

Claims

1. An electronic device comprising:
 - a processing portion configurable to receive and process audio input signals in a manner so as to produce audio output signals, the audio input signals being associable with audio characteristics and a plurality of frequency ranges; and
 - a plurality of audio output portions coupled to the processing portion such that audio output signals are communicable to the audio output portions from the processing portion for output,
 - wherein the electronic device is positionable in at least a first orientation and a second orientation, and based on change in orientation to the second orientation when the electronic device is initially positioned in the first orientation, the processing portion is further configurable to at least one of:
 - one of vary and control at least a portion of the audio characteristics of the audio input signals; and
 - one of vary and control output of audio output signals.
2. The electronic device as in claim 1 wherein output of audio output signals is one of controlled and varied in the context of channel output of audio output signals when the audio output signals are associable with at least one of left channel output audio characteristics and right channel output audio characteristics
3. The electronic device as in claim 2,
 - wherein when the electronic device is positioned in the first orientation, a portion of the audio output portions is considered to be left channel speaker output and another portion of the audio output portions is considered to be right channel speaker output,
 - wherein when the electronic device is positioned in the second orientation, a portion of the audio output portions is considered to a portion of the audio output portions is considered to be left channel speaker output and another portion of the audio output portions is considered to be right channel speaker output,
 - wherein the portion of audio output portions considered to be left channel speaker output in the first orientation and the portion of audio output portions considered to be left channel speaker output in the second orientation are different,

wherein the portion of audio output portions considered to be right channel speaker output in the first orientation and the portion of audio output portions considered to be right channel speaker output in the second orientation are different,

wherein audio output signals associable with left channel output audio characteristics are output by the left channel speaker output regardless of change in orientation of the electronic device, and

wherein audio output signals associable with right channel output audio characteristics are output by the right channel speaker output regardless of change in orientation of the electronic device.

4. The electronic device as in claim 1 wherein output of audio output signals is one of controlled and varied in the context of directivity of output of audio output signals via the plurality of audio output portions.

5. The electronic device as in claim 1 wherein output of audio output signals is one of controlled and varied in the context of at least one of:

impeding output of at least one of the plurality of frequency ranges via at least a portion of the audio output portions; and

allowing output of only at least one of the plurality of frequency ranges via at least a portion of the audio output portions.

6. The electronic device as in claim 1 wherein output of audio output signals is one of controlled and varied in the context 3D audio positioning on the output of the audio output signals.

7. The electronic device as in claim 1 further comprising a sensor unit to one of sense and detect orientation of the electronic device, the sensor unit being configurable to communicate sensor signals indicative of orientation of the electronic device.

8. The electronic device as in claim 7 wherein the sensor unit corresponds to at least one of:

at least one gyroscope;

at least one digital compass; and

at least one accelerometer.

9. The electronic device as in claim 1,
wherein the audio output portions are initially calibrated prior to change in orientation of the electronic device,
wherein audio characteristics of the audio input signals relate to at least one of frequency characteristics, phase characteristics, amplitude and channel characteristics, and
wherein output of audio output signals is one of controlled and varied in the context of time delay in the output of at least a portion of the audio output portions.
10. An electronic device comprising:
a processing portion configurable to receive and process audio input signals in a manner so as to produce audio output signals, the audio input signals being associable with audio characteristics and a plurality of frequency ranges; and
a plurality of audio output portions coupled to the processing portion such that audio output signals are communicable to the audio output portions from the processing portion for output,
wherein the electronic device is movable between at least a first location and a second location, and based on movement of the electronic device to the second location when the electronic device is initially located in the first location, the processing portion is further configurable to at least one of:
one of vary and control at least a portion of the audio characteristics of the audio input signals; and
one of vary and control output of audio output signals.
11. An electronic device comprising:
a processing portion configurable to receive and process audio input signals in a manner so as to produce audio output signals, the audio input signals being associable with audio characteristics and a plurality of frequency ranges; and
a plurality of audio output portions coupled to the processing portion such that audio output signals are communicable to the audio output portions from the processing portion for output,
wherein the processing portion is further configurable to receive and process at least one of image signals and optical signals, and

wherein based on at least one of image signals and optical signals, the processing portion is yet further configurable to at least one of:

one of vary and control at least a portion of the audio characteristics of the audio input signals; and

one of vary and control output of audio output signals.

12. An electronic device comprising:

a processing portion configurable to receive and process audio input signals in a manner so as to produce audio output signals, the audio input signals being associable with audio characteristics and a plurality of frequency ranges; and

a plurality of audio output portions coupled to the processing portion such that audio output signals are communicable to the audio output portions from the processing portion for output,

wherein the processing portion is further configurable to receive and process voice input signals, and

wherein based on the voice input signals, the processing portion is yet further configurable to at least one of:

one of vary and control at least a portion of the audio characteristics of the audio input signals; and

one of vary and control output of audio output signals.

13. An electronic device comprising:

a processing portion configurable to receive and process audio input signals in a manner so as to produce audio output signals, the audio input signals being associable with audio characteristics and a plurality of frequency ranges; and

a plurality of audio output portions coupled to the processing portion such that audio output signals are communicable to the audio output portions from the processing portion for output,

wherein the electronic device is positionable in at least a first orientation and a second orientation and orientation of the electronic device is changeable between the first and second orientations.

wherein the processing portion is further configurable to receive and process at least one of image signals, optical signals and voice input signals, and

wherein based on at least one of the image signals, the optical signals, the voice input signals and change in orientation of the electronic device, the processing portion is yet further configurable to at least one of:

one of vary and control at least a portion of the audio characteristics of the audio input signals; and

one of vary and control output of audio output signals.

14. An electronic device suitable for use with a media player device configurable to communicate audio signals corresponding to audio input signals, the electronic device comprising:

a processing portion configurable to receive and process audio input signals in a manner so as to produce audio output signals, the audio input signals being associable with audio characteristics and a plurality of frequency ranges; and

a plurality of audio output portions coupled to the processing portion such that audio output signals are communicable to the audio output portions from the processing portion for output,

wherein the electronic device is positionable in at least a first orientation and a second orientation, and orientation of the electronic device is changeable between the first and second orientations,

wherein the electronic device is movable between at least a first location and a second location, and, by moving the electronic device, location of the electronic device is changeable between the first and second locations,

wherein the processing portion is further configurable to receive and process at least one of image signals, optical signals and voice input signals, and

wherein based on at least one of the image signals, the optical signals, the voice input signals, movement of the electronic device and change in orientation of the electronic device, the processing portion is yet further configurable to at least one of:

one of vary and control at least a portion of the audio characteristics of the audio input signals; and

one of vary and control output of audio output signals in the context of at least one of:

directivity of output of audio output signals via the plurality of audio output portions;

channel output of audio output signals;

impeding output of at least one of the plurality of frequency ranges
via at least a portion of the audio output portions; and
allowing output of only at least one of the plurality of frequency
ranges via at least a portion of the audio output portions.

Claims

1. An electronic device comprising:
 - a processing portion configurable to receive and process audio input signals in a manner so as to produce audio output signals, the audio input signals being associable with audio characteristics and a plurality of frequency ranges; and
 - a plurality of audio output portions coupled to the processing portion such that audio output signals are communicable to the audio output portions from the processing portion for output,
 - wherein the electronic device is positionable in at least a first orientation and a second orientation, and based on change in orientation to the second orientation when the electronic device is initially positioned in the first orientation, the processing portion is further configurable to at least one of:
 - one of vary and control at least a portion of the audio characteristics of the audio input signals; and
 - one of vary and control output of audio output signals,
 - wherein audio characteristics of the audio input signals relate to at least one of frequency characteristics, phase characteristics, amplitude and channel characteristics, and
 - wherein output of audio output signals is one of controlled and varied in the context of time delay in the output of at least a portion of the audio output portions.
2. The electronic device as in claim 1 wherein output of audio output signals is one of controlled and varied in the context of channel output of audio output signals when the audio output signals are associable with at least one of left channel output audio characteristics and right channel output audio characteristics.
3. The electronic device as in claim 2,
 - wherein when the electronic device is positioned in the first orientation, a portion of the audio output portions is considered to be left channel speaker output and another portion of the audio output portions is considered to be right channel speaker output,

wherein when the electronic device is positioned in the second orientation, a portion of the audio output portions is considered to be left channel speaker output and another portion of the audio output portions is considered to be right channel speaker output,

wherein the portion of audio output portions considered to be left channel speaker output in the first orientation and the portion of audio output portions considered to be left channel speaker output in the second orientation are different,

wherein the portion of audio output portions considered to be right channel speaker output in the first orientation and the portion of audio output portions considered to be right channel speaker output in the second orientation are different,

wherein audio output signals associable with left channel output audio characteristics are output by the left channel speaker output regardless of change in orientation of the electronic device, and

wherein audio output signals associable with right channel output audio characteristics are output by the right channel speaker output regardless of change in orientation of the electronic device.

4. The electronic device as in claim 1 wherein output of audio output signals is one of controlled and varied in the context of directivity of output of audio output signals via the plurality of audio output portions.

5. The electronic device as in claim 1 wherein output of audio output signals is one of controlled and varied in the context of at least one of:

impeding output of at least one of the plurality of frequency ranges via at least a portion of the audio output portions; and

allowing output of only at least one of the plurality of frequency ranges via at least a portion of the audio output portions.

6. The electronic device as in claim 1 wherein output of audio output signals in one of controlled and varied in the context 3D audio positioning on the output of the audio output signals.

7. The electronic device as in claim 1 further comprising a sensor unit to one of sense and detect orientation of the electronic device, the sensor unit being configurable to communicate sensor signals indicative of orientation of the electronic device.
8. The electronic device as in claim 7 wherein the sensor unit corresponds to at least one of:
- at least one gyroscope;
 - at least one digital compass; and
 - at least one accelerometer.
9. The electronic device as in claim 1,
- wherein the audio output portions are initially calibrated prior to change in orientation of the electronic device.
10. An electronic device comprising:
- a processing portion configurable to receive and process audio input signals in a manner so as to produce audio output signals, the audio input signals being associable with audio characteristics and a plurality of frequency ranges; and
 - a plurality of audio output portions coupled to the processing portion such that audio output signals are communicable to the audio output portions from the processing portion for output,
- wherein the electronic device is movable between at least a first location and a second location, and based on movement of the electronic device to the second location when the electronic device is initially located in the first location, the processing portion is further configurable to at least one of:
- one of vary and control at least a portion of the audio characteristics of the audio input signals; and
 - one of vary and control output of audio output signals,
- wherein audio characteristics of the audio input signals relate to at least one of frequency characteristics, phase characteristics, amplitude and channel characteristics, and
- wherein output of audio output signals is one of controlled and varied in the context of time delay in the output of at least a portion of the audio output portions.

11. An electronic device comprising:
- a processing portion configurable to receive and process audio input signals in a manner so as to produce audio output signals, the audio input signals being associable with audio characteristics and a plurality of frequency ranges; and
 - a plurality of audio output portions coupled to the processing portion such that audio output signals are communicable to the audio output portions from the processing portion for output,
 - wherein the processing portion is further configurable to receive and process at least one of image signals and optical signals, and
 - wherein based on at least one of image signals and optical signals, the processing portion is yet further configurable to at least one of:
 - one of vary and control at least a portion of the audio characteristics of the audio input signals; and
 - one of vary and control output of audio output signals,
 - wherein audio characteristics of the audio input signals relate to at least one of frequency characteristics, phase characteristics, amplitude and channel characteristics, and
 - wherein output of audio output signals is one of controlled and varied in the context of time delay in the output of at least a portion of the audio output portions.
12. An electronic device comprising:
- a processing portion configurable to receive and process audio input signals in a manner so as to produce audio output signals, the audio input signals being associable with audio characteristics and a plurality of frequency ranges; and
 - a plurality of audio output portions coupled to the processing portion such that audio output signals are communicable to the audio output portions from the processing portion for output,
 - wherein the processing portion is further configurable to receive and process voice input signals, and
 - wherein based on the voice input signals, the processing portion is yet further configurable to at least one of:
 - one of vary and control at least a portion of the audio characteristics of the audio input signals; and

one of vary and control output of audio output signals,
wherein audio characteristics of the audio input signals relate to at least one of frequency characteristics, phase characteristics, amplitude and channel characteristics, and
wherein output of audio output signals is one of controlled and varied in the context of time delay in the output of at least a portion of the audio output portions.

13. An electronic device comprising:

a processing portion configurable to receive and process audio input signals in a manner so as to produce audio output signals, the audio input signals being associable with audio characteristics and a plurality of frequency ranges; and

a plurality of audio output portions coupled to the processing portion such that audio output signals are communicable to the audio output portions from the processing portion for output,

wherein the electronic device is positionable in at least a first orientation and a second orientation and orientation of the electronic device is changeable between the first and second orientations.

wherein the processing portion is further configurable to receive and process at least one of image signals, optical signals and voice input signals, and

wherein based on at least one of the image signals, the optical signals, the voice input signals and change in orientation of the electronic device, the processing portion is yet further configurable to at least one of:

one of vary and control at least a portion of the audio characteristics of the audio input signals; and

one of vary and control output of audio output signals,

wherein audio characteristics of the audio input signals relate to at least one of frequency characteristics, phase characteristics, amplitude and channel characteristics, and

wherein output of audio output signals is one of controlled and varied in the context of time delay in the output of at least a portion of the audio output portions.