loudspeakers themselves are a single full-range driver, using a neodymium magnet and magnesium and aluminum alloy cone. The F80 is supported by a solid die-cast metal base and each loudspeaker is housed in its own separate enclosure created from an alloy-injected composite, a material that was brought on by the partnership with Ferrari. The F80 will be selling for $3,000 and is available in five official Ferrari colors.

Meridian *404 344 7111* *www.meridian-audio.com*

Widescreen Review™ The Essential Home Theatre Resource™ presents

THE ULTIMATE DVD GIVEAWAY CONTEST!

20 TITLES—OVER 100 DVDs!

Just complete the contest form below and mail it or fax it to us. We will draw names at random the first week of January 2008.

Live Free Or Die Hard

I Now Pronounce You Chuck & Larry

Shoot 'Em Up

Mr. Bean's Holiday

The Simpson's Movie

Entourage Season 3 Part 2

Ratatouille

Shrek The Third

Futurama: Bender's Big Score

Flight Of The Conchords

Transformers: The Movie

Rush Hour 3

Deep Water

Evan Almighty


Doctor Who: Third Season

Pirates Of The Caribbean: At World's End

Little Britain: Complete Collection


Harry Potter Years 1-5 Gift Set

Blade Runner: Four Disc Collector's Edition

Stanley Kubrick Director's Series

NAME _____

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CITY _____ STATE _____ ZIP CODE _____ COUNTRY _____

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DVD PREFERENCES

1) _____ 2) _____ 3) _____

Mail to: Widescreen Review, 27645 Commerce Center Drive, Temecula, CA 92590. Fax to: 951-693-2960. Enter online at: www.WidescreenReview.com. All DVDs are NTSC Region 1.

Entries must be received by December 31, 2007.
Titles preferred are not guaranteed to be won. One DVD winner per physical address.

Michael Green And Bob Hodas

Wizards Of Room Tuning

In this edition of On Screen we explore the controlled acoustic approach to home theatre surround sound. Can the videophile and audiophile be considered separately in the context of a home theatre experience? I think not. Both the videophile's goal of realistic reproduction of the theatrical experience in the home and the audiophile's goal of the recreation of the concert or recording venue experience are mutually supportive in a home theatre music system optimally setup to maximize spaciousness and scale. The primary raison d'etre of the theatre or concert hall is not spaciousness in and of itself, but rather the ability to contain a sizeable audience. The large number of seating positions inevitable results in a whole range of better and worse seats acoustically and visually. With the typical home audience consisting of just one, two or a few people (on occasion), the optimization of the reproduction of the soundtrack for all or most of the likely seating positions is well within reach.

Michael Green and Bob Hodas, who spent time with us at our home re-setting-up our reference systems, approach surround sound set-up with the idea that when you listen to a sound system you are listening to the room as much as the system. If you accept this premise an understanding of the way a room works acoustically will provide great insight into appropriate system set-up. The result of treating your room in the way prescribed is to substantially eliminate the boundaries of the room acoustically, thus allowing for a sense of stage width, depth and height extending beyond the physical boundaries of the room.

Editor Gary Reber talks with both Michael Green and Bob Hodas during the two day period the three spent together creating a controlled acoustic environment in the living room of the home which serves as *Widescreen Review's* reference system facilities. Michael Green is the President of Michael Green Designs and RoomTune who design and manufacture acoustical and tunable audio products distributed by Ultra Systems (800 724 3305). Bob Hodas has made excellence in audio a primary goal from his early work with The Doobie Brothers, through the recent remix of *Aladdin* for Walt Disney's World On Ice, and has recorded a number of records for the Windham Hill and Hearts Of Space labels. He has consulted on the development of many successful products with manufacturers such as Dolby Laboratories and Monster Cable®. As a contributing editor for *Recording Engineer/Producer* and *Mix* magazines he has written articles sharing knowledge that contributes to the advancement of audio quality. He tunes more than 200 recording studios on a regular basis. Mr. Hodas can be reached at 510 649 9254 in Northern California.—Gary Reber, Editor ■

Create A Controlled Acoustic Environment

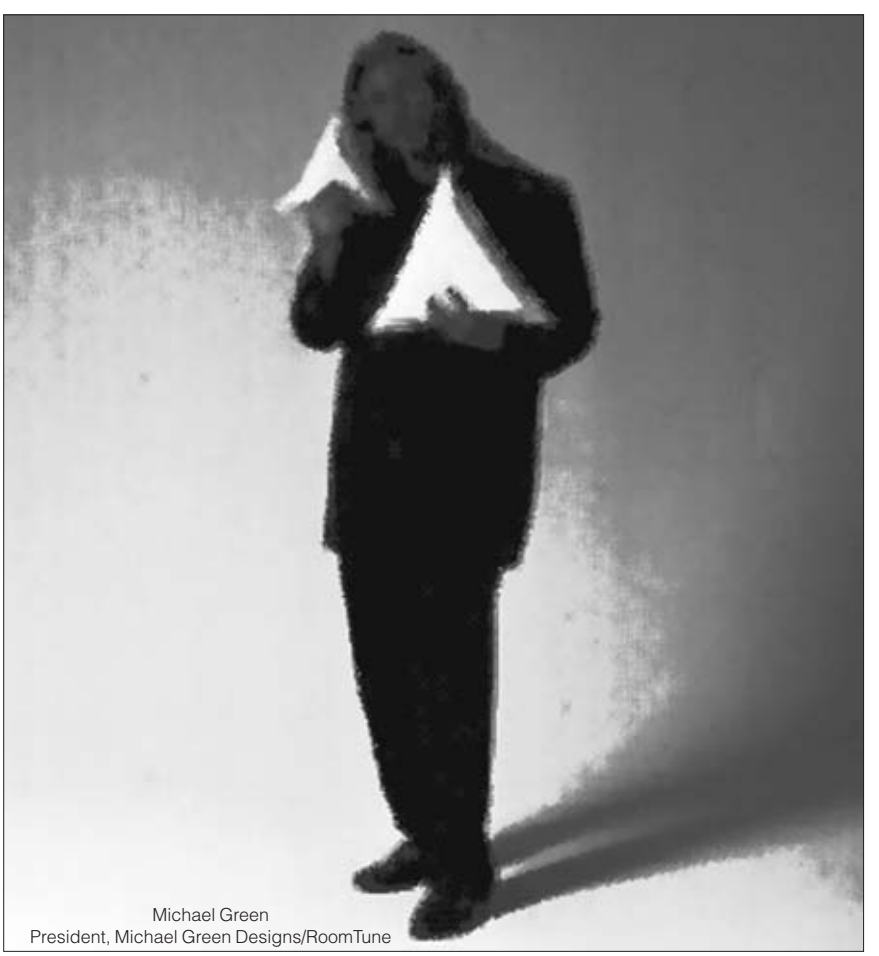
Gary Reber, Widescreen Review: We're starting the conversation while we open the first group of boxes containing the Clamp Racks.

Michael Green, RoomTunes/Michael Green Designs: Yes.

Reber: Michael, how are your Clamp Racks designed? What are the benefits of your rack designs?

Green: These are actually Deluxe Justa Racks, which can double for a ClampRack if you decide to do top and bottom clamping on the components. These are the first mechanical grounding racks that have ever been made. What they allow you to do is adjust the vibrating energy from each of your components. Every part on the circuit board vibrates and has its own little signature. That signature changes depending on what else is vibrating around it.

What this rack allows you to do is develop a vibration synergism between your different components and even the room itself by "tuning" the components. As you tighten the shelves on the rack, it takes energy from the components, sends it into the rack, then down the rods and into the mechanical grounding devices at the bottom, the bottom cones, which then transmit the energy into the floor. If you want the sound, or the pic-



Michael Green
President, Michael Green Designs/RoomTune

ture, if you're using a laserdisc, to be a little tighter sounding, or to get a little cleaner, sharper looking, you simply tighten up the shelf; if you want it to sound more open and harmonic, then you loosen up the shelf. So it kind of acts like tuning a string on a guitar. Everything I design is based on mechanical grounding principles. The key is to integrate the system together-acoustically, mechanically and electrically.

Reber: Tell our readers about the vibrations occurring in amplifiers, processors, preamplifiers and D to A converters that communicate outside the chassis through the signal path, and the impact vibrations have on sound quality.

Green: When we started to research how much our music and pictures are being altered by the vibration of parts on the circuit board, we were pretty amazed. All of these component parts are part of a formula that makes the component work the way it does. Part of that formula is vibration, and how you alter that vibration. And it does get altered whether you want it to or not, because of humidity, because of other parts it may be attached to, and because of other sympathetic vibrations around it. If you can gain control of the vibrations you can tune the component—it's just like a string of a guitar. That guitar string is passing a signal. But what you do to that string, by attaching it to a piece of wood and by tightening and loosening it, is to make it change. Well electronic parts, from the aspect of vibration, are not that different from the guitar string.

Reber: Is this something that can be measured or seen?

Green: Dramatically. You can hook up to a Melissa Computer System, or you can set up a microphone in the room and make changes on your rack. If you have a spectrum analyzer, you can show changes in the harmonic structures of your music. We did a few such tests over in Europe last year. We watched how the harmonic structures of different instruments changed depending on the mechanical changes we made. Did you ever hear somebody say about their music system, "the guitars and cymbals and pianos and everything kind of has the same sound character?" Well, that's because each instrument is not able to develop its own harmonic structure. The reason they're not able to do that is because of the vibrations.

Reber: Should the object be to tune out the vibrations? What would be the result?

Green: You don't necessarily want to tune out the vibrations. But you do want to control the vibrations so that you can make the sonic or visual changes that you want to make. An interesting part of our industry and this hobby is that nobody really agrees on what is correct.

Room at beginning stages of JustaRack building with Michael Green.

Reber: And that's okay.

Green: That's completely okay. You eat Jiff peanut butter, I eat Skippy. It's still peanut butter. The problem is that we've tried to build an industry around absolutes, but the thing that makes music, for instance, so wonderful is listening to the same piece of classical music played by different groups in two different halls with two different conductors with two different audiences on two different nights and you come up with something that's unique to each performance. I completely oppose the idea of "this is correct," because music does not work that way. Music is a moment and you may walk out of a concert, or poetry reading, or whatever perceiving something completely different from what I would. Whose to say what's right? It's an art form. That's why there are so many components, because people have varied tastes. But here's the problem. Let's say your system is comprised of components from ten different designers. Those ten designers would probably disagree with each other about how music should sound. And when they design their component or their speaker, they voice it in their own home, to their own taste, with their own equipment, at some specific altitude, with a certain level of humidity and so on and so on and so on. And let's say that month they are eating Jiff! They have all these factors influencing them when they are designing. Then they put their product in a box and say "this is what is right." They ship it to another part of the world, or even next door, and it never sounds the same as what the designer created in his or her own room. The customer takes it out of the box and tries to make that designer's personal taste work. And they're trying to match it up with other designer's work, who went through the same process. Something's wrong.

Look at how different that is compared to, say, let's all sit down and play a guitar, a violin, a cello and a drum. You take all these very different instruments, which all are played differently, but you have the one thing that an audio system doesn't have: you are able to tune the instruments together. Bingo! And that's what the rest of the audio industry is

Michael Green at work assembling a JustaRack.

missing. They're trying to solve everything electronically. As far as the electronic end of it goes, that's fine. We do need to be able to fix as much as we can electronically. But when you get to the end of that road, you've got to turn towards mechanical physics.

Reber: So the rack system is a basic foundation to that whole theory. Because that's what all the components that make all this stuff work rest on.

Green: If you look at everything that I design, it doesn't take you too long to figure out where I'm coming from. Whether you're looking at my speakers or my racks, or my other designs, the same principle is followed.

What we're after is this. We think consumers are in varying states of confusion. They are spending all this money trying to obtain good sound and good video performance. They keep turning towards all these different electronic design philosophies—philosophies that are really not harmonious, not really able to work with the other philosophies of other designers. So we took a look at the big picture and said, "why is this thing not working, why are these approaches getting stuck in the mud, and what can we do about it to allow people to dial in the sound that they want?" Because that's the bottom line. No matter who you are, or what your taste is, or what your beliefs are, or what you think music should sound like, you should be able to get that. And if you follow the way the industry has done things in the past, you're pretty much getting everyone else's taste, and they are saying to you, "well if you like it you're right, if you don't, you're wrong." You don't see somebody building an instrument with that in mind, or playing music with that in mind. So we came along and came up with a different path for people to follow. That's what this is all about.

Everything follows a very thought-through method of listening, all the way from the smallest rack that we design through to the biggest speaker that we design. What we have is a system that's really a big instrument. And then all you have to do is sit back and dial in what you want to hear. Every part is affected by tuning.

Reber: You often use the term "dial in" interchangeably with "tuning." Define that a little bit more in terms of the actual steps and what is needed to do that.

Green: "Dialing in" is just another way of saying "tuning." You've got three things that you're going to be dialing in. First there's the electrical side, meaning the electrical characteristics of the components and even the quality of electricity coming out of the wall. Then you've got vibrations—the mechanical grounding of the components, the speakers, even the cables—everything that is passing a signal. Finally you've got the room itself, which involves both mechanical and acoustical vibration. You see, vibration is part of the formula. So when we're talking about dialing in, we're talking about making these three areas work together. What we do is design products to give you flexibility and control. For example, we've designed acoustic products to make the room as live or dead as you want. We even go to the extent where we're now building rooms in homes and stores where we can change the resonant characteristics, the pitch, of the walls. See, you're not just hearing the speaker, you're hearing the wall too. You can either adapt the speaker to the wall, or you can adapt the wall to the speaker, or you can do both and get the best of both worlds.

Getting back to "dialing in," what we usually do is we give three elements to the customer. The customer already has electronics. We give him tunable racks to put his electronics on, we give him tunable speakers, and we give him acoustic tuning devices to put in the room. He or she then starts to follow an easy process.In fact we have a guide book called "Let"s Tune Your Room," and the customer starts through this process of dialing in the sound that he or she wants.

Reber: This would be a good time to talk about the acoustical treatment of a room.

Green: Most everybody thinks of an acoustical wave as a straight line that's traveling through a room. When it reflects off a wall they think of a ball on a billiard table. That's not the case. Acoustics are more like a bunch of balls with each ball representing a particular frequency. These balls, or waves if you prefer this term, are pushed around the room by the movement of the drivers in the speakers. These balls are bumping into each other and everything in the room.

Reber: They are varying sizes?

Green: Yes. Every frequency is a different size ball. Patterns are formed in the air and as the air starts to move around the room the waves or balls are pushed around and hit the room boundaries, the walls. When they hit the walls, some of these frequencies, depending on the size of the wall and the materials it is made of, actually soak into the wall causing the wall itself to vibrate. This is the mechanical vibration part of room acoustics. Other balls or waves reflect off the wall and then run into another wave about the same size. These waves in turn bump into other waves and then it builds into what's called the laminar effect, it travels along the wall. You can hear it when you walk close to a wall and all of a sudden you can hear your voice spread all the way out across the wall. That happens on every surface, no matter how big or how small the surface is. It's just like if you took a cup of water and poured it on the table. Some would splash, but a lot would run along the table. If you turned that table sideways and called it a wall, that's what's happening with the sound waves. You're pushing all that energy along and it's moving down the wall and then gathering in the corners, especially the upper corners where there is no furniture to break it up. Since it builds acoustic pressure in the corners, we can come along with our acoustic treatment and catch it as it corner loads and shouts back into the room.

Reber: So that's how the CornerTune works.

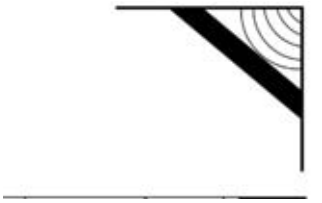
Green: Yes.

Reber: And the object of it is to catch the wave as it comes out from the corners.

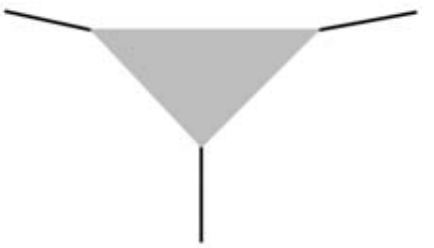
Green: Because you have more control catching the wave coming out from the corner. The more dampening you do on the wall itself, the more sound you're losing. You don't want to lose the sound, the frequencies, you just want to control them. For example if you just deadened your wall, no matter what speaker you had, you would end up having a very dead, sucked out sound. You've already lost the music! All rooms have some things in common. They have walls, and because those walls are connected, they have corners. Corner loading then occurs because much of the energy builds up in the corners. So that's where I start, with the CornerTunes to control the corners. Once you control the corner loading by "barricading" your major corners, then you'll start to hear other areas. Halfway between the corner and the next corner you will generally want more acoustic treatment. Of course all of this is on those diagrams.

Reber: Some companies, as you said, approach acoustical treatment by putting

Horn loading in the corners.



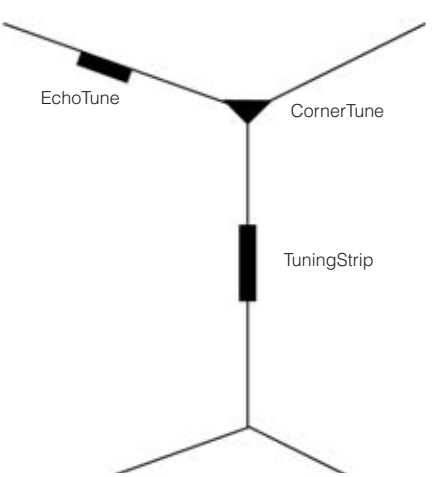
Stopping the reflected wave.



CornerTune in corner.

frequency-deadening materials on walls.

Green: Think about the words: "deadening." You know, "dampening, deadening, absorbing." Music is based on just the opposite. Harmonic structure for example. Take a piano. It's like having a whole series of sustaining or deadening pedals on a piano. You want the piano to be able to develop harmonic structure. Any time you dampen the sound from the piano to stop the note short, you will notice that the harmonic richness that the piano board is developing, also dies. You can treat a room the same way, if you dampen or deaden your room, or even the circuit path in your electronics, you're killing the sound. You'll never again be able to restore that sound. Once you stop the natural harmonics from developing, you're done for. No engineer can tell me that you could come back later and synthetically add those harmonics back into that piano and get that harmonic structure back. It's not possible. The best you can do is end up with something that sounds very artificial.



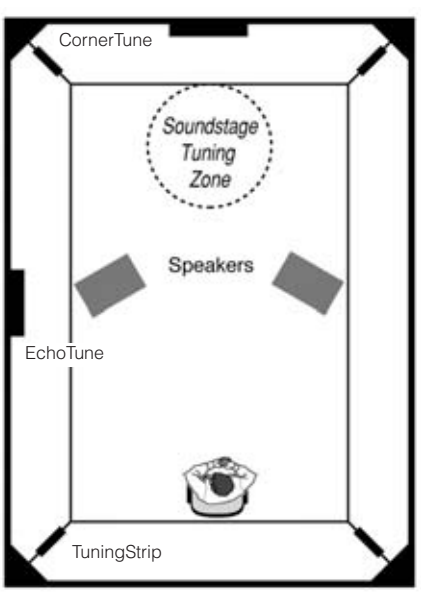
Typical Tunepack configuration in a recctangular room.

Reber: Isn't that one of the arguments for dampening a room and designing speakers with, say, very narrow or focused or controlled directivity, to eliminate reflections. Isn't the idea to hear the direct sound rather than any reflection or the room character and that's the reason for applying dampening materials?

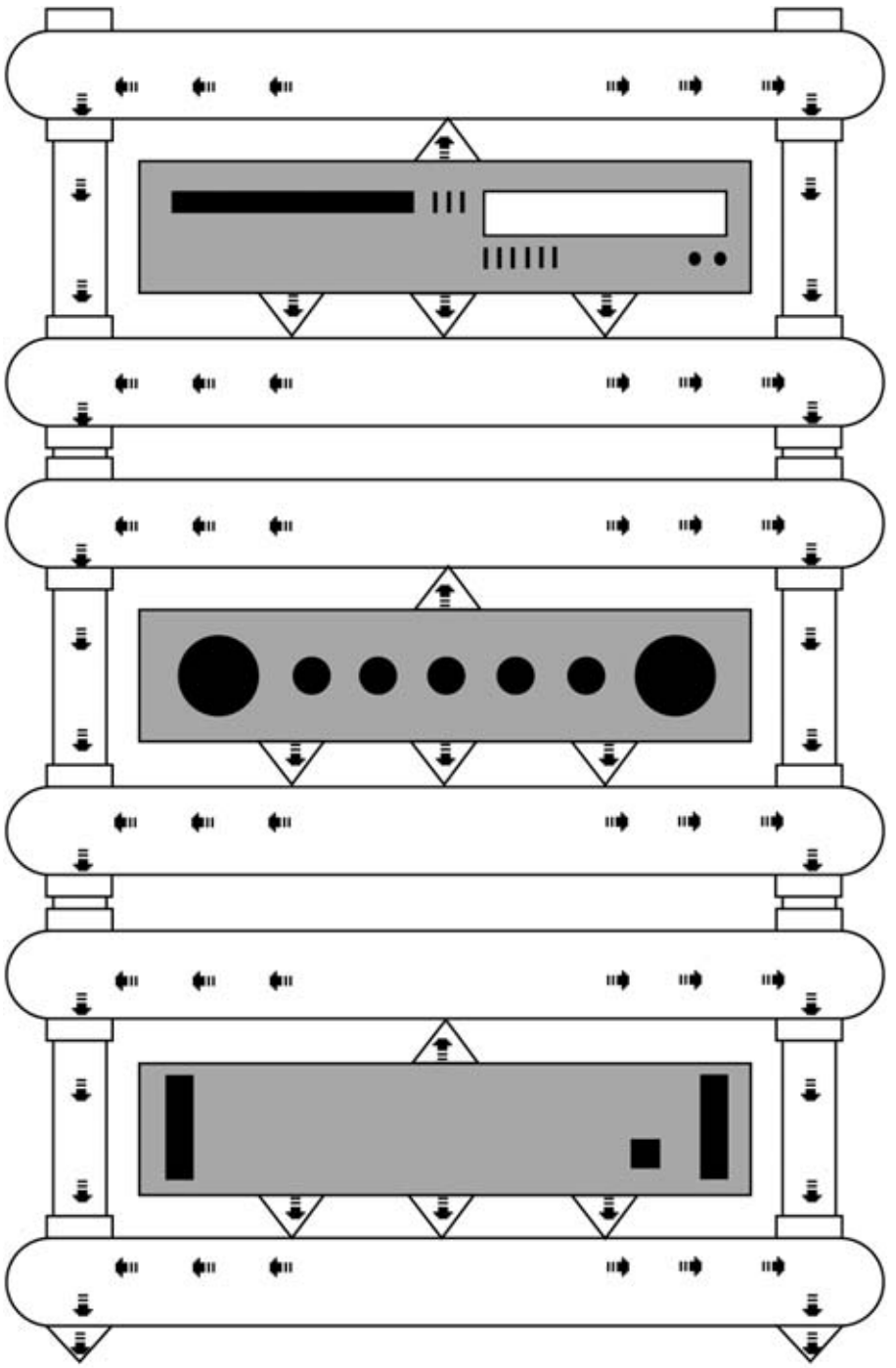
Reber: Well think about it. It almost goes back to that straight line theory whereby sound is a straight arrow that travels right from a source to your ear. If you pay attention to my voice when I'm talking to you, you'll notice that as much as you're hearing my voice, you're hearing the room. You can hear the walls talk back to you right now when I talk to you. To try to take that sound and treat it unnaturally by killing those walls, or deadening those walls, all you really are going to do is make those walls sound like this (deader and darker sounding). You're going to hear the walls anyway. The walls are just going to sound dead. So that whole theory of point source is pretty far removed from any writing in the past on music theory. Music theory has never agreed with point source. It's just some of your modern day acousticians who are trying to change physics. I don't know where they got stuck, but they got stuck.

Reber: Many loudspeaker designers design their drivers and test and refine their designs in anechoic chambers.

Green: Some do, and then others build them in typical rooms. You may have noticed that the ones that are finished off in anechoic chambers usually have drivers with a lot more dampening on them than speakers that are built by ear. It's kind of interesting. It's called an anechoic chamber, but what it really is is a bunch of dampening. Put a bunch of foam in a room, all you're really doing is distorting the air pressure, the sound waves. There's a big difference between making a sound or a note, and making a frequency. A frequency is just the cycle. Sound is quite a bit bigger than that. A sound is also harmonic structure. You not only hear resonances at the particular frequency, but you also hear resonances that are developed up and down from that frequency. What happens when you use too much dampening, or when you use dampening at all, is that you start to decrease



Room with soundstage zone.



Mechanical transfer flow chart: providing a series of conduits for excess energy to move to ground.

and into the tuning boards so the energy is now common between the tuning board and the inside the component. By tightening those two nuts right there, above and below the tuning board, you're changing the resonant pitch to a higher frequency in the tuning board, which means more energy will now run over to the rod and will flow down to the floor. If you loosen it, you're going to slow down the flow of energy. It's kind of like operating a valve controlling the whole energy-draining process. To tighten up the image and soundstage, and harmonics, you would tighten the shelves. To get more of a full harmonic sound, you would loosen them up.

If you want to make a more effective mechanical ground and gain even more control, what you would do is also put one Audio Point on the top of your component, and use two shelves or "tuning boards" to sandwich your component, instead of just setting the component on one shelf. You gain about 50 percent more control over your component and the way that it sounds. Again, the idea is not to squeeze your component, but just to make positive contact so that you can drain the energy into the shelves. That's what the mechanical flow chart is all about.

Reber: So after we've done all of that, we've got the rack that's become extremely stable, the AudioPoints are in place and of course, as we clamp, everything becomes very snug in terms of the electronic components. Then the last thing is to work with the physical perimeter of the room. Actually I had already RoomTuned our main or living room and we're now adding to and repositioning the RoomTunes in both the living room and in the family room.

Green: Yes. You could start with the room, either way.

Reber: And so that's where the various RoomTune acoustic products come into play. So let's talk about what you did there, how you approach that.

Green: The speakers produce the sound waves. These waves build up in the room and make their way to the wall. The wall will do what it does with the sound. As we talked about before, it'll reflect part of it, it'll absorb part of it, and transmit part of it up into the corner. So the first thing to do acoustically is deal with the corners because that's where the concentrated waves are going to form and then horn load back into the room. So start with the CornerTunes.

Next you start to work on the other areas of the room that are hot spots such as the midpoint of the room where wall meets ceiling. Your room, because it's open on one side, right by the speaker, is creating some asymmetry acoustically. By putting some Room Tunes on the right side in the opening to the dining room you're blocking out interference from this opening. In fact we're using the floor standing RoomTunes to "barricade" the dining room acoustically.

Reber: What is the principle behind the RoomTunes having a different treatment on each side? Do they have a different inner treatment?

Green: There's an absorbing side and a harder, reflecting side. It's most important that you don't point the damping material at the listener, because anytime you do that with a dampening, absorbing type of material, you start to lose your harmonic balance in the upper frequencies. You can start to make your violins sound very dull. You get a lifelessness in your system. You lose dynamic range. So

the harmonic structure and sound really becomes distorted. You know what's really interesting to me about all this stuff we're talking about is that you can go down to the library and read all this. You can dispute this whole deadening movement, and yet we have a whole industry that for the past 40 years has been trying to base itself on science that really doesn't work. Kind of interesting, isn't it?

Reber: Yes.

Green: It's the same way with rubber and other dampening materials. Run a note through a piece of copper, measure the harmonic structure, and you'll probably get seven to nine harmonic layers going up and down from the note. Now take a piece of rubber or PVC or Teflon, a piece of any kind of dampening material, and set it on that copper and watch how it changes and distorts the harmonic structure. So what do we do? We design cables with a bunch of dampening materials thinking that we're preserving the signal, when what we're really doing is stealing the signal. We're robbing it. We do it to cables, we do it to circuits, we do it with most everything else we're designing. Right now you're opening an amplifier, think about what we're seeing. Here's the transformer, and what do you have on either side? A big hunk of rubber. We have a system set up in Ohio that's completely devoid of any dampening materials. It's pretty interesting. What it does is give us total control to shape the sound any way we want to. We end up having a system that sounds a lot more like real instruments, instead of the locked in character of most components.

Reber: What stage are we at right now?

Green: We're just setting up the racks for the components to go on. We want to make good grounding contact with the bottom cone that goes into the floor. Energy wants to travel to a lower state. Another way to say this is that energy wants to be grounded. It's important that it makes contact with the floor, to facilitate this natural transfer of energy from the component to ground. That way excess energy can be "grounded" out of the rack. If not, it's just going to stay in that rod and go back up into the shelves, which isn't necessarily a disaster, but it certainly isn't desirable. So we mechanically ground the rack to the floor and then we tighten up the shelves to where we want. To start with, not too tight, but since we're not clamping the components at this time, not too loose either because the tighter shelf will drain off more of the excess energy.

Reber: When begin clamping then what do we want to do?

Green: At that stage you're going to leave your boards pretty loose. You can start from a loose position and then gradually tighten it up, which will give you more focus, but you don't want to tighten it up so much that it starts sounding like what people call "CD digital sound," that real hard sound. It's pretty easy and intuitive once you get started, and it's explained pretty well in the assembly instructions.

Reber: To prepare for this stage we're taking off all the rubber associated with the equipment, actually the rubber feet attached to the bottom plate of each component.

Green: Right. You need to do that because the excess energy is draining, moving to a lower state like mother nature wants. It goes from the capacitors and transistors to the PC board, and then from the PC board to the standoffs, and then from the standoffs to the chassis. Let's say you're doing fine at that point, but if you run it into a rubber foot on the bottom of the chassis, you're inhibiting the transfer of this energy to the next stage, which would be a mechanical transfer device, in this case the AudioPoint, and from there to the shelf of the rack. So you've got to remove that piece of rubber because it's just soaking up energy. It's robbing the signal that's passing through. It's interesting too, because when you start to go through this process you realize how delicate that signal really is, and how easy it is to change that signal. It's a lot more susceptible to vibration than we might think, because in essence, it is vibration. That's why a lot of times when you hear equipment, the equipment itself has a signature sound to it. Part of that is because of the resonant characteristics of all the parts the signal is running through, actually dampening part of the music. It changes the harmonic structure and the fundamental note is affected.

Usually when I'm done putting a system together like this one, one of the first things that the customer says is, "That's all so practical. There's really no magic to it. You're just doing what makes sense." And they're right. This is just what makes sense. In essence what we're doing is we're making all your electronics variable. So this stage is really key. We're going to see the best of both worlds here. It should be pretty incredible. It's unfortunate that the two design camps fight each other so much of the time. If the two camps can work together we can wind up solving a lot of problems because you can't do everything by mechanical physics, and sometimes when you tweak things out electrically, it only works as well as your physics will allow. So the two really need to work together. They're going to interact regardless, the question is how well are they going to work together.

Above Michael Green tightens Tuning Boards On JustaRack. Below completed JustaRacks with components resting on AudioPoints.

[Editor's Note: The room tuning continues in the next issue of the WSR Newsletter!]