

What is claimed is:

1. An electronic device, comprising:
 - stimulation circuitry configured to generate a stimulation signal and to send it to one or more traversal circuits, the one or more traversal circuits configured to receive the stimulation signal and to modify it by changing at least its phase, and output the modified stimulation signal as a first signal; and
 - a processing module configured to receive the first signal, the processing module further comprising a demodulation circuit including a memory configured to store a processing module specific value, and configured to generate a demodulation signal associated with the first signal and having the same phase and frequency as the first signal;
 - wherein the demodulation circuit controls the phase of the demodulation signal by referring to the processing module specific value.
2. The electronic device of claim 1, wherein the one or more traversal circuits include a multi-touch panel.
3. The electronic device of claim 1, wherein the one or more traversal circuits include a proximity sensor panel.
4. The electronic device of claim 1, wherein the processing module further includes a mixer and is configured to mix the first signal and the demodulation signal.
5. The electronic device of claim 4, wherein mixing the first and the demodulation signals results in a signal selected from the group consisting of: a rectified version of the first signal, a demodulated version of the first signal, a noise suppressed version of the first signal, and a demodulated, rectified and noise suppressed version of the first signal.
6. The electronic device of claim 1, further comprising an initialization circuit configured to test various versions of the processing module specific values to determine a version for which the demodulation module produces a match to within predetermined limits between the phases of the demodulation and first signals, and save the version in the memory of the demodulation circuit.
7. The electronic device of claim 1, wherein:
 - the traversal circuits through which the stimulation signal travels when being modified to the first signal change over time causing the phase difference between the stimulation signal and the first signal to change over time;
 - the electronic device further comprises a plurality of timing specific values associated with the changes of phase difference between the stimulation and first signals over time, each timing specific value being associated with one or more time periods; and
 - the demodulation circuit is configured to control the phase of the demodulation signal by referring to the timing specific values as well as the processing module specific value.
8. The electronic device of claim 7, further comprising a test circuit configured to test various versions of the processing module specific value and the timing specific values in order to determine the versions of said values which result in a match to within predetermined limits between the phases of the first signal and the demodulation signal.
9. The electronic device of claim 7, further comprising a plurality of processing modules, wherein:
 - a different version of the first signal arrives at each processing module, at least two of said different versions having different phases; and
 - each processing module comprises a respective demodulation circuit whose memory includes a respective processing module specific value associated with the phase of the version of the first signal arriving at said processing module.
10. The electronic device of claim 1, wherein the electronic device is a mobile telephone.
11. The electronic device of claim 1, wherein the electronic device is a portable music player.
12. An electronic device comprising:
 - a multi touch panel;
 - a driver circuit for sending a stimulation signal to the multi touch panel; and
 - at least one analog channel for receiving an incoming signal from the multi touch panel, the incoming signal being related to the stimulation signal, the analog channel further comprising a demodulation circuit for generating a demodulation signal and controlling the phase of the demodulation signal so that it matches the phase of the incoming signal.
13. The electronic device of claim 12, wherein the demodulation circuit further comprises a memory, the memory comprising a channel specific phase delay value related to the phase of the incoming signal at the multi touch panel, wherein the demodulation circuit uses the channel specific phase delay value to control the phase of the demodulation signal.
14. The electronic device of claim 13, wherein the electronic device further comprises an initialization circuit, configured to test various versions of the channel specific phase delay value to determine a version which results in a demodulation signal whose phase matches the phase of the incoming signal to within predetermined limits, and save the version in the memory of the demodulation circuit.
15. The electronic device of claim 14, wherein the initialization circuit comprises a generally programmable processor running an initialization program.
16. The electronic device of claim 12, wherein the incoming signal results from the passing of the stimulation signal through the multi touch panel.
17. The electronic device of claim 12, wherein
 - the driver circuit is configured to send the stimulation signal to one or more of a plurality of electrodes of the multi touch panel and to periodically change the electrodes of the multi touch panel through which the stimulation signal is sent, said changing of electrodes causing a change in the phase of the incoming signal; and
 - the demodulation circuit is configured to periodically change the phase of the demodulation signal to reflect the changes of phase of the incoming signal.
18. The electronic device of claim 17, wherein:
 - the electronic device comprises a register including a plurality of time specific phase delay values;
 - each time specific phase delay value is associated with one or more electrodes through which the stimulation signal can be sent and is related to the resulting phase of the incoming signal if the stimulation signal is sent to said one or more electrodes; and
 - the demodulation circuit is configured to periodically access different time specific phase delay values in order to control the phase of the demodulation signal in accordance with periodic changes of the incoming signal.
19. The electronic device of claim 18, wherein the electrodes to which the stimulation signal is sent by the driver