

METHOD, AND DEVICE FOR CALIBRATING A MOTORIZED WATCH

FIELD OF THE INVENTION

[0001] The present invention relates generally to calibration in devices and more particularly, to a method and device for calibrating a motorized watch.

BACKGROUND OF THE INVENTION

[0002] Calibration is the method of comparing a device under test (DUT) of an unknown value with a reference standard of a known value. Calibration is primarily performed to determine the error or verify the accuracy of the DUT's unknown value. The procedures involved in calibrating devices may vary and differ, since it depends on the type of device and scheme of calibration. There are two main schemes in calibration, such as comparing with a source value and comparing with a calibrated measurement standard. There are several ways to calibrate an instrument depending on the type of instrument and the chosen calibration scheme.

[0003] In micro motor watches, the calibration is performed to correct minor variations/errors in the positions of one or more hands of watch and to accurately synchronize time by operating all hands of watch, whenever the watch is pairing or connecting with a mobile device for the first time. The calibration can also be performed to correct the error, after connection establishment between the mobile device and micro motor watch. Further, the user of micro motor watch may anytime calibrate the watch by manually pressing the primary or secondary crown. The primary and secondary crowns are used to adjust the positions of hour, minute and offset hands. All hands of the watch are positioned at 12:00 before calibration. During calibration, the micro motor corrects any error in the watch by automatically operating all hands of watch. After calibration, all hands of watch are aligned to the current time by reading the value from the time observance unit.

[0004] The following paragraphs provide a novel solution to prepare the motorized watch for calibration and to automatically initiate calibration through the connected mobile device.

SUMMARY OF THE INVENTION

[0005] In one aspect of present invention, a method for preparing a motorized watch for calibration comprising, capturing a first image of front side of motorized watch by a mobile device configured with a mobile application, comparing the first image of motorized watch with a reference image, identifying the positions of hour, minute and offset hands, by an image processing unit, preparing a first set of instructions to align all hands of motorized watch to 12:00 hours, sending a first instructions to the motorized watch from a mobile device, actuating

all hands of motorized watch to position 12:00 hours and initiating calibration by executing the first instructions received by the motorized watch.

BRIEF DESCRIPTION OF FIGURES

[0006] FIG. 1 is an example system 100 illustrating the motorized watch 110 and components of mobile device 120.

[0007] FIG.2 is illustrating example components of motorized watch 110.

[0008] FIG.3 is the example system 300 in an embodiment of the present invention, when the calibration is performed through a voice instruction from a mobile device or from an external device.

[0009] FIG.4 illustrates the example parts of a motorized watch 110 in an embodiment of the present invention.

[0010] FIG.5 is a flowchart illustrating the method of calibrating a motorized watch in an embodiment of the present invention.

[0011] FIG.6 is an embodiment of camera screen in the mobile application, illustrating the 'layout' for capturing the image of front side of motorized watch.

[0012] FIG.7 is a second embodiment of camera screen illustrating the layout for capturing the image of motorized watch.

[0013] FIG.8 is a first example method of capturing the image of motorized watch through the mobile application, in an embodiment of the present invention.

[0014] FIG.9 through 16 illustrates a second example method of capturing positions of all hands of motorized watch.

[0015] FIG.17 is a flowchart illustrating the method of actuating one or more hands of a motorized watch and performing calibration operation through a voice instruction.

DETAILED DESCRIPTION

[0016] FIG. 1 is an example system 100 illustrating the motorized watch 110 and components of mobile device 120. As shown there, the motorized watch 110 is connected to the mobile device 120 through a network (not shown). The network supports short-range communication such as Bluetooth or BLE. The components of mobile device 120 include a scanner 130, an image processing unit 140, a calibrator 150 and a control unit 160. The mobile device 120 is configured with a mobile application wherein which the components may be operated or configured in a manner. The mobile application further connected and interacts with the application server (not shown) and the database (not shown). In an embodiment, the motorized watch 110 may be equipped with three or more micro motors, wherein they can be operated to display time (through hands or arms), activity, alert to the users.

[0017] In an embodiment, the motorized watch 110 has at least one micro motor for driving the hour hand and the minute hand to characterize and display the time. The motorized watch 110 may contain a scheduler, and a time observance unit. The time observance unit is a real time clock (RTC) having a chip which keeps the current updated track of time. The scheduler is used to schedule an activity for a watch such as alarms etc.

[0018] In an embodiment, the mobile application may operate with one of more components of the mobile device such as camera, processor, memory, storage to initiate one or more instructions for the motorized watch. The scanner 130 is a camera of the mobile device 120, wherein the mobile application has the access to scan and capture photos of front side of motorized watch 110. The scanner 130 is an image scanner wherein, which captures the image of motorized watch 110 and transmits to an image processing unit 140. In an embodiment, user is provided an interface to manually upload the image of front side of motorized watch 110. The image processing unit 140 sharpens and remove any noise in the subject image of motorized watch 110, by applying one or more filters. The image processing unit 140 also employs edge detection, segmentation, feature extraction and thresholding techniques to analyze the input image. In an embodiment, the image processing is performed to primarily identify the positions of minute hand, hour hand and offset hand of motorized watch 110. The edge detection is used to identify points in a digital image at which the image brightness changes sharply or having discontinuities. The points at which image brightness changes sharply are typically organized into a set of curved line segments termed edges. Segmentation is a process of partitioning a digital image into multiple segments (for example, sets of pixels, or image objects). Image segmentation is used to locate objects and its boundaries (such as lines, curves, etc.) in the images. Features may be specific structures in the image such as points, edges or objects. One or more features are extracted from the input image of the motorized watch 110. Thresholding is the process of segmenting the image, for example from a grayscale image to a binary image. In an embodiment, the mobile application is configured with reference sample set of images of motorized watch 110 having different positional arrangements of minute, hour and offset hand. The input image which is being processed in image processing unit 140 is compared with the reference image to find the actual difference in values, which provide information about the actual or current positions of minute, hour and offset hand in the input image. After finding the actual positions of motorized watch 110, the control unit 160 identifies the actual time being displayed on the motorized watch 110. The control unit 160 sends an instruction to the motorized watch 110 to keep all hands to 12:00, in order to proceed with the calibration operation. The communication module of motorized

watch 110 receives the instruction from mobile device and transmits to the micro controller unit. The micro controller unit of motorized watch 110 executes subject instruction actuating one or more micro motors to position the hands (minute, hour and offset hand) to 12:00. When all hands reach 12:00 position in motorized watch 110, the mobile device synchronizes with the motorized watch 110 to perform calibration operation in order to identify and locate any error or technical glitch and correct them. During calibration operation, the calibrator 150 executes set of standard instructions through control unit 160 in order to check the accuracy of motorized watch 110. The control unit 160 of mobile device 120 is capable of controlling scanner 130, image processing unit 140 and calibrator 150.

[0019] FIG.2 is illustrating example components of motorized watch 110. The components include a controller 205, a time observance unit 210, a first actuator 215, a second actuator 225, a first micro motor 220, a second micro motor 230, an hour hand 235, a minute hand 240, an offset hand 245, a scheduler (not shown) and a communication module (not shown). The controller 205 is capable of controlling all components of the motorized watch 110. The scheduler is connected to the controller 205, a first actuator 215 and a second actuator 225. A communication module is configured to connect with the mobile device, to receive one or more instructions and transmit information to the mobile device. As shown there, the controller 205 executes one or more instructions to actuate the first and second actuators (215 and 225). The first micro motor 220 is connected to the first actuator 215, the time observance unit 210 and the controller 205. The second micro motor 230 is connected to the second actuator 225 and the controller 205. The first micro motor 220 is coupled to the hour hand 235 and minute hand 240, whereas the second micro motor 230 is coupled to the offset hand 245. The controller 205 receives and processes the instructions from the connected mobile device. The hour and minute hand (235 and 240) are operated by the first actuator 215 and first micromotor 220. The offset hand 245 is operated by the second actuator 225 and second micromotor 230. The mobile device captures the position of all three hands (235, 240 and 245) along with one or more dials in the motorized watch in order to efficiently recognize the positions of subject hands. In an embodiment, all three hands (235, 240 and 245) are simultaneously actuated to keep the 12:00 position, through one or more instructions, before calibration. During calibration, the hands (235, 240 and 245) are adjusted to check any minor errors and correct them. After calibration, the hour and minute hands (235 and 240) are aligned and automatically moved to show current actual time, whereas, the offset hand 245 moves to 'start' position (to display start of activity). In an embodiment, the offset hand 245 is used to show the progress, activity status, alarm, date, time 2, alert etc. In another embodiment, the dial of motorized watch 110 is marked with days

of week, and dates in a month. When the offset hand 245 is at start, which implies, 0% of goal is completed, there are 4 other values are marked within the offset dial such as 20, 40, 60,80 and 100 which directly implies the percentage of goal. The goal is related to the number of steps covered by the user, in a day, whereas, the goal is usually the target set by the user to achieve in a day. After calibration, the mobile application synchronizes the data with the motorized watch 110 and update the status, then the offset hand 245 is automatically moved to display amount of goal covered, as per the current user data. The primary crown of motorized watch 110 is used to control one or more activities of hands. For example, single press of primary crown displays the goal percentage (offset hand), double press displays a time 2 (current time in a second time zone) configured by the user, three press displays date and day, the day is projected by hour hand and date is projected by minute hand, four press displays the alarm time configured. The secondary crown pressed to position at least one hand, where the hand is moved or adjusted at least for 3⁰.

[0020] In an embodiment of the present invention, the mobile application navigates the procedure of positioning the arms before calibration, wherein, the user manually enters the positions of all hands of the motorized watch, then the calibration is performed by the mobile application.

[0021] FIG.3 is the example system 300 in an embodiment of the present invention, when the calibration is performed through a voice instruction from a mobile device or from an external device. As shown there, the components of the system include a motorized watch 310, a mobile device 320, a first communication network 330, an application server 340, a database 350, a second communication network 360, an external server 370 and an external device 380. As shown there, the motorized watch 310 is connected to the mobile device 320. The mobile device 320 is configured with a mobile application which can interact, transmit and receive instruction, send data, receive data to the application server 340 through the first communication network 330. The application server 340 processes the data from mobile device 320 and stores them in the database 350. In an embodiment, the application server 340 is connected to an external network 370 through a second communication network 360. In an embodiment, the external server 370 is autonomous and a second mobile application accessing data from external server 370 is configured in the mobile device 320 of the user. In an embodiment, the external server is connected to an external device, wherein the voice instruction from the user is first received, then transmitted to the application server for further processing. The external devices may be I/O devices, AV devices and other smart devices. In an example, the external server 370 process voice instructions and send or receive voice I/O.

In other words, the external server 370 receives input through voice and sends out output through the voice based or visual or smart devices. In an embodiment, the external server 370 is a part of application server, itself. In an embodiment, the user's voice instruction performs the calibration operation in the motorized watch 310. The user's voice instruction can be received from user's mobile device 320 or any external devices 380 connected with the application server (through one or more external server). The first mobile application is also capable of capturing voice instructions from user and sends out voice-based outputs to the user, during preparation of motorized watch for calibration and during calibration operation.

[0022] The example voice instruction and reply is as follows, the user asks the voice instruction unit (not shown, configured in the mobile device 320) to calibrate the motorized watch 310 then the voice instruction unit replies with, what is the time shown in the motorized watch 310, then the user replies with the actual time which is being displayed on the motorized watch 310 along with the instruction to calibrate the motorized watch 310. The voice instruction unit captures the time and calibration command, automatically prepares the relevant instructions for calibration and transmit those instructions to the motorized watch 310 through the connected mobile device 320. After executing the subject instructions, the motorized watch 310 is calibrated and synced.

[0023] FIG.4 illustrates the example parts of a motorized watch 110 in an embodiment of the present invention. As shown the parts include, an outer dial 410, an outer offset dial 420, an inner dial 430, an outer dial space 440, an hour hand 450, a minute hand 460, an offset hand 470, an inner dial space 480 and a primary crown 490. The outer dial 410 is the outermost dial of the motorized watch 110. The outer offset dial 420 holds and accommodates offset hand along with printed values such as start, goal, time2, alert, alarm, battery, date. The inner dial 430 is inner most dial of the motorized watch 110. The outer dial space 440 is the area between the outer and inner dial (410 and 430), which covers the date and day values around the watch surface. The inner dial space 480 accommodates the hour hand 450, minute hand 460, outer offset dial 420, offset dial printed values and offset hand 470. The numerals of watch are marked inside the inner dial space 480 in a circular fashion. The axis of hour and minute hand (450 and 460) is situated at center of the outer dial of motorized watch, whereas the axis of offset hand 470 is situated at center of the outer offset dial 420. The primary crown 490 is used to position the minute and hour hand (460 and 450) manually.

[0024] FIG.5 is a flowchart illustrating the method of calibrating a motorized watch in an embodiment of the present invention. As shown there, in step 510 of, capturing a first image of motorized watch by a mobile device configured with a mobile application. The mobile

device captures the front side of the motorized watch through the camera. In an embodiment, the camera before taking the picture, the screen in mobile application displays image alignment instructions to user, in order to effectively capture the image of motorized watch. The mobile device should be positioned at a particular height from the motorized watch, matching the outer dial of motorized watch to the outer circular line displayed in the camera screen of mobile application. And, further matching the center of motorized watch to the inner circular axis of the camera screen. Additionally, the inner dial and offset dial is provided in camera screen which should match the subject dials of motorized watch. In an embodiment, the photo of front side of the motorized watch taken by the user through the mobile application is the first image. [0025] In step 520 of, comparing the first image of motorized watch with reference image in the mobile application. The mobile application stores a set of reference images of motorized watch having different positions and combinations of hour, minute and offset hands. In step 530 of, identifying the actual positions of hour, minute and offset hands of motorized watch, by the mobile application. In step 540 of, preparing a first set of instructions to align all hands of motorized watch to 12:00 hours, by a mobile application. In an embodiment, the first set of instructions may provide the steps to align all hands of motorized watch to 12:00 hours, by actuating one or more micro motors. In step 550 of, sending the first instructions to the motorized watch from the mobile application. In step 560 of, actuating all hands of motorized watch to position 12:00 hours by the controller of the motorized watch. In one embodiment, the first set of instructions may comprise the procedure for clockwise and anti-clockwise rotation of one or more micro motors, to align the coupled hands to 12:00 hours. In another embodiment, the first set of instructions may comprise the procedure to 'calibrate' the motorized watch. In another embodiment, the controller of motorized watch reconfirms whether the position of all hands (hour, minute and offset hands) is at 12:00 hours, before initiating calibration operation. In step 570 of, initiating calibration of motorized watch by executing the first set of instructions received from the mobile device.

[0026] FIG.6, 7 and 8 illustrates a first example method of capturing the image of motorized watch within the layout of the camera screen. FIG.6 is an embodiment of camera screen in the mobile application, illustrating the 'layout' for capturing the image of front side of motorized watch. As shown there, the outer layout 610 covers the entire camera screen. The first axis 620 is the axis of the motorized watch having minute and hour hand. The second axis 630 is the axis of offset dial. The figure also shows an outer dial 410, an outer offset dial 420, an inner dial 430 of the motorized watch. Before taking the picture of motorized watch, the mobile device should be positioned at a height, adjusted and aligned to match the outer dial 410, an

outer offset dial 420, an inner dial 430 of the motorized watch, when they are aligned, the option 'scan' 640 to be clicked. The outer dial 410, an outer offset dial 420, an inner dial 430 are the alignment parameters of motorized watch, which differentiates the offset, and outer dial space. In another embodiment, the first and second axes should be positioned exactly while taking the picture matching their exact positions on the motorized watch. After clicking 'scan', the mobile application captures the image of motorized watch, with the positions of minute, hour and offset hand. In an embodiment, the mobile application automatically suggests to retake the picture, when the alignment of outer and inner dial is missing or image is blurred or axis alignment missing or offset dial alignment is missing. In an embodiment, the captured image is shown to the user to confirm to proceed with the image processing. The user is provided with options, proceed and retake, and user must select at least one option to proceed with further steps. The user clicks the option 'proceed' then the image is processed, otherwise, when user clicks 'retake' when not satisfied with the quality of picture taken and camera screen displays 'layout' to recapture the image.

[0027] The reference images of motorized watches are accessed by the image processing unit in order to find the difference in image and to identify actual positions of hour, minute and offset hands of motorized watch, taken as an image. The reference images also provide values of hour, minute and offset hand, thereby identifying the actual positions of subject hands in the image. After obtaining the positions, the mobile application provides instructions to align the hands at 12:00 for calibration. Then the user clicks the 'calibrate' option, then the instruction is executed at the motorized watch to check any error in measurement and a message 'calibration is successful' is shown to the user. Finally, the mobile application syncs the data to the motorized watch, where, the positions of minute and hour hand are moved to display the current updated time and synchronized data.

[0028] FIG.7 is a second embodiment of camera screen illustrating the layout for capturing the image of motorized watch. As shown there, multiple offset dials are displayed depending on their locations in the subject motorized watch. The motorized watch may have one or more offset dials and capable of displaying useful information to the user. The user should position the mobile device to align the layouts of offset dials including the outer and inner dials and their axes. The image processing unit is capable of identifying one or more offset dials in motorized watch since their positions are predefined. In an embodiment, the image processing unit processes the captured image in layout wise, such as A, B, C, D and E. The layouts A and B are constant, whereas, C, D and E are dynamic which depends on the design make and offset dials of the watch. By default, layout C may be at the bottom. The motorized watch may have

all three offset dials C, D and E, or two dials (C&D, D&E, E&D) or only single dials (C or D or E) as in their respective positions. The image processing unit while processing should analyze all samples sets of all offset dials for determining the position and location of one or more offset dials and their hands.

[0029] FIG.8 is a first example method of capturing the image of motorized watch through the mobile application, in an embodiment of the present invention. The mobile device should be vertically placed or positioned above the motorized watch, aligning the layouts of respective dials and axes, at least at a height of 0.5 feet or at the feasible height to cover and align the layouts. After user verifies that the alignment is accurate, then user clicks the option 'scan' or 'calibrate' in the mobile screen, to capture the image of motorized watch and calibrate in a single step.

[0030] FIG.9 through 16 illustrates a second example method of capturing positions of all hands of motorized watch. FIG.9 shows the first step in calibration, wherein the positions of minute, hour and offset hand are at the last known synced values of motorized watch. The user clicks 'Next' to move to next screen. FIG.10 shows the manner in which calibration operation to be performed in the mobile application and provide information to the user. The user clicks 'Next' to move to next screen. FIG.11 shows the actual position of hour hand of motorized watch. The user using a mover 1110 which is outside the watch dial on mobile screen adjusts the position of hour hand. The position of hour hand of motorized watch is made in the mobile screen. After adjusting the hour hand for 12:00 hours, user clicks 'Next' to move to next screen. FIG.12 shows the actual position of minute hand of motorized watch. The user using a mover 1210 which is outside the watch dial on mobile screen, adjusts the position of minute hand. The position of minute hand of motorized watch is made to point 12:00 hours in the mobile screen. After adjusting the position of minute hand, user clicks 'Next' to move to next screen. FIG.13 shows the actual position of offset hand of motorized watch. The user using a mover 1310 which is outside the offset dial on mobile screen, adjusts the position of offset hand. The position of offset hand of motorized watch is made to point 12:00 hours in the mobile screen. After adjusting the position of offset hand, user clicks 'Next' to move to next screen.

[0031] FIG.14 illustrates an adjustment screen wherein minor adjustments may be made on the mobile screen with the help of side arrows provided to each of the hands. The adjustments made are directly affected on the motorized watch and positioning is made accurately to keep all hands at 12:00 hours. After adjustment, the user clicks 'Done' to initiate and perform 'Calibration' operation in the motorized watch. FIG.15 shows the example success message when calibration operation is completed at the motorized watch. FIG.16 shows the landing

screen when the motorized watch connected to the mobile application is successfully calibrated and the process of syncing the activity data is initiated, wherein, the mobile application receives and retrieves activity data of the user and plot them in the graph to visually display the current progress of the activity.

[0032] FIG.17 is a flowchart illustrating the method of actuating one or more hands of a motorized watch and performing calibration operation through a voice instruction. As shown there, in step 1710 of, initiating a calibration operation through a first voice instruction by a mobile device. For example, the user interface of mobile application provides an option to user to calibrate through voice instruction. The user may say 'calibrate' the motorized watch as instruction. In step 1720 of, receiving the first voice instruction by a mobile device. The mobile application (configured in the mobile device) is capable of identifying and recognizing user's voice. In step 1730 of, requesting the user to disclose the current time of motorized watch. The mobile application asks the user to manually say the current time (during connecting the motorized watch for the first time or during pairing, where, the application server/database does not have the data relating to the user and the motorized watch). In an embodiment, the mobile device automatically fetches the current time being displayed in the motorized watch. In step 1740 of, receiving the current time of motorized watch through a second voice instruction. In step 1750 of, preparing and sending instructions to calibrate the motorized watch. In an embodiment, the mobile application automatically prepares and sends instructions to calibrate the watch, whenever, the user say 'calibrate' my watch, as a voice instruction. In step 1760 of, actuating all hands of motorized watch to 12:00 before initiating calibration and perform calibration operation. The motorized watch receives the instruction from mobile device to actuate all hands of watch and calibrate and synchronize with the mobile device.

[0033] While various embodiments of the present disclosure have been described above, it should be understood that they have been presented by way of example only, and not limitation. Thus, the breadth and scope of the present disclosure should not be limited by any of the above-discussed embodiments but should be defined only in accordance with the following claims and their equivalents.

Claims

We claim,

1. A method for preparing a motorized watch for calibration comprising:
 - capturing a first image of front side of the motorized watch by a mobile device configured with a mobile application;
 - comparing the first image of the motorized watch with a reference image;
 - identifying the positions of hour, minute and offset hands of the motorized watch, by an image processing unit;
 - preparing a first set of instructions to align all hands of motorized watch to 12:00 hours;
 - sending the first instructions to the motorized watch from the mobile device;
 - receiving the first instructions by a controller of the motorized watch, through a communication module;
 - actuating all hands of the motorized watch to position 12:00 hours; and
 - initiating calibration by executing the first instructions received by the controller of the motorized watch.
2. The method of claim 1 further comprising:
 - initiating a calibration operation through a first voice instruction by a mobile device;
 - receiving the first voice instruction by a mobile device;
 - requesting the user to disclose the current time of motorized watch;
 - receiving the current time of motorized watch through a second voice instruction;
 - preparing and sending instructions to calibrate the motorized watch; and
 - actuating all hands of motorized watch to 12:00 hours before initiating calibration and perform calibration operation and synchronize with the mobile device.
3. A method of preparing the camera for capturing an image of motorized watch comprising:
 - positioning a camera of a mobile device at a predefined height;
 - aligning an outer dial of motorized watch with the outer circular line of camera;
 - aligning an inner dial of motorized watch with the inner circular line of camera;
 - aligning the center of motorized watch with the inner circular axis of camera;

aligning the offset dial of motorized watch with the offset circular line of camera; and

capturing an image of front side of motorized watch.

4. The method of claim 3, wherein, the gap between the camera of mobile device and front side of motorized watch is 0.5 feet.
5. A system for preparing a calibration operation comprising:
 - a motorized watch; and
 - a mobile device, configured with a mobile application, connected with the motorized watch, and capable of receiving voice instructions directly from the user, transmitting a first set of instructions to the motorized watch, wherein, the first set of instructions include, means of actuating at least one hand from plurality of hands, positioning the hands at 12:00 hours and performing calibration of the motorized watch.
6. The system of claim 5, wherein, the motorized watch contains hour hand, minute hand and offset hand.
7. The system of claim 5, further comprising:
 - a first communication network;
 - an application server, connected to the mobile device through the first communication network, capable of processing the information from mobile device and capable of analyzing and processing voice-based instructions;
 - a database capable of storing the information processed by the application server;
 - a second communication network;
 - an external device connected with the external server wherein, the external device receives one or more voice instructions from the user and transmits them to the external server and capable of outputting audio or video messages to the user; and
 - an external server, capable of analyzing and processing voice-based instructions, connected to the application server through the second communication network, wherein, a first voice instruction to calibrate a motorized watch is received by the external device, transmitted and processed at the application server.
8. The system of claim 7, wherein, the one or more voice instruction from the user is received by both mobile device and external device, and subject voice instruction is transmitted to application server and external server respectively for processing.
9. The system of claim 7, wherein, the external server is an integral part of the application server.

10. The system of claim 7, wherein, the external device output a message to the user requesting the current time displayed on the motorized watch.
11. The system of claim 8, wherein, receiving a second voice instruction having a current time, by the external server and thereby application server, and preparing the first set of instructions to actuate all hands of the watch to 12:00 hours and to perform calibration operation, wherein, the first set of instructions are transmitted to the motorized watch through the mobile device.
12. A motorized watch comprising:
 - a controller capable of monitoring, processing one or more instructions from a mobile device;
 - a time observance unit capable of updating the current time;
 - a pair of actuators;
 - a pair of micro motors, wherein, the first actuator, time observance unit and controller are connected to the first micro motor, and, wherein, the second actuator, and controller are connected to the second micro motors;
 - a pair of hands, is capable of displaying the time, wherein, which is actuated by the movement of the first micro motor; and
 - an offset hand is capable of displaying one or more activity status, wherein, which is actuated by movement of second micro motor.
13. The device of claim 12, wherein, the pair of hands are hour hand and minute hand.
14. The device of claim 13, wherein, the controller receives a first set of instructions from a connected mobile device to prepare motorized watch for calibration and perform calibration.
15. The device of claim 14, wherein, the hour hand, minute hand and offset hand are actuated by first and second micro motor when the controller executes the first set of instructions.