



DLS IRIDIUM 6.3

DLS hits home with a true competition-grade three-way component system. by Paul Sonoda

Competition — the ultimate validation for your stereo. The people who compete are an interesting breed. They're fanatical about their car stereos — they're willing to try anything new to gain an edge against the competition. It's here that DLS derives its direction and passion. As stated on their Web site, "We are not afraid to venture into the unknown during development — no idea is too strange for us to experiment with in the search for perfect sound."

It's this desire that has led to the development of the Iridium 6.3 three-way component system.

FIRST LOOK

The Iridium 6.3 is a three-way component system which is part of the Ultimate series from DLS. Everything about the Iridium 6.3 is purpose-built for sound quality. The Iridium 6.3 is composed of a 1.1-inch tweeter, a 3-inch dome, and a 6.5-inch woofer. Each driver is unique in its own right. While normal three-way systems use a 3- or 4-inch cone midrange, the Iridium includes a 3-inch doped fabric dome. The 12 dB-per-octave crossovers are housed in four separate units with one pair for the 1.1-inch tweeter and 6.5-inch woofer and the other pair for the 3-inch dome midrange.

CLOSER LOOK

The 6.5-inch woofer is a non pressed paper cone that uses a 3-inch voice coil wound with aluminum flat wire on aluminum former — yes, I said "3 inch." This voice coil diameter is more common on larger high performance subwoofers than a 6.5-inch part of a three-way system. The size of the voice coil allows the magnet to be placed inside the voice coil, allowing for a very compact structure that promotes more flexible installations. The grille is about the only thing that is conventional.

More intriguing is the fact that the 3-inch midrange also uses a 3-inch voice coil configuration — that's a huge voice coil for a midrange. The doped fabric midrange is a sealed back design where the resonance chamber has an internal conical shape that eliminates any potential reflections. The grille used on the midrange is curved to match the profile of

DLS IRIDIUM 6.3 ON THE SONODA SCALE

Strengths: Awesome tonal quality, impressive imaging and staging, high flexibility in mounting locations for midrange

Weakness: Not bi-amp capable with (tweeter and midrange on one amplifier and the woofer on another amplifier) takes time to tune for best sound quality

Best Use: A serious choice for someone wanting the best chance to win the IASCA, USACI, or MECA finals.

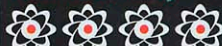
Performance Value:



Performance vs. Weight



Power vs. Efficiency:



Manuals, Online Support:



the midrange dome. It's made out of perforated metal with a plastic top grille that resembles the lines of a basketball.

The silk-dome tweeter has a plastic grille that mimics the midrange. The plastic housing is designed for a flush-mount installation. Differing from typical surface-mount designs, the Iridium 6.3 includes a pedestal-style mounting for the tweeter, which allows for the precise aiming of the tweeter. The 1.1-inch silk dome tweeter also incorporates a resonant chamber behind the tweeter dome. This resonant chamber leads to an incredible low-frequency resonance of 900 Hz. This creates an exceptionally wide frequency response from 1 kHz to 25 kHz.

The crossover design is unusual in its configuration. The midrange has its own crossover case while the tweeter and woofer share a crossover case. Both crossovers use high quality parts with gold plated screw connectors. There are adjustments for tweeter level, midrange level, and a woofer "on/off" setting. Combine this with different polarity configurations, and you have a system with 72 different setting combinations for each channel.

INSTALLATION

The Iridium 6.3 comes with six drivers and four crossover cases. It will take time to install this system. The connections on the crossover are well marked

and easily understood. I found it unusual that the tweeter and the woofer shared a crossover and the midrange had a separate crossover. This configuration prevents a common set-up of using one amplifier for the tweeter and mid and a second amplifier for the woofer. I recommend to anyone installing this system to take special care in the location of the speakers. Due to this fact, I would recommend that the Iridium 6.3 be installed by a highly trained authorized DLS dealer.

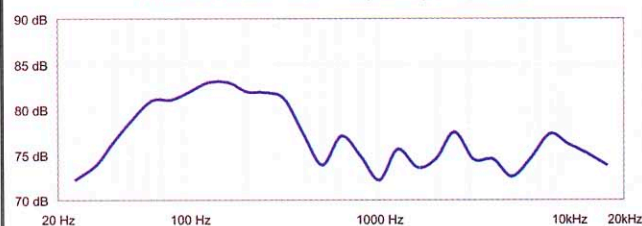
MANUALS/WEB SUPPORT

The owner's manual was well documented with the necessary information for proper installation. What I especially like about the owner's manual is the provided recommended enclosures for the 6.5-inch woofer. The Web site, www.dls.se, also provided good information about the Iridium 6.3. I was able to download the spec sheets and another tech sheet that even provided the schematic of the passive crossovers. Many companies would not have provided this level of information about the design of their product. It demonstrates DLS' level of commitment to the audio enthusiast.

SOUND Q & PERFORMANCE

After some time spent determining the best speaker locations and system settings, I found two different configurations I liked. With the midrange mount-

Iridium 6.3 In-car Frequency Response



ed high and forward on top of the door, the staging was very high, the left and right separation was stunning and the tonality sounded great. However, the RTA response showed some phasing problems between the midrange and the woofer. When the midrange was mounted low and far forward in the kick panel, the sound staging was still high but female vocals sounded a bit chesty. In this configuration, the phasing problems were eliminated and the RTA response was quite good (see graph), but the left and right separation was somewhat reduced from the other configuration. What's important is that the flexibility of the Iridium 6.3 allowed me to explore these different speaker locations where other systems would not. With a little more time, I'm sure that I could tweak the system to correct any perceived deficiencies.

It should be noted that in both situations, a good equalizer would go a long way to correct these problems. I did not use one for the tests.

SUMMARY

When I decided to test the Iridium 6.3, I asked DLS for their speakers that had represented them well in competition. In fact, the Iridium 6.3 was used in two systems that won this year's IASCA Finals. Being a former IASCA competitor, I decided to review these speakers on a much more critical fashion than I would normally use for speakers. I wanted to decide for myself that if I were to compete today, would these speakers hold up to the high standards of competition. In other words, would I use these speakers in my own system if I was going to compete again? The answer is yes. ■

IRIDIUM 6.3 SPECS

PRICE & CONTACT: \$TK, www.dls.se

IN CAR FREQUENCY RESPONSE:

25 Hz to 16 kHz: +6 dB; -6dB
100 Hz to 20 kHz: +3 dB; -6dB

SENSITIVITY 1 WATT (2 VOLTS RMS): 92 dB (measured using pink noise)

IRIDIUM 6.3 PUBLISHED SPECS

SPEAKER TYPE: 3-way system

WOOFER SIZE: 16.5 cm (6.5 inches)

MIDRANGE SIZE: 75 mm (3 inches)

POWER HANDLING CAPACITY:

100 W RMS / 160 W max

TWEETER: 28 mm (1.1") tweeter

SENSITIVITY: 91 dB (1W/1m)

MAGNET SIZE WOOFER:

85mm (3.35 inches) Hybrid ferrite/neodymium

MAGNET SIZE MIDRANGE:

80 mm (3.15 inches) neodymium

OUTER DIAMETER OF WOOFER/MIDRANGE:

165 mm (6.5 inches)/120 mm (4.72 inches)

INSTALLATION DEPTH OF WOOFER/MIDRANGE:

65 mm (2.56 inches)/35 mm (1.38 inches)

MOUNTING HOLE OF WOOFER/MIDRANGE: 140 mm (5.5 inches) / 95 mm (3.74 inches)

CROSSOVER: Box filters, one for midrange and one for bass/tweeter