



# *Soavo*

N a t u r a l   S o u n d   S p e a k e r   S y s t e m s

The natural sound of Soavo.  
Music as it should be heard.

At Yamaha, we love, understand  
and respect music. We're sure  
that you love music, too, and that  
when you listen to it, you want it  
to sound as natural as possible.  
We believe that "natural sound" is

# Soavo

N a t u r a l   S o u n d   S p e a k e r   S y s

the original sound of musical  
instruments, and of the human  
voice, so they should be  
reproduced with nothing added or  
taken away. Giving you this  
beautiful music experience is the  
reason we created the Soavo  
series. Listen to Soavo and  
discover how truly natural music  
from a speaker can be.



t e m s



# Soavo and Yamaha's Commitment to Music

Speakers backed by over  
a century of music  
experience.



Yamaha's involvement and passion for music goes back more than a century to when we built our first reed organ in 1887. Now we are the world's leading producer of pianos and other musical instruments and are involved with music in many other ways as well. We manufacture professional recording equipment, we design concert halls and we assist artists at concerts with regards to set up and sound tuning.

This knowledge and experience benefits our production of speakers in many ways. In fact, the very first speaker we made was used in a musical instrument – the Electone® electronic

organ. For the Soavo series, our speaker engineers took advantage of Yamaha expertise in many areas, including woodworking, metallurgy, acoustics, sound processing and even piano tuning.

But the most important factor is our commitment to maintaining an extremely high standard of sound quality that we call "Natural Sound." You can hear it in all of our musical instruments, and now we are proud to present one of the finest examples of Natural Sound performance we have ever created: the Soavo speaker series.







# *Soavo 1*

Natural Sound Speaker System

Soavo-1 sets a new standard in sound excellence, delivering impressive power and dynamic range, a wide stereo image and deep bass output. This three-way, floor-standing, dual-woofer speaker system achieves superb clarity from extremely low to high levels, and a full, spacious sound. With the Soavo-1 gracing your home, you will appreciate the fine qualities of your music as never before.





# Soavo Interior

Beautiful design  
that compliments  
the beautiful music.



Since you are interested in the Soavo speakers, you undoubtedly enjoy the finest music in your home. Naturally, you want your entire decor to be beautiful also. To ensure that the Soavo speakers are visually as well as aurally beautiful, Yamaha commissioned the world-famous designer Toshiyuki Kita to create uniquely attractive speakers that will enhance the atmosphere of any interior.

## Toshiyuki Kita

Working in both Japan and Milan, Toshiyuki Kita has designed many successful products for German, Italian and Japanese manufacturers. His designs are in the permanent collections of museums all over the world, including the Museum of Modern Art in New York and the Centre Georges Pompidou in Paris. He also designs traditional Japanese crafts.

T. Kita



# Soavo 2

Natural Sound Speaker System

Maintaining the high standards of the Soavo series, Soavo-2 delivers extremely accurate resolution and finely detailed sound with an elegant and versatile design. This two-way bookshelf speaker system provides crisp and clear sound localization. Place it in any convenient location and prepare to be amazed as you hear every note of the music with razor-sharp clarity and outstanding sound imaging.







In order to achieve the most natural music reproduction, the Soavo design team spent five years of research, planning and development. They created a unique cabinet design, which is shaped and reinforced for optimum music reproduction. They also used the expertise of Yamaha wood craftsmen who produce our grand pianos, selected acoustically excellent wood, and gave it a high quality piano-type finish. Every material and design aspect was carefully considered, even down to the feet. The result is beautiful speakers that bring forth out the full potential of the music.



## Soavo Design

Higher performance  
through innovative  
design.

# Soavo Technology

Designed and built to deliver Natural Sound.

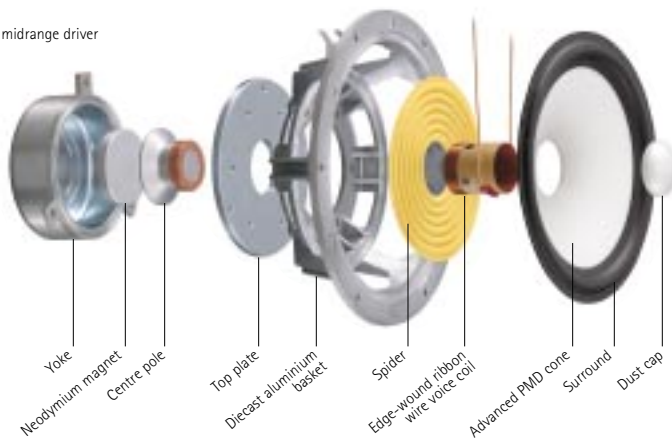
## DRIVERS

**Advanced PMD Woofer and Midrange Cones**  
In order to provide very fast attack time (sound rise and fall), as well as excellent midrange clarity and bass response, Yamaha developed Advanced PMD (Advanced Polymer-injected Mica Diaphragm) cones that are extremely light, rigid and sturdy. They employ

a low specific gravity material called PMP (Poly-Methyl-Pentene) that is much lighter than either paper or polypropylene. Precisely determined amounts of mica and talc are added, which testing has proved contribute to the beautiful quality of sounds in the vocal range. These drivers' internal loss

characteristics decrease unwanted resonances to achieve the smooth frequency response that results in natural sounding vocals. The midrange driver creates a feeling of presence as if someone is actually singing in the room, while the dual woofer design delivers deep and tight bass.

Soavo-1 midrange driver



Advanced PMD cone midrange driver and woofer

**Aluminium Dome, DC-Diaphragm™ Tweeter**  
The high-performance 1" (3cm) aluminium dome tweeter delivers crisp and clear highs at all power levels. It employs a fully integrated diaphragm/voice coil structure called the DC-Diaphragm that eliminates extraneous materials for a cleaner sound. It is extremely light yet durable, and for a small unit transmits an extremely large amount of detailed sound information, resulting in a denser sound field.

**Tweeter Plate**  
A diecast aluminium tweeter plate isolates the tweeter from cabinet vibration and provides a solid attachment for the tweeter unit, so the high range sound is clear and transparent, with no colouration.

**All Parts Selected for the Highest Possible Performance**  
The edgewise-wound ribbon wire voice coil contributes to high resolution, exceptional sound detail and excellent imaging. The spider is a high performance model made by Kurt Müller of

Germany. Diecast aluminium baskets ensure solid support for high stiffness, improving sound image localization and depth reproduction. The midrange driver is powered by a newly designed, compact and powerful neodymium magnet.

**Carved Wooden Port**  
Each port is carved from carefully chosen, high quality wood. The port has very thick and rigid walls and a flared shape, ensuring a smooth sound flow that contributes to bass sound with a more spacious and massive feel.



DC-Diaphragm™



Aluminium dome tweeter with diecast aluminium tweeter plate



The diecast aluminium tweeter plate is very effective in damping the vibrations that occur during high frequency output.



Spider by Kurt Müller (High linearity suspension)



Wooden port

Yamaha developed the Soavo speakers to provide extraordinarily realistic music reproduction. We accomplished this through a combination of advanced speaker engineering, use of the absolute best parts and materials available, and an innovative cabinet design.

## C A B I N E T

### Innovative Cabinet Design

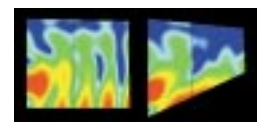
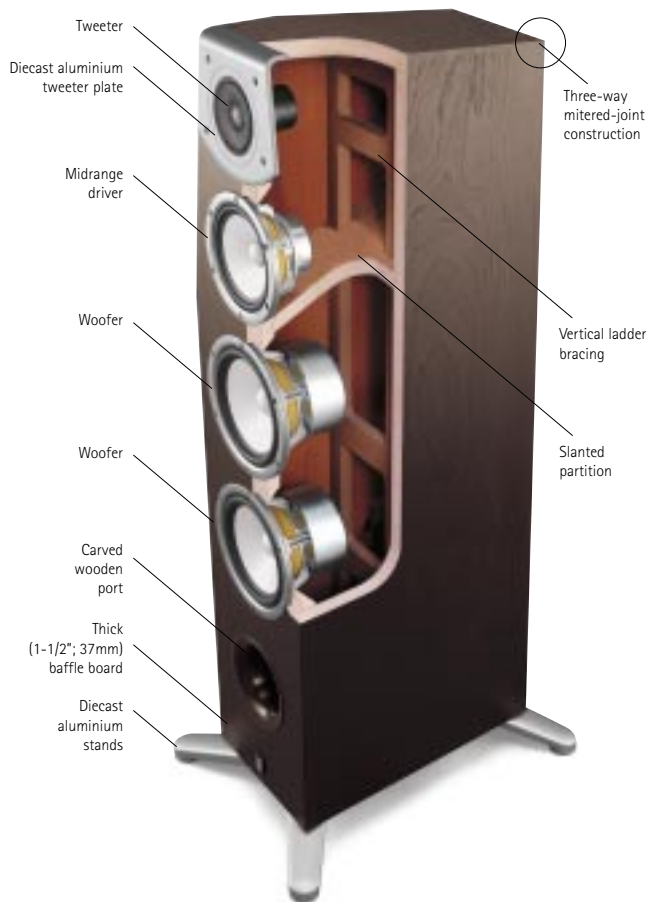
One of the keys to Soavo's ability to deliver Natural Sound music reproduction is the cabinet design. While maximizing sound clarity and imaging, the designers strived to drastically reduce internal standing waves and produce an expansive sound with an exceptional feeling of depth. Their solution was to create a cabinet with non-parallel sides, divide the woofer and midrange sections by a slanted partition, and strengthen the interior with large, vertical ladder-type bracing.

### Three-Way Mitered-Joint Construction for a Rigid Body

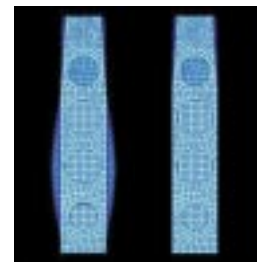
Yamaha's excellence in woodworking is used to good advantage in the three-way mitered construction of the cabinet joints. This technique ensures extremely tight joints so the entire cabinet behaves as a single unit, providing tight bass reproduction.

### Diecast Aluminium Stands

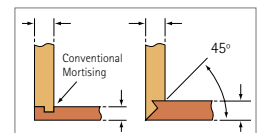
The Soavo-1 is equipped with diecast aluminium stands that provide the necessary solid floor contact for tighter bass and increased stability.



**Sound Pressure Distribution Inside the Midrange Driver**  
Left: Ordinary enclosure; Right: Non-parallel surfaces. The image on the left shows that there are standing waves. The non-parallel surfaces restrict standing waves, preventing degradation of midrange sound.



**Effect of vertical ladder bracing**  
Left: Without vertical ladder bracing; Right: With vertical ladder bracing. Speaker with bracing shows greatly reduced vibration.



Conventional Mortised Construction      Three-Way Mitered-Joint Construction

## N E T W O R K S

### Independent Direct Crossover Connections

Yamaha's total commitment to achieving rich and vivid sound is seen in the design of the Soavo networks. They use the highest quality parts, including Solen metalized polypropylene capacitors of France and large hollow centre coils with carefully selected wire. Furthermore, rather than using printed circuit boards, each connection is individually soldered on a thick wooden board, providing larger, shorter signal paths for maximum sound quality.



Woofer crossover network



Solen metalized polypropylene capacitors.



Large hollow centre coils

# Soavo Specifications and Cabinet



## *Soavo 1*

Natural Sound Speaker System

<b>Soavo-1</b>	3-way bass-reflex floor-standing
Woofers	Dual 6-1/2" (16cm) Advanced PMD cone
Midrange Driver	5" (13cm) Advanced PMD cone
Tweeter	1" (3cm) aluminium dome
Frequency Response	35 Hz-50 kHz
Sensitivity	89 dB/2.83 V/1 m
Maximum Input Power	200 W
Nominal Input Power	50 W
Crossover Frequencies	500 Hz/5 kHz
Impedance	6 ohms
Dimensions (W x H x D)	13-3/4" x 41-3/8" x 19-3/16"; 349 x 1,051 x 487 mm
Weight	59.5 lbs.; 27 kg



## *Soavo 2*

Natural Sound Speaker System

<b>Soavo-2</b>	2-way bass-reflex bookshelf
Woofers	6-1/2" (16cm) Advanced PMD cone
Tweeter	1" (3cm) aluminium dome
Frequency Response	45 Hz-50 kHz
Sensitivity	88 dB/2.83 V/1 m
Maximum Input Power	120 W
Nominal Input Power	30 W
Crossover Frequencies	3 kHz
Impedance	6 ohms
Dimensions (W x H x D)	8-11/16" x 14-15/16" x 13-7/8"; 220 x 380 x 352 mm
Weight	20.9 lbs.; 9.5 kg
<b>SPS-900</b>	Optional Speaker Stands
Dimensions (W x H x D)	14-3/16" x 23-5/8" x 16-5/16"; 360 x 600 x 415 mm
Weight	16.5 lbs.; 7.5 kg



# Finishes



**Birch Veneer Cabinet with Open-Pore Finish**  
Birch is an acoustically excellent material that is used in Yamaha pianos. Yamaha's long decades of woodworking expertise have confirmed the superior performance of birch veneer for speaker cabinets, particularly in the shading of bass sounds. The cabinet is given the same luxurious and environmentally friendly open-pore finish used on Yamaha's finest wood-grain pianos. It is available in four colours: dark brown birch, brown birch, natural birch and black birch.

# Soavo-900 Series Natural Sound Speaker System

The Soavo-900M Surround Speaker and Soavo-900C Centre Speaker feature sound tuning that perfectly complements the other Soavo speakers. They allow you to enjoy multi-channel sources in an ideal surround sound environment.



## Soavo-900M

This two-way speaker is compact enough for wall mounting. Its design and tuning are based on the same natural music reproduction concept as the other Soavo speakers, to provide a fully realized surround sound environment.

<b>Soavo-900M</b>	2-way bass-reflex
Woofers	5" (13cm) Advanced PMD cone
Tweeter	1" (3cm) aluminium dome
Frequency Response	56 Hz-50 kHz (-10 dB)
Sensitivity	87 dB/2.83 V/1 m
Maximum Input Power	120 W
Nominal Input Power	30 W
Crossover Frequencies	3 kHz
Impedance	6 ohms
Dimensions (W x H x D)	8-11/16" x 13-3/4" x 9-5/16"; 220 x 349 x 237 mm
Weight	13.2 lbs.; 6 kg/unit



## Soavo-900C

This two-way, dual-woofer centre speaker utilizes innovative Soavo technology to deliver centre-stage dialogue and other sounds with the utmost clarity.

<b>Soavo-900C</b>	2-way bass-reflex
Woofers	Dual 5" (13cm) Advanced PMD cone
Tweeter	1" (3cm) aluminium dome
Magnetic Shielding	Yes
Frequency Response	56 Hz-50 kHz (-10 dB)
Sensitivity	89 dB/2.83 V/1 m
Maximum Input Power	200 W
Nominal Input Power	40 W
Crossover Frequencies	3 kHz
Impedance	6 ohms
Dimensions (W x H x D)	19-11/16" x 6-11/16" x 10-11/16"; 500 x 170 x 271 mm
Weight	19 lbs.; 8.6 kg

The Soavo-900SW Subwoofer meets the challenge of providing an ideal balance between tight sounds (with crisp, fast attack) and deep sounds (with a spacious feeling). Designed for extremely accurate music reproduction, the Soavo-900SW proudly takes its place in Yamaha's Soavo series.



## Soavo-900SW

<b>Soavo-900SW</b>	Advanced YST II and front firing subwoofer
Output Power	600 W
Frequency Response	18 Hz - 160 Hz
High Cut Filter (Continuously Variable)	40 Hz - 140 Hz
Driver	10" (25cm) multi-range
Standby Power Consumption	0.5 W
Dimensions (W x H x D)	16-1/8" x 17-15/16" x 18-3/16"; 410 x 457 x 462 mm
Weight	70.1 lbs.; 32 kg



Full function remote unit

## Soavo-900SW Technology

### High Performance Driver

The 10" (25cm) F.B.P. diaphragm driver uses a new Yamaha-developed material consisting of paper with a blend of carbon and aramid fibers. Its extreme stiffness and extra-long stroke prevent distortion from occurring even during large, deep bursts of sound. A large, powerful magnetic circuit also contributes to the driver's fast response. The unit is firmly supported by a strong diecast aluminium frame.

### 600W Digital Amplifier

The Soavo-900SW has a high-end audio component built in! — a 600W digital amplifier. Featuring the same power chipset as the high-end MX-D1 digital amplifier, it delivers exceptionally high levels of power and sound quality, yet with low power consumption.



Power chip  
(YDA133  
modulator LSI)

### Heavy-Duty Construction with Three-Way Mitered-Joint Construction

Yamaha uses three-way mitered-joint construction at the cabinet corners and baffle/body connections to increase joint tightness for better response and less vibration. A thick (1-1/2"; 37mm) baffle also reduces vibration.

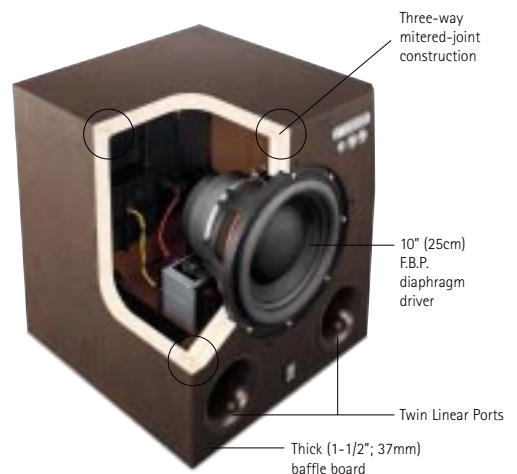
### Effect of Linear Port



Advanced YST II produces rich bass sound, and the addition of twin wooden Linear Ports help to increase bass output.



Power transformer  
(9.3lbs.; 4.2kg) and  
custom-made block  
capacitors





w w w . s o a v o . c o m

