Multi-Grammy Award winning artist Horacio “el Negro” Hernandez has helped to shape the face of Latin Jazz. He is widely known for his independent left foot clave patterns. He has performed with Tito Puente, Santana, John Patitucci and The Cuban All Stars.
"The sensation of sound is a thing sui generis, not comparable with any of our other sensations. No one can express the relation between a sound and a colour or smell. Directly or indirectly, all questions connected with this subject must come for decision to the ear, as the organ of hearing; and from it there can be no appeal."
-Lord Raleigh, The Theory of Sound, 1877
What if each drum in your drum set was engineered as an instrument unto itself. Each tom designed to respond perfectly within the confines of its respective frequency without compromise over any other area of your kit. This is the mission behind Reference Series. A complete set of individually engineered, incredible sounding drums.

In 1999, Pearl began its most ambitious undertaking, The Masterworks Series, the world’s first truly custom drums. Designed for the player by the player. Every aspect of the manufacturing process was custom made, from the number of wood plies, the wood selection, to the final finish. Over the last 5 years, through arduous listening tests, Masterworks has taught us a great deal about drums and what makes the perfect shell. So forget what you think you know about drums and take a close look at Reference Series, the most acoustically advanced drums in the world.

To fully understand the Reference Series you must understand that the desired tonal characteristics of a 10” tom are completely different than that of a 22” bass drum. Thus to use the same material in both drums would result in a compromise. Reference Series drums use a combination of task specific bearing edges and 3 time proven woods, Birch, Maple, and African Mahogany. Using Maple as a sole material has long been the traditional choice for shells and for good reason. Maple provides smooth, well balanced tone that is perfect for a 12” tom. Subsequently, all Reference Series 12” toms are composed of 6 plies of Maple. The only single wood shell in the series. Our 10” and 8” toms receive 4 plies of Maple with 2 inner plies of Birch for cut and attack. And for maximum response, all 13” and smaller toms have a rounded 45° bearing edge. Beginning with our 13” tom and larger, Mahogany is added to the inner plies to increase the lower frequencies and accentuate the warmth of the Maple. The 14” toms and larger begin using our fully rounded bearing edge for even more shell contact. Our 18” and 20” bass drums use 4 inner plies of Mahogany with 2 outer plies of Maple. As the size of the bass drums increase, so does the amount of Mahogany. Our 22” and 24” bass drums incorporate an amazing 6 inner plies of Mahogany surrounded by 2 outer plies of Maple for the ultimate in solid responsive bass frequencies. Of course the heart and soul of any kit is the snare drum and with Reference Series you have the choice of 3 shell sizes, 13” or 14” by 6.5” or 14”x5” all composed of 6 inner plies of Birch united with 14 outer plies of Maple for an incredible 20 ply shell. With Reference Series, it’s not about compromise, it’s about every drum in your kit performing at its optimal capacity.

“Reference Series represent a philosophical shift in drum shell construction.” - Drum!
The shell is the beating heart of your drums. Shell composition affects every nuance of tonal transference. After all, they are air chambers which happens to be the common vehicle for sound waves, air molecules. Approximately 1 million in a cubic inch of air, are put into motion by the kinetic energy transference as your stick strikes the drum head. Air molecules forced into an excited state of motion bouncing off the interior walls of the air chamber. Larger shell sizes slow down the molecules resulting in a slower cycles per second or hertz creating lower sound frequencies. Smaller chambers offer a more confining area for the excited molecules to move about which tends to accelerate them creating a faster modulation or higher frequency. These air molecules reacting with the shell creates the effect we know as resonance. This why the interior composition of the air chamber has such a dramatic effect on the frequency response.

“The final sound is the sum of your materials.”

Shell Composition

The Reference family photo. Each shell engineered to perform optimally within its dynamic range.

“Shells manufactured from only one wood has to be a compromise”-Morgan Rose
Birch
A straight grained wood with a fine, even texture. Known for its strength and resilience, Birch provides a lively interior springboard for sound waves thus in turn creating a noticeable increase in the higher frequencies. This makes it the perfect interior for smaller tom-toms. Birch’s tightly bound network of cells also promotes a perfect balance of midrange frequencies with a smooth transition from the lower register to mid-range frequencies. The 8˝ and 10˝ toms incorporate 2 inner plies of Birch for cutting attack and high frequency presence.

Maple
A fine grain wood with a smooth even texture. This highly respected wood offers a very wide dynamic range with extremely well balanced acoustic properties. Rich lustrous lows with an even balance of mid tones and high frequencies has made this the all around accepted premium shell material for years in the acoustic drum industry. This mix of creamy warm resonant mid to highs balanced with the propensity for powerful bass response make it the logical choice for our 12˝ Toms which also happens to be the only single wood shell in the series.

African Mahogany
A relatively “soft” hardwood that offers a dramatic boost in lower frequencies. This bass boost effect is most likely due to its loosely packed cellulose network that creates a natural Helmholtz resonator effect in the lower frequencies. This predisposition for powerful lows makes it the logical choice for the interior of 13˝ and larger toms for solid punch. All Reference Series bass drums use 4 to 6 inner plies to produce a noticeable bass response and a naturally smooth timbral overlap into the midrange frequencies.

“Shells manufactured from only one wood has to be a compromise”

*With Pearl’s ability to mix different woods, it was just a matter of time till they created the ultimate drum kit* - Mike Mangini
“All of the complexity of the thick shell is focused in an area less than 1mm.”

The Bearing Edge Influence

Next to the selection of wood, nothing influences the overall response and tonal dynamics of the drum as the bearing edge. The bearing edge is the energy portal from the drum head to the shell. This is why the Reference Series incorporates 3 unique and task specific edges to optimize the tonal characteristics and dynamic range of each component. Each bearing edge is task specific to maximize the dynamic range of each component. The 45° bearing edge used in the construction of the snare shell allows the inner 6 plies of Birch and the outer 14 plies of Maple to unite in a highly focused area. The inner plies of Birch provide exceptional cut while the outer Maple plies balance the sound by providing warmth and resonance. This in turn allows all of the available energy from the 20 plies to project dizzying sound pressure levels while maintaining extraordinary sensitivity.

6 inner plies of Birch and 14 outer plies of Maple united by a 45° bearing edge make Reference Series Snares one of the most responsive and powerful Snare drums that you’ll ever play.

“These are simply magnificent drums” - Horacio “el Negro” Hernandez
**45° Bearing Edge**

The 45° bearing edge on Reference snare shells brings all 20 plies into play by promoting a tightly focused shell contact area for extreme sensitivity and maximum volume. The six inner plies of Birch provide a resilient crack that is balanced and warmed by the 14 outer plies of Maple. The ultimate balance of power, projection and resonance, Reference Snare Drums are unlike anything that you have ever experienced.

**Rounded 45° Bearing Edge**

The rounded 45° bearing edge featured on our 8” thru 13” Toms offer cutting attack, focused projection balanced with solid punch. This edge promotes a finely balanced interaction between the individual wood plies that allow the smaller toms to sing with cutting clarity without premature decay. The journey of the energy from the head to the shell has a more direct path.

**Fully Rounded Bearing Edge**

The fully rounded bearing edge provides the ultimate solid punch and resonance by raising the overall contact area of the head to shell. This in turn forces all of the kinetic energy from the head into the shell resulting in maximum shell resonance. This is the logic for using this particular edge on toms 14” to 18” for thunderous tom fills. Our 18” to 24” bass drums utilize this edge for a deep solid punch and sound pressure levels that can be felt as well as heard.

"Pearl's continued research into drum shell dynamics is time and money well spent." - Jazztimes
The Sensitive Type

Reference Snare Drums offer a level of performance unattainable before now. 6 inner plies of Birch unite with 14 outer plies of Maple for a staggering 20 ply shell. The 45° bearing edge brings all 20 plies to the party in a highly focused sweet spot. This projects the volume that you would expect from such a thick shell without losing sensitivity or articulation. The state of the art in modern hardware adorn these snares to maximize every nuance of the shell construction. Available in 3 sizes to perfectly suit your personal level of performance.

Strength and Flexibility

Pearl’s revolutionary BRL-65/55 lugs assure the ultimate in head seating and tuning integrity. The unique swivel function allows the tension rods to align perfectly into the lugs so there’s no lateral pressure against the hoops, thus assuring maximum resonance and sustain.

“You’re not going to get this range out of any other snare drum.”

“Pearl’s experiments with mixed wood shells is a success.” - Modern Drummer

Stainless Steel Tension Rods instill a level of confidence with their overall tensile strength and precision milled exterior.
Reference snare drums feature Ultra-Sound snares (pat. pending) with graduated tension snares. The looser wires respond to the most delicate strokes while the tighter wires withstand all you can give it for noticeably extended dynamic range and sensitivity. The low mass phosphor bronze end plates provide 3 unique mounting holes including one with tunnels that allow the snares to lay perfectly flat against the bottom head for superb sensitivity and response from the most subtle buzz rolls to hard pounding thunder.

Push, Turn, Lock, Play.

The SR-1000 Glide-Lock strainer features a locking tension knob (pat. pending) to maintain snare tension settings no matter how hard you play. Simply push down and turn its large industrial machined knob to adjust tension and release it to lock. The ergonomically designed polished knob is intuitive to find while playing and offers effortless adjustments. Snare tension drifts are a bleak memory with Glide-Lock.

Locked to Rock.

The Glide-Lock strainer incorporates a locking lever (pat. pending) that eliminates accidental snare release once and for all. The lever locks with a reassuring click and keeps the snares positively engaged no matter how energetically you play. Depressing an unobtrusive button at the end of the lever allows the snares to be released quickly and easily. A super smooth bearing system (pat. pending) provides precise, play-free movement and accurate tension settings.

An Extended Dynamic Range

"Silky smooth and a lock that does not fail."

"There’s no question that these are about as upscale as drums get." Drum! Magazine
Pearl’s OptiMount Suspension System is considered to be the perfect tom mounting system. OptiMount attaches to the drum’s upper and lower tension rods preventing any unnecessary shell contact. This maximizes shell resonance and sustain to bring out every subtle nuance of the shell. Even the attachment points are insulated by oversized rubber cushion to absorb vibration and prevent any sympathetic overtones from being transmitted through the hardware. The OptiMount bracket provides a vise-like grip on tom holders via its UltraGrip Wingnut. The memory lock makes positioning perfect and dependable every time.

MasterCast Hoops
Pearl’s MasterCast die cast hoops are designed with the perfect balance of thickness and mass to provide superior strength for infallible tuning integrity with clear projection and clarity from your snare and toms.
Strong and sleek,
The new generation of OptiMount balances industrial strength with streamlined ergonomic design. Hours of research and development brought to fruition. No hardware touching the shell to leach off energy. Another reason that Reference toms sound like no other.

“Absolutely no shell contact to dampen shell resonance.”

Fits toms 9”-10” deep
Fits toms 7”-8” deep
Fits toms 15”-16” deep
Reference Series Floor Toms are available in 4 sizes and each feature a fully rounded bearing edge for thunderous low end frequencies. The 14” and 15” have 4 outer plies of Maple and 4 inner plies of African Mahogany. The 16” and 18” are constructed of 2 outer plies of Maple with 6 inner plies of African Mahogany for added punch in the lower frequencies. All Reference floor toms feature our BRL bridge lugs with swivel function for optimal tuning and resonance. The LB-200 clam shell brackets provide a vise-like grip on the LG-200 tom legs and feature built-in memory locks for consistent setup. The oversized rubber feet provide sure footed grip and insulate the tom from the floor for optimal sustain.

“You should be able to feel your fills.”

Four on the Floor

Pearl’s ergonomically designed Winglock provides easy tightening of the clamshell bracket for dependable height settings.

“Each individual drum sang authoritatively with its own voice, yet together they blended as a harmonious choir.” - JazzTimes
Reference Bass Drums provide unprecedented low frequency response. By utilizing our fully rounded bearing edge and varying interior plies of African Mahogany we have a shell that exudes low frequency power. The 18” and 20” use 2 outer plies of Maple and 4 inner plies of African Mahogany. The 22” and 24” use 2 outer plies of Maple and step up to 6 plies of African Mahogany and offer the substantial bass available from an acoustic bass drum. Available in a wide range of sizes to fit your ideal playing style, Reference Series bass drums will absolutely blow you away.

Pearl’s BRL-300 Bridge lugs feature a unique swivel function that promotes optimal head seating for tuning ease. Our CW-300 Recessed Die Cast Claws incorporate a rubber “hoop saving” gasket.

“Thunderous” is not cliché here.
13" x 10" Tom
2 Mahogany inner plies
4 Maple outer plies
Rounded 45° Bearing Edge

14" x 14" Tom
4 Mahogany inner plies
4 Maple outer plies
Fully Rounded Bearing Edge

16" x 16" Tom
6 Mahogany inner plies
2 Maple outer plies
Fully Rounded Bearing Edge

18" x 16" Tom
6 Mahogany inner plies
2 Maple outer plies
Fully Rounded Bearing Edge

22" x 16" Bass
6 Mahogany inner plies
2 Maple outer plies
Fully Rounded Bearing Edge

#142 Root Beer Fade
Chad Smith and the Red Hot Chili Peppers have sold over 40 million units Worldwide. Chad was key in the testing and development of the Reference Series while recording with legendary producer Rick Rubin.

"It makes me proud to know that I helped in the development of these great drums." - Chad Smith
Scarlet Fade

10"x8" tom
12"x9" tom
14"x14" floor tom
16"x16" floor tom
22"x18" bass
14"x5" snare

"The sound of Reference will inspire you to play to a higher level." - Will Kennedy
Dennis Chambers is an icon in the world of drumming. He's played with some of the true legends in modern music: David Sanborn, Stanley Clarke, George Duke, John Scofield and most currently Santana.

"The new Reference Series is one of the greatest drum sets I've ever played in my life." - Dennis Chambers

On location at Sound Kitchen Studios - Franklin, TN
Granite Sparkle

12”x9” tom
14”x14” floor tom
16”x16” floor tom
22”x20” bass
14”x6.5” snare

"Building sets from drums of like woods, with uniform shell plies and bearing edges has officially been deemed an obsolete compromise," - JazzTimes
Omar Hakim is a master performer whether in the studio or playing on stage with Sting, Madonna, Larry Carlton or his highly regarded work as a member of the group Weather Report.

"Pearl has given us a new level of perfection in the Reference Series" - Omar Hakim
Purple Craze

A complete set of individually engineered, incredible sounding drums.

Purple Craze
16"x8" tom
16"x8" tom
14"x11" tom
16"x13" tom
20"x18" bass
14"x5" snare
Jimmy DeGrasso is a high-energy technician. His drumming prowess is apparent on his work with Megadeth, Suicidal Tendencies, Ozzie, Lita Ford and Alice Cooper.

“This is the most bone-jarring bass I’ve ever experienced.” - Jimmy DeGrasso
Welcome to Reference Series, where manufacturing convention bows to acoustic innovation.
Eric Singer’s resume reads like a drummer’s dream. His powerful style has been showcased with groups like Badlands, Black Sabbath, Alice Cooper, Lita Ford, Queen and Kiss.
"I guess perfection does have a price" - Virgil Donati

Copperfire Sparkle

10”x8” tom
12”x9” tom
13”x10” tom
14”x11” tom
16”x16” floor tom
18”x16” floor tom
20”x18” bass
14”x6.5” snare
The same innovation that we strive for in our drums is equally represented by our expansive line of hardware. The Advanced Hardware Systems features groundbreaking innovation and rugged durability combined to offer years of service.

Our 2004 MIPA Award-winning BC-2000 Boom Stand provides a range of positioning possibilities never before attainable with traditional stands. Our Eliminator Series pedals feature interchangeable cams to fine tune the action to fit your playing style. The finest drums deserve the state of the art in hardware.

Reference Series is available in 6 high gloss finishes.