

A SOUND SYSTEM

Field Of Invention

The present disclosure generally relates to a sound system.

Background

Audio entertainment has become an integral part of everyday live for many people.

Unfortunately, conventional sound systems are not able to facilitate achievement of wider stereo effect/enlarging "sweet spot" in a convenient/user friendly manner

Moreover, conventional sound systems do not allow audio/music to be shared effectively from, for example, a portable player (e.g., MP3 player) in a large listening area with minimal user intervention.

It is therefore desirable to provide a solution to address at least one of the foregoing problems.

Summary of the Invention

In accordance with an aspect of the disclosure, a speaker apparatus is provided. The speaker apparatus can be coupled to another speaker apparatus. Preferably, the speaker apparatus can be coupled to another speaker apparatus by a coupling apparatus.

The speaker apparatus can be either be identified a master device or be identified as a slave device relative to the another speaker apparatus depending on how the speaker apparatus is coupled to the another speaker apparatus.

When the speaker apparatus is identified as a master device relative to the another speaker apparatus, the speaker apparatus can be configured to receive audio signals which can be communicated from a source module. The speaker apparatus can be further configured to process the audio signals for one or both of audio reproduction and further communication to the another speaker apparatus.

When the speaker apparatus is identified as a slave device relative to the another speaker apparatus, direct communication of audio signals from the source module to the speaker apparatus can be impeded.

The speaker apparatus can, for example, correspond to a first speaker apparatus and the another speaker apparatus can, for example, correspond to a second speaker apparatus.

In one embodiment, the first speaker apparatus can include a processing portion, a coupling portion and a sensor portion. The processing portion can be coupled to the sensor portion and the sensor portion can be coupled to the coupling portion. Additionally, the second speaker apparatus can include a coupling portion. The coupling portion of the first speaker apparatus can be shaped and dimensioned to receive one end of the coupling apparatus and the coupling portion of the second speaker apparatus can be shaped and dimensioned to receive another end of the coupling apparatus.

The sensor portion can be configured to communicate a sensor signal to the processing portion and based on the sensor signal communicated to the processing portion, the first speaker apparatus can be identified as either a master device or a slave device relative to the second speaker apparatus.

Specifically, the sensor signal can, for example, correspond to a varying logic signal which can be associated with a plurality of predetermined values. Based on a predetermined value from the plurality of predetermined values, the first speaker apparatus can be identified as either a master device or a slave device.

In another embodiment, one or both of the first speaker apparatus and the second speaker apparatus can be coupled to a subwoofer. The first speaker apparatus can be either directly coupled or indirectly coupled to the second speaker apparatus via the coupling apparatus.

When directly coupled, one end of the coupling apparatus is coupled to the first speaker apparatus and another end of the coupling apparatus is coupled to the second speaker apparatus. When indirectly coupled, the first speaker apparatus is coupled to the second speaker apparatus via a combination of the subwoofer and the coupling apparatus.

In accordance with another aspect of the disclosure, a sound system is provided. The sound system can be configured to receive audio signals which can be communicated from a source module.

The sound system can include a first speaker apparatus, a second speaker apparatus and a coupling apparatus coupling the first and second speaker apparatuses.

The first speaker apparatus can be identified as either a master device or a slave device relative to the second speaker apparatus depending on how the first and second speaker apparatuses are coupled by the coupling apparatus.

When identified as a master device relative to the second speaker apparatus, the first speaker apparatus can be configured to receive the audio signals communicated from the source module and process the audio signals for one or both of audio reproduction and further communication to the second speaker apparatus.

When identified as a slave device relative to the second speaker apparatus, direct communication of audio signals from the source module to the first speaker apparatus can be impeded.

In one embodiment, the first speaker apparatus can be coupled to the second speaker apparatus by the first coupling apparatus in a manner such that the first speaker apparatus can be identified as a master device relative to the second speaker apparatus. Additionally, the second speaker apparatus can be identified as a slave device relative to the first speaker apparatus.

In another embodiment, the system can further include a third speaker apparatus and another coupling apparatus. The coupling apparatus and the another coupling apparatus can, for example, correspond to a first coupling apparatus and a second coupling apparatus respectively. The first speaker apparatus can be coupled to the second speaker apparatus by the first coupling apparatus in a manner such that the first speaker apparatus can be identified as a master device relative to the second speaker apparatus and the second speaker apparatus can be identified as a slave device relative to the first speaker apparatus. Moreover, the second speaker apparatus can be coupled to the third speaker apparatus by the second coupling apparatus in a manner such that the second speaker apparatus can be identified as a master device relative to the third speaker apparatus and the third speaker apparatus can be identified as a slave device relative to the second speaker apparatus.

The system can be configured to be operable in at least one of a plurality of operational modes.

The plurality of operational modes can, for example, include:

- 1) A party operational mode. In the party operational mode, audio signals can be communicated from the source module to the first speaker apparatus. The first speaker apparatus can be configured to communicate the received audio signals to the second speaker apparatus.
- 2) A wide stereo operational mode. In the wide stereo operational mode, audio signals can be communicated to the first speaker apparatus. The first speaker apparatus can be configured to process the received audio signals by extracting a first portion of the received audio signals for audio reproduction. The first speaker apparatus can be further configured to communicate a second portion of the received audio signals to the second speaker apparatus for further processing (e.g., for audio reproduction).
- 3) A life saver operational mode. In the life saver operational mode, audio signals can be randomly played to alert a user.
- 4) A bedtime operational mode. In the bedtime operational mode, loudness of the audio signals can be varied by gradually reducing loudness.
- 5) A wake operational mode. In the wake operational mode, loudness of the audio signals can be varied by gradually increasing loudness.
- 6) A metronome operational mode. In the metronome operational mode, audio signals communicated from the source module can be received and processed in a manner so that audibly perceivable audio signals can be associated with a predetermined tempo.
- 7) An announcement operational mode. In the announcement operational mode, audio signals can be output for providing information to a user.
- 8) An extended party operational mode. In the extended party operational mode, audio signals can be communicated from the source module to the first speaker apparatus. The first speaker apparatus can be configured to communicate the received audio signals to the second speaker apparatus. The second speaker apparatus can, in turn, be configured to communicate the received audio signals to the third speaker apparatus.

9) An extended wide stereo operational mode. In the extended wide stereo operational mode, audio signals can be communicated from the source module to the first speaker apparatus. The first speaker apparatus can be configured to process the received audio signals by extracting a first portion of the received audio signals for audio reproduction and communicating the received audio signals to the second speaker apparatus. The second speaker apparatus can be configured to process the received audio signals (i.e., from the first speaker apparatus) by extracting a second portion of the received audio signals and mix the first and second portions to produce center channel audio characteristics. The second speaker apparatus can be further configured to communicate the second portion of the received audio signals to the third speaker apparatus for audio reproduction.

In accordance with yet another aspect of the disclosure, a coupling apparatus is provided. The coupling apparatus can be suitable for coupling a first speaker apparatus and a second speaker apparatus. The coupling apparatus can include a first end portion, a second end portion and a body portion.

The first end portion can be structured such that when it is coupled to the first speaker apparatus, the first speaker apparatus can be identified as a master device relative to the second speaker apparatus. The first end portion can be coupled to the second end portion by the body portion.

The second end portion can be structured such that when it is coupled to the first speaker apparatus, the first speaker apparatus can be identified as a slave device relative to the second speaker apparatus.

In one embodiment, the coupling apparatus can further include one or both of a light source portion and a mixer portion. The light source portion can be coupled to one or both of the first end portion and the second end portion. The light portion can be configured to emit light. Additionally, the mixer portion can be coupled to one or both of the first end portion and the second end portion. The mixer portion can be further coupled to the light source portion. The mixer portion can be configured to modulate light emitted from the light source portion to vary light emitted.

Moreover, the body portion can be constructed (i.e., made) such that light emitted can be visually perceived.

Brief Description of the Drawings

Embodiments of the disclosure are described hereinafter with reference to the following drawings, in which:

Fig. 1 shows a sound system which can include one or more speaker apparatuses and one or more coupling apparatuses, in accordance with an embodiment of the disclosure;

Fig. 2a shows, in further detail, the speaker apparatus of Fig. 1 which can have a battery compartment for carrying one or more batteries, in accordance with an embodiment of the disclosure;

Fig. 2b shows the aforementioned battery/batteries which can be put into the battery compartment;

Fig. 3a shows the coupling apparatus of Fig. 1 in further detail in accordance with an embodiment of the disclosure;

Fig. 3b shows the coupling apparatus of Fig. 1 in further detail in accordance with another embodiment of the disclosure;

Fig. 3c shows the coupling apparatus of Fig. 1 in further detail in accordance with yet another embodiment of the disclosure;

Fig. 3d shows the coupling apparatus of Fig. 1 in further detail in accordance with yet a further embodiment of the disclosure;

Fig. 4a shows a first exemplary scenario in relation to an operation mode in which the sound system of Fig. 1 can be operated, in accordance with an embodiment of the disclosure;

Fig. 4b shows a second exemplary scenario in relation to an operation mode in which the sound system of Fig. 1 can be operated, in accordance with an embodiment of the disclosure;

Fig. 4c shows a third exemplary scenario in relation to an operation mode in which the sound system of Fig. 1 can be operated, in accordance with an embodiment of the disclosure;

Fig. 4d shows a fourth exemplary scenario in relation to an operation mode in which the sound system of Fig. 1 can be operated, in accordance with an embodiment of the disclosure;

Fig. 5 shows a flow diagram of a method for audio processing in association with the sound system of Fig. 1, in accordance with an embodiment of the disclosure;

Fig. 6a shows that a speaker apparatus of Fig. 1 can be paired with one or more subwoofers in accordance with an embodiment of the disclosure; and

Fig. 6a and Fig. 6b show examples where the speaker apparatuses of Fig. 1 can be coupled via a subwoofer.

Detailed Description

Representative embodiments of the disclosure, for addressing one or more of the foregoing problems, are described hereinafter with reference to Fig. 1 to Fig. 6.

Fig. 1 shows a sound system 100 in accordance with an embodiment of the disclosure. The sound system 100 can include one or more speaker apparatuses 102 and one or more coupling apparatuses 104. The sound system 100 can, optionally, further include one or more subwoofers 106. The sound system 100 can, optionally, yet further include a source module 108.

The speaker apparatus 102 will be discussed later in further detail with reference to Fig. 2. The coupling apparatus 104 will be discussed later in further detail with reference to Fig. 3.

In accordance with an embodiment of the disclosure, as shown in Fig. 1, the sound system 100 can include a first speaker apparatus 102a, a second speaker apparatus 102b and a coupling apparatus 104. The sound system 100 can further include a first subwoofer 106a and a second subwoofer 106b. The sound system 100 can yet further include a source module 108.

The first speaker apparatus 102a can be coupled to the second speaker apparatus 102b via the coupling apparatus 104. Specifically, in one example, the coupling apparatus 104 can include two ends of which a first end can be coupled to the first speaker apparatus 102a and a second end can be coupled to the second speaker apparatus 102b. In another example, the coupling apparatus 104

can include two ends of which a first end can be coupled to the second speaker apparatus 102b and a second end can be coupled to the first speaker apparatus 102a.

Additionally, the first speaker apparatus 102a and the second speaker apparatus 102b can be coupled to the first subwoofer 106a and the second subwoofer 106b respectively. The source module 108 can be configured to signal communicate with either the first speaker apparatus 102a or the second speaker apparatus 102b. The source module 108 can be coupled to the first speaker apparatus 102a or the second speaker apparatus 102b via one or both of wired coupling and wireless coupling.

In general, the source module 108 can be an electronic device which is capable of transmitting audio signals. Examples of such an electronic device include a Smartphone, a portable audio player such as an MP3 player and a computer.

Additionally, when the sound system 100, as an option, excludes the source module 108 (e.g., the sound system 100 includes the first speaker apparatus 102a, the second speaker apparatus 102b and the coupling apparatus 104 but not the source module 108), the sound system 100 can be configured to receive audio signals which can be communicated from the source module 108.

Audio signals can be communicated from the source module 108 to either the first speaker apparatus 102a or the second speaker apparatus 102b for audible reproduction. Furthermore, the audio signals can be stereo signals having at least left and right channel audio characteristics. The audio signals can include low-range frequency signals, mid-range frequency signals and/or high-range frequency signals.

Either the first speaker apparatus 102a or the second speaker apparatus can be identified as a "master device". If one of the speaker apparatuses 102 has been identified as a "master device" (e.g., the first speaker apparatus 102a) the remaining speaker apparatuses 102 (e.g., the second speaker apparatus 102b) can be identified as slave devices. Appreciably, if desired, there can be more than one "master device" in the sound system 100. Further appreciably, a speaker apparatus 102 can be both a "slave device" and a "master device" at the same time. This will be discussed later in further detail.

Preferably, audio signals are communicated from the source module 108 to a master device. The master device can process the audio signals for audible reproduction and/or process the audio signals for further communication to the slave devices. Also preferably, the slave devices are not capable of receiving audio signals directly from the source module 108.

For example, between the first and second speaker apparatuses 102a/102b, the first speaker apparatus 102a is identified as the master device and the second speaker apparatus 102b is identified as the slave device. In this regard, audio signals can be communicated from the source module 108 to the first speaker apparatus 102a.

The first speaker apparatus 102a, as a master device, can be configured to process the received audio signals for one or both of audio reproduction (i.e., output) and further communication to the second speaker apparatus 102b (i.e., the slave device). The second speaker apparatus 102b can be configured to process received audio signals communicated from the first speaker apparatus 102a for one or both of audio reproduction (i.e., output) and further communication to another speaker apparatus (another slave device which is not shown).

In one embodiment, as will be discussed later in further detail with reference to Fig. 4a and Fig. 4b, the first speaker apparatus 102a can be configured to process the received audio signals by manner of amplifying them so that a listener (not shown) can audibly perceive an amplified version of audio signals transmitted from the source module. In this regard, the aforementioned audio reproduction can correspond to a reproduction of audio signals, communicated from the source module 108, in amplified form. Moreover, the first speaker apparatus 102a can be further configured to communicate the received audio signals to the second speaker apparatus 102b. The second speaker apparatus 102b can be configured to process the received audio signals in a manner analogous to the first speaker apparatus 102a (i.e., by manner of amplification). In a similar manner, the second speaker apparatus 102b can be configured to communicate received audio signals to one or more other speaker apparatuses (not shown) which can, in turn, be configured to process the received audio signals in a manner analogous to the first and/or second speaker apparatuses 102a/102b (i.e., by manner of amplification).

In another embodiment, as will be discussed later in further detail with reference to Fig. 4c, the first speaker apparatus 102a can be configured to process the received audio signals by separating the left channel audio characteristics and the right channel audio characteristics of the received audio

signals. Thus the received audio signals can be separated into a first portion and a second portion. The first and second portions can, in one example, correspond to the left channel and right channel audio characteristics respectively. The first and second portions can, in another example, correspond to the right channel and left channel audio characteristics respectively. The first speaker apparatus 102a can be further configured to process the first portion of the received audio signals for audio reproduction whilst communicating the second portion of the received audio signals to the second speaker apparatus 102b for further processing for audio reproduction. In this regard, the first and second portions of the received audio signals can be audibly reproduced by the first and second speaker apparatuses 102a/102b respectively. Additionally, if desired, at least one part of the first portion can be communicated from the first speaker apparatus 102a to the second speaker apparatus 102b in addition to the second portion. Appreciably, audio reproduction can be associated with audio amplification.

In yet another embodiment, as will be discussed later in further detail with reference to Fig. 4d, the first speaker apparatus 102a can be configured to process the received audio signals by extracting a portion of the received audio signals for audio reproduction and communicating the received audio signals to the second speaker apparatus 102b for further processing. The extracted portion of the received audio signals can correspond to the aforementioned first portion of the received audio signals. The second speaker apparatus 102b can be configured process the received audio signals communicated from the first speaker apparatus 102b in a manner so as to produce audio signals having center channel audio characteristics. Center channel audio characteristics can be based on the aforementioned right and left channel audio characteristics. The second speaker apparatus 102b can be configured to extract and communicate another portion of the received audio signals, corresponding to the aforementioned second portion of the received audio signals, to another speaker apparatus (not shown in Fig. 1) for audio reproduction. Appreciably, audio reproduction can be associated with audio amplification.

Earlier mentioned, the first speaker apparatus 102a and the second speaker apparatus 102b can be coupled to the first subwoofer 106a and the second subwoofer 106b respectively. Further earlier mentioned, the audio signals can include low-range frequency signals, mid-range frequency signals and/or high-range frequency signals. In this regard, it is appreciable that the speaker apparatus(es) can be configured to output (i.e., audio reproduction) mid and/or high range frequency signals, and communicate low-range frequency signals to the subwoofer(s) for output (i.e., audio reproduction).

Fig. 2a shows the speaker apparatus 102 (e.g., the first speaker apparatus 102a and/or the second speaker apparatus 102b) mentioned in Fig. 1 in further detail, in accordance with an embodiment of the disclosure.

The speaker apparatus 102 can include one or both of a transceiver 202 and a coupling module 204. The speaker apparatus 102 can further include a processing portion 206, one or more speaker drivers 208, a coupling portion 210 and a sensor portion 212. The speaker apparatus 102 can yet further include a reservoir portion 214 and a battery compartment 216.

The transceiver 202 and/or the coupling module 204 can be coupled to the processing portion 206. The processing portion 206 can be coupled to the speaker driver 208, the coupling portion 210 and/or the sensor portion 212, or any combination thereof. One or both of the reservoir portion 214 and the battery compartment 216 can be coupled to the transceiver 202, the coupling module 204, the processing portion 206, the speaker driver 208, the coupling portion 210 and/or the sensor portion 212, or any combination thereof, for supply of power/voltage thereto.

Earlier mentioned, the source module 108 can be an electronic device which is capable of transmitting audio signals to the speaker apparatus 102 (e.g., the first speaker apparatus 102a). The source module 108 can be coupled to the speaker apparatus 102 (e.g., the first speaker apparatus 102a) via one or both of wired coupling and wireless coupling.

In this regard, the source module 108 can be coupled to the transceiver 202 and/or the coupling module 204 depending on whether wireless communication or wired communication is desired.

In the case of wireless coupling, the source module 108 can be coupled to the transceiver 202 so that the source module 108 can communicate audio signals to the speaker apparatus 102 wirelessly. In the case of wired coupling, the source module 108 can be coupled to the coupling module 204 so that the source module 108 can communicate audio signals to the speaker apparatus 102 via wired based communication. Additionally, the coupling module 204 can be in the form of a receptacle shaped and dimensioned to mate with the source module 108. When mated, source module 108 and the coupling module 204 can be coupled electrically so that the source module 108 can signal communicate with the speaker apparatus 102 via the coupling module 204.

One or both of the transceiver 202 and/or the coupling portion 204 can be coupled to the processing portion 206 in a manner such that audio signals received from the source module 108 can be communicated to the processing portion 206 for further processing.

The processing portion 206 can process the received audio signals by, for example, amplifying them, separating the left channel audio characteristics and the right channel audio characteristics, extracting a portion of the received audio signals for audio reproduction and/or processing the right channel and left channel audio characteristics to produce center channel audio characteristics. The processing portion 206 can, for example, include logic gates and/or operational amplifiers in the form of analog circuits and/or integrated circuits. The processing portion 206 can, for example, further include one or more microprocessors. The processing portion 206 can, for example, yet further include one or more mixers.

The speaker driver 208 can be configured to output received audio signals processed by the processing portion 206 in a manner so that they can be audibly perceived by a listener.

The coupling portion 210 can be shaped and dimensioned so as to receive one end of the coupling apparatus 104. In this regard, the ends of the coupling apparatus 104 can, for example, be in the form of a jack and the coupling portion 210 can, for example, be in the form of a female connector shaped and dimensioned to accommodate the jack so that the coupling apparatus 104 can be electrically connected with the speaker apparatus 102 via the coupling portion 210.

The sensor portion 212 can be configured to communicate one or more sensor signals to the processing portion 206. The sensor portion 212 can, for example, be in the form of a "pull-up" resistor having one end coupled to a voltage supply (e.g., the reservoir portion 214) and one end coupled to the processing portion 206 and the coupling portion 210. The sensor signals can be indicative of which end of the coupling apparatus 104 that has been coupled to the speaker apparatus 102. Specifically, the sensor signals can be indicative of whether the first end or second end of the coupling apparatus 104 has been coupled to the coupling portion 210. This will be discussed later in further detail with reference to Fig.3.

Earlier mentioned, the reservoir portion 214 can be coupled to the transceiver 202, the coupling module 204, the processing portion 206, the speaker driver 208, the coupling portion 210 and/or the

sensor portion 212, or any combination thereof, for supply of power/voltage thereto. In this regard, the reservoir portion 214 can be akin to an internal battery which powers the speaker apparatus 102.

The battery compartment 216 can be shaped and dimensioned to accommodate one or more batteries (e.g., a 'AA'/'AAA' type battery). When accommodated in the battery compartment 216, the battery can be used in a manner analogous to the reservoir portion 214 (i.e., for supply of power/voltage).

Appreciably, one or both of the reservoir portion 214 and the battery/batteries in the battery compartment 216 can be used for charging the source module 108 when the source module 108 is coupled to the speaker apparatus 102. In one exemplary scenario, when the source module 108 is wire coupled to the speaker apparatus 102 via the coupling module 204 and it is desired to charge the source module 108, current can be drawn from one or both of the reservoir portion 214 and the battery/batteries in the battery compartment 216.

In one embodiment, current can be supplied from the reservoir portion 214 to the source module 108 for charging. In another embodiment, current can be supplied from the battery/batteries in the battery compartment 216 to the source module 108 for charging.

In yet another embodiment, current can be supplied from both the reservoir portion 214 and the battery/batteries in the battery compartment 216 to the source module 108 for charging.

In yet a further embodiment, current can be supplied from the battery/batteries in the battery compartment 216 to the reservoir portion 214, and subsequently, from the reservoir portion 214 to the source module 108 for charging. Therefore, the source module 108 can be charged by the battery/batteries in the battery compartment 216 indirectly (i.e., via the reservoir portion 214).

Further appreciably, when it is desired to charge the source module 108, it is possible to isolate one or both of the reservoir portion 214 and the battery/batteries in the battery compartment 216 from one or more (or all) of the remaining components (i.e., the transceiver 202, processing portion 206, speaker driver 208, coupling portion 210 and/or sensor portion 212) so that more current from the reservoir portion 214 and/or battery/batteries in the battery compartment 216 can be reserved for charging the source module 108.

Fig. 2b shows the aforementioned battery/batteries which can be put into the battery compartment 216. In one example, only one battery 218 is put in the battery compartment 216. In another example, a plurality of batteries 220 can be packaged in a battery pack 222 and at least a portion of the battery pack 222 can be put into the battery compartment 216. As shown, the plurality of batteries can be positioned in parallel with respect to each other and electrically connected. The battery pack 222 can include one or more break portions 224 so that one or more batteries from the plurality of batteries can be detached from the battery pack 222 if desired.

Earlier mentioned, the sound system 100 can include one or more speaker apparatuses 102 (e.g., the first speaker apparatus 102a and the second speaker apparatus 102b) and a coupling apparatus 104. Further mentioned earlier, one speaker apparatus can be coupled to another speaker apparatus via the coupling apparatus 104 (e.g., the first speaker apparatus 102a can be coupled to the second speaker apparatus 102b via the coupling apparatus 104).

The coupling apparatus 104 will be discussed in further detail with reference to Fig. 3 hereinafter. Fig. 3a shows the coupling apparatus 104 in further detail in accordance with an embodiment of the disclosure. Fig. 3b shows the coupling apparatus 104 in further detail in accordance with another embodiment of the disclosure. Fig. 3c shows the coupling apparatus 104 in further detail in accordance with yet another embodiment of the disclosure. Fig. 3d shows the coupling apparatus 104 in further detail in accordance with yet a further embodiment of the disclosure.

In accordance with an embodiment of the disclosure, as shown in Fig. 3a, the coupling apparatus 104 can include a first end portion 302, a second end portion 304 and a body portion 306. The first end and second end portions 302/304 can be coupled by the body portion 306. Specifically, the first end portion 302 can be coupled to one end of the body portion 306 and the second end portion 304 can be coupled to another end of the body portion 306.

The first end portion 302 can include a plurality of sections. For example, the first end portion 302 can include a first section 302a, a second section 302b, a third section 302c and a fourth section 302d. The first section 302a can be adjacent the second section 302b, the second section 302b can be adjacent the third section 302c and the third section 302c can be adjacent the fourth section 302d. The second end portion 304 can include a plurality of parts. For example, the second end portion 304 can include a first part 304a, a second part 304b and a third part 304c. The first part

304a can be adjacent to the second part 304b and the second part 304b can be adjacent to the third part 304c.

The first, second, third and fourth sections 302a/302b/302c/302d can be electrically isolated from each other. The first, second and third parts 304a/304b/304c can be electrically isolated from each other. The first section 302a can be electrically connected to the first part 304a. The second section 302b can be electrically connected to the second part 304b. The third section 302c can, optionally, be electrically connected to the third part 304c.

In accordance with another embodiment of the disclosure, as shown in Fig. 3b, the coupling apparatus 104 can further include one or more resistors 308 in addition to the aforementioned first end portion 302, second end portion 304 and body portion 306 as discussed in Fig. 3a. The resistor 308 can be carried by the body portion 306 near the first end portion 302. One end of the resistor 308 can be coupled to the third section 302c and another end of the resistor 308 can be coupled to the fourth section 302d.

In accordance with yet another embodiment of the disclosure, as shown in Fig. 3c, the coupling apparatus 104 can further include a mixer portion 310 and/or a light source portion 312 in addition to the aforementioned first end portion 302, second end portion 304 and body portion 306 as discussed in Fig. 3a, and/or the aforementioned one or more resistors 308 as mentioned in Fig. 3b. The mixer portion 310 and the light source portion 312 can be carried by the body portion 306.

The mixer portion 310 can, for example, include a first terminal 310a, a second terminal 310b and a third terminal 310c. The light source portion 312 can, for example, include a first contact point 312a, a second contact point 312b and a third contact point 312c.

Additionally, the mixer portion 310 can be coupled to the light source portion 312. Furthermore, each of the mixer portion 310 and the light source portion 312 can be coupled to one or both of the first end portion 302 and the second end portion 304.

For example, the mixer portion 310 can be coupled to the light source portion 312 and the first end portion 302. Specifically, the mixer portion 310 can be coupled to the light source portion 312 and one or both of the first and second sections 302a/302b. More specifically, the first terminal 310a of the mixer portion 310 can be coupled to the first section 302a of the first end portion 302. The

second terminal 310b of the mixer portion 310 can be coupled to the second section 302b of the first end portion 302. The third terminal 310c of the mixer portion 310 can be coupled to the first contact point 312a of the light source portion 312. The second contact point 312b can be coupled to the third section 302c of the first end portion 302. The third contact point 312c can be coupled to the fourth section 302d of the first end portion 302.

In a further example, the mixer portion 310 can be coupled to the light source portion 312 and the second end portion 304. Specifically, the mixer portion 310 can be coupled to the light source portion 312 and one or both of the first and second parts 304a/304b. More specifically, the first terminal 310a of the mixer portion 310 can be coupled to the first part 304a of the second end portion 304. The second terminal 310b of the mixer portion 310 can be coupled to the second part 304b of the second end portion 304. The third terminal 310c of the mixer portion 310 can be coupled to the first contact point 312a of the light source portion 312. The second contact point 312b can be coupled to the third section 302c of the first end portion 302. The third contact point 312c can be coupled to the fourth section 302d of the first end portion 302.

In an exemplary application, the mixer portion 310 can be configured to receive the left and/or right channel audio characteristics of the received audio signals via, for example, the first and/or second terminals 310a/310b for processing to produce a mixed signal. The mixed signal can be communicated from, for example, the third terminal 310c of the mixer portion 310 to the light source portion 312 via, for example, first contact point 312a. A logic '1' signal (based on the aforementioned "pull-up" resistor) can be fed to the light source portion 312 via, for example, the third contact point 312c. The second contact point 312b can, for example, be connected to the third section 302c of the first end portion 302. The third section 302c can, for example, be an electrical ground point. Appreciably, the logic "1" signal fed to the light source portion 312 can be a voltage to allow the light source portion 312 to emit light. The mixed signal can be used to modulate the logic "1" signal so that the light emitted from the light source portion 312 can fluctuate or vary according to the left and/or right channel audio characteristics of the received audio signals. Therefore, the mixer portion 310 can, effectively, be considered to be configurable to modulate light emitted from the light source portion 312 to vary light emitted/cause light emitted to fluctuate (e.g., in accordance with the left and/or right channel audio characteristics of the received audio signals).

At least the body portion 306 of the coupling apparatus 104 can, for example, be made (i.e., constructed) of a translucent/transparent material so that light emitted from the light source portion 312 can be visually perceived.

Although it is mentioned above that the mixed signal can be used to modulate the logic "1" signal so that the light emitted from the light source portion 312 can fluctuate or vary according to the left and/or right channel audio characteristics of the received audio signals, it is appreciable that there may be no need to modulate the logic "1" signal. Specifically, instead of causing light emitted from the light source portion 312 to fluctuate/vary, it may be possible to simply emit light of substantially consistent brightness (i.e., without fluctuation/variance in brightness). In this regard, it is appreciable that the mixer portion 310 can be omitted and light emitted from the light source portion 312 can be based on a logic "1" signal which is not modulated (i.e., based on a substantially consistent voltage/power supply).

In accordance with yet a further embodiment of the disclosure, as shown in Fig. 3d, the coupling apparatus 104 (reabeled as 315 in Fig. 3d) can yet further include a coupling part (labeled as 314 in Fig. 3d) in addition to the aforementioned first end portion 302, second end portion 304 and body portion 306 as discussed in Fig. 3a, the aforementioned one or more resistors 308 as mentioned in Fig. 3b and/or the mixer portion 310 and a light source portion 312 as mentioned in Fig. 3c.

Additionally, earlier mentioned, the sound system 100 can include one or more coupling apparatuses 104. For example, as shown in Fig. 3d, the sound system 100 can include a plurality of coupling apparatuses 104. The plurality of coupling apparatuses 104 can, for example, include a first coupling apparatus 315 and a second coupling apparatus 316.

Each of the first and second coupling apparatuses 315/316 can be analogous to the earlier discussed coupling apparatus 104 in Fig. 3a to Fig. 3c. As shown in Fig. 3d, the first coupling apparatus 315 is largely similar to the coupling apparatus 104 (as discussed in Fig. 3a to Fig. 3c) except that it further includes a coupling part 314. The second coupling apparatus 316 is substantially similar to the coupling apparatus 104 (as discussed in Fig. 3a to Fig. 3c).

In this regard, the foregoing discussion in relation to the coupling apparatus 104 (e.g., as mentioned in Figs 3a to 3c) analogously applies to the first and second coupling apparatuses 315/316 as appropriate.

Specifically, the first coupling apparatus 315 can include the aforementioned first end portion 302, the aforementioned second end portion 304 and the aforementioned body portion 306. Earlier mentioned, the first end portion 302 can be coupled to the second end portion 304 via the body portion 306.

Additionally, the second coupling apparatus 316 can include two ends 316a/316b coupled by a body portion 316c. One of the two ends (e.g., 316a) can be similar to the first end portion 302 of the first coupling apparatus 315 and another one of the two ends (e.g., 316b) can be similar to the second end portion 304 of the first coupling apparatus 315.

Preferably, one end 316a can have a structure (i.e., a first section 316d, a second section 316e, a third section 316f and a fourth section 316g) similar to that of the first end portion 302 and another end 316b can have a structure (i.e., a first part 316h, a second part 316i and a third part 316j) similar to the second end portion 304. Alternatively, each of the two ends 316a/316b can have a structure (i.e., a first part 316h, a second part 316i and a third part 316j) similar to that of the second end portion 304.

In one example, the first, second and fourth sections 316d/316e/316g of one end 316a can be electrically connected to, respectively, the first, second and third parts 316h/316i/316j of another end 316b. In another example, the first parts 316h of both ends 316a/316b can be electrically connected, the second parts 316i of both ends 316a/316b can be electrically connected and the third parts 316j of both ends 316a/316b can be electrically connected.

The coupling part 314 can be configured to couple the second coupling apparatus 316 to the first coupling apparatus 315.

In this regard, the coupling part 314 can be in the form of a connector shaped and dimensioned to accommodate at least one of the two ends 316a/316b of the second coupling apparatus 316. In one example, when one of the ends 316a/316b is inserted into the coupling part 314, the first, second and third parts 304a/304b/304c of the second end portion 304 of the first coupling apparatus 315

are electrically connected, respectively, to the first, second and third parts 316h/316i/316j of the inserted end (i.e., one of the two ends 316a/316b) of the second coupling apparatus 316. In another example, when one of the ends 316a/316b is inserted into the coupling part 314, the first and second parts 304a/304b of the second end portion 304 of the first coupling apparatus 315 are electrically connected, respectively, to the first and second sections 316d/316e of the inserted end (i.e., one of the two ends 316a/316b) of the second coupling apparatus 316. In yet another example, when one of the ends 316a/316b is inserted into the coupling part 314, the first and second parts 304a/304b of the second end portion 304 of the first coupling apparatus 315 are electrically connected, respectively, to the first and second parts 316h/316i of the inserted end (i.e., one of the two ends 316a/316b) of the second coupling apparatus 316.

The sound system 100 will be discussed in further detail hereinafter.

As mentioned earlier, either the first speaker apparatus 102a or the second speaker apparatus 102b can be identified as a "master device". Specifically, either the first speaker apparatus 102a or the second speaker apparatus 102b can be identified as a "master device" depending on how the first and second speaker apparatuses 102a/102b are coupled by the coupling apparatus 104. Moreover, if one speaker apparatus (e.g., the first speaker apparatus 102a) is identified as a "master device" the other speaker apparatus (e.g., the second speaker apparatus 102b) can be identified as a "slave device" relative to the speaker apparatus (e.g., the first speaker apparatus 102a) which has been identified as the "master device". This will be discussed in further detail hereinafter using, as an example, the first speaker apparatus 102a being identified as a "master device".

For the first speaker apparatus 102a to be identified as a "master device" it is required for the first end portion 302 of the coupling apparatus 104 to be inserted into the coupling portion 210 of the first speaker apparatus 102a. The second end portion 304 can be inserted into the coupling portion 210 of the second speaker apparatus 102b. In this regard, the coupling apparatus 104 can include a first end portion 302 which can be structured (e.g., the plurality of sections 302a/b/c/d as discussed in Fig. 3) such that when the first end portion 302 is coupled (e.g., by insertion into the coupling portion 210) to the first speaker apparatus 102a, the first speaker apparatus 102a can be identified as a master device relative to the second speaker apparatus 102b. Appreciably, if the second end portion 304 of the coupling apparatus 104 is coupled to the first speaker apparatus 102a and the first end portion 302 of the coupling apparatus 104 is coupled to the second speaker apparatus 102b, the first speaker apparatus 102a can be identified as a slave device relative to the second speaker

apparatus 102b instead of a master device and the second speaker apparatus 102b can be identified as a master device relative to the first speaker apparatus 102a instead of a slave device. Therefore, the coupling apparatus 104 can also include a second end portion 304 which can be structured (e.g., the plurality of parts 304a/b/c as discussed in Fig. 3) such that when the second end portion 304 is coupled (e.g., by insertion into the coupling portion 210) to the first speaker apparatus 102a, the first speaker apparatus 102a can be identified as a slave device relative to the second speaker apparatus 102b. Earlier mentioned, the coupling apparatus 104 can include a body portion 306 coupling the first end portion 302 and the second end portion 304.

When the first end portion 302 is inserted into the coupling portion 210 of the first speaker apparatus 102a, the first and second sections 302a/302b can be coupled to the processing portion 206 of the first speaker apparatus 102a, the third section 302c can be a ground portion which can be coupled to the electrical ground (not shown) of the first speaker apparatus 102a and the fourth section 302d can be coupled to the sensor portion 212 of the first speaker apparatus 102a. When the second end portion 304 is inserted into the coupling portion 210 of the second speaker apparatus 102b, the first and second parts 304a/304b can be coupled to the processing portion 206 of the second speaker apparatus 102b, and the third part 304c can be a ground portion which can be coupled to the electrical ground (not shown) and the sensor portion 212 of the second speaker apparatus 102b.

Earlier mentioned, sensor signals communicated from the sensor portion 212 can be indicative of whether the first end or second end of the coupling apparatus 104 has been coupled to the coupling portion 210. Also earlier mentioned, the sensor portion 210 can, for example, be in the form of a "pull-up" resistor.

Therefore, when the fourth section 302d makes electrical contact with the sensor portion 212, the sensor portion 212 can, for example, be configured to communicate a logic '1' signal (based on the aforementioned "pull-up" resistor) to the processing portion 206. This will provide an indication that the first end portion 302 of the coupling apparatus 104 has been inserted into the coupling portion 210. Conversely, it is appreciable that if the second end portion 304 of the coupling apparatus 104 has been inserted into the coupling portion 210, only the third part 304c is capable of making electrical contact with the sensor portion 212.

Therefore, within the first speaker apparatus 102a, the sensor portion 212 is configured to communicate a logic '1' signal (based on the aforementioned "pull-up" resistor) to the processing portion 206. In this manner, the first speaker apparatus 102a can be identified as a "master device". Conversely, within the second speaker apparatus 102b, the sensor portion 212 is configured to communicate a logic '0' signal (by virtue of the third part 304c which is a ground portion being connected) to the processing portion 206. In this manner, the second speaker apparatus 102b can be identified as a "slave device".

Yet further earlier mentioned, audio signals can be communicated from the source module 108 to the master device (e.g., the first speaker apparatus 102a) for audible reproduction and/or for processing the audio signals for further communication to the slave devices (e.g., the second speaker apparatus 102b). This will be discussed in further detail with reference to Fig. 4a, Fig. 4b, Fig. 4c and Fig. 4d.

A first exemplary scenario 400a will be discussed with reference to Fig. 4a, a second exemplary scenario 400b will be discussed with reference to Fig. 4b, a third exemplary scenario 400c will be discussed with reference to Fig. 4c and a fourth exemplary scenario 400d will be discussed with reference to Fig. 4d hereinafter.

Referring to Fig. 4a, in a first exemplary scenario 400a, the first end portion 302 is inserted into the coupling portion 210 of the first speaker apparatus 102a and the second end portion 304 is inserted into the coupling portion 210 of the second speaker apparatus 102b. Therefore, the first speaker apparatus 102a can be identified as a "master device" and the second speaker apparatus 102b can be identified as a "slave device".

Audio signals are communicated from the source module 108 to the first speaker apparatus 102a. The first speaker apparatus 102a can be configured to process the received audio signals by manner of amplifying them so that a listener (not shown) can audibly perceive an amplified version of audio signals transmitted from the source module. In this regard, the aforementioned audio reproduction can correspond to a reproduction of audio signals, communicated from the source module 108, in amplified form. The first speaker apparatus 102a can be further configured to communicate the received audio signals to the second speaker apparatus 102b. The second speaker apparatus 102b can be configured to process the received audio signals in a manner analogous to the first speaker apparatus 102a (i.e., by manner of amplification).

Appreciably, in this manner, the sound system 100 provides a way for music (i.e., audio signals) to be shared effectively from a portable player (i.e., source module 108) in a large listening area with minimal user intervention.

Referring to Fig. 4b, in a second exemplary scenario 400b, the first speaker apparatus 102a can be coupled to the second speaker apparatus 102b which can be further coupled to a third speaker apparatus 402. The first and second speaker apparatuses 102a/102b can be coupled by a first coupling apparatus 404. The second and third speaker apparatuses 102b/402 can be coupled by a second coupling apparatus 406.

The third speaker apparatus 402 can be similar/identical to the aforementioned first and/or second speaker apparatuses 102a/102b. In this regard, the earlier discussion regarding the first and/or second apparatuses 102a/102b analogously applies. Additionally, the first and second coupling apparatuses 404/406 can be similar/identical to the aforementioned coupling apparatus 104. In this regard, the earlier discussion regarding the coupling apparatus 104 analogously applies.

Moreover, the first coupling apparatus 404 can include the earlier discussed coupling part 314.

The first end portion 302 of the first coupling apparatus 404 can be inserted into the coupling portion 210 of the first speaker apparatus 102a and the second end portion 304 of the first coupling apparatus 404 can be inserted into the coupling portion 210 of the second speaker apparatus 102b. The first end portion 302 of the second coupling apparatus 406 can be inserted into the coupling part 314 and the second end portion 304 of the second coupling apparatus 406 can be inserted into the coupling portion 210 of the third speaker apparatus 402.

In one example, both the first end portions 302 of the first and second coupling apparatuses 404/406 include the first to fourth sections 302a/302b/302c/302d. The fourth section 302d of the first end portion 302 of the first coupling apparatus 404 establishes contact with the sensor portion 212 (of the first speaker apparatus 102a) whereas the coupling part 314 does not allow the fourth section 302d of the first end portion 302 of the second coupling apparatus 406 to establish contact with the sensor portion 212 (of the second speaker apparatus 102b). Thus it is appreciable that only the first speaker apparatus 102a is identified as the "master device" whereas the remaining speaker

apparatuses (i.e., the second and third speaker apparatuses 102b/402) are identified as "slave devices".

In another example, the first end portion 302 of the first coupling apparatus 404 include the first to fourth sections 302a/302b/302c/302d whereas the first end portion 302 of the second coupling apparatus 406 include the first to third parts 316h/316i/316j. The fourth section 302d of the first end portion 302 of the first coupling apparatus 404 establishes contact with the sensor portion 212 (of the first speaker apparatus 102a). No contact is established between the sensor portion 212 (of the second speaker apparatus 102b) and any part 316h/316i/316j of the first end portion 302 of the second coupling apparatus 406 when the first end portion 302 of the second coupling apparatus 406 is inserted into the coupling part 314. Thus it is appreciable that only the first speaker apparatus 102a is identified as the "master device" whereas the remaining speaker apparatuses (i.e., the second and third speaker apparatuses 102b/402) are identified as "slave devices".

Therefore, audio signals are communicated from the source module 108 to the first speaker apparatus 102a. The first speaker apparatus 102a can be configured to process the received audio signals by manner of amplifying them so that a listener (not shown) can audibly perceive an amplified version of audio signals transmitted from the source module. In this regard, the aforementioned audio reproduction can correspond to a reproduction of audio signals, communicated from the source module 108, in amplified form.

The first speaker apparatus 102a can be further configured to communicate the received audio signals to the second speaker apparatus 102b. The second speaker apparatus 102b can be configured to process the received audio signals in a manner analogous to the first speaker apparatus 102a (i.e., by manner of amplification). Additionally, the second speaker apparatus 102b can be further configured to communicate the received audio signals to the third speaker apparatus 402. The third speaker apparatus 402 can be configured to process the received audio signals in a manner analogous to the first and/or second speaker apparatuses 102a/102b (i.e., by manner of amplification).

Appreciably, in this manner, the sound system 100 provides a way for music (i.e., audio signals) to be shared effectively from a portable player (i.e., source module 108) in a large listening area with minimal user intervention.

Referring to Fig. 4c, in a third exemplary scenario 400c, the first end portion 302 can be inserted into the coupling portion 210 of the first speaker apparatus 102a and the second end portion 304 can be inserted into the coupling portion 210 of the second speaker apparatus 102b. Therefore, the first speaker apparatus 102a can be identified as a "master device" and the second speaker apparatus 102b can be identified as a "slave device".

Audio signals are communicated from the source module 108 to the first speaker apparatus 102a. The first speaker apparatus 102a can be configured to process the received audio signals by separating the left channel audio characteristics and the right channel audio characteristics of the received audio signals. Thus the received audio signals can be separated into a first portion and a second portion. The first and second portions can, in one example, correspond to the left channel and right channel audio characteristics respectively. The first and second portions can, in another example, correspond to the right channel and left channel audio characteristics respectively. The first speaker apparatus 102a can be further configured to process the first portion of the received audio signals for audio reproduction whilst communicating the second portion of the received audio signals to the second speaker apparatus 102b for further processing for audio reproduction. In this regard, the first and second portions of the received audio signals can be audibly reproduced by the first and second speaker apparatuses 102a/102b respectively. Additionally, if desired, at least one part of the first portion can be communicated from the first speaker apparatus 102a to the second speaker apparatus 102b in addition to the second portion. Appreciably, audio reproduction can be associated with audio amplification.

In a specific example, the first and second portions of the received audio signals can correspond to left channel and right channel audio characteristics respectively. In this regard, the first speaker apparatus 102a can be configured to process the left channel audio characteristics of the received audio signals for audio reproduction whilst communicating the right channel audio characteristics of the received audio signals to the second speaker apparatus 102b for further processing for audio reproduction. Additionally, at least one part of the left channel audio characteristics of the received audio signals can be communicated from the first speaker apparatus 102a to the second speaker apparatus 102b in addition to the second portion. Specifically, the low-range frequency signals (i.e., bass) part of the left channel audio characteristics of the received audio signals can be communicated to second speaker apparatus 102b from the first speaker apparatus 102a in addition to the right channel audio characteristics of the received audio signals.

Therefore, the first and second speaker apparatuses 102a/102b can be configured to process the left and right channel audio characteristics, respectively, of the received audio signals for audio reproduction. Additionally, when each of the first and second speaker apparatuses 102a/102b are paired with a subwoofer 106 (i.e., each of the first and second speaker apparatuses 102a/102b is coupled to a subwoofer 106), the bass part (i.e., the low-range frequency signals) of the left and right channel audio characteristics of the received audio signals can be output via each of the subwoofers 106.

Appreciably, it is appreciable that, in the above manner, the sound system 100 can be capable of facilitating achievement of wider stereo effect/enlarging "sweet spot" in a convenient/user friendly manner since speaker apparatuses 102 (e.g., the first and second speaker apparatuses 102a/102b) can be flexibly positioned (e.g., nearer/further from each other) given one of the speaker apparatuses 102 (e.g., first speaker apparatus 102a) outputs only the left channel audio characteristics and another one of the speaker apparatuses 102 (e.g., second speaker apparatus 102b) outputs only the right channel audio characteristics whilst allowing each of the subwoofers to output the bass part (i.e., the low-range frequency signals) of the left and right channel audio characteristics of the received audio signals.

Referring to Fig. 4d, in a fourth exemplary scenario 400d, the sound system 100 can include the aforementioned first speaker apparatus 102a, the aforementioned second speaker apparatus 102b and the aforementioned third speaker apparatus 402. The sound system 100 can further include a first coupling apparatus 408 and a second coupling apparatus 410.

Appreciably, each of the first coupling apparatus 408 and the second coupling apparatus 410 can be analogous to the earlier discussed coupling apparatus 104 (e.g., in Fig. 1).

The first speaker apparatus 102a can be coupled to the second speaker apparatus 102b by the first coupling apparatus 408. The second speaker apparatus 102b can be coupled to the third speaker apparatus 402 by the second coupling apparatus 410. Additionally, the second speaker apparatus 102b can further include a first coupling portion 412 and a second coupling portion 414. The first and second coupling portions 412/414 are analogous to the aforementioned coupling portion 210 in Fig. 2. The second speaker apparatus 102b can yet further include a signal mixer 416.

The first end portion 302 of the first coupling apparatus 408 can be inserted into the coupling portion 210 of the first speaker apparatus 102a and the second end portion 304 of the first coupling apparatus 408 can be inserted into the first coupling portion 412 of the second speaker apparatus 102b. Additionally, the first end portion 302 of the second coupling apparatus 410 can be inserted into the second coupling portion 414 of the second speaker apparatus 102b and the second end portion 304 of the second coupling apparatus 410 can be inserted into the coupling portion 210 of the third speaker apparatus 402.

Therefore, the first speaker apparatus 102a can be identified as a "master device" relative to the second speaker apparatus 102b. The second speaker apparatus 102b can be identified as a "slave device" and a "master device" relative to the first and third speaker apparatuses 102a/402 respectively. The third speaker apparatus 402 can be identified as a "slave device" relative to the second speaker apparatus 102b. In this regard, the first speaker apparatus 102a can be a "master device," the second speaker apparatus 102b can be both a "master device" and a "slave device," and the third speaker apparatus 402 can be a "slave device".

Audio signals are communicated from the source module 108 to the first speaker apparatus 102a. The first speaker apparatus 102a can be configured to process the received audio signals by extracting a portion of the received audio signals for audio reproduction and communicating the received audio signals to the second speaker apparatus 102b for further processing. The extracted portion of the received audio signals can correspond to the aforementioned first portion (e.g., left channel audio characteristics) of the received audio signals.

Appreciably, both the left channel audio characteristics and the right channel audio characteristics of the received audio signals can be communicated to the second speaker apparatus 102b. The second speaker apparatus 102b can be configured to process the received audio signals communicated from the first speaker apparatus 102b in a manner so as to produce a center channel audio characteristics based on the aforementioned right channel and left channel audio characteristics. For example, the left channel audio characteristics and the right channel audio characteristics of the received audio signals can be mixed by the signal mixer 416 to produce the center channel audio characteristics.

The second speaker apparatus 102b can be further configured to extract and communicate another portion of the received audio signals, corresponding to the aforementioned second portion (e.g.,

right channel audio characteristics) of the received audio signals, to the third speaker apparatus 402 for audio reproduction. Appreciably, audio reproduction can be associated with audio amplification.

Appreciably, it is appreciable that, in the above manner, the sound system 100 can be capable of facilitating achievement of wider stereo effect/enlarging "sweet spot" in a convenient/user friendly manner since speaker apparatuses 102 (e.g., the first, second and third speaker apparatuses 102a/102b/402) can be flexibly positioned (e.g., nearer/further from each other) given one of the speaker apparatuses 102 (e.g., first speaker apparatus 102a) outputs only the left channel audio characteristics, one of the speaker apparatuses 102 (e.g., second speaker apparatus 102b) outputs the center channel audio characteristics and another one of the speaker apparatuses 102 (e.g., third speaker apparatus 402) outputs only the right channel audio characteristics.

Further appreciably, as with the third exemplary scenario 400c, the speaker apparatuses (i.e., 102a/102b/402) of the sound system 100 in the fourth exemplary scenario can each be paired with a subwoofer 106, if desired, so that each of the subwoofers can output the bass part (i.e., the low-range frequency signals) of the left and right channel audio characteristics of the received audio signals.

As can be seen from Figs. 4a to 4d, the sound system 100 can operate in at least one of many operational modes (e.g., first to fourth exemplary scenarios 400a/400b/400c/400d). Preferably, this (i.e., which operational mode the sound system 100 operates in) can be determined based on how the speaker apparatuses 102 (i.e., the first apparatus 102a, the second apparatus 102b and/or the third speaker apparatus 402) are coupled to each other (by coupling apparatus 104).

As mentioned earlier, the sensor portion 212 can, for example, be in the form of a "pull-up" resistor having one end coupled to a voltage supply (e.g., the reservoir portion 214) and one end coupled to the processing portion 206 and the coupling portion 210. Additionally, as mentioned earlier, the sensor portion 212 can be configured to communicate one or more sensor signals to the processing portion 206.

The voltage supply can, for example, be a 3 volts (i.e., 3V) supply and the "pull-up" resistor can, for example, be of 10000 ohms in value (i.e., a 10K Ω resistor)

In one example, in the third exemplary scenario 400c, when the fourth section 302d of the first end portion 302 contacts the end of the "pull-up" resistor coupled to the coupling portion 210, a logic "1" signal of 3 volts can be communicated to the processing portion 206. When the processing portion 206 detects a logic "1" signal of 3 volts, it can be determined that the sound system 100 is operating in the third exemplary scenario 400c. The third exemplary scenario 400c may also be known as "wide stereo" operation mode.

In another example, in the first/second exemplary scenario 400a/400b, the coupling apparatus 104 may further include another resistor 308 which can, for example, be also 10000 ohms in value (i.e., a 10K Ω resistor). The "pull-up" resistor and the resistor 308 in the coupling apparatus 104 can be electrically connected as a voltage divider. Thus when the fourth section 302d of the first end portion 302 contacts the end of the "pull-up" resistor coupled to the coupling portion 210, a logic "1" signal of 1.5 volts (due to the voltage divider arrangement) can be communicated to the processing portion 206. When the processing portion 206 detects a logic "1" signal of 1.5 volts, it can be determined that the sound system 100 is operating in the first/second exemplary scenarios 400a/400b. The first exemplary scenario 400a and the second exemplary scenario 400b may also be known as "party" operation mode and "extended party" operation mode respectively.

In yet another example, in the fourth exemplary scenario 400d, the coupling apparatus 104 may further include another resistor 308 which can, for example, be of 27500 ohms in value (i.e., a 27.5 K Ω resistor). The resistor 308 in the coupling apparatus 104 and the "pull-up" resistor can be electrically connected as a voltage divider such that when the fourth section 302d of the first end portion 302 contacts the end of the "pull-up" resistor coupled to the coupling portion 210, a logic "1" signal of 2.2 volts (due to the voltage divider arrangement) can be communicated to the processing portion 206. When the processing portion 206 detects a logic "1" signal of 2.2 volts, it can be determined that the sound system 100 is operating in the fourth exemplary scenario 400d. The fourth exemplary scenario 400d may also be known as "extended wide stereo" operation mode.

In general, it is preferable that the operational mode can be determined based on logic signals communicated to the processing portion 206. Logic signals can correspond to the aforementioned one or more sensor signals. Logic signals communicated to the processing portion 206 can be a signal associated with varying values. The values can, for example, be voltage values determined in the manner exemplified above. Specifically, as exemplified above, a logic signal communicated to the processing portion 206 can be a high logic (i.e., a logic "1" signal). More specifically, as

exemplified above, operation mode can be determined based on the value of the logic "1" signal (e.g., 3/2.2/1.5 volts) communicated to the processing portion 206. Therefore it is appreciable that a sensor signal can correspond to a varying logic signal which is associable with a plurality of predetermined values such as predetermined voltage values (e.g., 3/2.2/1.5 volts).

Further, the coupling apparatus 104 may also include a switching arrangement (not shown) to vary the voltage divider arrangement. For example, the switching arrangement can be used to electrically disconnect/connect the resistor 308 from the "pull-up" resistor.

Moreover, although four exemplary scenarios 400a/400b/400c/400d (corresponding to, for example, "party" operational mode in relation to the first exemplary scenario 400a, "extended party" operational mode in relation to the second exemplary scenario 400b, "wide stereo" operational mode in relation to the third exemplary scenario 400c and "extended wide stereo" operational mode in relation to the fourth exemplary scenario 400d) have been discussed, other exemplary scenarios can also be possible (i.e., other/more operational modes).

Other operational modes can, for example, include "life saver" operational mode, "bedtime"/"wake" operational mode, "metronome" operational mode and/or "announcement" operational mode. In this regard, aside the earlier discussed four exemplary scenarios 400a/400b/400c/400d, there can be more exemplary scenarios.

For example, there could be a fifth exemplary scenario (not shown) associated with the "life saver" operational mode, a sixth exemplary scenario (not shown) associated with the "bedtime story"/"wake" operational mode, a seventh exemplary scenario (not shown) associated with the "metronome" operational mode, and/or an eighth exemplary scenario (not shown) associated with the "announcement" operational mode.

In the "life saver" operational mode, a random audio clip/ audio stream/audio file from, for example, the source module 108 can be played randomly (e.g., at random timings) to, for example, alert a user/listener. The audio clip/audio stream/audio file can be communicated from the source module 108 in the form of the aforementioned audio signals to the one or more speaker apparatuses 102 for audible reproduction. Additionally, the audio clip/audio stream/audio file can, for example, reside/be stored in a designated location in the source module 108. For example, the audio clip/audio stream/audio file can reside/be stored in a file folder named "life saver" (i.e., designated

location). Preferably, the source module 108 can be operated by a user/listener so that a file folder named, for example, "life saver" can be created and the user can select, for example, one or more audio clips and/or audio files for storage in the "life saver" file folder. Alternatively, a file folder named, for example, "life saver" can be automatically created/be an existing default file folder (e.g., factory programmed/proprietary file folder) in the source module 108 and the, for example, audio clip(s) and/or audio file(s) can be automatically stored in the "life saver" file folder or stored in the "life saver" file folder based on factory settings (i.e., proprietary based). The "life saver" operational mode is especially useful for situations where a listener/user has to remain alert (e.g., to prevent the listener/user from nodding off while driving).

In the "bedtime"/"wake" operational mode, the one or more speaker apparatuses 102 can be configured to vary audibly perceivable loudness in relation to the aforementioned audible reproduction of the, for example, audio signals. In one example, in relation to "bedtime" operational mode, the one or more speaker apparatuses 102 can be configured to vary loudness of the audio signals by gradually reducing loudness (i.e., reducing audio volume) so that audio signals can be audibly perceived to be gradually softer. This is useful in a situation where a user or listener is preparing to sleep and it would be desirable for the audio signals to be audibly perceived to be gradually reducing in loudness. In another example, in relation to "wake" operational mode, the one or more speaker apparatuses 102 can be configured to vary loudness of the audio signals by gradually increasing loudness (i.e., increasing audio volume) so that audio signals can be audibly perceived to be gradually louder. This is useful in a situation where a user or listener needs to wake up from sleep. An audio clip/ audio stream/audio file from, for example, the source module 108 can be played and the one or more speaker apparatuses 102 can be configured to vary loudness of the played audio clip/ audio stream/audio file. The audio clip/audio stream/audio file can be communicated from the source module 108 in the form of the aforementioned audio signals to the one or more speaker apparatuses 102 for audible reproduction. Additionally, the audio clip/audio stream/audio file can, for example, reside/be stored in a designated location in the source module 108. For example, the audio clip/audio stream/audio file can reside/be stored in a file folder named "bedtime listening"/"wake"/"bedtime story" (i.e., designated location). Moreover, the audio clip/audio stream/audio file can, for example, be an audio story (e.g., audio book) or music based (e.g., a song). Preferably, the source module 108 can be operated by a user/listener so that a file folder named, for example, "bedtime story" can be created and the user can select, for example, one or more audio clips and/or audio files for storage in the "bedtime story" file folder. Alternatively, a file folder named, for example, "bedtime story" can be automatically created/be an existing default

file folder (e.g., factory programmed/proprietary file folder) in the source module 108 and the, for example, audio clip(s) and/or audio file(s) can be automatically stored in the "bedtime story" file folder or stored in the "bedtime story" file folder based on factory settings (i.e., proprietary based).

In the "metronome" operational mode, the one or more speaker apparatuses 102, in one embodiment, can be configured to process the audio signals communicated from the source module 108 in a manner so that the audibly perceived audio signals can be associated with a predetermined tempo. In another embodiment, the one or more speaker apparatuses 102 can be configured to generate and output an audio signal associated with a predetermined tempo. The predetermined tempo can, for example, relate to a series of beats. The series of beats can be rhythmic. For example, the series of beats can correspond to regular/periodic pulses/beats (e.g., 180 beats per minute) which can be audibly perceived. In this regard, the predetermined tempo can correspond to a series of beats which can, for example, be a predetermined number of beats per minute (e.g., 180 beats per minute). The one or more speaker apparatuses 102 can also be configured to vary the predetermined tempo. For example, the beats per minute (of the series of beats) can be varied in a manner so that the beats per minute can either be increased (i.e., more than, for example 180 beats per minute) or decreased (i.e., less than, for example 180 beats per minute).

An audio clip/audio stream/audio file from, for example, the source module 108 can be communicated to the one or more speaker apparatuses 102. The audio clip/audio stream/audio file can be communicated from the source module 108 in the form of the aforementioned audio signals to the one or more speaker apparatuses 102 for audible reproduction.

Earlier mentioned, in relation to the "metronome" operational mode, the one or more speaker apparatuses 102 can, in one embodiment, be configured to process the audio signals communicated from the source module 108 in a manner so that the audibly perceived audio signals can be associated with a predetermined tempo. The audio clip/audio stream/audio file can, in one example, be associated with a song. In this regard, the one or more speaker apparatuses 102 can be configured to process the audio signals communicated from the source module 108 so that the song can be audibly perceived in conjunction with a series of beats (e.g., 180 beats per minute). Therefore, a listener can, for example, be able to audibly perceive the song with a series of beats (e.g., a beep tone) at the same time (i.e., a series of beats beeping in the form of a beep tone at the background of the song). In this regard, the beep tone (series of beep) can effectively be superimposed with the song. Therefore, the beep tone superimposed with the song can correspond

to the aforementioned audibly perceived audio signals associated with a predetermined tempo. Aside superimposing the beep tone with the song, it is also possible to vary inherent tempo of the song. Therefore, the original tempo of the song can be varied in accordance with the predetermined tempo. The audio clip/audio stream/audio file can, in another example, be associated with a beep tone. In this regard the speaker apparatuses 102 can be configured to play the beep tone. The beep tone can be associated with the series of beats. Therefore, the beep tone can correspond to the aforementioned audibly perceived audio signals associated with a predetermined tempo.

Also earlier mentioned, in relation to the "metronome" operational mode, the one or more speaker apparatuses 102 can be configured to generate and output an audio signal associated with a predetermined tempo. In this regard, the one or more speaker apparatuses 102 can be configured to generate, for example, a beep tone which can be associated with the series of beats. The beep tone can correspond to the aforementioned audio signal associated with a predetermined tempo.

The "metronome" operational mode can be useful in situations where a user/listener is working out or jogging and desires to have a pacer, in the form of the aforementioned predetermined tempo, which can be audibly perceived.

In the "announcement" operational mode, the one or more speaker apparatuses 102 can be configured to communicate output audio signals for providing information to a user/listener. The output audio signals can be audibly perceived and can correspond to an announcement to a user/listener. The information provided to a user/listener can, for example, relate to the number of steps taken by the user/listener (i.e., step counter function), distance traveled by the user/listener (i.e., distance calculator function) and/or time elapsed (i.e., stopwatch function).

In one example, in relation to the "announcement" operational mode, the source module 108 can be a Smartphone and the one or more speaker apparatuses 102 can be configured to signal communicate with the Smartphone. The Smartphone may have a global positioning system (GPS) function to ascertain/determine, for example, distance traveled by a user carrying the Smartphone. The determined traveled distance can be communicated as information signals from the source module 108 to the one or more speaker apparatuses 102. The one or more speaker apparatuses 102 can be configured to communicate output audio signals based on the information signals. The output audio signals can correspond to an announcement of distance traveled to the user/listener.

In another example, in relation to the "announcement" operational mode, the source module 108 can be a Smartphone and the one or more speaker apparatuses 102 can be configured to signal communicate with the Smartphone. The Smartphone can be carried by a user and may have a timer function which can determine/ascertain timing information such as time elapsed (akin to a stopwatch function) for the user to travel from one point to another (total time taken for a user to travel a certain distance). The determined elapsed time can be communicated as information signals from the source module 108 to one or more speaker apparatuses 102. The one or more speaker apparatuses 102 can be configured to communicate output audio signals based on the information signals. The output audio signals can correspond to an announcement of time elapsed to the user/listener.

Based on the determined elapsed time and determined distance traveled, it is possible to determine speed. Determined speed can be communicated as information signals from the source module 108 to one or more speaker apparatuses 102. The one or more speaker apparatuses 102 can be configured to communicate output audio signals based on the information signals. The output audio signals can correspond to an announcement of determined speed to the user/listener.

Although the foregoing examples, in relation to the "announcement" operational mode have been discussed in the context of information signals communicated from the source module 108 to the one or more speaker apparatuses 102, it is appreciable that it may not be necessary to depend solely on information signals from the source module 108 for the purpose of communicating output audio signals corresponding to an announcement.

For example, a speaker apparatus 102 can include one or more modules (not shown) configurable to perform the aforementioned timer function and/or GPS function and a processor for computing signals communicable from the one or more modules to produce information signals analogous to the information signals communicated from the source module 108. In this regard, information signals can be generated by the speaker apparatus 102 and it is not necessary to rely on information signals communicated from the source module 108.

Referring to Fig. 5, a flow diagram of a method for audio processing is shown, in accordance with an embodiment of the disclosure. The method for audio processing can be in association with the sound system of Fig. 1.

The method for audio processing 500 can include a coupling step 502 and an identification step 504. The method for audio processing 500 can, as an option, further include an additional coupling step 506. The method for audio processing 500 can, as another option, further include an operational mode determination step 508.

In one embodiment, the method for audio processing 500 can include a coupling step 502 and an identification step 504.

At the coupling step 502, the first speaker apparatus 102a can be coupled, directly or indirectly, to the second speaker apparatus 102b by the coupling apparatus 104. This has been discussed earlier in detail in, for example, Fig. 1 to Fig. 4. In this regard, relevant portions of the earlier discussion analogously apply.

At the identification step 504, depending on how the first speaker apparatus 102a is coupled to the second speaker apparatus 102b (i.e., by the coupling apparatus 104), the first speaker apparatus can either be identified as a master device or a slave device. If the first speaker apparatus 102a is identified as a master device, the second speaker apparatus 102b can be identified as a slave device relative to the first speaker apparatus 102a. If the first speaker apparatus 102b is identified as a slave device, the second speaker apparatus 102b can be identified as master device relative to the first speaker apparatus 102a. This has been discussed earlier in detail in, for example, Fig. 1 to Fig. 4. In this regard, relevant portions of the earlier discussion analogously apply.

In another embodiment, the method for audio processing 500 can, in one option, further include one or both of an additional coupling step 506 and operational mode determination step 508 aside the aforementioned coupling step 502 and identification step 506.

At the coupling step 502, the first speaker apparatus 102a can be coupled, directly or indirectly, to the second speaker apparatus 102b by the aforementioned first coupling apparatus 404. This has been discussed earlier in detail in, for example, Fig. 4b. In this regard, relevant portions of the earlier discussion analogously apply.

At the additional coupling step 506, the second speaker apparatus 102b can be coupled, directly or indirectly, to a third speaker apparatus 402 by the aforementioned second coupling apparatus 406.

This has been discussed earlier with reference to, for example, Fig. 4b. In this regard, relevant portions of the earlier discussion analogously apply.

At the identification step 504, where the first speaker apparatus 102a is coupled to the second speaker apparatus 102b by the first coupling apparatus 404 and the second speaker apparatus 102b is coupled to the third speaker apparatus 402 by the second coupling apparatus 406, depending on how the first speaker apparatus 102a is coupled to the second speaker apparatus 102b (i.e., by the first coupling apparatus 404), the first speaker apparatus can either be identified as a master device or a slave device relative to the second speaker apparatus 102b. Additionally, depending on how the second speaker apparatus 102b is coupled to the third speaker apparatus 402 (i.e., by the second coupling apparatus 406), the second speaker apparatus 102b can either be identified as a master device or a slave device relative to the third speaker apparatus 402.

In one example, if the first speaker apparatus 102a is identified as a master device, the second speaker apparatus 102b can be identified as a slave device relative to the first speaker apparatus 102a. However, if the first speaker apparatus 102a is identified as a slave device, the second speaker apparatus 102b can be identified as master device relative to the first speaker apparatus 102a. This has been discussed earlier in detail in, for example, Fig. 1 to Fig. 4. In this regard, relevant portions of the earlier discussion analogously apply.

In another example, if the second speaker apparatus 102b is identified as a master device, the third speaker apparatus 402 can be identified as a slave device relative to the second speaker apparatus 102b. However, if the second speaker apparatus 102b is identified as a slave device, the third speaker apparatus 402 can be identified as a master device relative to the second speaker apparatus 102b. This has been discussed earlier in detail in, for example, Fig. 1 to Fig. 4. In this regard, relevant portions of the earlier discussion analogously apply.

At the operational mode determination step 508, the operational mode (party mode, extended party mode etc) can be determined based on logic signals communicated to the processing portion 206. Specifically, depending on how the first and speaker apparatuses 102a/102b are coupled by the coupling apparatus 104 (and, analogously, the first coupling apparatus 404) and/or how the second speaker apparatus 102b is coupled to the third speaker apparatus 402 by the second coupling apparatus 406, logic signals of predetermined values can be communicated to the processing portion 206. Based on the predetermined value of the logic signal (e.g., 1.5 Volt logic "1"

signal), an operational mode (e.g., party operational mode) can be determined. This has been discussed earlier in detail in, for example, Fig. 1 to Fig. 4. In this regard, relevant portions of the earlier discussion analogously apply.

In the foregoing manner, various embodiments of the disclosure are described for addressing at least one of the foregoing disadvantages. Such embodiments are intended to be encompassed by the following claims, and are not to be limited to specific forms or arrangements of parts so described and it will be apparent to one skilled in the art in view of this disclosure that numerous changes and/or modification can be made, which are also intended to be encompassed by the following claims.

In one example, earlier mentioned, each of the first and second speaker apparatuses 102a/102b are paired with a subwoofer 106 (i.e., each of the first and second speaker apparatuses 102a/102b is coupled to a subwoofer 106). It is appreciable that more than one subwoofer 106 can be paired with a speaker apparatus (i.e., first and/or second speaker apparatuses 102a/102b) as shown in Fig. 6a.

In another example, as shown in Fig. 6b, instead of coupling the first and second speaker apparatuses 102a/102b with the coupling apparatus 104 via the coupling portions 210 of the first and second speaker apparatuses 102a/102b (i.e., direct coupling of the first speaker apparatus 102a to the second speaker apparatus 102b using the coupling apparatus 104), it is also possible to pair each of the first and second speaker apparatuses 102a/102b with a subwoofer 106 and have the first speaker apparatus 102a coupled to the second speaker apparatus 102b via a subwoofer 106 (i.e., indirect coupling of the first speaker apparatus 102a to the second speaker apparatus 102b via the subwoofer 106). More specifically, it is also possible to couple the first and second speaker apparatuses 102a/102b via a combination of the subwoofer 106 and the coupling apparatus 104.

Specifically, as shown in Fig. 6b, a subwoofer 106 can be paired with the first speaker apparatus 102a. The first speaker apparatus 102a can be configured to process the audio signals and communicate the processed audio signals to the subwoofer 106 paired with the first speaker apparatus 102a. The subwoofer 106 paired with the first speaker apparatus 102a can be coupled to the second speaker apparatus 102b using the coupling apparatus 104 and can be configured to communicate the processed audio signals to the second speaker apparatus 102b. The second speaker apparatus 102b can, optionally, be paired with a subwoofer 106.

In yet another example, as shown in Fig. 6c, the first speaker apparatus 102a can be paired with a subwoofer 106 and a plurality of other speaker apparatuses 102 (e.g., the second speaker apparatus 102b and the third speaker apparatus 402) can be coupled to the first speaker apparatus 102a via the subwoofer 106 in an analogous manner as described in Fig. 6a. Each of the plurality of other speaker apparatuses 102 (e.g., the second speaker apparatus 102b and the third speaker apparatus 402) can be paired with a subwoofer 106.

Appreciably, there can be yet more operational modes aside those earlier discussed. For example, there can be a "phone saver mode" in association with a ninth exemplary scenario (not shown) where the sound system 100 can include a security feature and if the source module 108 (e.g., a Smartphone) is more than a predetermined distance away from the "master device," an alarm can be sounded. This can be done using the transceiver 202 for detecting the signal strength of the source module 108 and using the processing portion 206 for calculating the separated distance based on the detected signal strength. Conversely, a user (e.g., a child) can be holding on to the master device. If the master device is more than a predetermined distance away from the source module 108 (e.g., a Smartphone which can be carried by a parent of the child), the source module 108 can be configured to sound an alarm.

Further appreciably, the sound system 100 can be operable in power saving mode. Polling signals can be communicated from the "master device" to determine if the source module 108 is within range and, if the source module 108 is detected, the master device can be configured to produce only music audio or only voice audio based on audio signals communicated from the source module 108.

Claims

1. A sound system comprising
 - a coupling apparatus having a first end portion and a second end portion which is structurally different from the first end portion, and
 - a first speaker apparatus capable of being coupled to a second speaker apparatus by the coupling apparatus, the first speaker apparatus comprising
 - a connector for coupling to the first end portion or the second end portion of the coupling apparatus;
 - a sensor portion arranged to determine which of the first end portion or the second end portion of the coupling apparatus is coupled to the connector; wherein
 - the first speaker apparatus is configured as one of a master device and a slave device relative to the second speaker apparatus based on the determination by the sensor portion, and
 - wherein when configured as a master device relative to the second speaker apparatus, the first speaker apparatus is configured to receive audio signals communicated from a source module and process the audio signals for at least one of audio reproduction and further communication to the second speaker apparatus, and
 - wherein when configured as a slave device relative to the second speaker apparatus, direct communication of audio signals from the source module to the first speaker apparatus is impeded.
2. A sound system of claim 1, further comprising a processing portion coupled to the sensor portion,
 - wherein the sensor portion is configured to communicate a sensor signal to the processing portion based on the determination and the first speaker apparatus is configured as one of a master device and a slave device relative to the second speaker apparatus based on the sensor signal.
3. A sound system of claim 2,
 - wherein the sensor signal corresponds to a varying logic signal associable with a plurality of predetermined values, and
 - wherein based on a predetermined value from the plurality of predetermined values, the first speaker apparatus is configured as one of a master device and a slave device.

4. A sound system of any preceding claim, wherein the first end portion includes four sections electrically isolated from each other, and the second portion includes three sections electrically isolated from each other.
5. A sound system of any preceding claim further comprising:
the second speaker apparatus.
6. The sound system as in claim 5, wherein the first end portion of the coupling apparatus is coupled to the first speaker apparatus and the second end portion of the coupling apparatus is coupled to the second speaker apparatus to configure the first speaker apparatus as a master device relative to the second speaker apparatus and the second speaker apparatus is configured as a slave device relative to the first speaker apparatus.
7. The sound system as in claim 6,
wherein the system is configurable to be operable in at least one of a plurality of operational modes, the plurality of operational modes comprising :
 - party operational mode where audio signals are communicable from the source module to the first speaker apparatus, and the first speaker apparatus is configurable to communicate the received audio signals to the second speaker apparatus;
 - wide stereo operational mode where audio signals are communicable to the first speaker apparatus which is configurable to process the received audio signals by extracting a first portion of the received audio signals for audio reproduction whilst communicating a second portion of the received audio signals to the second speaker apparatus for further processing;
 - life saver operational mode where audio signals are capable of being randomly played to alert a user;
 - bedtime operational mode where loudness of the audio signals is capable of being varied by gradually reducing loudness;
 - wake operational mode where loudness of the audio signals is capable of being varied by gradually increasing loudness;
 - metronome operational mode where audio signals communicated from the source module are receivable and capable of being processed in a manner so that audibly perceivable audio signals are associable with a predetermined tempo; and

announcement operational mode where audio signals are capable of being output for providing information to a user.

8. The sound system as in claim 6,
wherein the system further includes a third speaker apparatus and a further coupling apparatus,

wherein a first end portion of the further coupling apparatus is coupled to the second speaker apparatus and a second end portion of the further coupling apparatus is coupled to the third speaker apparatus to configure the second speaker apparatus as a master device relative to the third speaker apparatus and the third speaker apparatus is configured as a slave device relative to the second speaker apparatus.

9. The sound system as in claim 8,
wherein the system is configurable to be operable in at least one of a plurality of operational modes, and

wherein the plurality of operational modes include:

extended party operational mode where audio signals are communicable from the source module to the first speaker apparatus which is configurable to communicate the received audio signals to the second speaker apparatus which is, in turn, configurable to communicate the received audio signals to the third speaker apparatus; and

extended wide stereo operational mode where audio signals are communicable from the source module to the first speaker apparatus which is configurable to process the received audio signals by extracting a first portion of the received audio signals for audio reproduction and communicating the received audio signals to the second speaker apparatus which is configurable to process the received audio signals by extracting a second portion of the received audio signals and mix the first and second portions to produce center channel audio characteristics, the second speaker apparatus being further configurable to communicate the second portion of the received audio signals to the third speaker apparatus for audio reproduction.

10. The sound system of claim 9,
wherein the coupling apparatus further comprises a light source portion coupled to at least one of the first end portion and the second end portion, the light source portion being configurable to emit light.

11. The sound system of claim 10, wherein the coupling apparatus further comprises a mixer portion coupled to at least one of the first end portion and the second end portion, the mixer portion being further coupled to the light source portion, the mixer portion being configurable to modulate light emitted from the light source portion to vary light emitted.
12. The sound system of claim 10 or 11, wherein the coupling apparatus includes a body portion coupling the first end portion and the second end portion, the body portion being constructed such that light emitted is visually perceivable.