# TYPE J/II LOUDSPEAKER

## SNELL ACOUSTICS: Unexcelled Accuracy in Sound Reproduction

The design philosophy of Snell Acoustics is that a loudspeaker should not "color" the reproduction of recorded sound. Snell Acoustics was founded by Peter Snell in 1976 to develop and produce loudspeakers which would ultimately establish the world benchmark for sonic accuracy. The company's first product, the Type A loudspeaker, stunned the audio world as a result of its unique sonic transparency, but also, and just as significantly, for its unsurpassed quality, integrity, and consistency of construction.

These qualities have become the trademark of Snell Acoustics and are reflected in each and every one of its products.

An accurate loudspeaker never "colors" the signal source as it converts the *electrical* energy it receives into the *sound* energy that is heard. The ideally accurate loudspeaker will neither add nor subtract anything as it reproduces the information created by the previous components in the audio stream. A truly accurate speaker is perhaps most significantly a *timeless audio investment* because as the quality (accuracy) of the preceding audio components improves, the improvement is revealed to the listener by the total transparency of the speaker—an accurate speaker is *always* accurate. A recent example of the benefit of this additional dimension has been digital disc technology. While virtually all other loudspeaker companies have had to re-design their products to handle this dynamic source, Snell speakers were not only completely ready to take advantage of this technology but owners were not in the position of having to replace their existing speakers in order to "hear" the results of a digital disc source. Remarkable advances which have been realized in the analogue format such as direct-to-disc and half speed mastering are also more clearly revealed through Snell loudspeakers due to their inherently accurate design. The one common benefit to the listener of any of these recording formats is the ability to more accurately—realistically—capture the totally unique and subtle nuances of a musical performance. However, only a truly accurate loudspeaker will be capable of realizing the extraordinary potential of these technologies by its ability to re-create in the listening room the unique timbres of true musical sound uncolored, unaltered and undistorted in any way from the original performance. The ultimate goal of enjoying the musical event rather than "listening to your speakers" is realized.

## TYE TYPE J/II: Unexcelled Performance, Craftsmanship/Cost Ratio

The Snell Type J/II loudspeaker is an extension of the Type A design and manufacturing philosophy. The same uncompromising search for sonic accuracy, quality, and fine craftsmanship exhibited in the Type A is available in the Type J/II. Just as we hand manufacture critical internal components and the speaker cabinets for the Type A—we also manufacture the cabinets of the Type J/II to the same exacting standards and use the same critical internal components and manufacturing processes that are found in the Type A. The series II Type J, in fact, directly traces its heritage to the Type E II loudspeaker which has garnished the reputation by noted audio critics as "the best loudspeaker under $1,000". The basic design goal of the Type J/II is to incorporate the essential performance of the Type E II into the "large bookshelf" speaker format. To that end even the drivers and dividing network of the Type J/II come directy from the Type E/II. Like the Type E/II (and Types C, and A/III) the Type J II uses *double* sets of *gold* plated 30 amp terminals—one set for the low frequency circuit and one for the mid/high frequency circuit, thus allowing the exotic options of **bi-wired or bi-amplified** operation.

## TYPE J/II DESIGN INNOVATIONS DEEP ACCURATE BASS REPRODUCTION

Some speakers offer low bass reproduction but with relatively little accuracy (bass with no definition and sounds "muddy"). Others will have accuracy but no depth, and often deliberately introduce artificially stimulated response in the low midrange, giving the *illusion* of deep bass. The result of this all too often is a speaker which has abnormally warm voice reproduction, "*boomy*" bass, and is ultimately fatiguing to listen to over extended periods.

The Type J/II is the first loudspeaker to offer *both* extremely accurate frequency response *and* low bass reproduction in the large bookshelf format. This ability can be directly traced to design innovations found in the Snell Type A which has *categorically established* the world benchmark for deep accurate bass reproduction. Additionally, the unique Richard Small porting technique has been adopted so as to effect "rear surface" room loading, thereby further taking advantage of naturally occurring room boundary speaker relationships which enhance bass reproduction.

## The Exceptional Snell Crossover

As in other areas of loudspeaker design, Snell Acoustics has established itself on the leading edge of technical accomplishment in the design and manufacturing of crossover networks. The various drivers in a speaker design cannot properly perform their function unless they are fed the proper signals so as to yield the desired composite sonic results. Crossover networks are essential to the optimum distribution of electrical energy to the appropriate drivers and one of the cornerstones of superior loudspeaker performance. The dividing networks used in the Type J/II loudspeaker trace their heritage directly to those used in the Type A and Type C loudspeakers and have been critically acclaimed as the most sophisticated and complex in the industry. Each crossover is manufactured entirely in the Snell Acoustics manufacturing facility using such components as hand-wound precision calibrated air-core chokes, computer grade polypropylene capacitors and oxygen-free heavy gauge four conductor (TM Live Wire) copper wiring harnesses. Once manufactured, *each* dividing network in *each* Type J/II speaker system is individually *hand adjusted* by a technician while under dynamic operating conditions to the particular sonic characteristics of each of the associated drivers. This process, pioneered by Snell Acoustics in the Type A design and unique in the industry, assures a totally seamless transition from driver to driver and provides a rigidly specific frequency balance among the particular drivers. This series of tests and accompanying fine adjustments is performed on *every* Type J/II speaker system to assure precise uniformity of sonic performance in frequency response, accuracy, and imaging. While some manufacturers brandish about high percentage quality control sampling rates, complete quality assurance can be guaranteed only by a 100% sampling rate.

## High Efficiency + Accurate Sound

The Type J/II's high efficiency rating (92db) means that the speaker system converts a relatively large amount the electrical energy supplied to it by the amplification source into sound energy. Up until this time highly efficient loudspeakers have typically been very inaccurate (colored). Relatively accurate designs, on the other hand, have been typically very inefficient, meaning that they require abnormally large amplification sources to produce even a moderate loudness level; additionally, they were often extraordinarily expensive. The Type J II for the first time combines in one loudspeaker the best of both worlds: *High efficiency*, which gives dynamic performance with relatively small power sources, and *unexcelled accuracy*, which delivers to the listener every fine detail and nuance of today's advanced sound sources.

## Drivers/Cabinet Design Integration

The Type J II utilizes a remarkably high performance low frequency driver. It has a polymer treated curvilinear cone that gives superb midrange clarity and natural tonal balance. The combination of a "precision tuned" enclosure and a high efficiency long throw 203mm woofer provides the listener with extended **and** accurate low frequency reproduction (only −3db at 48Hz). The bass driver is optimally matched with the cabinet enclosure and accompanying high frequency driver resulting in extended dynamic range from effortless crystal clear high frequencies down to a deep, ultra-high definition bass. Carefully aligning *each* crossover to its associated drivers also results in a totally "seamless" transition from driver to driver.

The 25mm soft dome tweeter produces extremely fast transient response and smooth, wide dispersion characteristics. The dome's small diameter results in unexcelled uniformity of dispersion to the highest audible limits.

## From Perfect Timber to Perfect Timbre

The solid construction of a loudspeaker cabinet is a cornerstone of superior speaker design. It is an essential principle on which all elements are supported as a speaker system builds towards exceptional performance. The finest drivers in the world cannot realize their potential unless they are firmly attached to a structure which is as solid as possible. This extraordinary level of cabinet quality is entirely produced in Snell's cabinet manufacturing facility. Construction of the cabinet from raw materials through cutting, assembly, hand sanding, natural oiling, and hand polishing is accomplished by trained craftsmen, resulting in cabinets of rare integrity and unique quality. The walnut and oak veneered cabinets are selectively matched in sequential pairs. In fact, speakers start out as pairs from the moment when cabinet parts are milled from the same sheet of veneer. Each cabinet is internally braced to insure minimal transmission of acoustic vibrations.

Another example of the thoroughness of Snell design and dedication to excellence is the separate *speaker stand* available for the Type J/II. The stand is designed and manufactured by Snell Acoustics specifically for the Type J/II to optimize its performance. Stands are constructed from SOLID premium grade oak or walnut to not only perfectly match the speaker's appearance but also *rigidly* support them at the optimal height and angle to the floor, thus further assuring the best sound quality possible.

## Product Specifications

The following measurements were conducted in average *home* listening environments rather than under unrealistic anechoic chamber conditions.

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|---|---|---|
| Frequency response | | ±2db 49Hz to 22KHz |
| Crossover frequency | | 2300Hz |
| Nominal impedence | | 8 ohms |
| Unit-to-unit efficiency variation | | less than .5db |
| Sensitivity | | 92db (at 1 meter 2.8v pink noise) |
| Power requirements | Minimum | 15 watts per channel |
| | Maximum | 150 watts per channel |
| Dimensions | | 23"H x 13"W x 10"D |
| Weight | | 38 pounds |
| Drivers | | 203 mm woofer |
| Finishes | | Sequentially matched, hand sanded, oiled, select veneer pairs in oak with dark brown grill cloths or walnut with black grill cloths. |

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Manufacturing Loudspeakers of unexcelled accuracy since 1976.