IS 2.8P
8 x 2-inch column speakers

IS 3.8P
8 x 3-inch column speakers

SP 12.1P
Twelve-inch subwoofer

SP 8.1P
Eight-inch subwoofer

IS-TR7B
Tripod mount for IS 2.8P or IS 3.8P

IS-PM1B
1 foot pole mount for SP subs

IS-PM6B
Pole mount for IS 2.8P or IS 3.8P + SP 12.1P

IS-TWM
Tilt wall mount for IS 2.8P or IS 3.8P

IS-FWM
Flush wall mount for IS 2.8P or IS 3.8P

IS-JP2
Joining bracket for two IS 2.8Ps or IS 3.8Ps

M10-SP
Fly bolts for SP 1.8P
Safety and Operation Precautions.

1. Heed all warnings; follow all instructions.
2. Refer all servicing to qualified personnel. Servicing is required when the apparatus has been damaged in any way.

Installation and Mounting
3. To prevent inductive effects from causing hum and/or noise, loudspeaker lines should not be laid together with other electric cables, microphone or line level signal cables connected to amplifier inputs.
4. To ensure proper sound reproduction, correct loudspeaker polarity is necessary. Check “+” and “−” polarity at both the amplifiers and the IS Series speakers.
5. Make sure loudspeaker lines are not shorted before turning the amplifier on.
6. The entire audio system must comply with the current local standards and regulations regarding electrical systems.
7. Ashly recommends this product only be permanently installed by licensed, professional installers (or specialized firms) who can ensure a correct installation and certified by a local inspector.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Use only with mounts or brackets specified by Ashly Audio.
10. Check the suitability of the support surface to which the product is anchored (wall, ceiling, structure, etc.) and the attachment components (wall plugs, screws, brackets etc.) to confirm that they are in compliance with requirements set forth by local building, safety and electrical codes.
11. Make sure all connections have been made correctly and the loudspeaker input voltage is suitable for the amplifier output.

Operation
23. IS column line arrays can deliver high sound pressure that can surpass 90 dB. Exposure to high sound levels can cause permanent hearing loss. Monitor and control the volume at all times.
24. If amplifiers or other connected equipment displays “clipping”, “peak”, or other overload conditions, adjust to assure these are operating below that threshold to prevent a distorted signal, which may cause damage to the speakers.
25. To avoid clipping, always use a clip limiter if available. Always observe specified high pass filtering recommendations; failure to do so may result in damage to drivers.
26. Contact your authorized service center or qualified personnel should any of the following occur:
   ■ The loudspeaker does not function normally
   ■ The cable has been damaged
   ■ Objects or liquids have gotten into the unit
   ■ The loudspeaker has been damaged due to heavy impacts
27. Clean only with a dry cloth. Do not use solvents, alcohol, benzene, or other volatile substances for cleaning the external parts of this product.
28. Don’t unplug signal cables when the amp connected to your IS Series speakers is still on.
29. Don’t remove the metal grille of the speaker, which can cause damage to the speaker cones.
30. Depending on the impedance switch setting on the back of the IS speakers (8/32 ohms), make sure to limit the number of connected speakers to match the amplifier’s minimum safe operating impedance. Please refer to the Ashly amplifiers operations manual for the correct settings and speaker count.
Thank you for choosing Ashly IS Series line array column speakers (and hopefully our matching subwoofer). We know that there are many choices on the market today; so we have worked hard to create column speakers that set themselves apart from the rest.

Elevate or wall-mount a pair of IS 3.8P or IS 2.8P speakers on stands, add one or more SP 8.1 P or SP 12.1 P subwoofers and you have a high-fidelity, high-output system that’s perfect for reception halls, small churches, mobile discos, bars, coffee shops, and many other applications.

Before installation, check for any possible shipping damage. Also, please read all of the Safety and Operation Precautions on the previous page.

Note that this Guide also covers IS-TWM Tilt Wall Mount Bracket, IS-JP Joining Bracket, and IS-FWM Flush Wall Mount Bracket.

### Contents

- Back Panel Connections
  
- System Configurations
    - with Dual-impedance IS Series
  
- Other Typical Configurations

- Ashly AquaControl (via AquaControl™) and Protēa™ Presets for IS Speakers

- Basic Loudspeaker Processing

- IS 2.8P Specifications

- IS 3.8P Specifications

- SP 8.1P Specifications

- SP 12.1P Specifications

- IS-FW Joining Bracket Install

- IS-TWM Tilt Bracket Install

- IS-PM6B Tripod

- Other IS Accessories

---

**IS 2.8P**

- 8 x 2-inch (IS 2.8P) and 8 x 3-inch (IS 3.8P) matched, high power handling transducers with Neodymium magnet structures and heat-resistant voice coils

- Switchable 8 Ω / 32 Ω impedance allows up to eight loudspeakers to be driven by a single amplifier channel.

- AquaControl™ and Protēa DSP presets for selected Ashly power amplifiers and DSP processors (see page 6 for listing)

- 2-pole Euroblock connector, plus 2 x ¼-inch phone jacks (IS 2.8P)

- 4-pole Euroblock connector, plus 2 x SpeakOn® Connectors (IS-3.8P)

- High-strength and light aluminum enclosure

- Durable, chip-resistant polymer coating

- Optional pole, tripod, and tilt or flush wall mounts

---

**IS 3.8P**

- 12-inch, high power handling (350 W) low-frequency transducer with ferrite magnet structure

- 4-pole Euroblock terminal inputs

- Neutrik® SpeakOn x 2 inputs

- Internally-braced birch ply enclosure

- Pole sockets on top and side

---

**SP 8.1P**

- 8-inch, high power handling (150 W) low-frequency transducer with ferrite magnet structure

- 4-pole Euroblock terminal inputs

- Neutrik SpeakOn x 2 inputs

- Internally-braced birch ply enclosure

- Pole sockets on top and side

- 10mm bolt holes for use with optional flying hardware

---

**WARNING:** When connecting the IS speaker, **do not under any circumstances** plug outputs from different amplifiers or amp channels into more than one jack (any type on the speaker) at the same time.
**IS 3.8P**

Neutrik® SpeakOn connectors can be used as the IS 3.8P input or a pass-through to another IS 3.8.

- 8 Ω / 32 Ω impedance switch
- 4-conductor Euroblock terminal connector

**SP 8.1P/12.1P**

4-conductor Euroblock terminal connector

**System configurations with Dual-impedance IS Series**

IS Series’ Hi-Z / Lo-Z design allows more connection options than typical single-impedance column speakers.

In 8 Ω mode, IS columns are ideal for typical low-Z and live performance applications.

However, switching IS columns to 32 Ω lets one Ashly 4-channel amplifier drive up to 32 individual IS 2.8P or IS 3.8P speakers!

The example below shows 32 IS columns driven with 62.5 watts each via a 4 x 500-watt amplifier.

**IS 3.8P**

System configurations with Dual-impedance IS Series

- Neutrik® for output to other speakers or subwoofers.

**WARNING:** When connecting the IS speaker, do not under any circumstances plug outputs from different amplifiers or amp channels into more than one jack (any type on the speaker) at the same time."
Shown below is a system with 16 IS columns driven at 62.5 watts each through a 4 x 250-watt amp.

**Wattage for each column** = amplifier power (per channel @ stated impedance) / total number of columns
For example, 500 W @ 4 Ω = 62.5 W per column.

**Impedance** = 32 / total number of columns
For example, for 8 IS speakers: 32 / 8 = 4 ohms.

**Required amplifier power** = total number of cabinets x desired speaker wattage
If you need 60W per IS Series speaker, then 60 x 8 = 480 W
NOTE: If amp power exceeds more than 2 x power handling of the speaker, then selecting 32 Ω mode on the speaker will draw less from those amplifier channels. Example, CA-1.04 = 500 W/ch @ 8 Ω (more than 2 x speaker handling). With the speaker set to 32 Ω, the same amp operates with approximately 125 W.
Ashly AquaControl (via AquaControl™) and Protêa™ software presets for IS Speakers

Audio performance, including directivity and frequency response of IS Series speakers can be enhanced when used in conjunction with:

- mXa-1502 mixer amplifier
- Pêma amplifiers
- ne amplifiers (pe version only)
- nXp amplifiers
- ne DSP system and matrix processors
- ne 24.24m DSP matrix processor
- SP series DSP loudspeaker processors

The various capabilities and software used are shown as follows:

<table>
<thead>
<tr>
<th>Ashly Product</th>
<th>Ashly Software</th>
<th>Directivity-weighted, optimized linear frequency response</th>
<th>Universal crossover implementation for use between subwoofers and full-range loudspeakers</th>
<th>FIR-corrected, linear phase response above about 300 Hz</th>
<th>Basic loudspeaker processing</th>
</tr>
</thead>
<tbody>
<tr>
<td>mXa-1502</td>
<td>AquaControl</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>N/A</td>
</tr>
<tr>
<td>Pêma amplifiers</td>
<td>Protêa™</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>N/A</td>
</tr>
<tr>
<td>ne amplifier (pe version)</td>
<td>Protêa™</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>N/A</td>
</tr>
<tr>
<td>ne amplifiers</td>
<td>Protêa™</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>N/A</td>
</tr>
<tr>
<td>ne system and matrix processors</td>
<td>Protêa™</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>N/A</td>
</tr>
<tr>
<td>ne 24.24m DSP matrix processor</td>
<td>Protêa™</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>N/A</td>
</tr>
<tr>
<td>SP series speaker processors</td>
<td>Protêa™</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✤</td>
</tr>
</tbody>
</table>

+ Basic loudspeaker processing is defined as basic EQ (4-Band PEQ) approximating the appropriate curve, plus Delay. No advanced EQ or FIR filters.

* HPF/LPF only
# IS 2.8P Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Transducer</strong></td>
<td>8 x 2-inch (51 mm) Neodymium</td>
</tr>
<tr>
<td><strong>Frequency Response</strong> (-10dB limits)**</td>
<td>115 Hz – 20 kHz</td>
</tr>
<tr>
<td><strong>Sensitivity (ref 2.83V)</strong></td>
<td>88 dB</td>
</tr>
<tr>
<td><strong>Nominal Impedance</strong></td>
<td>8 Ω / 32 Ω switchable</td>
</tr>
<tr>
<td><strong>Maximum Continuous SPL, @ MIV (continuous / peak)</strong></td>
<td>104 dB / 115 dB</td>
</tr>
<tr>
<td><strong>Maximum Continuous SPL, calculated from power handling (continuous / peak)</strong></td>
<td>109 dB / 115 dB</td>
</tr>
<tr>
<td><strong>Maximum Input Voltage (MIV)</strong></td>
<td>28 dBV, 25.1 V (equivalent to 80 W into rated impedance)</td>
</tr>
<tr>
<td><strong>Power Handling</strong></td>
<td>120 W</td>
</tr>
</tbody>
</table>
| **Beamwidth**                                      | Horizontal: 190°  
Vertical: 30° |
| **Directivity Index (DI)**                         | 14.4 dB |
| **Directivity Factor (Q)**                         | 27.4 |
| **Input Connectors**                               | 2 x ¼-inch (6.3 mm) phone jack  
1 x 2-position Euroblock |
| **Mounting Provisions**                            | IS-TWM Tilt Wall Mount  
IS-FWM Flush Wall Mount  
Bracket (included) |
| **Enclosure Material**                             | Aluminum |
| **Dimensions (HxWxD)**                             | 24.00 in. x 2.76 in. x 3.54 in.  
610 mm x 70 mm x 90 mm |
| **Net Weight**                                      | 6.4 lbs. / 2.9 kg |
| **Recommended amplifiers**                         | Single-ch.: nXp 400 or higher  
Bridged: nXp 150 or higher  
Pema 4125, 4250, 8125, 8250 |

1) With recommended processing (see previous page)  
2) Referenced to 1 m  
3) The maximum input voltage (MIV) is determined by no more than a 3 dB change in the frequency response of the loudspeaker system  
4) Averaged from 400 Hz to 10 kHz
IS Series + SP Series Operating Manual

# IS 2.8P Specifications

## Impedance

![Impedance Graph]

- Frequency [Hz]
- Impedance, Amplitude [ohm]

- 8 ohm
- 32 ohm

## Beamwidth

![Beamwidth Graph]

- Frequency [Hz]
- Beamwidth [deg]

## Directivity Index

- Frequency [Hz]
- Directivity Index [dB]

- Horizontal
- Vertical

- Directivity
IS 2.8P Specifications

Horizontal & Vertical Polars  
(1/3 octave)

Horizontal
IS 2.8P Specifications

Vertical (1/3 octave)

- 0 - 12 - 24 - 36
- 6 - 6 - 18 - 30

- 100 Hz
- 125 Hz
- 160 Hz
- 200 Hz
- 315 Hz
- 400 Hz
- 500 Hz
- 630 Hz
- 800 Hz
- 1 kHz
- 1.25 kHz
- 1.6 kHz
- 2 kHz
- 3 kHz
- 4 kHz
- 5 kHz
- 6.3 kHz
- 8 kHz
- 10 kHz
- 12.5 kHz
- 16 kHz
- 20 kHz
IS 3.8P Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transducer</td>
<td>8 x 3-inch (76 mm) Neodymium</td>
</tr>
<tr>
<td>Frequency Response (-10dB limits)</td>
<td>105 Hz – 19 kHz</td>
</tr>
<tr>
<td>Sensitivity (ref 2.83V)</td>
<td>95 dB</td>
</tr>
<tr>
<td>Nominal Impedance</td>
<td>8 Ω / 32 Ω switchable</td>
</tr>
<tr>
<td>Maximum Continuous SPL @ a MIV (continuous / peak)</td>
<td>113 dB / 124 dB</td>
</tr>
<tr>
<td>Maximum Continuous SPL, calculated from power</td>
<td>119 dB / 125 dB</td>
</tr>
<tr>
<td>handling (continuous / peak)</td>
<td></td>
</tr>
<tr>
<td>Maximum Input Voltage (MIV)</td>
<td>30 dBV, 31.6 V (equivalent to 125 W into rated impedance)</td>
</tr>
<tr>
<td>Power Handling</td>
<td>240 W</td>
</tr>
<tr>
<td>Beamwidth 4</td>
<td>Horizontal: 170°</td>
</tr>
<tr>
<td>Directivity Index (DI)</td>
<td>11.8 dB</td>
</tr>
<tr>
<td>Directivity Factor (Q)</td>
<td>15.2</td>
</tr>
<tr>
<td>Input Connectors</td>
<td>2 x NL4 SpeakOn</td>
</tr>
<tr>
<td></td>
<td>1 x 4-position Euroblock</td>
</tr>
<tr>
<td>Mounting Provisions</td>
<td>IS-TWM Tilt Wall Mount</td>
</tr>
<tr>
<td></td>
<td>IS-FWM Flush Wall Mount</td>
</tr>
<tr>
<td></td>
<td>Bracket (included)</td>
</tr>
<tr>
<td>Enclosure Material</td>
<td>Aluminum</td>
</tr>
<tr>
<td>Dimensions (HxWxD)</td>
<td>31.77 in. x 4.06 in. x 5.12 in.</td>
</tr>
<tr>
<td></td>
<td>807 mm x 103 mm x 130 mm</td>
</tr>
<tr>
<td>Net Weight</td>
<td>12.8 lbs. / 5.8 kg</td>
</tr>
<tr>
<td>Recommended amplifiers</td>
<td>Single-channel: nXp 400 or higher</td>
</tr>
<tr>
<td></td>
<td>Bridged: nXp 400 or higher Pema 4125, 4250, 8125, 8250</td>
</tr>
</tbody>
</table>

1) With recommended processing (see previous page)
2) Referenced to 1 m
3) The maximum input voltage (MIV) is determined by no more than a 3 dB change in the frequency response of the loudspeaker system
4) Averaged from 400 Hz to 10 kHz
IS 3.8P Specifications

**Impedance**

![Impedance Graph]

**Beamwidth**

![Beamwidth Graph]

**Directivity Index**

![Directivity Index Graph]
IS 3.8P Specifications

Horizontal & Vertical Polars (1/3 octave)

Horizontal
IS Series + SP Series Operating Manual

IS 3.8P Specifications

Vertical

-30° -30° -30° -30° -30° -30°
-60° -60° -60° -60° -60° -60°
-90° -90° -90° -90° -90° -90°
-120° -120° -120° -120° -120° -120°
-150° -150° -150° -150° -150°
0° 0° 0° 0° 0°
+180° +180° +180° +180° +180° +180°
0° -12° -24° -36°
6° -6° -18° -30°
## SP 8.1P Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transducer</td>
<td>1 x 8-inch (200 mm) Ferrite woofer</td>
</tr>
<tr>
<td>Frequency Response (-10dB limits)</td>
<td>43 Hz – 180 Hz</td>
</tr>
<tr>
<td>Sensitivity (ref 2.83V)</td>
<td>95 dB</td>
</tr>
<tr>
<td>Nominal Impedance</td>
<td>8 Ω</td>
</tr>
<tr>
<td>Maximum Continuous SPL, @ MIV (continuous / peak)</td>
<td>116 dB / 122 dB</td>
</tr>
<tr>
<td>Maximum Continuous SPL, calculated from power handling (continuous / peak)</td>
<td>116 dB / 122 dB</td>
</tr>
<tr>
<td>Maximum Input Voltage (MIV)</td>
<td>30 dBV, 24 V (eq to 100 W ...)</td>
</tr>
<tr>
<td>Power Handling</td>
<td>150 W</td>
</tr>
<tr>
<td>Input Connectors</td>
<td>2 x NL4 SpeakOn® 1 x 4-position Euroblock</td>
</tr>
<tr>
<td>Enclosure Material</td>
<td>Birch Plywood</td>
</tr>
<tr>
<td>Dimensions (HxWxD)</td>
<td>13.25&quot; H x 12&quot; W x 15.63&quot; D / 336.55 mm H x 304.8 mm W x 397</td>
</tr>
<tr>
<td>Net Weight</td>
<td>25.9 lbs / 13.38 kg</td>
</tr>
<tr>
<td>Recommended amplifiers</td>
<td>mXa-1502 nXp-1502 FA-125.2/4 (power-sharing) FA-250.4 (single-channel) Pema 4125/8125 (bridged) nep/pema 4250/8250 CA-502/4</td>
</tr>
</tbody>
</table>

1) With recommended processing (see previous page)
2) Referenced to 1 m
3) The maximum input voltage (MIV) is determined by no more than a 3 dB change in the response of the loudspeaker system
**SP 12.1P Specifications**

- **Transducer**: 1 x 12-inch (300 mm) Ferrite woofer
- **Frequency Response** (~10dB limits): 39 Hz – 180 Hz
- **Sensitivity (ref 2.83V)**: 99 dB
- **Nominal Impedance**: 8 Ω
- **Maximum Continuous SPL, @ a MIV (continuous / peak)**: 120 dB / 128 dB
- **Maximum Continuous SPL, calculated from power handling (continuous / peak)**: 124 dB / 130 dB
- **Maximum Input Voltage (MIV)**: 32 dBV, 31.6 V (equivalent to 200 W into rated impedance)
- **Power Handling**: 350 W
- **Input Connectors**: 2 x NL4 SpeakOn, 1 x 4-position Euroblock
- **Enclosure Material**: Birch Plywood
- **Dimensions (HxWxD)**: 17.8" H x 14.8" W x 18.85" D / 452 mm H x 376 mm W x 479 mm D
- **Net Weight**: 39.5 lbs / 18 kg
- **Recommended amplifiers**: nXp4002/4004, nep/pema 4250/8250 (bridged), KLR-2000, CA-1.02/4

---

1) With recommended processing (see previous page)
2) Referenced to 1 m
3) The maximum input voltage (MIV) is determined by no more than a 3 dB change in the frequency response of the loudspeaker system
IS-JP2 Joining Bracket Install

**NOTE:** When joining two IS speakers invert the upper speaker as shown below.

1. [Diagram of IS-JP2 bracket installation steps]
2. Face plate
3. Face plate
3. Face plate

IS-FW Joining Bracket Install

**Easy peasy.** Use correct fasteners for the wall type. Align to a wall stud when possible. Be sure to securely attach the safety cable.

1. IS-JP2 bracket
2. IS-FW bracket
3. IS-FW bracket

And remember to set the Impedance switch before mounting.
**IS Series + SP Series Operating Manual**

**IS-TWM Tilt Bracket Install**

**NOTE:** Use correct fasteners for the wall type. Align to a wall stud when possible.

And remember to securely attach the safety cable.

**Other IS Accessories**

- **IS-TWM**
- **IS-TP7B Tripod** for IS 2.8 & IS 3.8
- **IS-PM6B Pole Mount** for IS 2.8 & IS 3.8
- **IS-PM1B Pole Mount** for SP Subs
- **M10-SP Eyebolts**
Questions? Install problems? We think that Ashly Technical Support is the best in the pro audio business. Just call us (8 AM–5PM Eastern time zone) or e-mail us.

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Support@Ashly.com