

## THE SOUND ENERGIZERS

Stark Designs conceived the Sound Energizers with the intention of creating the finest compact 2-way bookshelf speaker systems available. Working within the design parameters dictated by the small physical size necessary for a true bookshelf system, we set as our goal uncompromised performance packaged in a precision scaled furniture quality cabinet.

To attain this goal, we used the same high efficiency dome tweeter found in our more expensive bookshelf systems. Stark Designs' exclusive Directed Dispersion Unit was employed to provide unprecedented versatility in speaker placement. We felt that this flexibility is vital in a true bookshelf system because of its unlimited installation possibilities.

In the SE-2 we used the long-throw 10-inch woofer from our SR-1. For the SE-1 a new 8-inch woofer was developed with the same magnet structure and voice coil assembly which drive the 10-inch woofer. In addition, a specially ribbed cone material was

selected to insure the proper stiffness to weight ratio necessary to retain the excellent transient response characteristics of our larger drivers.

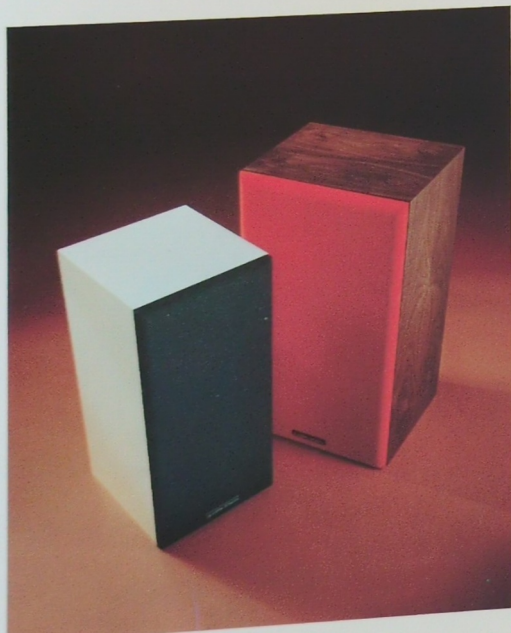
To achieve optimum performance from these low frequency drivers the enclosures were designed to meet critical interior volume requirements. The acoustic suspension principle was employed to maximize the tight, accurate bass response potential of each driver.

Finally, the components were carefully matched with a sophisticated crossover network specifically engineered for the Sound Energizers. This network utilizes the same high grade components and circuitry we use in all our electronics. This circuitry includes a four position equalization switch for user adjustment of the tweeter energy level relative to the woofer energy level. This allows the listener to individually tailor each speaker system in response to room acoustics or personal preferences.

The Sound Energizers have unusual power handling capabilities for speaker systems this size. Through the integrated design of the drivers, electronics, and enclosure, energy is efficiently transformed into accurate, undistorted acoustic output. To insure uncompromised performance and reliability, we use the same selection of materials, construction techniques, and quality control procedures practiced in our larger, more expensive systems.

As the end result, we have achieved our goal. This is audibly and visibly evident in the Sound Energizers. The clean, unencumbered design of the cabinet with grille enhances any decor. Its simplicity belies its performance. Upon removal of the grille the user can immediately appreciate the complexity of the design.

The Sound Energizers are available in oiled walnut with brown grille or satin white with black grille. Optional orange, blue, brown or black grilles are separately available at a modest cost.



se-1/se-2



## THE SOUND REPRODUCERS

In the Sound Reproducers, Stark Designs has attained the highest possible degree of refinement in bookshelf size loudspeaker systems. In these systems the entire audible frequency spectrum is divided into three distinct ranges.

The most critically important musical range is reproduced by one high power, low distortion dome driver. This transducer exhibits an excellent spherical radiation pattern unrestricted by the unique concave frontal configuration of its housing. A large diameter vented voice coil is precisely centered in a massive precision machined magnet structure, resulting in superb power handling, outstanding transient response, and low distortion.

The high frequencies are reproduced by a highly efficient 1-inch hemispherical dome radiator. By housing this driver in the Directed Dispersion Unit, unprecedented flexibility in speaker placement becomes possible without sacrificing high frequency

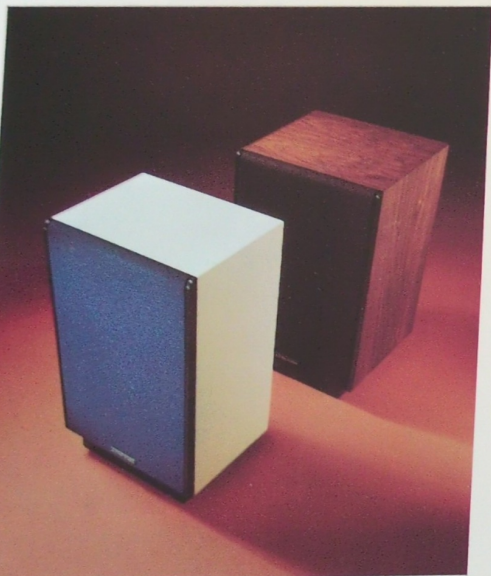
definition. The reproduction of these high frequency transients and musical overtones enriches the accurate program material delivered by the midrange.

Both mid and high frequency drivers are matched by a sophisticated crossover network. These electronics incorporate circuitry for the equalization of both drivers relative to the sound pressure levels of the low frequency drivers. At normal setting the overall balance of all drivers is optimized for ideal listening environments. However, both midrange and tweeter levels can be individually adjusted to compensate for any differences in room acoustics or personal tastes.

The low frequency drivers employed in the Sound Reproducers determine the difference in their overall performance. The 10-inch driver in the SR-1 reproduces low frequencies equally or better than most 12-inch drivers. For the SR-2 an exclusive 12-inch driver was developed. A much larger magnet structure is used in conjunction with a larger diameter voice coil for power handling potential seldom found in bookshelf size systems. Accurate reproduction at high energy levels of even the very deepest bass fundamentals is possible in the SR-2.

To provide the increased internal volume needed for optimum performance of the larger woofer, the cabinet of the SR-2 is 2 inches deeper. With the grilles in place both Sound Reproducer cabinets are identical in appearance from the front. The radiused black metal trim highlights the refined curvature of the fabric grille. This artistic blend of wood, metal, and fabric sets the design of the Sound Reproducers apart visually from all other bookshelf systems. Removal of the grille reveals the fascinating integrated design for the mounting of all drivers and associated electronics.

The Sound Reproducers are available in oiled walnut with brown grille or satin white with black grille. Optional orange, blue, brown or black grilles are separately available at a modest cost. The Sound Reproducers are shown at left with optional matte black floorbases for floor placement.



**SR-1/SR-2**



## THE SOUND TRANSDUCERS

The Sound Transducers represent the ultimate blend of technology and art expressed by Stark Designs. In these systems no effort has been spared to deliver astounding acoustical performance in elaborately styled furniture enclosures.

The outstanding acoustical performance of these six element systems was derived from the use of dual woofers and carefully positioned front and rear firing midrange/tweeter combinations. Stark Designs employed the tower configuration and unique mounting techniques for phase optimized driver spacing.

The dual woofer concept provides extremely high power handling capability and lightning fast transient response. In the ST-1 two 8-inch woofers combine for a considerably larger radiating area than that of a single 10-inch woofer. The woofers used in the ST-2 utilize the same large magnet structure and voice coil as the 12-inch woofer in our SR-2. These drivers unite

to deliver performance excelling that of any 12-inch driver. Each low frequency driver is independently housed in its own acoustically sealed chamber to prevent destructive interaction.

Each midrange/tweeter combination in the Sound Transducers produces a homogenous frequency wavefront. Smooth imperceptible transition from mid to high frequencies is maintained through the precise axial spacing of these components. With these assemblies mounted front and rear a dispersion pattern approaching 360° is achieved above 900 Hz. Therefore speaker placement becomes virtually unlimited.

For the Sound Transducers a totally unique crossover network has been designed. This electronic network is constructed with plug-in acoustic equalizers for each of the midrange and high frequency transducers. The pushbutton control center is strategically located under the glass top for easy access or viewing. This allows a degree of user participation never before present in loudspeaker systems.

Although unequalled performance was the prime consideration, equally superb cabinetry with provocative aesthetic appeal is presented in the Sound Transducers. The continuous wraparound elegance of the black anodized aluminum lower trim panel, dark stretch fabric grille, and smoked bronze glass top compliments the long, unbroken slab side panels with radiused corners. The ST-2, despite its impressive 4 foot height, occupies only slightly more than 1 square foot. The ST-1, occupying less than one square foot, stands 3-1/2 feet tall. The exquisite appearance understates the technical refinement of the total design which is revealed when the grilles and glass top are removed. The sparkling glass top beautifully reflects any decorative object. The black felt support pad may be removed for subtle display of the electronic control settings.

The Sound Transducers are available in oiled walnut with brown grille or satin white with black grille. Optional blue, brown, or black grilles are separately available at modest cost.



ST-1/ST-2



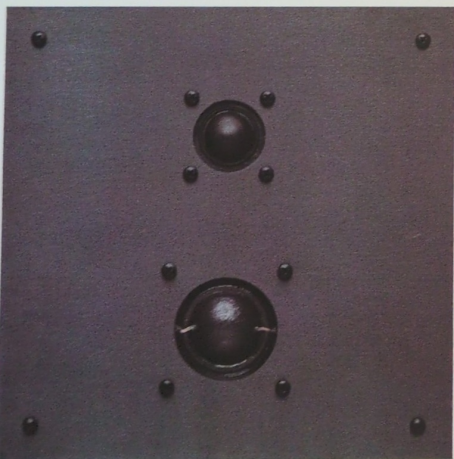
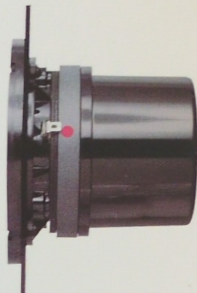
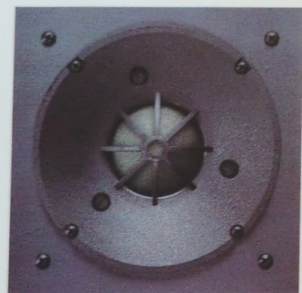
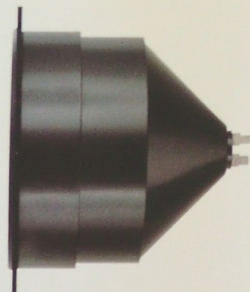
## THE DOME DRIVERS

Dome drivers are used in all Stark Designs loudspeaker systems for reproduction of the mid and high frequency spectrums of the musical range. Dome radiator technology offers the highest power handling capacity, widest dispersion and greatest efficiency.

Shown at upper left is the high frequency dome tweeter used in all bookshelf systems. This unit features a 4-inch polycarbonate dome and aluminum-silver, copper clad voice coil. These are aligned with the 10 ounce magnet by a precision centering device. Wide and uniform dispersion is accomplished with the aid of a diffuser which is an integral part of the protection grid. This dome radiator is mounted at a precisely determined angular offset in a concave hemispherical module, which we termed the Directed Dispersion Unit. This electro-mechanical device may be rotated 360° allowing the user to select the desired dispersion pattern.

The dome midrange pictured at center left is used in the Sound Reproducers. Its 2-inch voice coil is precision wound on a vented aluminum voice coil former for rapid heat dissipation during sustained power application. A large 16 ounce magnet drives this coil with unsurpassed efficiency. The radiating surface is formed from a durable paper fiber which is suspended by a specially impregnated cloth surround. This hard dome produces excellent spherical radiation uninhibited by the concave frontal area with internal baffle which eliminates spurious radiation. This driver is acoustically suspended within its own sealed chamber. The output is critically damped through the resistive loading of lambs wool.

Shown at lower left is the midrange/tweeter combination used both front and rear in the Sound Transducers. These drivers are similarly constructed to compliment each others' performance. The soft domes are made from a specially developed fabric treated with a flexible compound to insure no degradation in performance even after prolonged heavy loading. The tangential surround aids in dissipating unwanted peaks. The voice coils are wound on aluminum formers to withstand high power inputs. The massive magnet structures employed in both units are aligned on a single aluminum mounting plate with rigid precision-formed substructures.



## THE ELECTRONICS

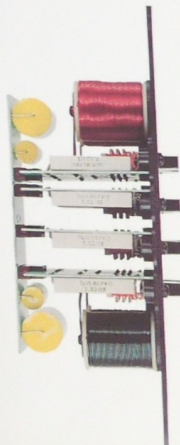
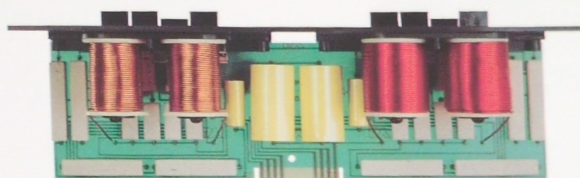
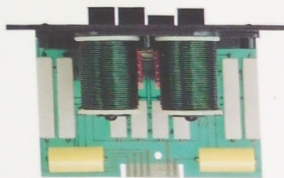
To maintain the optimum characteristics of all drivers employed in each system, Stark Designs has taken an entirely new approach to crossover network design. Special circuitry in this network design minimizes both amplitude and phase distortion at the crossover points.

No wires are to be found anywhere in the electronic circuitry. Instead, all connections are ingeniously laid out on military-grade glass-epoxy printed circuit boards, assuring unit-to-unit reliability. Separate wiring harnesses with plug-in edgeboard connectors allow each completed circuit board to be pre-tested before final assembly.

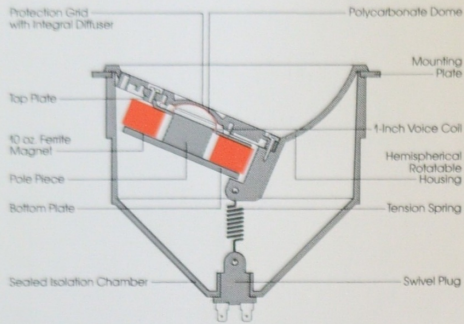
Saturation-free air core inductors, wound with heavy 18 gauge wire minimize transient and harmonic distortion at all power levels. The dynamic tonal quality is virtually unaffected through the use of computer grade metalized Mylar capacitors. These superior components guarantee long term stability and low power losses. All components have stringent tolerances and ample overload margins.

At the low crossover points in the Sound Reproducers and Sound Transducers a 6 dB/Octave slope assures accurate distribution of the audio signal to the proper drivers through the transition frequencies. The high crossover points in all systems have 12 dB/Octave slopes to provide sharp roll-off characteristics which assure minimum overlap of transducer output. For unprecedented accuracy and control flexibility, all Stark Designs networks employ totally new equalization circuitry. The four position pushbutton switches allow level adjustments over an unusually wide range in discrete 3 dB increments. In the Sound Transducers four independent plug-in equalization boards are joined by one master board.

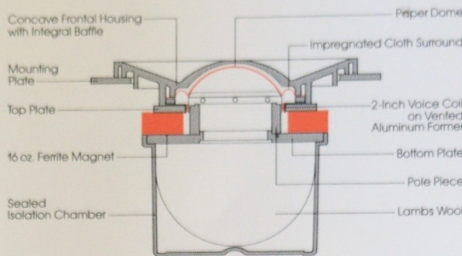
All electronics are mounted with amplifier-like control plates for ease of installation and servicing. All control panels are mounted up front, or on top in the case of the Sound Transducers, for maximum convenience.



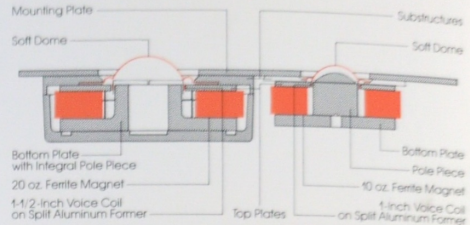
1-Inch Dome Tweeter in Directed Dispersion Unit



2-Inch Dome Midrange



Midrange/Tweeter Combination



## THE DESIGN INTEGRITY

Stark Designs is a relatively new but very capable manufacturer dedicated to the design and production of innovative new products uncompromised in performance, versatility, reliability, quality and design integrity.

Our obvious attention to detail and flawless construction express the artistic ability of our craftsmen to faithfully execute the integration of form and function. The genuine walnut veneered cabinets are hand finished with an oil/stain combination followed by a hand-buffed natural wax. The satin white cabinets are undercoated, hand sanded, then finished with multiple coats of satin white lacquer.

Unusually tight tolerances and quality control procedures are used in the production of all Stark Designs drivers and electronics. These components are mounted with precision metal plates, giving an extremely durable finish and a unique appearance unmatched by any other loudspeakers in the industry.

Even though the specifications listed indicate the consistent design integrity of Stark Designs products, they cannot convey the full impact of an extensive listening experience.

## THE SPECIFICATIONS

### SYSTEM COMPONENTS

Low Frequency

Mid Frequency

High Frequency

### ELECTRONIC NETWORK

Crossover Frequencies

Crossover Slopes

Equalization—in 3 dB Increments

By 4 Position Pushbutton Switches

### SYSTEM CHARACTERISTICS

Frequency Response—Full Spectrum

Frequency Response—Critical Spectrum

Dispersion at 12000 Hz

Dispersion at 2500 Hz

Nominal Impedance

### POWER CAPACITY

Recommended Amplifier Power

Continuous Program Power

Intermittent Program Power

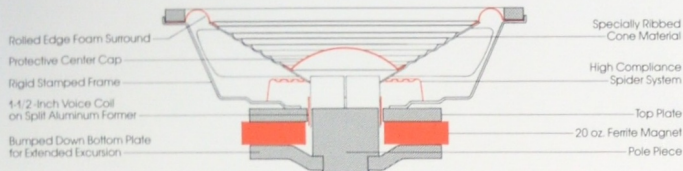
### DIMENSIONS AND WEIGHT

Height × Width × Depth (in)

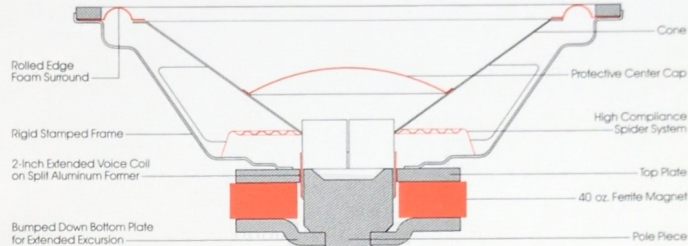
Height × Width × Depth (cm)

Shipping Weight

## 8-Inch Woofer



## 12-Inch Woofer



All illustrations on these pages are 1/3 actual size.

### SE-1

8 in (20.3 cm) Cone

1 in (2.5 cm) Dome

2000 Hz  
12 dB/Octave  
Tweeter  
Level Control

50 Hz to 20 KHz  $\pm$  4.5 dB  
100 Hz to 15 KHz  $\pm$  3.0 dB  
100° Adjustable

8 Ohms

20 Watts RMS/Channel  
40 Watts RMS/Channel  
80 Watts RMS/Channel

21 × 10 × 11  
53.3 × 25.4 × 27.9  
35 lbs (16 kg)

### SE-2

10 in (25.4 cm) Cone

1 in (2.5 cm) Dome

2000 Hz  
12 dB/Octave  
Tweeter  
Level Control

40 Hz to 20 KHz  $\pm$  4.5 dB  
100 Hz to 20 KHz  $\pm$  3.0 dB  
100° Adjustable

8 Ohms

20 Watts RMS/Channel  
40 Watts RMS/Channel  
80 Watts RMS/Channel

24 × 13 × 11  
61 × 33 × 27.9  
42 lbs (19 kg)

### SR-1

10 in (25.4 cm) Cone  
2 in (5.0 cm) Dome  
1 in (2.5 cm) Dome

450 Hz and 4500 Hz  
6 dB and 12 dB/Octave  
Tweeter and Midrange  
Level Controls

40 Hz to 20 KHz  $\pm$  4.0 dB  
100 Hz to 15 KHz  $\pm$  2.5 dB  
100° Adjustable  
150° On Axis  
8 Ohms

30 Watts RMS /Channel  
50 Watts RMS/Channel  
100 Watts RMS/Channel

24 × 15 × 11  
61 × 38.1 × 27.9  
51 lbs (23 kg)

### SR-2

12 in (30.5 cm) Cone  
2 in (5.0 cm) Dome  
1 in (2.5 cm) Dome

450 Hz and 4500 Hz  
6 dB and 12 dB/Octave  
Tweeter and Midrange  
Level Controls

32 Hz to 20 KHz  $\pm$  4.0 dB  
100 Hz to 15 KHz  $\pm$  2.5 dB  
100° Adjustable  
150° On Axis  
8 Ohms

40 Watts RMS/Channel  
70 Watts RMS/Channel  
150 Watts RMS/Channel

24 × 15 × 13  
61 × 38.1 × 33  
57 lbs (26 kg)

### ST-1

Two 8 in (20.3 cm) Cones  
Two 1.5 in (3.8 cm) Domes  
Two 1 in (2.5 cm) Domes

900 Hz and 4000 Hz  
6 dB and 12 dB/Octave  
Front & Rear Tweeter and  
Midrange Level Controls

40 Hz to 24 KHz  $\pm$  3.5 dB  
100 Hz to 15 KHz  $\pm$  2.0 dB  
120° Front and Rear  
150° Front and Rear  
4 Ohms

40 Watts RMS/Channel  
80 Watts RMS/Channel  
160 Watts RMS/Channel

42 × 11 × 11  
106.7 × 27.9 × 27.9  
79 lbs (36 kg)

### ST-2

Two 10 in (25.4 cm) Cones  
Two 1.5 in (3.8 cm) Domes  
Two 1 in (2.5 cm) Domes

900 Hz and 4000 Hz  
6 dB and 12 dB/Octave  
Front & Rear Tweeter and  
Midrange Level Controls

32 Hz to 24 KHz  $\pm$  3.5 dB  
100 Hz to 15 KHz  $\pm$  2.0 dB  
120° Front and Rear  
150° Front and Rear  
4 Ohms

50 Watts RMS/Channel  
120 Watts RMS/Channel  
250 Watts RMS/Channel

48 × 14 × 14  
121.9 × 35.6 × 35.6  
112 lbs (51 kg)

## THE 5 YEAR WARRANTY

Every Stark Designs loudspeaker system is fully warranted against defects in material and workmanship for a period of five years from the date of original purchase, regardless of change in ownership. This warranty provides for repair of the unit, including parts and labor at no charge to the consumer, when the following conditions of the warranty are fully complied with.

The warranty registration card accompanying the unit must be filled in completely and properly and mailed within 10 days of the date of delivery to the original purchaser.

The consumer must obtain written permission from the factory before shipping the unit to the factory for repair under warranty.


The unit must be shipped, freight prepaid, or delivered to the factory in its original package or in a similar package affording an equal degree of protection. The unit should be fully insured by the sender. The return of the unit to the consumer will be paid for by the factory.

Unauthorized repair or modification, abuse or misuse, power input exceeding specified limits, accident, or alteration of the serial number will void this warranty. In such a case the consumer will be notified and advised of alternate repair choices and charges, and will be charged for the repair and return charges.

Units repaired under this warranty carry only the unexpired portion of the original warranty.

Stark Designs reserves the right to modify or change the equipment, in whole or part, in order to include electrical or mechanical improvements, without incurring any liability to modify or change any equipment previously delivered, or to supply new equipment in accordance with earlier specifications.

Except to the extent prohibited by applicable law, all implied warranties made in connection with this product, including warranties of merchantability or fitness, are limited in duration to the applicable warranty set forth above, and no warranties, whether express or implied, including warranties of merchantability or fitness, shall apply to this product after said period has expired. This warranty is expressly in lieu of all other warranties.

 **STARK Designs**

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