

### Uncompromised Performance - Unequaled Versatility

The new self-powered PowerNet ST7R and non-powered STX7 Series loudspeakers unite advanced technology and application-driven engineering to bring live sound closer to the ultimate reference point: reality. Patented CoEntrant M/H transducers, Class D Digital Tri-Amplification and unique innovations such as our Complex Conic horns combine to deliver natural sounding music and intelligible speech. Wherever audiences and operators demand superior performance and ease of use, ST/STX loudspeakers are the choice for transparent, reference quality performance.

All ST7R PowerNet loudspeakers are RHAON empowered for flexible analog and digital signal distribution and loudspeaker management and control over a CAT 5 Ethernet network.

### Applications

- Virtually any application where directional control and arrayability are critical issues and outstanding sonic performance is required.
- Distributed systems in sports arenas and stadiums.
- Multi-channel A/V playback systems, live sound and music systems in clubs and disco's (with optional subwoofers.)
- Side fill in all types of large sound reinforcement systems.
- Array modules for theatrical and concert sound systems, sound reinforcement systems in houses of worship.



### PM-3R PowerNet Tri-Amplifier

Choose external bi-amplification or self-powered and networked, you can select the system configuration that meets your needs. Select the STX7 when the project dictates the use of external amplifiers and the self-powered PowerNet ST7R for convenience and control in other applications.

The PM-3R, the heart of the PowerNet ST7R is a new kind of intelligent electronic system. It combines Class D digital tri-amplification with RHAON, the Renkus-Heinz Audio Operations Network for comprehensive DSP controlled signal processing and control.

**RHAON** EMPOWERED RHAON empowers you with CobraNet digital audio distribution, user configurable DSP for maximum control, remote systems management from any Windows computer, life safety functions and more – all using standard Ethernet hardware and cable.

The PM-3R has dual analog inputs, dual CobraNet inputs and an AES3id serial input. The onboard DSP is easily configured using RHAON software; it includes eight bands of parametric EQ, high and low shelving filters, delay and input level control. Critical operating parameters such as signal clipping, amplifier output voltage and current, and temperature are continually monitored with automatic alert functions.

## ST / STX Series

### STX7

Non-Powered

### ST7R

Powered

## High Power Dual 12" Lows CoEntrant M/H Driver 3-Way Complex Conic Loudspeakers

**PASSIVE : POWERED : NETWORKED**



- **Compact 3-Way Design, Outstanding Performance**  
Accurate full-range 40 Hz to 18 kHz high-level performance; 137 dB Peak SPL.
- **Flexible Input Configurations**  
Choose external bi-amplification, or go self-powered with the PM3R PowerNet Tri-Amplifier with RHAON for flexible analog and multi-channel digital signal distribution, computer control and supervision.
- **Dual-12 Doublet Low Frequency Design**  
Provides superior low frequency directionality in both horizontal and vertical planes.
- **Exclusive Complex Conic Design**  
Provides constant beamwidth/directivity without the problems of conventional rectangular horns.
- **Patented CoEntrant Topology**  
Integrates the acoustic output of an 10" cone and a 2" HF driver into a wideband, high power true point source
- **TRAP (True Array Principle) Design**  
ST7/44ASR and STX7/44AS models are true 40° TRAP modules that combine seamlessly to produce a phase aligned wave front virtually free of lobing. The /64 and /94 models can easily be turned into TRAP modules by rotating their horns 90 degrees.
- **Choice of Coverage Patterns**  
Choose between tightly controlled 60° by 40°, 90° by 40° and asymmetrical 40° by 40° (+10°, -30°) coverage patterns.

## TECHNICAL INFORMATION

### Sensitivity

**ST7R:** 1.4 V for rated power output

**STX7 (1W/1m):** LF -101 dB, MF - 104 dB, HF - 109 dB

**Max SPL (Pgm/Peak):**

	ST	STX
LF:	131/132 dB	134/137 dB
MF:	131/132 dB	132/135 dB
HF:	131/133 dB	131/133 dB

### Dispersion:

**ST7/44ASR & STX7/44AS:** 40° H by 40° V Asym. (+10°, -30°)

**ST7/64R & STX7/64:** 60° H by 40° V

**ST7/94R & STX7/94:** 90° H by 40° V

**Freq. Response:** 40 Hz to 18 kHz

**Mid/High Drivers:** CDT-2A; SSD3202S-8A 2" HF (75 W RMS) & SSL10-5 10" MF (300 W RMS)

**LF Drivers:** Dual 12" model SSL12-13 woofers; 4" VC ; 500 W RMS (1000 W RMS total)

**Crossover Points:** 350 Hz & 1500 Hz

**Power: STX7:** Lows: 1000 Watts RMS at 4 Ohms  
Mid/Highs: 300 Watts RMS at 8 Ohms

**Enclosure:** Multi-ply hardwood, perforated metal grille

**Connectors: STX7:** Neutrik 4-pin connectors or screw terminals

**Finish:** Black, white or custom paint , TuffTex, Natural (unfinished), Weather resistant

**Hardware Options:** 12-point universal mtg hardware , Handles, AeroQuip fly-track, R-Hang hardware

**Dimensions:** 40" H x 24" W x 32 1/4" D  
(101.6 cm x 61 cm x 81.9 cm)

### Weight

**ST7R:** 243 Lbs. (110.2 Kg) net

**STX7:** 206 Lbs (93.4 Kg) net

## PM-3R AMPLIFIER

### PWR Rating (Watts):

**Lows:** 850 RMS, 950 Pgm, 1200 Peak(20 ms)

**Mids:** 425 RMS, 475 Pgm, 600 Peak(20 ms)

**Highs:** 175 RMS, 200 Pgm, 250 Peak(20 ms)

**Freq. Response:** +0.0, -.5 dB, 20 Hz to 20 kHz

**THD Distortion:** < 0.01 % typical

**CMR:** > 90 dB, 30 Hz to 2 kHz

**Hum & Noise:** <100 dB, 20 Hz to 20 kHz)

**Input Sensitivity:** 1.4 V for RPO

**Damping Factor:** 135 (100 Hz to 400 Hz)  
100 (400 Hz and above)

### Power:

**Connector** PowerCon locking connector

**Requirements:** 90/136 V AC or 180/260 VAC, 50/60 Hz  
9.6 Amps @ 120 V, 4.8 Amps @ 240 V

**Idle Current:** 380 mA @ 120 V, 190 mA @ 240 V

### Max inrush

**current (soft start):** 14.5 Amps @ 120 V, 7.3 A @ 240 V

### Inputs

**Analog:** Dual inputs; looping XLR (female in & Male out) & Looping Phoenix connectors

**CobraNet:** Dual RJ 45 connectors (for redundancy)

**AESid Format:** AESid Format Serial Audio (AES/EBU input); Phoenix connector

**Controls:** LF, MF, HF Mute buttons

Up & Down Output Level push buttons

10 dB Input pad (on Analog 1 input)

Power On/Off, Push-To-Reset circuit breaker

**Computer Controls:** Gain, Mute, On/Standby, Input Selection; Compression, 9-Band Parametric EQ, Shelving & Rolloff Filters, Delay

**Status Indicators:** Power, Signal, Overdrive, Thermal, Mute, Input Pad

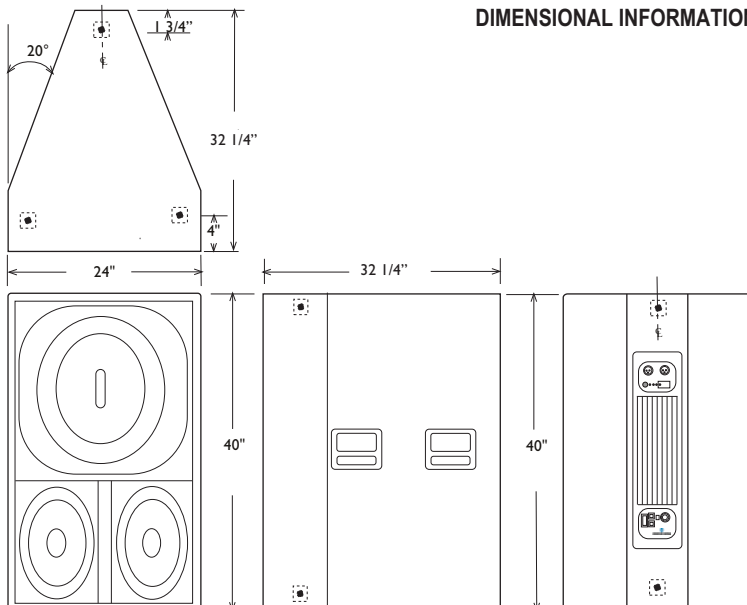
**Protection:** Soft & Peak Limiting, Excursion Control & Thermal Regulation

**Digital Format:** 16, 20 or 24 bit PCM; 48 or 96 kHz sample rate; selectable Network Latency.

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

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

## DIMENSIONAL INFORMATION



### Note:

The UMH (Universal Mounting Hardware) attachment points have 3/8-16 threads and are positioned 1 3/4" from the edges unless otherwise indicated. Portable models are normally supplied with handles and no attachment points.

The rear view of a ST7R 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](http://www.renkus-heinz.com)