



Design Without Boundaries - Performance Without Limits

Loudspeakers; amplifiers; signal processors; audio and control networks. SYGMA brings them all together to create a new kind of sound system, a new level of performance. World-class European transducers are paired with our advanced Complex Conic horns for audiophile reproduction that makes performances and audiences truly come alive. PF-1 Series Intelligent Digital Amplifiers can connect to RHAON, the Renkus-Heinz Audio Operations Network. RHAON gives you complete control of digital audio distribution, loudspeaker processing and system management.

The global SYGMA development and manufacturing process delivers unsurpassed quality and innovation, for performance and style that will make you proud and durability that will keep you sounding great. Before we'll ship them, your loudspeakers have to meet our exacting requirements,

Applications

- Virtually any application where size is important and high output and outstanding sonic performance are required.
- Ideal for multi-channel playback systems in clubs and disco's (with optional subwoofers.)
- Distributed sound reinforcement systems in sports arenas and stadiums.
- Side fill loudspeakers in sound reinforcement systems.
- High output floor monitors in live sound venues



PF Series Intelligent Amplifiers

Passive, powered or networked, you can choose the system configuration that meets your needs at any time. At the factory or in the field, the SGX passive connector plate can be easily replaced by one of five PF Series intelligent Class D digital amplifiers. The PF series light weight switching power supplies are over 70% efficient at full output. Their high efficiency reduces AC power requirements and eliminates the need for a cooling fan.



Whenever you are ready for Ethernet audio networking, your Sygma loudspeakers are, too; just replace the connector plate or the PF series amplifier with a RHAON empowered amplifier equipped for connection to the Renkus-Heinz Audio Operations Network. RHAON empowers you with full control over digital audio distribution, loudspeaker-specific DSP and control/monitoring – all using standard Ethernet hardware and cable.

If you need an outstanding high-power 12-inch 2-way system, order the SGX121 or SG121-5. For full range nearfield applications, the SG121-2 with a 200 Watt PF1-200 is a logical choice. For stage monitoring and other ultra-demanding applications, order the SG121-52R: it's bi-amped with 500 / 200 watt Class D amplifiers and RHAON empowered. If you need Ethernet-based audio operations networking, order the SG121-2R, SG121-5R or the SG121-52R; all are RHAON empowered.

SG / SGX Series

SGX121

Non-Powered



SG121

Powered

**12" Woofer + 2" HF
2-Way Complex Conic Loudspeakers**

PASSIVE : POWERED : NETWORKED



• Compact Multi-Function Design

Outstanding, full-range ± 3 dB, 65 Hz to 18 kHz performance in a versatile multi-angle enclosure.

• Flexible Input Configurations

Choose passive inputs, or go self-powered with the PF1 series intelligent amplifiers, either single-channel or bi-amped, with or without RHAON networking.

• RHAON Renkus-Heinz Audio Operations Network

All self-powered SG121 series cabinets are available with RHAON for flexible digital signal distribution, loudspeaker management and control

• Exclusive 90° by 60° Complex Conic Design

Provides constant beamwidth/directivity without the problems of conventional rectangular horns; can be rotated 90° within the cabinet for wide or deep listening spaces.

• 2" Extended Range Titanium HF Driver

Provides smooth, low distortion high frequency performance to 18 kHz and beyond.

• Heavy-Duty 12" Woofer

Easily handles 500 Watts of program power.

TECHNICAL INFORMATION

Sensitivity
SG121 Series: 1.0 V for RPO
SGX121: 97 dB (1W/1m)

Max SPL
SG121-2 & -2R: 120 dB program, 123 dB peak
SG121-5, -5R & -52R: 124 dB program, 127 dB peak
SGX121: 126 dB program, 129 dB peak

Dispersion: 90° H by 60° V

Freq. Resp: ± 3 dB, 65 Hz to 18 kHz

HF Driver: 2" Titanium driver, model SSD202-8;
 40 W RMS, 80 W program

LF Driver: 12" woofer, model SSL12-15;
 250 W RMS @ 4 Ohms, 500 W program.

Enclosure: 13-ply hardwood, perforated metal grille

Power
SG121 Series: 115 V AC OR 230V AC
SGX121: 500 Watts program at 4 Ohms

Connectors
SG121 Series: See PF1-200 Amplifier
SGX121: Screw terminals & looping 4-pin Neutrik
 SpeakOn style connectors

Finish: Black or white paint

Hardware: 12-point univ. mtg. hdw. (#10 metric threads)
 U-bracket attachment points

Dimensions: 23" H x 15 1/4" W x 14" D
 (58.4cm x 38.7 cm x 35.6 cm)

Weight
SG121-2 & -2R: 38.4 Lbs. (17.41 Kg) net
SG121-5, -5R: 40.4 Lbs. (18.33 Kg) net
SG121-52R: 42.4 Lbs. (19.23 Kg) net
SGX121: 36.4 Lbs. (16.51 Kg) net

PF1-200 & PF1-500 AMPLIFIER

Power: PF1-200: 200 W RMS @ 4 Ohms
 PF1-500: 500 W RMS @ 4 Ohms
Freq. Resp: +0.0, -5 dB, 20 Hz to 20 kHz
THD Distortion: < 0.02% typical
Hum & Noise: <100 dB (A weighted)
Damping: >100
Input: 10K Ohm balanced differential
Sensitivity: 1.0 V for RPO
CMR: 74 dB
Controls: Gain (screwdriver adjustable)
Power: Power: EC Power connector

Input: Looping XLR; female in, male out (pin 1 chassis, pin 2 +, pin 3 -)

PF1-200: 2.4 A @ 120 V, 1.2 A @ 240 V
 Idle current: 200 mA @ 120 V; 100 mA @ 240 V
 Max inrush current: 1 A, Universal 90-260 VAC, 50/60 Hz

PF1-500: 5 A @ 120 V, 2.5 A @ 240 V
 Idle current: 400 mA @ 120 V; 200 mA @ 240 V
 Max inrush current: 1 A, Switchable 115-230 VAC, 50/60 Hz

PF1-200R & PF1-500R RHAON EMPOWERED AMPLIFIER

The PF1-200R is identical to the PF1-200 except for the addition of the RHAON Network Interface; additional capabilities include:

Input: CobraNet; dual RJ45 connectors; accept
 Cat 5 copper cable.
 AES/EBU Phoenix connectors;
 Analog Phoenix connectors

Digital Format: 16, 20 or 24 bit PCM; 48 or 96 kHz sample
 rate; selectable Network Latency.
Protection: Soft & Peak Limiting, Excursion Control &
 Thermal Regulation

For additional details on the RHAON Audio Operations Network, refer to
 Renkus-Heinz brochure # RH 606.

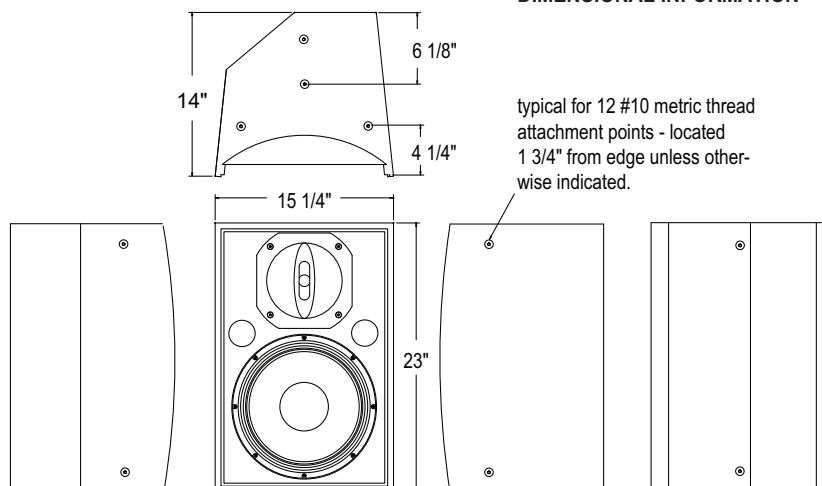
PF2-500R RHAON EMPOWERED BI-AMPLIFIER

The PF2-500R is a RHAON empowered 500/200 Watt bi-amplifier. It is
 identical to the PF1-500R except for also having a 200 Watt HF amplifier
 and associated electronic crossover.

Power: 6 A @ 120 V, 3 A @ 240 V
 Idle current: 500 mA @ 120 V;
 250 mA @ 240 V
 Max inrush current: 1 A

Note: All analog inputs and outputs comply with AES Standard 45-2005 on interconnecting, grounding and shielding.

DIMENSIONAL INFORMATION



SYGMA

Note:

The UMH (Universal Mounting Hardware) attachment points have #10 metric threads and are positioned 1 3/4" from the edges unless otherwise indicated.

The rear view of a SGX121 is shown. The enclosure is shown without its metal grille.

For more detailed dimensional information, please refer to the 2D and 3D drawing files on our website, www.renkus-heinz.com