



ChairSpeaker SonicCast System

2.4 GHz Low-latency Wireless Audio with DSP BY KARE AUDIO

CS4S | User Guide



Welcome

Any Congratulations on your new ChairSpeaker®, designed to help you and your loved ones watch TV together in a new way. We appreciate your product selection and would like to use this guide to welcome you to our family. We hope that you will take the time to read this manual to familiarize yourself with the product. This user guide will assist you and answer any questions you may have with setting up and using your new ChairSpeaker®.

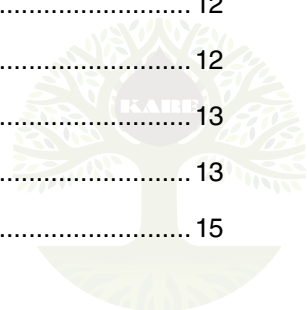
This product guide will provide the product description, safe operation, installation instructions, demonstrate different setup configurations, and help you identify the best option for your situation.

If you encounter some unresolvable issue or have any questions, suggestions, or concerns, don't hesitate to contact KARE's customer service department for further assistance.



Table of Contents

| | |
|--|----|
| Welcome..... | 2 |
| FCC Notice | 4 |
| Warranty | 4 |
| Safety Notices | 5 |
| Health Considerations | 5 |
| Listening Device Warning | 5 |
| Magnetic Warning..... | 5 |
| Parts | 6 |
| Identifying and Using Features | 8 |
| Powering the Transmitter | 8 |
| Connecting Signal | 8 |
| Ports | 9 |
| DSP (Digital Signal Processing) | 10 |
| DSP Modes | 10 |
| Selecting DSP Modes..... | 11 |
| DSP Mode Table..... | 11 |
| Audio Delay | 12 |
| Network & Audio Status..... | 12 |
| Pairing | 12 |
| Transmitter Placement and Mounting | 13 |
| Install your Speakers on Your Chair..... | 13 |
| Customer Support | 15 |



FCC Notice

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.



This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. this device may not cause harmful interference, and
2. this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Limited Warranty

This 1-year limited warranty covers product failures due to the manufacturer's defects for one year after the original purchase. The warranty is only valid if the product is purchased from KARE Audio or one of its authorized resellers. If the product fails within one year of the original purchase, it will be repaired or replaced at no charge with the same or newer model of equal value.



This warranty includes this product for home use, including speakers, transmitters, and accessories against defects in material and workmanship. Proof of purchase is required. This warranty is provided at the discretion of KARE, LLC. and does not cover cosmetic damage or damage due to acts of nature, accident, misuse, abuse, negligence, or modification.



Safety Notice



All safety and operation instructions should be read and understood before operating the ChairSpeaker®. It would help if you kept this guide for future reference.

Reorient or relocate the receiving antenna.

- This product is designed for indoor use only.
- This product should not be operated or submerged in or near water or in areas with high moisture.
- Clean with dry cloth only.
- Do not subject this product to extreme heat conditions such as radiators, heat vents, stoves, amplifiers, or any item that produces heat.
- Do not modify any part of the ChairSpeaker system.
- The power cable should be routed clear of foot traffic and supported clear of kinking and abrasion.
- Only use ChairSpeaker accessories and attachments with your ChairSpeaker system.
- Users should not attempt to service this product. Servicing for damages in any way should only be done by an authorized service agent.
- Do not use damaged products.

Magnetic Warning



Do not place speakers near a pacemaker or defibrillator. If you have a concern, please get in touch with your physician. As with all speakers, the ChairSpeaker has a magnetic field.

For more details, see <http://kareaudio.com/pacemaker>

Health Considerations



If you have or think you may have any of the following conditions, KARE, LLC advises you to consult promptly with a licensed physician (preferably an ear specialist) before use:

- Visible deformity of the ear
- Fluid or drainage from the ear within the past 90 days
- Sudden, rapidly progressing, or fluctuating hearing loss.
- Spells of acute or chronic dizziness
- Hearing loss only on one side that worsened in the past 90 days
- Ear canal blockage, a lasting ear infection, or a plugged-up feeling
- Excessive wax buildup, or a history of excessive wax buildup
- Pain or discomfort in the ear
- Ringing in one or both ears within the last 90 days

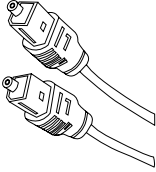
Listening Device Warning

Do not listen to high volume levels for long periods to prevent possible hearing loss.

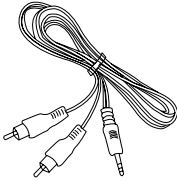


Listening Devices are intended to amplify sounds in situations that would be difficult for normal hearing individuals to hear. A listening device is NOT a hearing aid and is not intended to treat hearing loss. It is not intended to diagnose, treat, cure any disease, or alter the structure or function of the body. It will not restore normal hearing and will not prevent or improve a hearing impairment resulting from organic conditions. Listening devices are designed for occasional and recreational use for amplifying and filtering sounds that are inherently difficult to hear. If you believe you have hearing loss, you are encouraged by KARE, LLC to seek help from a qualified professional. To protect your hearing, avoid having the volume at high levels for extended periods of time. Permanent hearing loss can result from high sound volumes.

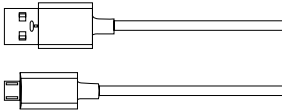
Parts



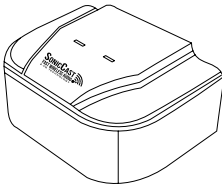
Part No: 610-36
Part Name: Optical Cable
Qty: 1



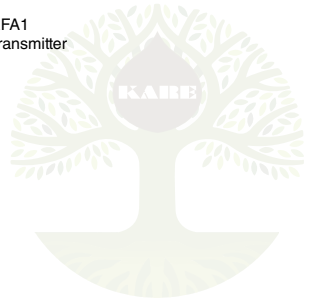
Part No: 811
Part Name: RCA to 3.5mm
Qty: 1



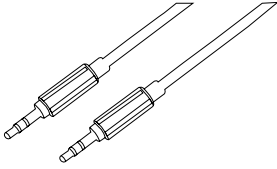
Part No: RFA1-PC
Part Name: USB A to Micro USB B
Qty: 1



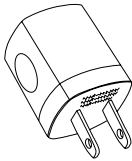
Part No: RFA1
Part Name: Transmitter
Qty: 1



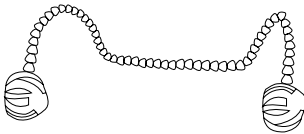
Parts



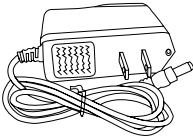
Part No: RFA1-HP-C
Part Name: 3.5mm to 3.5mm
Qty: 1



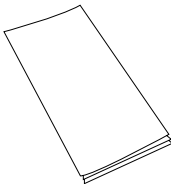
Part No: RFA1-PS
Part Name: USB Power Adapter
Qty: 1



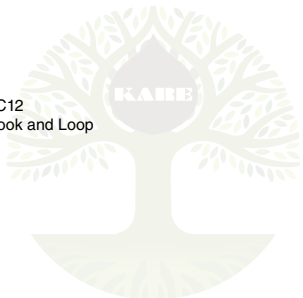
Part No: CS4S
Part Name: Set of Speakers
Qty: 1



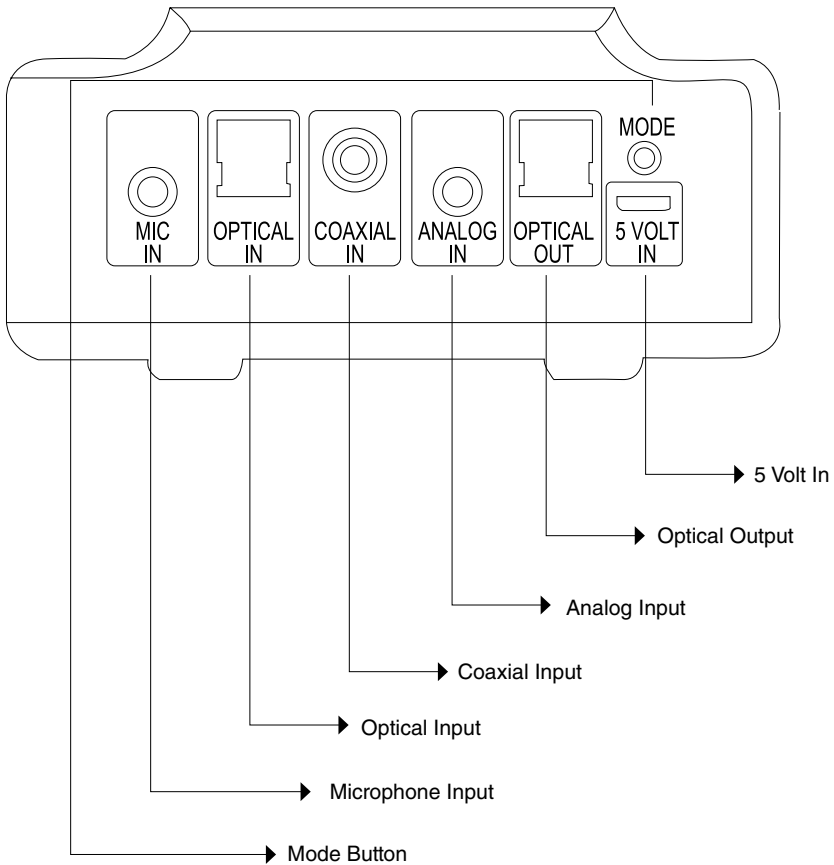
Part No: CS4S-PC-L
Part Name: Power Supply for Speakers
Qty: 1



Part No: VC12
Part Name: Hook and Loop
Qty: 1



Identifying and Using Features



Powering the Transmitter

Use the included micro-USB cable (RFA1-PC) to power to the transmitter. Audio is not input on this port. In some cases, the USB port on the back of your TV or audio device can provide power. If you have “buzzing or hissing” on an audio channel, use the included wall adapter (RFA1-PS).

Connecting Signal

Choosing the input signal is critical to getting the most enjoyable experience.

First, identify what outputs are available on your TV. If no outputs are on your TV, you can use a cable or satellite box. Connecting to different devices may have other features or create an undesirable sound echo.

Digital Optical, RCA analog, and 3.5mm analog cables are included in the box. You only need one of the provided cables. We have kits for installing other ways; if you need a specialty kit, please call us at 1-888-277-7941 or visit KAREAudio.com.

Ports on the front of your tv or other devices are generally AUDIO IN and will not send audio to the transmitter. Connect only to an AUDIO OUT.

Ports

Microphone Input

Use microphone (RFA-MP1) sold separately. This port is used when no other connection method is possible. The microphone will pick up the sound from your TV and for the transmitter. Feedback is a common issue when used with a ChairSpeaker, so fine-tuning the placement of the microphone is required. Microphone placement and speaker volume will need to be adjusted to keep feedback minimum. If you need help, don't hesitate to contact us.

Optical Input

Digital optical input is the most common and most straightforward method for setting up your system. Plug your device into this port using the provided optical cable (610-36). Remove plastic covers from the end of the optical cable before inserting them into the TV and transmitter. This type of connection snaps in place when securely inserted.

Coaxial Input

Use cable (RFA-COAX) sold separately. This single RCA coaxial cable is often colorcoded orange or black. You might find some that are not colored correctly, so it's always best to double-check the labeling of the connection. The output on your TV may be labeled as SPDIF or digital out.

Analog Input

Use either RCA to 3.5mm cable (811) or 3.5mm (RFA1-HP-C) to plug the desired device into analog in.

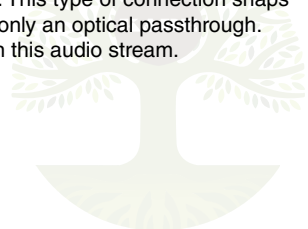
When using analog inputs, do not use USB power on your device. Using USB power from your TV may create a ground loop buzz on the analog channel. It would be best to use a wall outlet to power the transmitter when using this input. If you are using RCA jacks from your TV, make sure they are labeled output. Red and White inputs on the back of your device will not provide an audio signal.

When using the analog output on your device, your TV may control the volume. Check your TV manual for details.

If you are using the headphone jack on your TV, it may turn off your TV speakers. Check your TV manual for details.

Optical Output

The digital optical output is the easiest method for setting up your system with a soundbar. After setting up your optical input, plug your soundbar or other device using a 2nd optical cable (610-36) into the optical output. Remove plastic covers from the end of the optical cable before inserting them into the soundbar or transmitter. This type of connection snaps in place when securely inserted. The Optical Output port is only an optical passthrough. This output does not have sound processing or decoding on this audio stream.



DSP (Digital Signal Processing)

The digital signal processing in SonicCast RFA1 is designed to improve your audio experience and simplify setup. The DSP decodes audio, including 5.1 sound, and can provide the sound enhancements described below.

DSP Modes

Direct Sound

The Direct Sound mode will decode audio and, if required, downmix to 2 channels. No equalizers, virtualizations, or enhancements are applied to the audio stream.

Voice Priority SS

Voice Priority Surround Sound is a virtual surround sound technique that produces an airy and spatial sound that mimics a surround sound system while increasing voices so you can understand the voices. Voice Priority Surround Sound is most effective when using a digital 5.1 or higher audio source.

Voiceify AI

Voiceify AI is an AI voice quality enhancement using various algorithms together to maximize speech enhancement with the focus on intelligibility. Voiceify has three different settings Narrow, Wide, and Full.

Narrow Voiceify AI

Narrow Voiceify AI focuses its intelligibility algorithms on sounds in the 1kHz to 6kHz range. Narrow Voiceify AI also enables Voice Priority Surround Sound and Calm Commercial Technology.

Wide Voiceify AI

Wide Voiceify AI applies AI algorithms to voices in the 0.5kHz to 8kHz range. Wide Voiceify AI also enables Voice Priority SS and Calm Commercial Technology.

Full Voiceify AI

Full Voiceify AI applies AI algorithms to voices in the entire audio range. Full Voiceify AI also enables Voice Priority SS and Calm Commercial Technology.

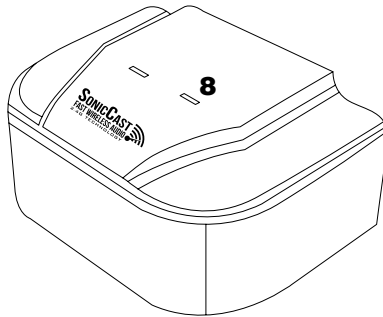
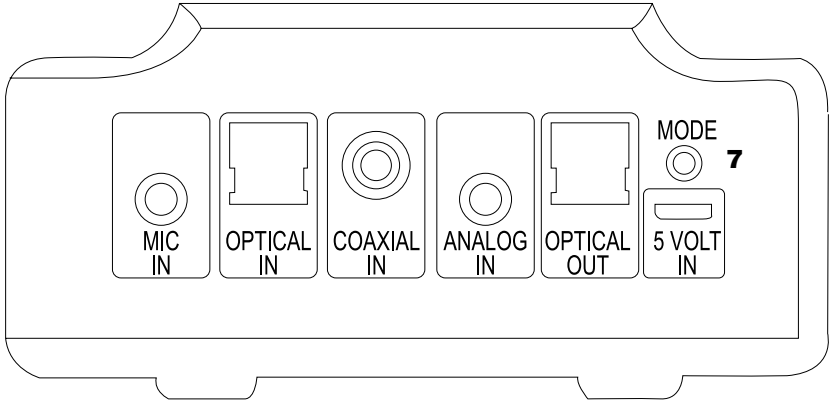
Calm Commercials

Calm Commercials is designed to reduce the sudden increase in volumes seen in commercials and action scenes. Calm Commercial technology digitally modifies the input signal volume to a standard full-scale audio level so that you can choose the best level for you using the volume controls on the receiver, independent of the audio source.

Calm Commercials uses automatic gain control and dynamic range compressor functions to improve listening quality. Automatic gain control dynamically adjusts the volume of the entire input stream so that during loud portions of audio (such as commercials) the volume is lowered automatically to match other parts of the audio. Dynamic range compression further enhances voice quality by decreasing the amplitude range of the audio signal to a smaller scope, making soft bits of the audio louder which improves your ability to understand speech in the audio stream. Calm Commercials supports mono, stereo, and multichannel audio. Calm Commercials is optimized for digital volume variations.

Selecting DSP Modes

The mode button **7** allows you to set DSP and adjust the delay. The Mode LED indicates these settings on the top of the transmitter **8**. A short press of the mode button cycles through the DSP modes.



DSP Mode Table

| Mode | Voiceify | Calm Commercials | Voice Priority SS | Mode LED Color |
|-------------------|----------|------------------|-------------------|----------------|
| Direct Sound | Off | Off | Off | White |
| Voice Priority SS | Off | Off | On | Fade Blue |
| Narrow Voiceify | On | On | On | Solid Blue |
| Wide Voiceify | On | On | On | Fade Green |
| Full Voiceify | On | On | On | Solid Green |

Audio Delay

If the sound is out of sync, you can add delay to the SonicCast system. Hold the Mode button for 5-10 seconds until the Mode LED is Solid Purple to enter the delay setting. While in delay adjustment mode, the Mode LED is solid purple, and a short press of the button cycles through delay modes. Each time the button is pressed, the Mode LED blinks a pattern to indicate the current delay mode:

| Mode | Mode LED |
|----------|----------------|
| No Delay | White, 1 Blink |
| 20 ms | White, 2 Blink |
| 40 ms | White, 3 Blink |
| 60 ms | White, 4 Blink |
| 80 ms | White, 5 Blink |

Network & Audio Status

The Status LED **9** indicates the status of both the audio input and if a receiver is connected.



| Audio Input Status | Device Connected | Status LED |
|--------------------|---------------------------------|-------------|
| Not Connected | No status until Audio Connected | Fade Red |
| Connected | No Receiver Connected | Fade Yellow |
| Connected | Receiver Paired | Solid Green |

Pairing

RFA1 broadcasts a pairing beacon when you can add additional receivers. To pair another receiver, please see the specific receiver guide. Pairing is proximity-based; if more than one RFA1 is in a location, the receiver should connect to the closest RFA1. If you have an issue pairing to the correct RFA1, turn one-off. Pair, then you can rewire the second RFA1.

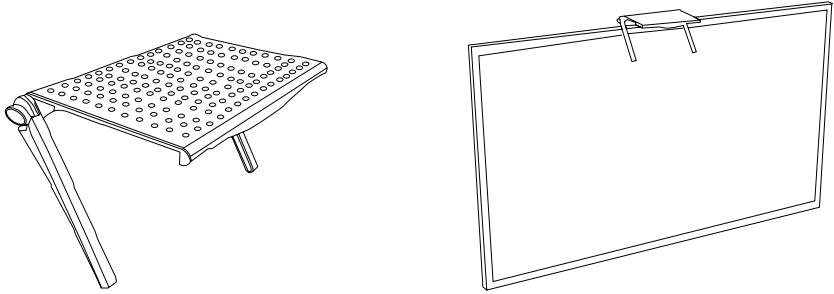
To pair transmitter with speaker simply press the pairing button for 5 seconds. The speaker status light will turn solid blue or purple when paired.

Two devices can be paired with one transmitter.

Transmitter Placement and Mounting

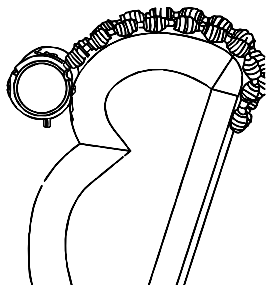
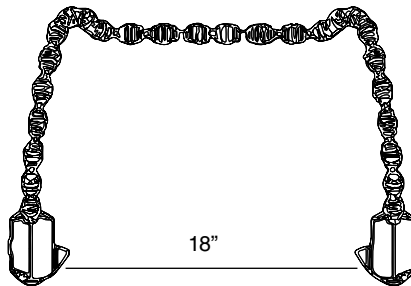
Careful consideration should be used when choosing placement for the RFA1. While the RFA1 should work behind the TV, some TVs contain large metal plates that interfere with radio waves. Locate the transmitter at least 10 feet away from WiFi routers. Plasma TVs generate large amounts of RF that may interfere with RF signals. The transmitter can be wall-mounted with screw holes on the transmitter's bottom or with the hook and loop.

Another option for mounting is a transmitter shelf. You can order from KAREAudio.com or call us.



Install your Speakers on Your Chair

After taking the ChairSpeaker out of the box, form into a U-shape. With both ends about 18" apart. Make sure the side with the power inlet is in your right hand. Stand up facing your chair and lay the ChairSpeaker over your chair. Press the links against the chair, so the links conform. Make sure some links go over the back.



Wrap the speakers around the chair’s headrest with the volume knob on the left for the user at about ear height.

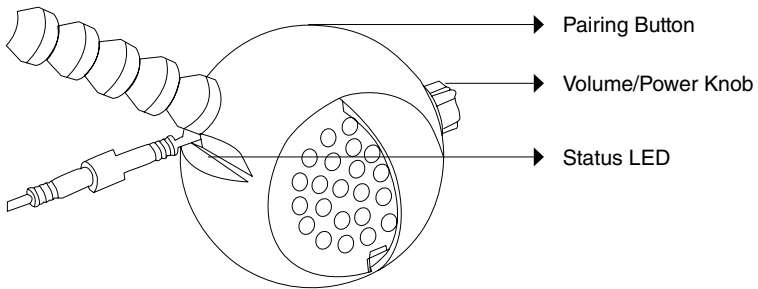
Next plug the speaker into the wall. You will need to charge your speakers for 4 hours to get a full charge. You can charge while in uses.

Turn on the speaker using the volume knob located on the front of the left speaker as a user is sitting in the chair.

| Status LED | Mode LED Color |
|--|---------------------------|
| Power Connected, Device Off | Red |
| Power Connected, Device On, Not Paired | Red with Quick Blue Flash |
| Power Connected, Device On, Paired | Purple |
| Device On, Battery, Paired | Blue |
| Device On, Battery, Not Paired | Flash Blue |

*If power is connected battery is charging

Left Speaker





1-888-277-7941



support@kareaudio.com



www.kareaudio.com





CS4S | User Guide



Patented
2A26F-CS4S
2A26F-RFA1

