

'258 Patent	'953 Patent	'001 Patent
<p>17. A first zone player comprising: ***</p> <p>receive control information from any one of a plurality of controllers over the LAN via the network interface, wherein the received control information comprises a direction for the first zone player to enter into a synchrony group with at least a second zone player;</p> <p>in response to the direction, enter into the synchrony group with the second zone player, wherein in the synchrony group, the first and second zone players are configured to playback audio in synchrony based at least in part on (i) audio content, (ii) playback timing information associated with the audio content, wherein the playback timing information is generated by one of the first or second zone players, and (iii) clock time information for the one of the first or second zone players, and wherein the generated playback timing information and the clock time information are transmitted from the one of the first or second zone players to the other of the first or second zone players, wherein the first and second zone players remain independently clocked while playing back audio in synchrony; and</p> <p>transmit status information to at least one of the plurality of controllers over the LAN via the network interface, wherein the status information comprises an indication of a status of the synchrony group.</p>	<p>7. A first zone player comprising: ***</p> <p>receiving a request to enter into a synchrony group with at least a second zone player that is communicatively coupled with the first zone player over a local area network (LAN);</p> <p>in response to receiving the request to enter into the synchrony group, entering into the synchrony group with the second zone player, wherein the first zone player is selected to begin operating as a slave of the synchrony group and the second zone player is selected to begin operating as a master of the synchrony group, and wherein the clock time of the first zone player differs from a clock time of the second zone player;</p> <p>after beginning to operate as the slave of the synchrony group:</p> <p>receiving, from the second zone player over the LAN, clock timing information that comprises at least one reading of the clock time of the second zone player;</p> <p>based on the received clock timing information, determining a differential between the clock time of the first zone player and the clock time of the second zone player;</p> <p>receiving, from the second zone player over the LAN, (a) audio information for at least a first audio track and (b) playback timing information associated with the audio information for the first audio track that comprises an indicator of a first future time, relative to the clock time of the second zone player, at which the first and second zone players are to initiate synchronous playback of the audio information for the first audio track;</p> <p>updating the first future time to account for the determined differential between the clock time of the first zone player and the clock time of the second zone player; and</p> <p>when the clock time of the first zone player reaches the updated first future time, initiating synchronous playback of the received audio information with the second zone player.</p>	<p>12. A first zone player comprising: ***</p> <p>receiving, via the network interface, a request to engage in synchronous playback of audio content as part of a synchrony group that includes at least a second zone player that is communicatively coupled to the first zone player via the at least one data network;</p> <p>after receiving the request to engage in synchronous playback of audio content as part of the synchrony group:</p> <p>detecting an indication that the first zone player is to operate in (a) one of a control-master mode or a control-slave mode for the synchrony group and (b) one of an audio-master mode or an audio-slave mode for the synchrony group; and</p> <p>beginning to operate in the synchrony group in accordance with the indication;</p> <p>wherein, while operating in the control-master mode for the synchrony group, the first zone player is configured to:</p> <p>receive, via the network interface, first control information for the synchrony group from a network device that is communicatively coupled to the first zone player; and</p> <p>based on the first control information, cause, via the network interface, at least one playback action to be applied in the synchrony group;</p> <p>wherein, while operating in the control-slave mode for the synchrony group, the first zone player is configured to:</p> <p>receive, via the network interface, second control information from another zone player; and</p> <p>perform one or more playback actions in accordance with the second control information;</p> <p>wherein, while operating in the audio-master mode for the synchrony group, the first zone player is configured to:</p> <p>obtain audio information that is representative of the audio content;</p> <p>generate playback timing information associated with the obtained audio information that is indicative of at least one future time that is relative to a reference clock time and denotes a time at which at least the first and second zone players are to engage in synchronous playback of a corresponding portion of the obtained audio information; and</p> <p>transmit, via the network interface, the obtained audio information and the generated playback timing information to the second zone player; and</p> <p>wherein, while operating in the audio-slave mode for the synchrony group, the first zone player is configured to:</p> <p>receive, via the network interface, audio information and playback timing information associated with the received audio information from another zone player; and</p> <p>engage in synchronous playback of the received audio information with at least the second zone player based on the received playback timing information associated with the received audio information while a local clock time of the first zone player differs from a local clock time of the second zone player.</p>