

## **SPENDOR SP100R2 - NEW PRODUCT INFORMATION BACKGROUND**

For over 30 years the Spendor Classic Series loudspeakers have been an enduring reference for discerning audiophiles, musicians and professional sound engineers. While Spendor has created a succession of successful and innovative modern loudspeakers using advanced materials and technology, the Classic series has continued largely unchanged using materials and technology developed in the 1970's. As vital materials and parts used in the Classic series have recently become unavailable, environmentally un-acceptable, or vastly expensive, Spendor decided this was an ideal opportunity to combine some of Spendor's advanced engineering with original 70's technology, construction and design to deliver some significant improvements in sound while carefully maintaining the rich and natural sound character which is the hallmark of every Spendor Classic design.

### **SP100R2**

The recently introduced Classic R2 models SP3/1R2 and SP2/3R2 have been warmly welcomed all over the world. Many reviewers and critical audiophiles have been astonished that these loudspeakers, based on 30 year old designs, easily and obviously outperform the majority of modern loudspeakers! For 2010 Spendor has applied a substantial number of carefully considered refinements to create the SP100R2. Many of the improvements are based on special technology developed by Spendor for the SA1 mini monitor and the new Spendor ST.

At the heart of the SP100R2 is a new 18cm Spendor bass-mid drive unit with ep38 polymer cone. The new mid-range incorporates phase correction technology, in the form of a focusing magnet motor pole extension, to control spurious phase and frequency response variations in the crossover region. Frequency transition between drive units is now more coherent due to improved phase matching. The result is a very even and natural sound and a more holographic sound-stage. Sound remains open and relaxed at higher listening levels due to the improved thermal dissipation of the new drive unit.

An all-new 22mm wide-surround tweeter combines the extended frequency response of a small diaphragm with the low frequency characteristics of a larger diaphragm to give stable low distortion response over a very wide frequency range.

One of the most enduring and appealing qualities of the original SP100 was its ability to produce a 'big', 'powerful', and always enjoyable sound. This relied on sophisticated damping control of thin cabinet side panels, the unique characteristics of the 12inch (30cm) Spendor bextrene cone woofer, and the structural characteristics of the front baffle. The new SP100R2 benefits from a redesigned and thicker front baffle which increases front panel rigidity while improving side-panel damping control. The result is a noticeable improvement in low frequency resolution while the low frequency 'character' of the original SP100 is carefully maintained.

Multi-layer elastomer damping is now applied to the rear of the woofer cone, and the front face has a thin balancing cellulose coating to give an even satin finish and improved appearance. New injection moulded port tubes improve air-flow linearity, especially at high playing levels, to give better low frequency articulation, and also improved appearance.

The crossover network has been re-engineered to improve conductivity and signal routing and to eliminate magnetic interaction between inductors. Revised filter alignment integrates the drivers seamlessly in a phase aligned configuration. All internal cables are heavy gauge, high purity multi strand copper conductors, individually silver-plated, with halogen free dielectrics, to give widebandwidth and clean signal transmission. The SP100R2 is a very easy-to-drive 8ohm load and it is compatible with all types of amplifiers, from powerful solid state to the most esoteric tube designs.

Specific geometry of the grille aperture dramatically reduces acoustic interaction. The new grille substantially improves sound stage and off-axis response.

Each pair of Spendor Classic Series loudspeakers is still calibrated and matched to stringent broadcast reference standards. All Spendor drive units and crossovers are individually calibrated and pair matched during manufacture.

### **Engineering notes**

- Magnet pole phase correction device in midrange driver (linear phase in crossover region)
- Revised crossover layout with gold plated tracks (improved signal conductivity)
- High saturation crossover inductors (improved overhead)
- Revised crossover alignment (phase aligned driver integration)
- Hi-linearity polypropylene crossover capacitors (low colouration)
- High performance wide-surround 22mm tweeter
- Re-engineered Spendor 18cm mid-range driver with ep38 polymer uses Spendor ST technology
- New front baffle design (reduced mid-band colouration, improved side panel damping characteristics)
- Injection moulded port tubes with flared termination (improved sound and improved appearance)
- Improved finish on woofer cone (Multi-layer elastomer damping on rear of cone)
- Increased power handling and reduced compression at high levels
- Rubberised cabinet damping pads (improved cabinet to damping layer interface)
- High grade silver plated internal cables (clean signal path)

### **Specification**

HF drive unit 22mm wide-surround  
Mid-range 18cm with ep38 cone  
LF drive unit 30cm (12in) elastomer damped bextrene cone  
Sensitivity 89 dB for 1 watt at 1 metre  
Crossover point 550 Hz, 5.0 kHz  
Frequency response 45 Hz to 20 kHz,  $\pm$  3dB anechoic  
Frequency range -6dB 35Hz typical in-room  
Impedance 8 ohms nominal, minimum 5.5 ohms  
Pair matching within 1 dB  
Power handling 200 watts un-clipped programme  
Terminals Gold plated 4 way binding posts bi-wire-able  
Cabinet (HxWxD) 700mm x 370mm x 430mm  
Finish Cherry, rosenut, black ash natural veneer  
Weight 36kg