

SONODYNE®

— OVER —
50 YEARS OF
AUDIO EXCELLENCE



CINEMA SOLUTIONS 2023

MADE IN INDIA
since 1970



The new CS range of cinema products are designed to meet digital cinema needs from small to large screens.

The range includes main LCR speakers, Surround Speakers, Subwoofers, and Power Amplifiers. Together they blend beautifully in tone, loudness, and dynamics, to reproduce multichannel audio at its best.

The common design elements include:

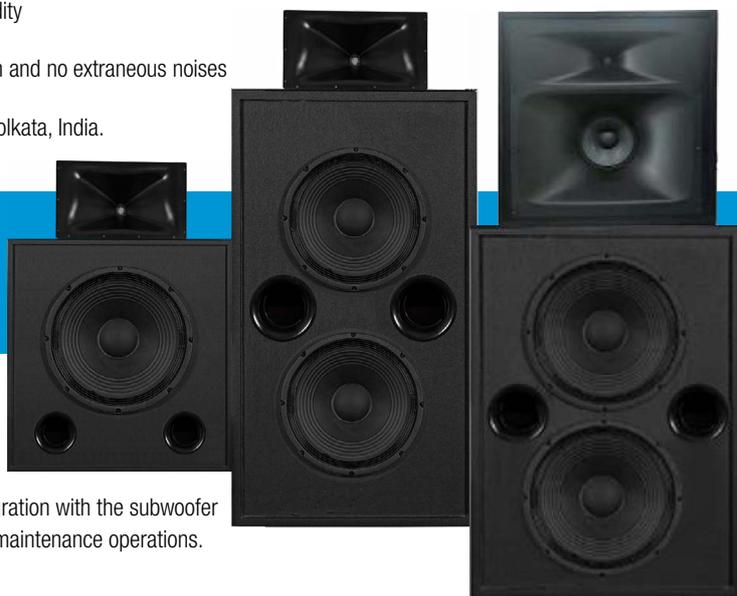
- Main channels and surrounds are horn loaded; all horns were designed in-house to ensure predictable coverage and optimal matching with HF and MF transducers
- All transducers have large voice coils to prevent damage from long duty cycles
- Elaborate crossovers result in smooth, and detailed response, especially in the critical midrange
- The wooden cabinets use both MDF and plywood, and are highly braced for rigidity
- The surround cabinets are moulded plastic
- All mechanical parts are tooled and perfectly matched to ensure easy installation and no extraneous noises

All these products are designed and manufactured in our factories in Mumbai and Kolkata, India.

CS 1000 SERIES

L, C, R, small format

The CS 1000 series comprises 2 way speakers that are designed for L, C, R main channel applications. Compact, yet powerful, they are ideal for the smallest cinema screens that require detailed, full-bodied sound from main channels. The drivers are time-aligned and there is tight directivity control. Due to extended LF response, integration with the subwoofer channel is seamless. Extensive power handling tests ensure hassle free, minimum maintenance operations.



HIGHLIGHTS

- 3 models
- Sturdy, compact cabinet with shallow profile
- 2 way/ 3 way design with inbuilt crossover
- Controlled directivity with provision to tilt to the horn
- Smooth and wide frequency response

| | CS 1015 | CS 1025 | CS 1132 |
|-----------------------------|--|---|------------------------------------|
| DESCRIPTION | 2 way screen channel speaker | 2 way screen channel speaker with high power LF | 3 way bi-amplified compact speaker |
| ENCLOSURE: LF | Highly braced particle board & plywood | Highly braced particle board & plywood | Highly braced particle board & MDF |
| ENCLOSURE : M/HF HORN | Plastic | Plastic | Plastic |
| TRANSDUCERS: LF | 1 x 15" | 2 x 15" | 2 x 15" |
| TRANSDUCERS: HF, MF | 1 x 1" horn loaded | 1 x 1" horn loaded | 1 x 1", 1 x 8" horn loaded |
| FREQUENCY RANGE (-3dB) | 55Hz ~ 17kHz | 40Hz ~ 17kHz | 40Hz ~ 18kHz |
| FREQUENCY RANGE (-10dB) | 50Hz ~ 18kHz | 30Hz ~ 18.5kHz | 30Hz ~ 19.5kHz |
| SENSITIVITY (1W/1M) | 98dB | 101dB | LF: 101dB; MF + HF: 100dB |
| NOMINAL IMPEDANCE | 8Ω | 4Ω | LF: 4Ω, MF + HF: 8Ω |
| INPUTS | Spring Loaded binding post | Spring Loaded binding post | Spring Loaded binding post |
| POWER HANDLING (CONTINUOUS) | 250W | 500W | LF: 500W; MF + HF: 250 W |
| POWER HANDLING (PROGRAM) | 500W | 1000W | LF: 1000W; MF + HF: 500 W |
| NOMINAL COVERAGE H x V | 90° x 50° | 90° x 50° | 90° x 50° |
| CROSSOVER FREQUENCY | 2.6kHz | 2.6kHz | 400Hz (Active), 1.3kHz (Passive) |



CS 2100 SERIES

L, C, R, medium format

The CS 2100 has 6 models, of which 4 are for small to medium sized screens, and the other 2 for larger screens. All models are designed with high performance in mind with the following highlights:

HIGHLIGHTS

- 2100 Series: 4 models
- 3 way design with bi-amp or triamp modes
- System is designed to suit both in-wall and platform installations. Shallow profile of the system relieves the need for a large installation space behind the cinema screen.
- Time-aligned compression and midrange drivers provide accurate imaging and minimum phase cancellations.
- Tight directivity control and angled construction of midrange horn provides uniform coverage.
- Specially configured midrange phase plugs result in minimum phase cancellations resulting in intelligibility of vocals.
- The mathematically-designed horn flare keeps distortion within limits.
- Dual 15" LF enclosure available in different power ratings for different hall sizes.
- All three sections – LF, MF and HF are optimized to provide flat frequency response inside a cinema hall (considering the influence of hall acoustics).
- Sturdy, compact cabinet with shallow profile
- Controlled directivity with provision to tilt to the horn



| | CS 2131B | CS 2131BX | CS2131T | CS2131TX |
|-----------------------------|---|--|--|---|
| DESCRIPTION | 3 way bi-amplified screen channel speaker | 3 way bi-amplified screen channel speaker with high power LF | 3 way tri-amplified screen channel speaker | 3 way tri-amplified screen channel speaker with high power LF |
| ENCLOSURE: LF | Highly braced particle board & MDF | Highly braced particle board & MDF | Highly braced particle board & MDF | Highly braced particle board & MDF |
| ENCLOSURE : M/HF HORN | Moulded FRP | Moulded FRP | Moulded FRP | Moulded FRP |
| TRANSDUCERS: LF | 2 x 15" | 2 x 15" high power | 2 x 15" | 2 x 15" high power |
| TRANSDUCERS: MF | 2 x 6.5" horn loaded | 2 x 6.5" horn loaded | 2 x 6.5" horn loaded | 2 x 6.5" horn loaded |
| TRANSDUCERS: HF | 1 x 1.5" horn loaded | 1 x 1.5" horn loaded | 1 x 1.5" horn loaded | 1 x 1.5" horn loaded |
| FREQ. RANGE (-3dB) | 40Hz ~17kHz | 40Hz ~ 17kHz | 40Hz ~17kHz | 40Hz ~17kHz |
| FREQ. RANGE (-10dB) | 30Hz ~ 18.5kHz | 30Hz ~ 18.5kHz | 30Hz ~ 18.5kHz | 30Hz ~ 18.5kHz |
| SENSITIVITY (1W/1M) | LF: 101dB; MF + HF: 103dB | LF: 101dB; MF + HF: 103dB | LF: 101dB; MF:107dB; HF:115dB | LF: 101dB; MF:107dB; HF:115dB |
| INPUTS | Screw type barrier strip | Screw type barrier strip | Screw type barrier strip | Screw type barrier strip |
| NOMINAL IMPEDANCE | LF: 4Ω; MF + HF: 8Ω | LF: 4Ω; MF + HF: 8Ω | LF:4Ω; MF: 16Ω; HF: 8Ω | LF:4Ω; MF: 16Ω; HF: 8Ω |
| POWER HANDLING (CONTINUOUS) | LF: 800W; MF + HF: 250W | LF: 1200W; MF + HF: 250W | LF: 800W; MF: 200W, HF: 85W | LF: 1200W; MF: 200W, HF: 85W |
| POWER HANDLING (PROGRAM) | LF: 1600W; MF + HF: 500W | LF: 2400W; MF+HF: 500W | LF: 1600W; MF: 400W, HF: 170W | LF: 2400W; MF: 400W, HF: 170W |
| NOMINAL COVERAGE | H: 90°, V: -30° / +20° | H: 90°, V: -30° / +20° | H: 90°, V: -30° / +20° | H: 90°, V: -30° / +20° |
| CROSSOVER FREQUENCY | 400Hz (Active), 1.3kHz (Passive) | 400Hz (Active), 1.3kHz (Passive) | Recommended: 400Hz, 1.3kHz | Recommended: 400Hz, 1.3kHz |



CS 2100 SERIES

L, C, R , large format

HIGHLIGHTS

- 2100 Series: 2 models
- 3 way large format speakers for triamp operation
- High SPL low, mid, and HF sections
- Time-aligned compression and midrange drivers provide accurate imaging and minimum phase cancellations.
- Tight directivity control and angled construction of midrange horn provides uniform coverage.
- Specially configured midrange phase plugs result in minimum phase cancellations resulting in intelligibility of vocals.
- The mathematically-designed horn flare keep distortion within limits.
- Dual 15" LF enclosure available in different power ratings for different hall sizes.
- All three sections – LF, MF and HF are optimized to provide flat frequency response inside a cinema hall (considering the influence of hall acoustics).
- Sturdy, compact cabinet with shallow profile
- Controlled directivity with provision to tilt to the horn



| | CS2132T | CS2132TX |
|-----------------------------|--|--|
| DESCRIPTION | 3 way tri-amplified screen channel speaker with dual midrange horn | 3 way tri-amplified screen channel speaker with dual midrange horn and high power LF |
| ENCLOSURE: LF | Highly braced particle board & MDF | Highly braced particle board & MDF |
| ENCLOSURE: M/HF HORN | Moulded FRP | Moulded FRP |
| TRANSDUCERS: LF | 2 x 15" | 2 x 15" high power |
| TRANSDUCERS: MF | 4 x 6.5", horn loaded | 4 x 6.5", horn loaded |
| TRANSDUCERS: HF | 1 x 1.5" horn loaded | 1 x 1.5" horn loaded |
| FREQ. RANGE (-3dB) | 40Hz ~ 17kHz | 40Hz ~ 17kHz |
| FREQ. RANGE (-10dB) | 30Hz ~ 18.5kHz | 30Hz ~ 18.5kHz |
| SENSITIVITY (1W/1M) | LF: 101dB; MF:109dB; HF:115dB | LF: 101dB; MF:109dB; HF:115dB |
| INPUTS | Screw type barrier strip | Screw type barrier strip |
| NOMINAL IMPEDANCE | LF: 4Ω; MF:8Ω; HF: 8Ω | LF: 4Ω; MF:8Ω; HF: 8Ω |
| POWER HANDLING (CONTINUOUS) | LF: 1200W; MF: 400W HF: 85W | LF: 1200W; MF: 400W HF: 85W |
| POWER HANDLING (PROGRAM) | LF: 2400W; MF: 800W HF: 170W | LF: 2400W; MF: 800W HF: 170W |
| NOMINAL COVERAGE | H: 90°, V: -30°/ +20° | H: 90°, V: -30°/ +20° |
| CROSSOVER FREQ. | Recommended: 400Hz, 1.3kHz | Recommended: 400Hz, 1.3kHz |



CS 2300 SERIES

Surrounds



The 2300 series comprises two speakers to meet the multichannel surround sound needs for 5.1 and Atmos screens. Despite being small in size, these speakers are powerful and precise. Elaborate crossover designs enable the high quality transducers to reproduce a detailed response that matches the main channels tonally. The compact cabinets are plastic moulded with tilted front baffles for precise vertical pattern control. Wall mounting brackets are included

HIGHLIGHTS

- Equipped with precise pattern control HF waveguide to provide uniform coverage throughout the audience seating areas.
- Linear on-axis anechoic frequency response despite angled cabinet.
- High power handling and high SPL help reduce the number of speakers required for a particular SPL.
- Appropriately tilted front baffle and tight vertical coverage ensure focused, reflection-free operation.
- Sturdy light-weight injection-moulded industrial grade plastic cabinet with convenient mounting points and easy to access terminals.

| | CS 2321 | CS 2322 |
|---------------------------------------|--|--|
| FREQUENCY RANGE (-10dB) | 60Hz ~ 20kHz | 50Hz ~ 20kHz |
| POWER HANDLING (CONTINUOUS) | 150W | 200W |
| POWER HANDLING (PROGRAM) | 300W | 400W |
| SENSITIVITY (1W/1M) | 93dB-SPL half-space/wall-mounted | 95dB-SPL half-space/wall-mounted |
| NOMINAL IMPEDANCE | 8Ω | 8Ω |
| NOMINAL COVERAGE (H x V) | 100° x 90° | 100° x 90° |
| LOW FREQ TRANSDUCER NOMINAL DIAMETER | 200mm (8") | 250mm (10") |
| HIGH FREQ TRANSDUCER NOMINAL DIAMETER | 25mm (1") exit compression driver | 25mm (1") exit compression driver |
| DOWNWARD FIRING ANGLE | Nominal 20° when mounted flush on back panel | Nominal 20° when mounted flush on back panel |
| ENCLOSURE MATERIAL | Injection moulded industrial grade plastic | Injection moulded industrial grade plastic |
| GRILLE COLOR | Black | Black |
| INPUT CONNECTORS | Binding posts | Binding posts |
| DIMENSIONS (H x W x D) mm | 406 x 343 x 224 | 457 x 457 x 260 |



CS 2200 SERIES

Subwoofers



With a channel dedicated to it, the subwoofer is a critical sonic element in the cinema soundstage. Digital formats demand dynamic ultra-low frequency response. With high excursion transducers mounted in sturdy cabinets the 2200 Series models are up to the task. The 4" voice coils transducers are subjected to extreme power tests in real world conditions to ensure that they can continuously reproduce the lowest octaves without fault or fatigue.

HIGHLIGHTS

- High excursion subwoofer drivers enable reproduction of the lowest frequencies at high SPL with minimum distortion.
- Large flared ports reduce power compression and wind noise to insignificant levels.
- Heavily braced cabinet eliminates cabinet vibrations at bass frequencies ensuring distortion-free, uncoloured sound.
- Custom design of the driver motor structure ensures continuous operation at high SPL.

| | CS 2201 | CS 2202 |
|-------------------------------|--------------------------------------|--------------------------------------|
| ENCLOSURE | Highly braced particle board and MDF | Highly braced particle board and MDF |
| TRANSDUCER | 1 x 18" | 2 x 18" |
| NOMINAL IMPEDANCE | 8Ω | 4Ω |
| POWER HANDLING (CONTINUOUS) | 800W | 1600W |
| POWER HANDLING (PROGRAM) | 1600W | 3200W |
| SENSITIVITY 1W/1 M HALF SPACE | 98dB | 101dB |
| FREQUENCY RESPONSE (-3dB) | 35Hz | 35Hz |
| FREQUENCY RESPONSE (-10dB) | 25Hz | 25Hz |
| CONNECTORS | Screw type barrier strip | Screw type barrier strip |



POWER AMPLIFIERS

The SLA are 2RU power amplifiers and include 9 models, both dual and 4 channel. The SLA Series provides a broad choice of power output extending to 2Ω operation so you can select a model that will ideally match the power requirements for your application. For even further flexibility all models can operate in 3 modes: dual channel mode; the parallel (mono) mode; and in the bridge mode. The SLA Series power amplifiers employs a large number of matched complementary devices in parallel having linear transfer characteristic for low distortion and high SOA guaranteeing safe operation at elevated power levels.

HIGHLIGHTS

- 2Ω operation
- Soft start
- High SNR
- Low THD, IMD
- Heavy-duty power supply for high dynamic power
- Short-circuit, thermal, output DC, RF protection
- LED indicators for metering, status,
- Neutrik Speakon[®] and binding post output connectors
- Variable-speed twin fan back-to-front cooling & operating mode

| | SLA 2003 | SLA 2004 | SLA 2006 | SLA 2008 | SLA 2010 | SLA 2013 | SLA 2015 | SLA 2104 | SLA 2106 |
|-----------------------|--|----------|----------|----------|----------|----------|----------|----------|----------|
| CHANNELS | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 4 | 4 |
| | Output Power (RMS), all channels driven | | | | | | | | |
| 8Ω | 300W | 400W | 600W | 800W | 1000W | 1300W | 1500W | 400W | 600W |
| 4Ω | 450W | 600W | 900W | 1200W | 1500W | 1950W | 2250W | 600W | 900W |
| 2Ω | 510W | 680W | 1020W | 1360W | 1700W | 2300W | 2550W | NA | NA |
| 8Ω BRIDGED | 900W | 1200W | 1800W | 2400W | 3000W | 3900W | 4500W | 1200W | 1800W |
| 4Ω BRIDGED | 1100W | 1480W | 2220W | 3000W | 3700W | 4810W | 5550W | NA | NA |
| CLASS | AB | AB | H | H | H | H | H | AB | H |
| THD @ RATED PW | < 0.1% | < 0.1% | < 0.1% | < 0.1% | < 0.1% | < 0.1% | < 0.1% | < 0.1% | < 0.1% |
| DAMPING FACTOR | >300 | >300 | >300 | >300 | >300 | >300 | >300 | >300 | >308 |
| SNR | 100dB | 101dB | 103dB | 104dB | 105dB | 106dB | 107dB | 101dB | 103dB |
| FREQUENCY RESPONSE | 20Hz~20kHz, ±0.5dB | | | | | | | | |
| INPUT CONNECTORS | XLR with link | | | | | | | | |
| OUTPUT CH CONNECTORS | Twist-lock speaker socket, binding posts | | | | | | | | |
| AMP LOAD PROTECTION | Short circuit, output DC, thermal, RF, internal fault, input overload, HF overload, mismatch load, mains inrush current. | | | | | | | | |
| FRONT PANEL CONTROL | Clip/protect indicator. 6 steps volume level indicator. 21 detent volume level control | | | | | | | | |
| REAR PANEL CONTROL | DIP switch for stereo, parallel, bridge. Dip switch for 2 sensitivity settings. | | | | | | | | |
| DIMENSIONS (WxDxH) MM | 483 x 457 x 88 | | | | | | | | |
| WEIGHT | 17kg | 19kg | 21kg | 23kg | 25kg | 27kgs | 28kg | 23kg | 26kg |
| AGENCY APPROVALS | CE, BIS IS 616-2010 | | | | | | | | |

SONODYNE[®]

MADE IN INDIA
since 1970

SONODYNE, 98 NB Block E New Alipore, Kolkata 700053, INDIA 1-800-31-31-035 • response@sonodyne.com • www.sonodyne.com

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