# Technics SB-4500

## "Linear Phase" 2-Way Speaker

# SB-4500 Linear Phase 2-Way Speaker System

## Musical Realism in a Top Value System

The amazing waveform fidelity of the Technics Linear Phase speaker systems is now almost legendary. Here, with the SB-4500, comes a similar system—priced to suit the economy-minded. Yet it still retains the essential crisp transparency of sound all the way through the audio spectrum. As our oscilloscope tests have shown, sound-pressure waveforms of musical instruments played through the Linear Phase system mirror almost exactly the original waveforms. The result is a real sense of "being there", inside the concert hall. Naturally, this technological achievement came only after months of patient research by teams of dedicated audio scientists. And one of their major successes was the development of a special phase measuring device which, for the first time, allowed precise measurement of phase delays. The result, as you will hear, is an incredible transparency and clarity of sound, with all the verve of a live performance. Now we are able to offer you this Linear Phase sound at an economical level, yet without sacrificing any musical vitality. If you're serious about musical realism, you owe it to yourself to give the SB-4500 a hearing!

## Technical Specifications

| | |
|---|---|
| Configuration | 2-way 2-speaker bass reflex |
| Impedance | 6 ohms |
| Instantaneous maximum input power | 75W (peak) |
| Output level | 92.5 dB/W (1m) |
| Speaker units | Woofer: 25 cm (10") cone type<br>Tweeter: 6 cm ($2\frac{3}{8}$") cone type |
| External dimensions (W × H × D) | 350 × 631 × 325 mm<br>($13\frac{3}{4}$" × $24\frac{7}{8}$" × $12\frac{3}{4}$")<br>(including grille) |
| Net weight | 14.5 kg (32.0 lbs.) |

Note 1: The instantaneous maximum input power quoted above is for a voice-coil temperature rise to not greater than 80°C (176°F), which corresponds to the conditions of measurement.
Note 2: System supplied with grille cloth as shown on front page.

## Bass-Reflex 2-Way Speaker System with 25cm (10") Woofer and 6cm ($2\frac{3}{8}$") Cone Tweeter in Linear Phase Configuration

A new crossover unit, specially designed for this Linear Phase system, ensures that accurate waveform fidelity, with corresponding realistic reproduction, is maintained. The crossover point is at 2 kHz. This network is designed for linear overall phase characteristics, including the individual speaker units. The units are designed for exceptionally wide frequency range and high performance, in ideal physical configuration.

### Extra Wide-Range Woofer

With a specially corrugated cone made from selected types of pulp which combines lightness with strength, the frequency range extends to 4 kHz, leaving the critical midrange frequencies free from partial vibrations, with low distortion. The voice-coil bobbin is of hardened aluminum foil, providing excellent heat dispersion in high power operation.

### Wide-Range Edgeless Cone Tweeter

A newly-developed synthetic resin prevents air-leakage and supports the cone with high compliance. The edgeless structure eliminates edge resonance and so reduces distortion. The voice coil is made of copper-clad aluminum wire for exceptional conductivity and heat dispersion. Response extends up to 28 kHz, with an fo at a low 350 Hz, giving the tweeter the ultra-wide range which is essential for linear phase response. The newly-designed crossover network provides perfect smoothness and tweeter/woofer balance, with linear phase. Crossover is so smooth, in fact, that the unit sounds more like a single, wide-range speaker.

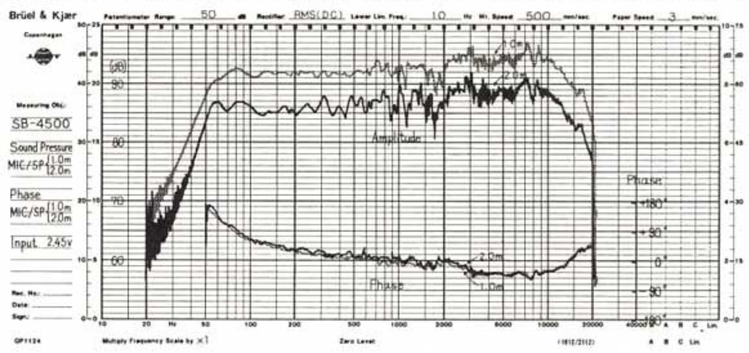
### Optimum Speaker Location

By precisely aligning the acoustic centers of the speaker units and placing them physically as close together as possible (while keeping them acoustically isolated), our engineers have succeeded is producing the maximum phase linearity with even sound distribution. Moreover, the location of the units is finely tuned to compensate for phase shift at the crossover network. You will notice that the woofer is placed well away from floor level to reduce boomy floor effects.

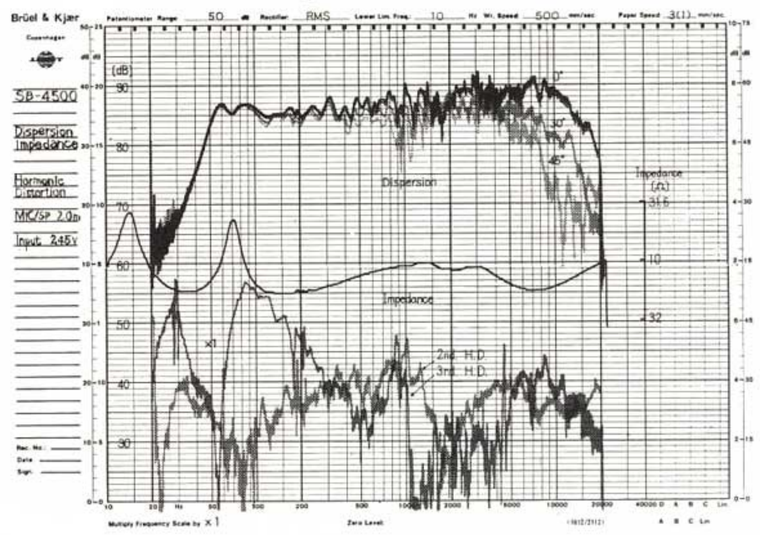
### High Power, High Efficiency Bass Reflex Design

The SB-4500 is perfectly at ease handling peak power up to 75 watts. And the high 92.5 dB/W.m efficiency still gives ample volume even at low power. The surprisingly rich, solid bass response is provided by a carefully tuned bass-reflex cabinet.

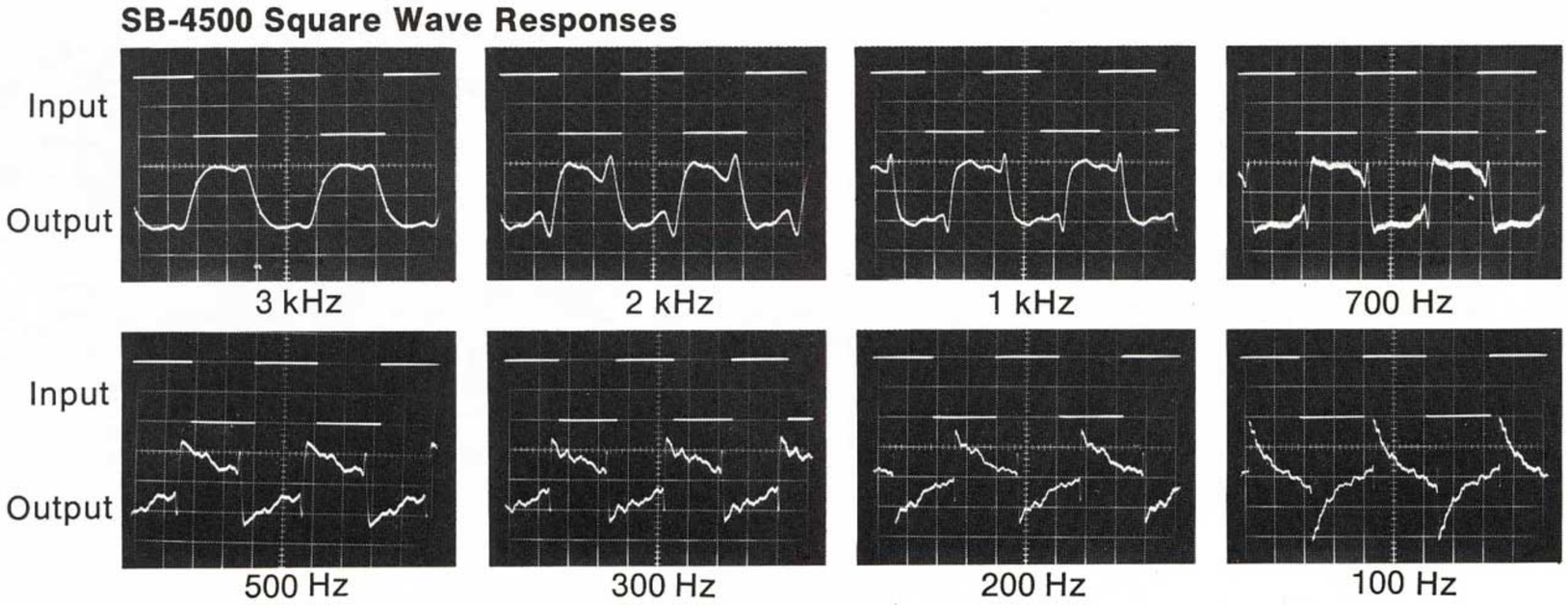
### Sound Pressure and Phase Characteristics




### Directional Dispersion, Harmonic Distortion and Impedance Characteristics




### SB-4500 Square Wave Responses

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