

# Klipsch Reference Premiere Review – RP-280F, RP-450C, RP-250S, R-115SW



The new Reference Premiere series from Klipsch sounds awesome across the board with its enthralling dynamics and audiophile sound quality

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### **Living Legends**

Among the many speaker brands, Klipsch has always played a very special role for generations of enthusiastic music lovers with their striking design and the systematic use of horn-loaded speaker drivers. The [Reference Premiere](#) series is the latest product from Klipsch to enter our listening room.

The American hi-fi pioneer Paul Wilbur Klipsch founded the company in 1946, and the namesake and acoustic conscience of Klipsch unfortunately passed away in 2002. No less than 18 patents goes to Paul W. Klipsch, and his name can be found, along with other technology icons like Graham Bell or Thomas Edison, in the "Engineering Hall of Fame."

### **The Klipsch Virtues**

Since its founding, Klipsch have until today consistently pursued four key attributes in the loudspeaker development: extremely high efficiency, maximum dynamic range, flat frequency response and dispersion control. For maximum dynamics and dispersion control they, in principle, only make horn loaded speakers, and Klipsch has

consistently and traditionally used horns in their products and tried to perfect them for almost 70 years.



## Tractrix Horn

The current models from Klipsch use a specifically shaped horn on the tweeters, the so-called Tractrix horn. This increases the efficiency of the 25 mm dome driver (and thus also the maximum dynamic range of the tweeter) and allow for a more defined sound dispersion with an angle of approximately  $90^\circ$  in the horizontal and  $90^\circ$  in the vertical plane. This ensures that the sound energy is primarily aimed at the listening position and not (as with conventional speakers) reflected off walls, floor and ceiling. This room acoustical phenomena is thereby effectively minimized.



## Reference Premiere RP-280F Floorstanding Speakers

Directly at a first glance you can see that this is a Klipsch speaker! In addition to the Tractrix horns, the typical copper-colored Klipsch drivers catches the eye. Nevertheless, the Reference Premiere series is an all-new speaker line, and while keeping with the classic Klipsch virtues, still manages to look living room friendly in form and style.

The main units of our 5.1 set are the largest floorstanding speakers in the series. The [RP-280F](#) are each equipped with two powerful woofers, placed in an approximately 43 inches high and 62.5 pounds heavy bass reflex enclosure. The 8" drivers are made of a ceramic-metal composite, which ensures extreme rigidity and low weight. These parameters allow a wide, low resonance reproduction range, because in addition to a rich, deep bass reproduction, these two drivers have to work up to about 1.5 kHz. From this cut-off frequency and up, the Tractrix Horn provides a virtually distortion-free, extremely dynamic tweeter, reaching far beyond the limit of audibility. With a precisely calculated shape (Tractrix) the horn provides the desired dispersion characteristics of approximately 90° in the vertical and horizontal plane, and the sound energy is thus mainly focused and "blasted" at the listening position.

For a deep, dynamic bass, the RP-280F utilizes a bass reflex design, and air flow noise from the rectangular bass reflex port is minimized.



### **RP-450C Center and RP-250S Rear**

For our 5.1 set we also opted for the largest center speaker in the series. The [RP-450C](#) has considerable dimensions with a width of just over 31 inches, four 5.25" Cerametallic Cone Woofers and a 1" Titanium LTS Tweeter with Hybrid Tractrix Horn. Friends of loud volume and maximum dynamics need not worry with this full-grown "adult" center speaker. With this high-quality driver selection, the particularly crisp and compelling dialogue playback that is so important in the home theater, is given.

For the "real" surround sound, like the one you'll hear in upscale cinemas, our Klipsch set include two [RP-250S](#) dipole rear speakers. These trapezoidal speakers are designed for wall mounting left and right next to the listening position and generates, thanks to double 5.25" woofers and Tractrix horns in a dipole array, the desired diffuse surround sound.



## R-115SW Subwoofer

Our two front speakers, RP-280F, already deliver powerful bass, and therefore it's only logical to go for the "large" subwoofer in the Reference series (as there is no subwoofer in the Reference Premiere series. Yet.) to take over when the 280's cannot dig any deeper.

The powerful [R-115SW](#) active subwoofer (with a dimension of approximately ~20" cubed) is equipped with a 15" spun-copper Cerametallic woofer, which in addition also has an extremely strong magnet and a 400-watt amplifier.

Klipsch has made no compromises with the R-115SW. Large driver area, plenty of space for it to move, and a powerful amplifier makes for ideal conditions for dry, dynamic and extremely deep bass. The R-115SW has a bass reflex port, which in this case isn't a tube, but rather a large sized slot opening on the front – flow noise at high volume levels and massive driver excursions are not likely heard.



## Measurements and Reference Premiere In Use

Our measurements verify that all of the speakers in the Reference Premiere series have a remarkably high efficiency. With an average 96dB @ 2.83V / 1m for the entire 5.1 set – it's very remarkable! No less impressive is the balanced frequency response of the RP-280F, apart from a slight increase in high frequencies, there are no disturbing dips or peaks. The transient response of the RP-280F is also impeccable and both the cabinet and baffle are virtually free of resonances and vibrations. A real highlight in the measurement charts is the large R-115SW subwoofer. The lower limit frequency is a fabulous 15 Hz, and even at high levels this bass demon doesn't sound sluggish.

For our listening test we set up the Reference Premiere's in a 430 square foot room with a moderate amount of acoustic treatment to imitate an average living room. We selected a number of our favorite movies on Blu-ray and started off with '[The Avengers](#)', and we could immediately tell that the Klipsch's love action movies! The short, concise shots from fire arms swished by our heads, feeling more authentic than we have ever heard. Exploding grenades made the entire room vibrate and almost threw us off the couch. All hail the R-115SW!

With seemingly unlimited energy and power in the lowest bass, the Klipsch subwoofer shakes loose and dry and can turn on a dime. At the other end, dialogs taking place in the middle of all the action cuts through beautifully thanks to the RP-450C, and the entire 5.1 setup plays as one cohesive unit and puts the audience, not least thanks to the RP250S, in the acoustic middle of the action – total immersion!

## **Conclusion**

The new Reference Premiere series from Klipsch sounds awesome across the board with enthralling dynamics and audiophile sound quality. Thanks to modern high-performance drivers and the highly efficient Tractrix Horn, the Reference Premiere are the actual result of over 60 years of sophisticated Klipsch concepts and sound absolutely "modern". Despite the typical, unmistakable Klipsch visuals, the new Reference Premiere is for both real home theaters as well as for more traditional living rooms when it comes to exciting, thrilling and highly detailed movie sound. The Klipsch Reference Premiere is practically a living legend and more current than ever.