Sennheiser infrared systems are ideal for wireless, interference-free secure assistive listening and interpretation for theaters, houses of worship, courtrooms, conferences and much more! With their unique amplitude and frequency modulation process, Sennheiser infrared systems offer high-quality, dependable audio with single, dual, stereo and multiple channel operation. Sennheiser IR systems can be modeled in EASE design software. Infrared products available to IS dealers. Please contact your Sennheiser representative for more information.

**The main components of an IR System:** the Modulator, Emitter and Receiver

**Modulator - Audio Frequency to Radio Frequency**
This part of the system is comprised of a rack-mounted device that will receive audio signals from the Public Address or sound system. Audio signals are superimposed onto a carrier frequency and travel by coaxial cable to the Emitter.

**Emitter - Radio Frequency to Infrared Light**
This device and its wall or ceiling mounting hardware are placed in the room where assistive listening is needed. The signal from the Modulator is converted to invisible light by the emitter’s LEDs. This transmits the program to the Receiver.

**Receiver - Infrared Light to Audio Frequency**
The receiver section is comprised of a stethophone (headset worn under the chin), its rechargeable battery and the battery charger. Here the light from the emitters is converted back to sound for the listener.

**Transmitter - Audio Frequency to Infrared Light**
For smaller rooms or portable applications, Sennheiser offers transmitters that combine a modulator and emitter into one device. Here audio frequencies are converted to infrared light directly. Some transmitters facilitate simple set-ups for small boardrooms. Other transmitters include features that make temporary installations simpler.

**Planning**
Sennheiser makes IR systems for many applications from single-channel systems for assistive listening to large-scale, multi-language translation systems - up to 32 channels simultaneously. Care must be taken to consider the room’s dimensions and layout (including balconies and side rooms).

**Coverage**
Consider an infrared emitter as you would a light source. Panels must be selected in the appropriate size and quantity for the square footage of the room in which the system will be used. Sennheiser emitter panels all contain the ability to daisy chain multiple panels together to cover wide- or odd-shaped rooms. Our emitter panels also feature automatic gain control so that there is no loss of signal in a multi-panel array or configuration.

**Placement**
Sennheiser offers the ability to mount emitters on a variety of ceiling or wall mounts. Smaller emitters such as the SZI30 can even be assembled in an array to create a longer throw or wider spread of the IR beam. When selecting an appropriate position for your emitters, keep in mind that they should be placed in a manner to provide even illumination throughout the room. They should be mounted high (generally 10-14 ft.) pointing down towards those wearing receivers. If emitters are placed on both sides of an altar they should be aimed diagonally across the room. Except in rare occasions, any number of panels can be placed in a room without concern of interference between panels. For assistance or more information on infrared transmission systems, please contact your Sennheiser sales representative or visit www.sennheiserusa.com/infoport.
Infrared System Line Drawings
Large Area Infrared Systems

SI 1015 Dual Channel Modulator

1. On/Off switch
2. Mains indicator
3. Peak LED for chan. A
4. Level control chan. A
5. Peak LED chan. B
6. Level control chan. B
7. Channel selector switch
8. IR monitoring diodes
9. RF output (BNC)
10. RF terminal
11. DC output terminal 1
12. DC output terminal 2
13. RF terminal 2
14. RF output 2 (BNC)
15. Audio input B (XLR-3)
16. Cable grip
17. Audio input A (XLR-3)
18. DC input socket
(for NT 1015)

SZI 1015T Modulator/Emitter

1. AF input (XLR-3F)
2. RF output (BNC)
3. Thread for mounting
4. DC input terminals
5. DC output terminals
6. RF output terminals

SZI 1015 Emitter

1. RF input
2. Mono/multi switch
3. RF output
4. Thread for mounting the radiator
5. Barrier strip RF contacts, input
6. Barrier strip DC inputs
7. Barrier strip DC outputs
8. Barrier strip RF contacts, output

SZI 1029 Emitter

1. Heat sinks
2. RF input, BNC socket
3. Mono/multi switch
4. RF output, BNC socket
5. Thread for mounting radiator
6. IEC mains connector
7. Steel clamp for securing mains connector

24 V DC input socket (only with 1029-24 model)

Daisy chaining the SZI 1029
Medium Area Infrared System

Infrared System Line Drawings

**SI 30 Modulator/Emitter**

1. LED indicator for transmission mode
2. 11 IR transmission diodes

**SZI 30 Emitter**

1. RF output (3.5 mm mono jack)
2. RF input (3.5 mm mono jack)
3. Power supply socket (2-pin Texas)

**Portable Infrared System**
**SP 230 Modulator/Emitter**

1. AF input (3-pin Texas socket)
2. Channel switch (stereo, channel 1, channel 2)
3. RF output (3.5 mm mono jack)
4. Power supply socket (2-pin Texas)

**SI 30 rear panel**

1. RF cascading socket for connecting several SI29-5, BNC
2. Five AF inputs, XLR-3F, transformer balanced
3. RF output (3.5 mm mono jack)
4. Power supply socket (2-pin Texas)

**Multi-Channel Infrared System**
**SI29-5 Modulator**

1. LED for indicating the currently transmitted AF input (1-5)
2. LED for indicating the transmission channel (0-31)
3. IR transmitting diodes for monitoring the RF output
4. Seven-segment LED deviation display
5. Menu keys
6. 5 LEDs for indicating which AF inputs deliver their signals to the RF output
7. +/- buttons

**SZI 30 back panel**

1. RF output (3.5 mm mono jack)
2. Power supply socket (2-pin Texas)
## Infrared System Configurations

### Single channel system for up to 3,000 sq. ft. – SI30-3000 Single

<table>
<thead>
<tr>
<th>Qty.</th>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SI30-3000 Single</td>
<td>Infrared system package, includes:</td>
</tr>
<tr>
<td>1</td>
<td>SI30</td>
<td>Transmitter</td>
</tr>
<tr>
<td>3</td>
<td>SZI30</td>
<td>Emitter panels</td>
</tr>
<tr>
<td>1</td>
<td>KKY20-015</td>
<td>Power connection cable</td>
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<tr>
<td>1</td>
<td>NT20-4-120</td>
<td>Power adapter</td>
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<tr>
<td>3</td>
<td>KR20-015</td>
<td>RF connection cable</td>
</tr>
<tr>
<td>1</td>
<td>IZK20</td>
<td>Mounting clamp</td>
</tr>
<tr>
<td>1</td>
<td>IZM20</td>
<td>Mounting hardware</td>
</tr>
<tr>
<td>1</td>
<td>WM1</td>
<td>Wall/ceiling mount</td>
</tr>
<tr>
<td>5</td>
<td>RI150</td>
<td>Single channel infrared receiver</td>
</tr>
<tr>
<td>1</td>
<td>L151-10/NT</td>
<td>Battery charger for (10) RI150 receivers or BA151 batteries, with power supply</td>
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<tr>
<td>1</td>
<td>ADA Signage Kit</td>
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### Single channel system for up to 4,000 sq. ft. – SI1015-4000 Single

<table>
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<th>Qty.</th>
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<td>Infrared system package, includes:</td>
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<td>1</td>
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<td>Modulator</td>
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<tr>
<td>1</td>
<td>NT1015-120</td>
<td>Power supply</td>
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<tr>
<td>1</td>
<td>GA1031-CC</td>
<td>Rack adapter</td>
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<tr>
<td>1</td>
<td>SZI1015</td>
<td>Emitter panel</td>
</tr>
<tr>
<td>1</td>
<td>WM1</td>
<td>Wall/ceiling mount</td>
</tr>
<tr>
<td>5</td>
<td>RI150</td>
<td>Single channel infrared receiver</td>
</tr>
<tr>
<td>1</td>
<td>L151-10</td>
<td>Battery charger for (10) RI150 receivers or BA151 batteries</td>
</tr>
<tr>
<td>1</td>
<td>NT92-120</td>
<td>Power supply for L151-10</td>
</tr>
<tr>
<td>1</td>
<td>ADA Signage Kit</td>
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<tr>
<td>1</td>
<td>CBL1015</td>
<td>Connecting cable</td>
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</tbody>
</table>
## Infrared System Configurations

**Dual channel system for up to 8,000 sq. ft. – SI1015-8000 DUAL**

<table>
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<th>Description</th>
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</thead>
<tbody>
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<td><strong>SI1015-8000 Dual Infrared System package, includes:</strong></td>
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<tr>
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<td>SI1015 Modulator</td>
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<tr>
<td>2</td>
<td>NT1015-120 Power supply</td>
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<tr>
<td>1</td>
<td>GA1031-CC Rack adapter</td>
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</tr>
<tr>
<td>4</td>
<td>SZI1015 Emitter panel</td>
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</tr>
<tr>
<td>4</td>
<td>WM1 Wall/ceiling mount</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>SZA1060 Terminating resistor</td>
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</tr>
<tr>
<td>10</td>
<td>HDI830 Two channel/stereo infrared receiver</td>
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</tr>
<tr>
<td>1</td>
<td>L300-10 Battery charger for (10) HDI830 receivers or BA300 batteries</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>ADA Signage Kit</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td><strong>CBL1015 Connecting cable</strong></td>
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</tr>
</tbody>
</table>