CLAIMS

1. A watch comprising:

a timing circuit configured to provide information about a current time;

a smart watch circuit configured to provide smart watch functionality;

a first battery configured to provide energy to the timing circuit;

a second battery configured to provide energy to the smart watch circuit; and

a communication circuit configured to provide communication between the timing circuit and the smart watch circuit; and

wherein the communication circuit comprises a safety circuit configured to prevent leakage of current from the first battery to the second battery;

wherein the safety circuit comprises a plurality of first connections connected to the timing circuit, and comprises a plurality of second connections connected to the smart watch circuit;

wherein the first connections are configured to float;

wherein the second connections are configured to pull low for output connections among the second connections; and

wherein the second connections are configured to use a pullup resistor for input connections among the second connections.

2. The watch of claim 1,

wherein the first battery is configured to provide energy only to the timing circuit.

3. The watch of claim 1 or claim 2,

wherein the first battery is configured to prevent providing energy to the smart watch circuit.

4. The watch of any one of claims 1 to 3,

wherein the second battery is configured to provide energy only to the smart watch circuit.

5. The watch of any one of claims 1 to 4, further comprising:

a further circuit configured to determine an amount of energy in the second battery;

wherein the second battery is further configured to provide energy to the timing circuit if the further circuit determines that the second battery comprises more than a pre-determined amount of energy.

6. The watch of any one of claims 1 to 5,

wherein the communication circuit comprises at least one of an input/ output buffer or a series of input/ output buffers.

7. The watch of claim 6,

wherein the input/ output buffers comprises the safety circuit.

8. The watch of any one of claims 1 to 7,

wherein the communication circuit is configured to transmit setting information from the timing circuit to the smart watch circuit.

9. The watch of claim 8,

wherein the setting information comprises the information about the current time.

10. The watch of claim 8 or claim 9,

wherein the setting information comprises information indicating user preference settings.

11. The watch of any one of claims 1 to 10,

wherein the communication circuit is configured to provide synchronization information between the timing circuit and the smart watch circuit.

12. The watch of any one of claims 1 to 11, further comprising:

a display;

wherein the timing circuit is configured to provide the information about the current time on the display;

wherein the smart watch circuit is configured to provide information based on the smart watch functionality on the display.

13. The watch of any one of claims 1 to 12, further comprising:

a first display; and

a second display; and

wherein the timing circuit is configured to provide the information about the current time on the first display; and

wherein the smart watch circuit is configured to provide information based on the smart watch functionality on the second display.

14. The watch of any one of claims 1 to 13,

wherein the first battery comprises a non-rechargeable battery.

15. The watch of any one of claims 1 to 14,

wherein the first battery comprises a coin cell.

16. The watch of any one of claims 1 to 15,

wherein the first battery is configured to provide a current of substantially 20 uA or less.

17. The watch of any one of claims 1 to 16,

wherein the second battery comprises a rechargeable battery.

18. The watch of any one of claims 1 to 17,

wherein the second battery comprises a lithium ion battery.

19. The watch of any one of claims 1 to 18,

wherein the second battery is configured to provide a current of more than 50 uA and on average in a range between 100 uA and 200 uA.