Further information about the Installation Series speakers, including 2D and 3D CAD data, CLF data, EASE data, white paper and other technical details, can be found on the Yamaha Pro Audio web page. System diagrams in which the speakers are combined with DME64N/DME24N devices, as well as DME Designer template files are also provided.

For details see the Yamaha Pro Audio web page at http://www.yamahaproaudio.com
The Quest For the Best In Pro Sound

Technological innovation occurs at a breathtaking pace in the world of professional audio…except in one vital but often-overlooked area. In spite of all the innovation, the fact remains that speaker systems are still the most critical, variable, and problematic link in the audio chain. Speakers interact directly with their environment and other components in the system, making it essential to both use speakers that are properly designed for their application and to set them up so that they and the room function as a well-balanced whole.

The second part of the above equation is the realm of the sound contractor and engineer, but the first is the responsibility of the manufacturer…and that's where Yamaha's dedication to delivering the best can mean the difference between average and superlative sonic performance.

Yamaha realized more than 40 years ago that simply building systems around speaker units bought from other manufacturers would not do, initiating a long, arduous, and fruitful quest for ideal speaker performance based on original technology. Along the way innovative Yamaha speaker technology has resulted in a number of breakthrough products that established new performance standards in a number of critical fields: The NS-1000M for home audio, the NS10M and NS10M STUDIO for professional near-field monitoring, and the Club Series for live sound.

The goal is simple: to provide sound reproduction that is totally faithful to the source. But as anyone involved in speaker design and manufacture will attest, achieving that simple goal is extremely difficult, and no speaker on earth can claim absolute perfection in this regard. The good news is that…now we've come closer than ever to achieving that elusive goal.

Yamaha's new Installation Series Speakers address a number of important issues that give them unprecedented performance and handling characteristics for live sound applications, including permanent installations. In particular, phase characteristics have been kept smooth and consistent throughout the entire series, so you can mix and match speakers to suit any system and venue without ending up with hot and dead spots due to phase interference. And of course sonic quality is superb throughout the entire reproduction range so the full impact of the source material reaches the audience undiluted.

Some Important Installation Series Speaker Features

- Ideal for small to medium-scale installations
- Uniform phase response throughout the entire series
- Models include 3-way, 2-way, large, small, high-power, medium-power, and other variations
- A wide selection of dispersion characteristics for long-range, short-range, and long/short-range use
- A range of standard U-bracket and array-frame hardware available for maximum installation convenience and efficiency
- Switchable passive and bi-amp drive modes (bi-amp and tri-amp modes for 3-way models)
Installation Series

Hard at work in venues all over the world

Conference & Education Facilities

Installation Series

 Clubs & Bars

Installation Series

Multipurpose Halls

Installation Series

Theaters & Halls

Installation Series

Houses of Worship

Installation Series

Banquet Halls

Installation Series

Sports Facilities

Installation Series

The Kurhaus (Italy)

Northampton's Royal Theatre (UK)

Ansan Gummun Church (Korea)

St. Michael and St. George Church (USA)

Youndong Church (Korea)

Montserrat Culture Centre (British Overseas Territory)

Carrefour des Communications (France)

Bersa Bar (Sweden)

The Stables (UK)

Carrefour des Communications (France)

Bersa Bar (Sweden)

Carrefour des Communications (France)

Bersa Bar (Sweden)

Carrefour des Communications (France)

Bersa Bar (Sweden)
One of the most common causes of uneven response in systems that fashion to equalization — in audio terms it needs to provide a “flat response” — reproduces the waveforms provided as input and responds in a linear fashion to equalization — in audio terms it needs to provide a “flat response”. Regardless of the above considerations, if the phase characteristics of a facility is of the utmost importance to sound engineers. In the same way that a painter’s canvas must be white in order to show the true colors of his paints, a speaker system must be a “white canvas” in the sense that it accurately reproduces the waveforms provided in input and responds in a linear fashion to equalization. — in audio terms it needs to provide a “flat response”. 

Creating the Ideal “White Canvas”

The ease with which a speaker system can be adjusted to match the characteristics of a facility is of the utmost importance to sound contactors and engineers. In the same way that a painter’s canvas must be white in order to show the true colors of his paints, a speaker system must be a “white canvas” in the sense that it accurately reproduces the waveforms provided as input and responds in a linear fashion to equalization — in audio terms it needs to provide a “flat response”. In any installation employing multi-speaker arrays, the phase characteristics of the speakers must be carefully considered. Most arrays set up for live concerts are composed of speakers of the same type, but a number of variations are often seen in installations.

Equalization does not provide the answer, and it is therefore essential to carefully match the phase characteristics of multiple speakers used in an array in order to achieve optimum response. Differences between the phase characteristics of the speakers used. Eliminating comb filter effects can be extremely difficult, and this is a problem to which Emthaz has assigned the highest priority in the pursuit of speaker array performance that comes as close to the ideal “white canvas” as possible.

1. Arrays using cabinets of the same type.

A) Speakers with different dispersion characteristics. 60° and 80° for distance and 40° and 60° for close range.

B) Different drive modes: Distance speaker bi-amped to provide extra high frequency power, combined with a passive speaker for close range.

C) Different power: a high-power model used for distance, and a mid-power model for close range.

2. Arrays using different cabinet types.

A) Large cabinets for distance, combined with a small cabinet for close range.

B) Small cabinets for close range.

C) Bi-amped to provide extra high frequency power, combined with a passive speaker for close range.

D) Passive drive for close range.

Different power: a high-power model for close range, and a mid-power model for distance.

Different drive modes: close range speaker with a small cabinet, distance speaker for distance, and a mid-power model for close range.

Different dispersion patterns: 50° x 40° for close range, 150° x 40° for distance.

Graph 1 illustrates severe cancellation can be seen at frequencies at which the phase of the speakers differs by 120° or more. A graph showing that the frequency response curves of both speakers are almost identical, and both have smooth, constant phase response over their entire range indicating that they are both high-quality speakers. However, although the phase curves are essentially equal in the low-frequency range, we can see a significant difference from the mid to high range.

Graph 2 shows the response of the above speakers which both have been combined as an array, measured in situ at point “A” in the illustration. Severe cancellation can be seen at frequencies at which the phase of the speakers differs by 120° or more.

All speakers in the same series will have uniform phase characteristics.

- Uniform phase characteristics from equivalent enclosures having different dispersion angles.
- Uniform phase characteristics whether driving the same model in bi-amped or passive mode.
- Uniform phase characteristics from high-power and mid-power models.
- Uniform phase characteristics from large and small-size enclosures.
- The phase difference between speakers will be maintained below 90° at 2 kHz.

YAMAHA INSTALLATION SERIES

- Comparison between models
- Comparison between drive modes
- Comparison between directivity patterns

COMPEITION MODEL

- Comparison between models
- Comparison between drive modes
- Comparison between directivity patterns

MODEL NUMBERING KEY

I F 2 1 1 2 (M)/64

- Coverage Pattern
  - Horizontal: 9° x 85°
  - Vertical: 5° x 85°
  - Angle: 4° x 45°

- The Number of LF Drivers
  - 1

- Installation
  - Full range
  - Subwoofer
  - Mid-High range

- Mid Power

- Front Speaker

- Middle Speaker

- Rear Speaker
General Features

Shape
In addition to having a significant effect on a speaker’s sound, the shape of a cabinet is an important factor for handling and setup versatility. The IF2112/AS, IF2115/AS, IF2108, and IF2208 models feature a ‘multi-angle’ design that allows them to be used as floor monitors as well as house sound. The IF2205 features a compact ‘step-down’ configuration. All other full-range cans have a 30° trapezoidal shape that results in minimum interference when the speakers are combined in arrays.

Cabinets
Building a high-performance speaker cabinet is a lot more complex than simply building a solid box... although solidity and lack of resonance is important. The materials used, size, shape, bracing, porting, acoustic treatment and other factors all interact to determine the final performance of the design. A lot of this can be determined by good old science and engineering, but a lot also hinges on experience and exhaustive listening and field tests.

Yamaha Installation Series Speakers feature cabinets constructed from high-quality 11-ply Finnish birch, as 16 millimeters thick in most models. Solid gluing of all joints and critical placements of internal bracing results in cabinets that virtually indestructible as most models. Solid gluing of all joints and critical placements of internal bracing results in cabinets that virtually indestructible as most models. Solid gluing of all joints and critical placements of internal bracing results in cabinets that virtually indestructible as most models.

Connectors & Mode Selectors
To match the widest possible range of systems and wiring arrangements, Yamaha Installation Series Speakers feature parallel-connected barrier-strip and Neutrik NL4 connectors (NL8 on 3-way models). The IF2112/AS, IF2115/AS, IF2108, and IF2208 models feature an additional Neutrik NL4 connector — 1 barrier strip + 2 Neutrik NL4 connectors — to facilitate wiring in monitor applications. 12-inch and 15-inch 2-way models have a selector on the rear panel that allows easy switching between bi-amp and mono modes. Dual-woofer subwoofers also allow switching between parallel and discrete modes for maximum system compatibility and flexibility. All mode switches are recessed to prevent inadvertent operation.

Networks
Selected top-quality crossover network parts including heavy-gauge inductor wire, large film capacitors, and a painstakingly-designed circuit board deliver unmatched sonic quality and reliability. Heavy 16-gauge wire is used for all internal wiring.

Drivers
HF drivers feature one-piece titanium domes formed to precision tolerances for superior sound as well as long-term reliability. 12-inch, 15-inch and 18-inch woofer cones have been specially treated for water resistance, providing optimum durability in a widest range of operating environments.

Horns
To allow the system designer maximum freedom and flexibility, all Yamaha Installation Series Speakers feature rotatable horns in a variety of configurations. 60° x 60°, 90° x 90°, and 90° x 90° horns are available for the 12-inch and 15-inch models, while 60° x 60°, 90° x 90° and 90° x 50° horns are available for the 3-way designs. 8-inch and 5-inch models feature 90° x 60° horns. The 12-inch and 15-inch model horn is made from fiber-reinforced plastic to minimize unwanted resonance.

Grille & Logo
Extremely rugged 16-gauge steel grilles with a 65% aperture ratio protect your speakers without detracting from their sonic performance in any way. An acoustically-transparent foam is located behind the grilles for a smart, unobtrusive looks without degraded sound. The logo plate can easily be rotated to match the speaker’s orientation, or removed completely.

Handles & Pole Mount Sockets
All models (except for IF2205) include integral handles that contribute significantly to the ease of handling and safety, whether the speakers are installed as a part of a fixed system or used for live sound and touring applications. The IF2112/AS, IF2115/AS, IF2108, and IF2208 models feature pole sockets so they can be easily pole mounted. The IS1112 subwoofer is also equipped with a pole socket which allows mounting a IF2108 or IF2208 speaker on the subwoofer.

When pole mounting, please refer to the precautions on the product pages and Yamaha’s website: http://www.yamahaproaudio.com.

Rigging
Multiple M10 rigging points are provided for shoulder eye-bolts or optional U-brackets. Four eye-bolts are supplied with each speaker. All hardware is industry-standard, and is compatible with third-party mounting accessories. Horizontal and vertical array frames are available in black or white to match the standard speaker finishes.

Finish
The fact that speakers must sound good goes without saying, but in permanent installations they have to look good and match the interior of the venue, too. Yamaha Installation Series Speakers are available in black or white, featuring a durable textured paint. But if basic black or white doesn’t suit your visual requirements, they can be easily repainted as required.
With an emphasis on superior sound quality and full-range reproduction, this high-quality 5-way speaker system delivers powerful, accurate sound for virtually any application. The system includes all the basic features common to the Installation Series lineup, such as horn dispersion selection, and rotatable horns. The IF3115 can be used to create any type of array, making it a versatile choice for any installation.

- Two horn dispersion patterns available: 60° x 80° x 60° and 90° x 50°.
- Horns can be rotated over 90-degree range, allowing vertical or horizontal mounting.
- 2-way low-frequency drivers, 3” midrange driver, and 3” high-frequency compression driver with 1.4” exit.
- Switchable bi-amp and tri-amp operation.
- Two handles for carrying comfort.
- Parallel-wired Neutrik NL8 for tri-amp, NL4 for bi-amp and barrier strip connectors.
- Durable black or white finish, which can be painted to match any interior.
- Two horn dispersion patterns available: 60° x 80° x 60° and 90° x 50°.
- Horns can be rotated over 90-degree range, allowing vertical or horizontal mounting.
- IEC noise.
- Rated for 500 W (AES) at 8 ohms.
- Two horn dispersion patterns available: 60° x 80° x 60° and 90° x 50°.
- Horns can be rotated over 90-degree range, allowing vertical or horizontal mounting.
- Two handles for carrying comfort.
- Parallel-wired Neutrik NL8 for tri-amp, NL4 for bi-amp and barrier strip connectors.

### Specifications

#### IF3115/64

<table>
<thead>
<tr>
<th>Dimension</th>
<th>IF3115/64</th>
<th>IF3115/95</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>64 kg</td>
<td>38 kg</td>
</tr>
<tr>
<td>Dimensions</td>
<td>610 x 591 x 600 mm (24.0 x 23.3 x 23.6 in)</td>
<td>610 x 591 x 600 mm (24.0 x 23.3 x 23.6 in)</td>
</tr>
<tr>
<td>Frequency Range (-10 dB)</td>
<td>250 Hz—20 kHz (Bi-amp mode)</td>
<td>70 Hz—2 kHz</td>
</tr>
<tr>
<td>Power Handling</td>
<td>500 W (AES)</td>
<td>440 W (AES)</td>
</tr>
<tr>
<td>Nominal Impedance</td>
<td>8 ohms</td>
<td>8 ohms</td>
</tr>
<tr>
<td>Sensitivity (1 W@1 m) SPL</td>
<td>106 dB</td>
<td>110 dB</td>
</tr>
<tr>
<td>Max. Power Output</td>
<td>2800 W (AES)</td>
<td>2800 W (AES)</td>
</tr>
</tbody>
</table>

#### IF3115/95

<table>
<thead>
<tr>
<th>Dimension</th>
<th>IF3115/95</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>33 kg</td>
</tr>
<tr>
<td>Dimensions</td>
<td>610 x 591 x 600 mm (24.0 x 23.3 x 23.6 in)</td>
</tr>
<tr>
<td>Frequency Range (-10 dB)</td>
<td>250 Hz—20 kHz (Bi-amp mode)</td>
</tr>
<tr>
<td>Power Handling</td>
<td>500 W (AES)</td>
</tr>
<tr>
<td>Nominal Impedance</td>
<td>8 ohms</td>
</tr>
<tr>
<td>Sensitivity (1 W@1 m) SPL</td>
<td>106 dB</td>
</tr>
<tr>
<td>Max. Power Output</td>
<td>2800 W (AES)</td>
</tr>
</tbody>
</table>

### Applications

- Performing Arts Facilities/Theaters
- Auditoriums
- Houses of Worship
- Live Clubs
- Sports Facilities
- Theatrical Entertainment Venues
- Stadium BLE positions of larger systems

This dedicated low-range speaker system is specifically designed to complement the mid/high-range IH2000. Putting the two together gives you a powerful, high-quality 3-way system, for a variety of applications.
The IF2112 and IF2115 are multipurpose high-power 2-way trapezoidal speaker systems. The IF2112m and IF2115m are the medium power versions of the IF2112 and IF2115 respectively. They are suitable for smaller venues or smaller speakers. The IF2112 series features a 12-inch woofer while the IF2115 series features a 15-inch woofer. We’ve created three different horn dispersion patterns for this system, allowing optimum flexibility in choice assembly and effectively eliminating potential sound interference. Dispersion can be controlled by rotating the horn in 90-degree increments, allowing the speaker to easily be installed even in crowded situations with other vertical or horizontal mounting. Multi-Velocity suspension points have been provided for different connections to the eyebolts, creating flexible control over horn aiming. A single control allows you to easily switch the speaker between tripod mode, which provides greater sound control and superior quality for passive mode.

### Applications
- Performing arts facilities/theaters
- Auditoriums
- Houses of Worship
- Live Clubs
- Sports Facilities
- Themed Entertainment Venues
- Delay Fill Locations of Larger System
- **Two-way Full-range Speaker System**

### Specifications

#### IF2112
- **Coverage**: 90° x 40°
- **Enclosure**: 12" (30 cm) Woofer, 3" (76 mm) Voice Coil
- **Sensitivity** (1 W@1 m) SPL: 131 dB
- **Power Rating**: 1500 W
- **Frequency Range**: 35 Hz—20 kHz (Bi-amp mode)

#### IF2112m
- **Coverage**: 90° x 40°
- **Enclosure**: 15" (38 cm) Woofer, 3" (76 mm) Voice Coil
- **Sensitivity** (1 W@1 m) SPL: 134 dB
- **Power Rating**: 2400 W
- **Frequency Range**: 35 Hz—20 kHz (Bi-amp mode)

#### IF2115
- **Coverage**: 60° x 40°
- **Enclosure**: 15" (38 cm) Woofer, 4" (100 mm) Voice Coil
- **Sensitivity** (1 W@1 m) SPL: 136 dB
- **Power Rating**: 2400 W
- **Frequency Range**: 35 Hz—20 kHz (Bi-amp mode)

#### IF2115m
- **Coverage**: 90° x 40°
- **Enclosure**: 15" (38 cm) Woofer, 3" (76 mm) Voice Coil
- **Sensitivity** (1 W@1 m) SPL: 131 dB
- **Power Rating**: 1500 W
- **Frequency Range**: 35 Hz—20 kHz (Bi-amp mode)

### Dimensions
- [Dimensions Diagram]

### Table

<table>
<thead>
<tr>
<th>Model</th>
<th>Coverage</th>
<th>Enclosure</th>
<th>Frequency Range (AES)</th>
<th>Power Rating</th>
<th>Sensitivity (1 W@1 m) SPL</th>
</tr>
</thead>
<tbody>
<tr>
<td>IF2112</td>
<td>90° x 40°</td>
<td>12&quot; (30 cm) Woofer, 3&quot; (76 mm) Voice Coil</td>
<td>35 Hz—20 kHz</td>
<td>1500 W</td>
<td>131 dB</td>
</tr>
<tr>
<td>IF2112m</td>
<td>90° x 40°</td>
<td>15&quot; (38 cm) Woofer, 3&quot; (76 mm) Voice Coil</td>
<td>35 Hz—20 kHz</td>
<td>2400 W</td>
<td>134 dB</td>
</tr>
<tr>
<td>IF2115</td>
<td>60° x 40°</td>
<td>15&quot; (38 cm) Woofer, 4&quot; (100 mm) Voice Coil</td>
<td>35 Hz—20 kHz</td>
<td>2400 W</td>
<td>136 dB</td>
</tr>
<tr>
<td>IF2115m</td>
<td>90° x 40°</td>
<td>15&quot; (38 cm) Woofer, 3&quot; (76 mm) Voice Coil</td>
<td>35 Hz—20 kHz</td>
<td>1500 W</td>
<td>131 dB</td>
</tr>
</tbody>
</table>
The IF2112/AS and IF2115/AS is multi-purpose high-power 2-way speaker systems. The IF2112/AS features a 12-inch woofer, the IF2115/AS features a 15-inch woofer, and an asymmetrical horn (hence the ‘AS’ designation). The result is exceptionally clear and uniform high-frequency sound over a wide listening area. Dispersion can be controlled by rotating the horn in 90-degree increments, allowing the speaker to easily be installed even in cramped locations with either vertical or horizontal mounting.

The IF2112/AS is also extremely versatile, as they can be installed vertically, hung from ceilings, placed on the floor as stage foldback monitors, or mounted on pole stands. A single control allows you to easily switch the speaker between bi-amp mode, which provides greater sonic control and superior quality, than passive mode.

### Applications
- Performing Art Facilities/Theaters
- Auditoriums
- Houses of Worship
- Live Clubs
- Sports Facilities
- Themed Entertainment Venues
- Stage Monitors
- Side Fill

### Specifications

<table>
<thead>
<tr>
<th>Supplier</th>
<th>IF2112/AS</th>
<th>IF2115/AS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range (12”/15” LF)</td>
<td>80 Hz—13 kHz/80 Hz—13 kHz</td>
<td>80 Hz—13 kHz/80 Hz—13 kHz</td>
</tr>
<tr>
<td>Frequency Range (3”/3” HF)</td>
<td>13 kHz—20 kHz/13 kHz—20 kHz</td>
<td>13 kHz—20 kHz/13 kHz—20 kHz</td>
</tr>
<tr>
<td>Nominal Impedance</td>
<td>8 ohms</td>
<td>8 ohms</td>
</tr>
<tr>
<td>Sensitivity (1 W@1 m) SPL</td>
<td>98 dB</td>
<td>98 dB</td>
</tr>
<tr>
<td>MAX. Power Rating</td>
<td>1200 W</td>
<td>1400 W</td>
</tr>
<tr>
<td>PGM Power Rating</td>
<td>600 W</td>
<td>700 W</td>
</tr>
<tr>
<td>Drive Mode</td>
<td>Passive</td>
<td>Passive</td>
</tr>
<tr>
<td>Nominal Coverage (H x V, -6 dB)</td>
<td>60°—100° x 45°—60°</td>
<td>45°—60° x 60°—100°</td>
</tr>
</tbody>
</table>

### Dimensions

- **Height**
  - IF2112/AS: 374 mm (14.7 in)
  - IF2115/AS: 448 mm (17.6 in)
- **Width**
  - IF2112/AS: 378 mm (14.9 in)
  - IF2115/AS: 448 mm (17.6 in)
- **Depth**
  - IF2112/AS: 333 mm (13.1 in)
  - IF2115/AS: 374 mm (14.7 in)

### Enclosure
- **Material**
  - IF2112/AS: 5/8 inch (16 mm), 11-ply Finnish Birch
  - IF2115/AS: 5/8 inch (16 mm), 11-ply Finnish Birch
- **Finish**
  - IF2112/AS: Textured Black (Textured White)
  - IF2115/AS: Textured Black (Textured White)
- **Dimensions (W x H x D)**
  - IF2112/AS: 695 x 378 x 333 mm (27.4 x 14.9 x 13.1 in)
  - IF2115/AS: 770 x 448 x 374 mm (30.3 x 17.6 x 14.7 in)

### Components
- **Driver**
  - **IF2112/AS**
    - 3” (76 mm) Voice Coil Compression Driver
  - **IF2115/AS**
    - 3” (76 mm) Voice Coil Compression Driver
- **Coaxial Frequency Response**
  - IF2112/AS: 32 Hz—20 kHz
  - IF2115/AS: 32 Hz—20 kHz
- **Dispersion Pattern**
  - IF2112/AS: 60°—100° x 45°—60°
  - IF2115/AS: 45°—60° x 60°—100°
- **Mounting**
  - Pole mountable
  - Optional Accessory: Mounting pole (6.0 m (19.7 ft))

### Accessories
- **Multi-angle Cabinet Design**
  - Enables floor monitor applications
- **Multi-angle Wedge Design**
  - Uniform high-frequency sound over a wide listening area
- **Parallel-wired Two Neutrik NL4 and Barrier Strip Connectors**

### Notes
- **Powerdrive (UK)**: n/a
- **Multimount (US, Allen Products)**: n/a
- **OmniMount (US)**: n/a
- **3rd Party Accessory**
  - **IF2112/AS**
    - U-bracket: UB2112 (W)
  - **IF2115/AS**
    - U-bracket: UB2115 (W)
- **Mounting the pole at an angle puts excessive stress on the socket and may result in damage to the socket.**

---

*Warning when using the pole socket*
Make sure that the pole is installed vertically when you mount the speaker to the pole. Mounting the pole at an angle puts excessive stress on the socket and may result in damage to the socket. Please refer to the owner’s manual and Yamaha Pro Audio website for details.
The IF2205 is the most compact unit in the Installation Series, and is ideal for small-to-medium sized concert halls and ballrooms. The stair-step design allows this versatile speaker to be inconspicuously mounted in stair treads, stage lips, or under balconies. The convenient U-bracket ensures secure wall mounting, while the rotatable horn enables either vertical or horizontal enclosure orientation. The IF2205 is ideal for use in concert halls and ballrooms.

### Applications
- Performing Arts Facilities/Theaters
- Auditoriums
- Houses of Worship
- Live Clubs & Bars
- Sports Facilities
- Floor Monitors

### Dimensions

#### IF2205
- **Height**: 146 (5.75) mm
- **Depth**: 229 (9.02) mm
- **Width**: 448 (17.64) mm

#### IF2108
- **Height**: 127 (5.00) mm
- **Depth**: 250 (9.84) mm
- **Width**: 337 (13.27) mm

#### IF2208
- **Height**: 140 (5.51) mm
- **Depth**: 283 (11.14) mm
- **Width**: 410 (16.14) mm

### Specifications

#### Drive Mode
- Passive

#### Frequency Response (1 W) [Hz]
- IF2205 (W): 60–20,000 Hz
- IF2108 (W): 60–20,000 Hz
- IF2208 (W): 60–20,000 Hz

#### Maximum SPL (1 W) [dB]
- IF2205 (W): 118 dB
- IF2108 (W): 118 dB
- IF2208 (W): 118 dB

#### Sensitivity (1 W@1 m) [dB]
- IF2205 (W): 95 dB
- IF2108 (W): 95 dB
- IF2208 (W): 95 dB

#### Nominal Impedance [ohms]
- IF2205 (W): 8 ohms
- IF2108 (W): 8 ohms
- IF2208 (W): 8 ohms

#### Maximum Power (1 W@1 m) [W]
- IF2205 (W): 800 W
- IF2108 (W): 800 W
- IF2208 (W): 800 W

#### Power Drive
- IF2205 (W): YAMAHA Powerdrive 75 series
- IF2108 (W): YAMAHA Powerdrive 100 series
- IF2208 (W): YAMAHA Powerdrive 100 series

#### Optional Accessories
- U-bracket: UB2205 (W), UB2108 (W), UB2208 (W)
- Connectors: 2 x Neutrik NL4 and barrier strip, wired in parallel
- Material: 1/2 inch (12 mm), 9-ply Finnish Birch
- Enclosure: Rectangular Multi-angle wedge
- Weight: 7.5 kg (17 lbs)

### Notes
- Please refer to the owner's manual and YAMAHA Pro Audio website for details.
Subwoofer IS1112

The IS1112 is a 12" high power subwoofer system comprised of dual 15-inch woofers. This IS112 can be clustered in the same fashion as the 2-way models. Many eyebolt suspension points have been provided for easy flying. The IS1112 is ideal match for full-range speakers such as IF2112/2115 for maximum power and full-spectrum reproduction. A single control allows you to easily switch the speaker between discrete mode, which provides greater some control and superior quality than parallel mode.

High power subwoofer.

- High power subwoofer.
- Dual woofers switchable between discrete drive and parallel-wired Neutrik NL4 and barrier strip connectors.
- Eighteen 10 mm (M10) threaded inserts.
- Internally braced construction.

Finish
- Textured Black (Textured White)

Material
- 5/8 in (16 mm), 11-ply Finnish Birch for Baffle.
- 3/4 inch (19 mm), 13-ply Finnish Birch for Baffle and Inner Wall.

Weight
- 24.0 kg (53 lbs)

HF
- n/a

Sensitivity (1 W@1 m)
- SPL 93 dB

Nominal Impedance
- 8 ohms

Nominal Coverage (H x V, -6 dB)
- n/a

Frequency Range
- *1 45Hz—2 kHz

Drive Mode
- Passive Parallel

Model
- IS1112 IS1118 IS1215 IS1218

Dimensions

![Subwoofer IS1112 Dimensions](Image)

Subwoofer IS1215

The IS1215 is a high power subwoofer system comprised of a single 18-inch woofer. This IS118 can be clustered in the same fashion as the 2-way models. Many eyebolt suspension points have been provided for easy flying. The IS1215 IS118 IS1218 is an ideal match for full-range speakers such as IF2312/2115 for maximum power and full-spectrum reproduction. A single control allows you to easily switch the speaker between discrete mode, which provides greater some control and superior quality than parallel mode.

High power subwoofer.

- High power subwoofer.
- Dual woofers switchable between discrete drive and parallel-wired Neutrik NL4 and barrier strip connectors.
- Eighteen 10 mm (M10) threaded inserts.
- Internally braced construction.

Finish
- Textured Black (Textured White)

Material
- 5/8 in (16 mm), 11-ply Finnish Birch for Baffle.
- 3/4 inch (19 mm), 13-ply Finnish Birch for Baffle and Inner Wall.

Weight
- 44 kg (97 lbs)

HF
- n/a

Sensitivity (1 W@1 m)
- SPL 96 dB

Nominal Impedance
- 4 ohms

Nominal Coverage (H x V, -6 dB)
- n/a

Frequency Range
- *1 55Hz—500 Hz

Drive Mode
- Passive Parallel

Model
- IS1118 IS1218

Dimensions

![Subwoofer IS1215 Dimensions](Image)
**Y-S³: Yamaha Sound System Simulator**

### V2.0 Features

Now allows simulation of distributed speaker systems.
- Distributed speakers mounted on ceilings and walls can now be simulated.
- Advanced auto layout features.
- Automatically place speaker array(s) at optimal locations by choosing from various layout patterns.
- Automatically layout distributed speaker systems by choosing from a variety of layout patterns and configurations.

### Improved simulation report feature.

- New report feature gives comprehensive project and system simulation reports.
- Improved simulation report feature.
- Automatically layout distributed speaker systems.
- Automatically place speaker array(s) at optimal locations by choosing from various layout patterns.

### Main Features

- This acoustic simulation software combines the essential elements of Yamaha Professional Audio acoustic technology for all sound handled from input to output, including DSP, amps, speakers, and even the venue’s shape.
- The software provides accuracy and reliability thanks to the knowledge and experience of the Yamaha Center for Advanced Sound Technologies, which is at the forefront of the world’s acoustic technology with its Active Field Control and Acoustic Modeling, and has employed its advanced acoustic technology in the acoustic design of many concert halls.

### Convenient features such as the auto layout of array speakers and auto setting of speaker parameters are

- Convenient features such as the auto layout of array speakers and auto setting of speaker parameters are
- Automatically layout distributed speaker systems.
- Automatically place speaker array(s) at optimal locations by choosing from various layout patterns.

### System Requirements

- Pentium processor 700MHz (1G Hz or higher recommended)
- Windows XP professional
- 256 MB (512 MB or higher recommended)
- 1024 x 768, 256 colors, DirectX 9.0C Supported PC
- 214MB

### Installation Series

1. **Select the Speaker Array.**
   - You can choose manual or automatic layout of speaker array(s). You may also choose to add distributed speaker systems by clicking on the speaker style at the right side.
   - Choose the speaker array from the list and install the speakers in the desired positions.
   - You may also choose from a variety of pre-defined speaker settings.

2. **Set various conditions for the speaker array.**
   - You can change a number of speaker conditions for the speaker array in real time as you view the simulation results.
   - You can set array, position, tilt, pan, rotate, target point, distance, time, SP properties, and other features.

### Main Features

- **Sound Pressure Level Distribution:**
  - Can display the sound pressure level distribution for selected frequencies and can be switched on/off.
  - Can be displayed in 3D.

- **Frequency Characteristics Graph:**
  - Balloon data is displayed for each frequency.
  - The bandwidth on the frequency characteristics graph can be changed to 1/1, 1/3, 1/6, or FFT.

- **Balloon data (directivity data for each frequency) can be checked on the screen for the speaker array.**
  - You can change several conditions for the speaker array.

- **Simulation result is displayed with visualized diagrams.**
  - The Y-S³ can visualize the simulation results with instantly understandable diagrams like those below.

### System Requirements

- **CPU:** Pentium III or a compatible processor
- **Memory:** 512 MB or more
- **Sound Card:** Digital interface (SPDIF) supported

---

**STEP 1**

1. **Select the Speaker Array.**
   - You can choose manual or automatic layout of speaker array(s). You may also choose to add distributed speaker systems by clicking on the speaker style at the right side.
   - Choose the speaker array from the list and install the speakers in the desired positions.
   - You may also choose from a variety of pre-defined speaker settings.

2. **Set various conditions for the speaker array.**
   - You can change a number of speaker conditions for the speaker array in real time as you view the simulation results.
   - You can set array, position, tilt, pan, rotate, target point, distance, time, SP properties, and other features.

### Main Features

- **Sound Pressure Level Distribution:**
  - Can display the sound pressure level distribution for selected frequencies and can be switched on/off.
  - Can be displayed in 3D.

- **Frequency Characteristics Graph:**
  - Balloon data is displayed for each frequency.
  - The bandwidth on the frequency characteristics graph can be changed to 1/1, 1/3, 1/6, or FFT.

- **Balloon data (directivity data for each frequency) can be checked on the screen for the speaker array.**
  - You can change several conditions for the speaker array.

### System Requirements

- **CPU:** Pentium III or a compatible processor
- **Memory:** 512 MB or more
- **Sound Card:** Digital interface (SPDIF) supported
The Yamaha SP2060 is an advanced 2-in/6-out digital speaker processor that provides the full range of functions required for precision speaker system setup, and more. Input equalization, zone delay, crossover, output equalization, alignment delay, and limiting. All of those units the SP2060 can be connected to a computer or controller via Ethernet for remote parameter editing and control.

In addition to balanced analog inputs the SP2060 features a stereo AES/EBU digital input for direct connection to digital router outputs. Much of the technology used in the SP2060 is inherited from Yamaha’s respected DME24N and DME64N Digital Mixing Engines, and like those units the SP2060 can be connected to a computer or controller via Ethernet for remote parameter editing and control.

In addition to balanced analog inputs the SP2060 features a stereo AES/EBU digital input for direct connection to digital router outputs. Much of the technology used in the SP2060 is inherited from Yamaha’s respected DME24N and DME64N Digital Mixing Engines, and like those units the SP2060 can be connected to a computer or controller via Ethernet for remote parameter editing and control.

Components

Applications

Configuration Example

Specifications

Digital Input Characteristics

Analog I/O Characteristics

General Specifications

Installation Series