ABSTRACT

An exercise environment controller is integrated into an exercise device and being usable to adjust one or more environmental parameters relative to an exercise device environment. The integrated exercise environment controller includes an input interface that receives environmental inputs from a user of the exercise device, an environment sensor that detects current environment parameters of the exercise device’s environment, and a communication module connected to the input interface and the environment sensor that communicates a control command to a home automation device that regulates climate for at least the exercise device environment.
Run Exercise Program on Exercise Device

Receive User And/Or Sensor Input

Generate control commands

Transmit Control Commands to Home

Receive Control Commands At Home Automation Device

Process Control Commands At Home Automation Device

Adjust Climate Of Exercise Environment

Fig. 5
INTEGRATED EXERCISE DEVICE ENVIRONMENT CONTROLLER

SUMMARY OF THE INVENTION


TECHNICAL FIELD

[0002] This disclosure relates generally to systems, methods, and devices for exercise. More particularly, the disclosure relates to an exercise environment controller which can be used to control the environments surrounding an exercise device.

BACKGROUND

[0003] Exercise devices are used all over the world. Individuals use exercise devices to relieve stress, improve their health and increase their fitness level. Many exercise devices are used when an individual’s schedule or inclement weather prohibits the individual from exercising outdoors. Additionally, some exercise devices, such as treadmills, are used to train for competitions. For instance, distance runners often use treadmills to train for upcoming races. Such training allows the individual to conveniently monitor various aspects of their performance (e.g., pace, speed, distance, time, etc.) during their training session as many treadmills track and display such information. Additionally, treadmills with adjustably inclining treadbases can also simulate the terrain the user will experience during the upcoming race. As a result, individuals do not have to train at the actual location of an upcoming race to be familiar with the race course.

[0004] While treadmills can be useful in exercising and training for a race, indoor training is often uncomfortably warm or cool. For example, a cool room may be too cool when a user begins their exercise, but then becomes too warm during their exercise. Similarly, a warm room may start out being comfortable to the user, but then, as the user exercises, the room becomes hot to the user. These variances in temperature can have a negative impact on the individual’s exercise performance. For instance, it may be difficult for an individual to maintain their pace and/or form when the environment is uncomfortably warm or cool.

[0005] Various exercise device climate controllers have been developed that allow for the adjustment of climate controls relative to an exercise device environment. For instance, U.S. Patent Publication No. 2009/0108082 discloses an apparatus for controlling the climate of a localized exercise environment. The apparatus is external to the exercise devices that are in the exercise room. The external device can control heating, cooling, humidity and air flow within the exercise room. Similarly, U.S. Patent Publication 2009/0209393 discloses an external climate controller that simulates the weather of a selected running route. The controller can also control heaters, air conditioners and other environmental control units. Other environment controllers that allow for the adjustment of environment parameters are disclosed in International PCT Application WO 2009/058637 A1, U.S. Pat. No. 6,152,856 and U.S. Patent Publication No. 2011/0065371.

[0006] In one embodiment of the disclosure, an integrated exercise environment controller is integrated into an exercise device and is usable to adjust one or more environmental parameters relative to an exercise device environment. The integrated exercise environment controller includes an input interface that receives environmental inputs from a user of the exercise device. The integrated exercise environment controller also includes an environment sensor that detects current environment parameters of the exercise device’s environment. A communication module is connected to the input interface and the environment sensor and communicates a control command to a home automation device that regulates climate for at least the exercise device environment. Upon receiving either an input from the input interface or an indication from the environment sensor, one or more environmental settings of the home automation device are adjusted using the control command.

[0007] In another aspect that may be combined with any of the aspects herein, an input interface of the integrated exercise environment controller includes buttons that are selectively activatable by the user.

[0008] In another aspect that may be combined with any of the aspects herein, input interface buttons allow the user to modify environment parameters for the exercise device’s environment including air temperature.

[0009] In another aspect that may be combined with any of the aspects herein, an exercise device environment is located in a household, the environment of which is regulated by the home automation device.

[0010] In another aspect that may be combined with any of the aspects herein, the integrated exercise environment controller provides control over one or more environments in the household that are different than the exercise device’s environment.

[0011] In another aspect that may be combined with any of the aspects herein, the communication module communicates with the home automation device to control one or more heating or cooling devices.

[0012] In another aspect that may be combined with any of the aspects herein, the communication module communicates with the home automation device to control one or more of the following: fans, misters and central air circulation systems.

[0013] In another aspect that may be combined with any of the aspects herein, the environment sensor determines current exercise parameters including one or more of the following: user’s heart rate, user’s body temperature, current pace of the exercise machine, current incline of the exercise machine.

[0014] In another aspect that may be combined with any of the aspects herein, the communication module further includes a network interface that communicates with the home automation device via a wired connection.

[0015] In another aspect that may be combined with any of the aspects herein, the communication module further comprises a wireless network interface that communicates with the home automation device wirelessly.

[0016] In another aspect that may be combined with any of the aspects herein, a display is provided that displays commands performable on the home automation device.

[0017] In another aspect that may be combined with any of the aspects herein, user input at the display causes the home automation device to perform various tasks.

[0018] In another aspect that may be combined with any of the aspects herein, the display further displays status data.
regarding aspects of home automation including at least one of the following: home security, home lighting and home appliance control.

[0019] In another aspect that may be combined with any of the aspects herein, the communication module communicates with the home automation device to control lighting in the exercise device environment.

[0020] In another aspect that may be combined with any of the aspects herein, a storage module is provided to store user profiles, wherein each profile includes user-specific exercise environment settings.

[0021] In another aspect that may be combined with any of the aspects herein, an exercise system includes an exercise device and an integrated exercise environment controller.

[0022] In another aspect that may be combined with any of the aspects herein, an exercise device includes a movable element that is movable during the performance of exercise, the movable element having one or more adjustable operating parameters.

[0023] In another aspect that may be combined with any of the aspects herein, an exercise device includes a receiver that receives control commands related to one or more adjustable operating parameters of a movable element.

[0024] In another aspect that may be combined with any of the aspects herein, an exercise device includes an actuator that causes one or more adjustable operating parameters to be adjusted in response to control commands received by a receiver.

[0025] In another aspect that may be combined with any of the aspects herein, an integrated exercise environment controller includes an input interface that receives environmental inputs from a user of the exercise device.

[0026] In another aspect that may be combined with any of the aspects herein, an integrated exercise environment controller includes an environment sensor that detects current environment parameters of the exercise device’s environment.

[0027] In another aspect that may be combined with any of the aspects herein, an integrated exercise environment controller includes a communication module connected to the input interface and the environment sensor that communicates a control command to a home automation device that regulates climate for at least the exercise device environment, wherein upon receiving either an input from the input interface or an indication from the environment sensor, one or more environmental settings of the home automation device are adjusted using the control command.

[0028] In another aspect that may be combined with any of the aspects herein, the communication module further includes a wireless network interface that communicates with the home automation device wirelessly.

[0029] In another aspect that may be combined with any of the aspects herein, the integrated exercise environment of the exercise device controller automatically controls the exercise device environment as sensor data is received from the environment sensor.

[0030] In another aspect that may be combined with any of the aspects herein, the exercise device further includes a display that displays status data regarding one or more aspects of home automation including at least one of the following: home security, home lighting and home appliance control.

[0031] In another aspect that may be combined with any of the aspects herein, a method for controlling a home automation system using an integrated exercise environment controller includes running an exercise program on an exercise device, wherein the exercise program controls the one or more operating parameters of the exercise device, and wherein the exercise program is initiated via a user input mechanism on the exercise device.

[0032] In another aspect that may be combined with any of the aspects herein, a method for controlling a home automation system using an integrated exercise environment controller includes receiving at least one of the following: user input indicating a desired change in exercise device environment and environment sensor input indicating one or more current workout parameters.

[0033] In another aspect that may be combined with any of the aspects herein, a method for controlling a home automation system using an integrated exercise environment controller includes transmitting a control command from the integrated exercise environment controller to the home automation system to control the exercise device environment based on at least one of the received user input and the received environment sensor input.

**BRIEF DESCRIPTION OF THE DRAWINGS**

[0034] FIG. 1 illustrates an exercise system according to one example embodiment of the present invention.

[0035] FIG. 2 is a side view of the exercise system of FIG. 1 with an exerciser exercising therewith.

[0036] FIG. 3 is a schematic diagram of the exercise system of FIG. 1.

[0037] FIG. 4 illustrates a top view of the exercise system of FIG. 1 located within an exercise room of a household.

[0038] FIG. 5 is a functional block diagram of a process for controlling an exercise device environment using a home automation system.

**DETAILED DESCRIPTION**

[0039] The present disclosure is directed to systems, methods, and devices for exercise. Depicted in FIGS. 1 and 2 is a representation of one illustrative exercise system 100, which may incorporate the novel features of the present invention, including various novel devices, functionalities, hardware and software modules, and the like. As shown, exercise system 100 includes an exercise device 102 with an integrated exercise environment controller 101. In FIG. 2, an exerciser is shown exercising on exercise device 102 that implements the integrated exercise environment controller 101.

[0040] In the illustrated embodiment, exercise device 102 is depicted as a treadmill and includes a console or control panel 106 having user input mechanisms 107 that may be used to control various aspects of exercise device 102 and/or the exercise device’s environment. For instance, integrated exercise environment controller 101 may communicate with a home automation device (131 in FIG. 4) to control the climate surrounding the exercise device 102. The integrated exercise environment controller 101 includes a communication module 103 to communicate with the home automation device 131. The integrated exercise environment controller 101 further includes a sensor 105 for determining the exercise device’s current environment.

[0041] Control panel 106 is illustrated as being supported on a generally upright support structure 108. Upright support structure 108, in this illustrated embodiment, includes two side members 110, 112 connected to a base frame 114. Side members 110, 112 and base frame 114 may have various
configurations and may be fabricated from various materials so long as they are capable of supporting control panel 106. A treadmill 116 is connected to support structure 108 and typically includes front and rear pulleys 118, 120 with a continuous belt 122 extending between and around front and rear pulleys 118, 120, respectively. Treadmill 116, front and rear pulleys 118, 120, and continuous belt 122 may be considered, individually or collectively, as movable elements that are movable during the performance of an exercise. A deck 124 typically supports the upper run of belt 122 and an exercising individual positioned upon belt 122.

As is common with electric treadmills, at least one of front pulley 118 and rear pulley 120 may be mechanically connected to an actuator, such as an electric belt drive motor 126. In the illustrated embodiment, belt drive motor 126 turns front or rear pulley 118, 120 in order to rotate belt 122. Belt drive motor 126 is electrically connected to a controller 128 that controls the operation of belt drive motor 126, and thus the speed of belt 122, in response to various inputs. The speed of belt 122 is one example of an adjustable operating parameter of exercise device 100.

Controller 128 can be incorporated within treadmill 116, control panel 106, or another portion of exercise device 100. Controller 128 may take the form of a computer, a processor, a microprocessor, a microcontroller, state machine or other similar device that includes circuitry for controlling the operation of one or more features on exercise device 100, including the operating parameter(s) of the movable element(s). As will be discussed in greater detail below, controller 128 may also perform other functions, such as receiving and implementing control commands.

In addition to the ability to control and vary the speed of belt 122, exercise device 102 may also allow the exerciser to control the exercise device’s environment (e.g., an exercise room 121, FIG. 4). For instance, buttons 109 and 111 may allow the exerciser to increase or decrease the air temperature in the exercise room 121. The integrated exercise environment controller’s sensor 105 senses the current temperature of the room 121. If the room is too warm, for example, the communication module 103 of the integrated exercise environment controller 101 indicates to the home automation device 131 that the exercise room 121 is to be cooled. Conversely, if the room is too cool, the communication module 103 of the integrated exercise environment controller 101 indicates to the home automation device 131 that the exercise room 121 is to be warmed up.

The integrated exercise environment controller 101 may also communicate other environmental changes to the home automation device 131. For instance, the integrated exercise environment controller 101 may indicate that fans, misters or other climate-controlling devices are to be operated by the home automation device 131. Thus, as shown in FIG. 2, fan 113 (which can be external to the exercise device 102 or built-in to the exercise device) may be controlled by the integrated exercise environment controller 101 through communication with the home automation device 131. The integrated exercise environment controller 101 indicates to the home automation device that the fan is to be turned on, or that the fan speed level is to be adjusted up or down. The home automation device then communicates to the fan via a communications interface 117 that the fan is to be turned on/off or that the fan level is to be adjusted.

Similarly, the mister 115 may be controlled by the integrated exercise environment controller 101. The mister 115 may be a standalone device, it may be integrated into the fan (as shown in FIG. 2) or it may be built into the exercise device 102. The mister may be turned on, turned off or the spray level may be adjusted by the integrated exercise environment controller 101 through communication with the home automation device 131. The home automation device 131 may use the household’s built-in air conditioning and heating system 123 in addition to fans, misters or other climate controlling devices. The home automation device 131 may control a heating device to heat the air that is pushed into the exercise room 121 via vent 119. The home automation device 131 may also control an air conditioner to cool the air that is pushed into the exercise room 121 via vent 119.

Thus, the environment changing capabilities of exercise device 102 provide exercise system 100 with additional operating parameters that may be adjusted to vary the climate or “exercise environment” of the exercise device. The altering of the climate may be accomplished by a wide variety of heating, cooling and other devices. The environmental changes may occur as the result of a direct user input at input mechanisms 107. For example, a user may use button 111 to decrease the temperature of the room via use of the fan 113, use of the mister 115 and/or use of cool air forced through the vent 119. When the user has completed his or her workout, he or she may use button 109 to increase the temperature of the room by turning off the fan 113, turning off the mister 115 and/or increasing the temperature of the air coming out of the vent 119.

Additionally or alternatively, the environmental changes may occur as an automated reaction to detecting that the user has initiated, ended or altered his or her exercise. The integrated exercise environment controller 101 may detect that the exerciser has initiated a workout, has ended a workout, or has increased or decreased the intensity of the workout. The integrated exercise environment controller 101 may detect the change in state and automatically change the environment according to predefined settings (e.g., decrease room temperature as workout intensity increases) or according to user-defined settings. The integrated exercise environment controller 101 may also detect changes in a user’s heart rate, the user’s body temperature, current pace of the exercise machine, current incline of the exercise machine or other measured or sensed parameters. The integrated exercise environment controller 101 may then communicate with the home automation device 131 to alter the exercise environment accordingly.

Still further, the environmental changes may occur as an automated reaction to changes in a pre-set exercise program. The integrated exercise environment controller 101 may determine that the exerciser has initiated a predefined or pre-set exercise program and that, as part of the program, the intensity of the exercise will increase or decrease. For instance, the integrated exercise environment controller may determine that the user is “running intervals” or is otherwise exercising according to an interval workout. The integrated exercise environment controller 101 may then communicate with the home automation device 131 to alter the exercise environment accordingly as the user progresses through the interval workout (e.g., increase fan speed, decrease room temperature, initiate misters, etc. during an interval and perform the opposite when the interval has ended). Similar adjustments in room climate may be made for hill workouts, cardio...
workouts, endurance workouts or any other type of pre-defined or pre-set workouts selectable on the exercise device 102.

[0051] With continued attention to FIGS. 1 and 2, attention is now directed to FIG. 3, which illustrates a block diagram of system 100. As shown in FIG. 3, integrated exercise environment controller 101 includes a processor 125 that is in communication with communications module 103 and sensor 105. Upon receiving input from user input mechanism 107, or upon receiving input from sensor 105, the processor may use the communications module 103 to communicate with home automation device 131. The communications module 103 may communicate control commands to the home automation device 131 via a wired or wireless connection between exercise device 102 and home automation device 131. A wireless connection between exercise device 102 and home automation device 131 may be any type of wireless connection, including Bluetooth, infrared (IR), radio frequency (RF), wireless fidelity (Wi-Fi), and the like. Accordingly, communications module 103 may include a Bluetooth, infrared (IR), radio frequency (RF), wireless fidelity (Wi-Fi), or other type of wireless transmitter or receiver. Home automation device 131 also includes a wired or wireless transceiver of any of the above types which receives data from and transmits data to the integrated exercise environment controller 101 of exercise device 102.

[0052] Upon receiving control data from the communications module 103 of the integrated exercise environment controller 101, the home automation device 131 then generates unique commands or forwards the received commands to the appropriate climate-controlling devices. For instance, the home automation device 131 may send control commands to fan 113, mister 115 and/or central air heating and cooling system 123. The home automation device may also control other climate controlling devices or other types of devices that are not listed on FIG. 3. Still further, the home automation device 131 may communicate commands or other information back to the exercise device 102. For instance, the home automation device 131 may indicate home security status updates to the exercise device (e.g., indicating that someone is at the front door, or that a window has been opened, etc.). Accordingly, the integrated exercise environment controller 101 and the home automation device 131 may be in substantially constant communication with each other and each device may control the other and/or provide status updates to the other.

[0053] Attention is now directed to FIG. 5, which illustrates a flow diagram of exemplary method 140 that may be implemented to control an exercise device environment using an integrated exercise environment controller communicatively connected to a home automation system. Method 140 may begin with step 142 in which an exercise program is run on an exercise device, such as exercise device 102. The exercise program may include one or more control commands that adjust the operating parameters of the exercise device. For instance, the exercise program may periodically adjust the resistance, incline, or speed of the exercise device and/or the movable elements of the exercise device to vary the intensity of the exerciser’s workout or to simulate a real world course. Alternatively, the exercise program may simply be the initial exercise device settings selected by the exerciser. The running of the exercise program may be initiated via one or more of the user input mechanisms 107 on the exercise device 102.

[0054] Method 140 may also include (at step 144) receiving at least one of the following: user input indicating a desired change in exercise device environment and environment sensor input indicating one or more current workout parameters. The user inputs may relate to one or more desired adjustments to be made to the environment of the exercise device. For instance, the user inputs may relate to a desired increase or decrease in the temperature of the room 121 in which the exercise device 102 is currently placed. The environment sensor inputs may provide various workout parameters including the temperature of the exercise room 121, the humidity level of the exercise room, the air speed of any blowing fans (e.g., 113), the spray level of any spraying misters (e.g., 115), the exerciser’s current heart rate, the exerciser’s current body temperature or other parameters relating to the user’s workout.

[0055] In step 146, control commands may be generated in response to the user inputs and/or the received environment sensor input. The control command may be representative of the user input received at the input mechanisms 107 or sensed parameters determined by sensor 103 or other parameters communicated by the integrated exercise environment controller. As such, the commands may be representative of the desired adjustments to be made to the operating parameters of the exercise environment.

[0056] After generation, the control commands are transmitted from the integrated exercise environment controller 101 to the home automation device 131, as indicated in step 148. As noted elsewhere herein, the control commands may be communicated from the integrated exercise environment controller 101 to the home automation device via a wired or wireless connection therebetween. In step 150, the control commands are received by the home automation device.

[0057] After the home automation device has received the control commands, the home automation device may optionally process the control commands in step 152. Finally, the home automation device may adjust the climate of the exercise environment in response to the user and/or sensor inputs received at the integrated exercise environment controller in order to reflect the desired changes in the exercise environment in step 154.

[0058] Attention is now directed to back to FIG. 4. Exercise device 102 may be placed in an exercise room 121 within a household 130. Many functions of the household may be controlled by the home automation device 131. For instance, the home automation device may control a home security system including cameras, door and window sensors and other security features. The home automation device 131 may also control appliances such as refrigerators, washing machines and dishwashers (among others). Still further, the home automation device 131 may control interior and exterior lighting.

[0059] In addition to the above, the home automation device 131 may also control heating and cooling for the household. The heating and cooling may be controlled on a whole-house level, on a floor-by-floor level, or on a room-by-room level. In cases where the heating and cooling is controlled on a room-by-room level, the home automation device may regulate or change the temperature in exercise room 121 by controlling the household’s heating and air conditioning system 123. Still further, the home automation device 131 may control (via wired or wireless communication) individual heating and cooling apparatuses including fan 113 and mister 115. The home automation device 131 controls these
devices according to control commands received from the integrated exercise environment controller 101. Accordingly, the integrated exercise environment controller 102 of exercise device 102 may communicate with the home automation device 131 to control the exercise device’s environment.

INDUSTRIAL APPLICABILITY

[0060] In general, embodiments of the present disclosure relate to exercise systems, devices, and methods that enable an exerciser to control an exercise device’s environment using a home automation device. The systems, devices, and methods of the present disclosure allow an exerciser to adjust the environment parameters of an exercise environment using a home automation device that controls household climate.

[0061] When exercising on an exercise device, an exerciser may desire to adjust one or more environment parameters of the exercise environment in order to exercise more effectively. For instance, the exerciser may want to decrease the temperature of the exercise environment in order to avoid overheating while exercising. In other situations, the exerciser may want to increase the temperature, such as after the exerciser has completed his or her workout.

[0062] The systems and devices disclosed herein enable an exerciser to adjust environmental parameters of an exercise environment using an integrated exercise environment controller that is communicatively connected to a home automation device. The integrated exercise environment controller receives user input indicating which environmental parameters are to be changed for the exercise room. Moreover, the integrated exercise environment controller may receive sensor inputs indicating which environmental parameters are to be changed. In such cases, the integrated exercise environment controller may communicate with the home automation device to automatically control the exercise device’s environment based on parameters detected by the sensor.

[0063] Manually changing climate controlling devices may be very tedious during a workout. For example, when an exerciser is running on a treadmill, it can be difficult to reach a nearby fan or mist and press the desired buttons in order to achieve the desired cooling effects. Moreover, manually changing a household temperature each time the user exercises may be very cumbersome, and the temperature will not change as the user exercises.

[0064] In contrast to manually changing settings on a cooling or heating device, or manually changing settings on a home automation device, a user may simply begin exercising and allow the integrated exercise environment controller to control the exercise environment automatically. The user may begin exercising and the sensor(s) of the integrated exercise environment controller detect that the user has initiated a workout. The integrated exercise environment controller can then communicate with the home automation device to indicate that the climate of the exercise room is to be cooled. The home automation may then send control signals to one or more different cooling devices including fans, misters and a central air conditioning system to begin cooling the exercise room. As the user works out and increases the speed of the workout, increases the incline of the exercise device, increases in body temperature and/or in heart rate, the integrated exercise environment controller can communicate with the home automation device to automatically cool the exercise room accordingly (either at a pre-defined rate or at a rate that corresponds to exercise intensity or user body temperature/heart rate). As such, the temperature of the user’s exercise room may be dynamically adjusted while the user works out.

[0065] Thus, the user does not need to think about whether to heat or cool the exercise room—these commands are generated automatically by the integrated exercise environment controller. Because the exercise environment controller is integrated into the exercise device, the user can directly interface with the home automation device using the exercise device’s display. Thus, the display can show not only the user’s workout data, but also data from the home automation device. The exercise device display may show home automation data including home security data (camer data, window and door data, online status information, etc.), home lighting (in some cases, allowing the user to control interior or exterior lighting from the display) and home appliance control (in some cases, allowing the user to control appliance functions from the display). Accordingly, the exercise device’s display may provide an interface into the home automation device, which then allows the user to control features provided by the home automation device directly from the exercise device.

[0066] Users may thus simply begin a workout and allow the integrated exercise environment controller and home automation device to work in tandem to produce a desirable workout environment. The user may be able to fine tune the temperature or other environment parameters manually if desired. For instance, some users may prefer to have higher or lower fan speed. Similarly, some users may prefer to have more or less mist spraying from a mister. Accordingly, the integrated exercise environment controller may include memory to store user profile data. The user’s profile data may indicate such climate control settings. These climate control settings may then be used when an identified user is using the exercise device.

[0067] While embodiments of the invention have been described in the context of a motorized treadmill, it is understood that the invention is not limited to any particular type of exercise device. Accordingly, the term “exercise device” shall refer broadly to any type of device that takes the form of an exercise machine, including, but not limited to, treadmills, exercise cycles, Nordic style ski exercise devices, rowers, steppers, likers, climbers, and elliptical or strider exercise devices. These various types of exercise devices may include interfaces that allow users to modify the climate of the exercise environment. Moreover, each of these types of exercise device may include an integrated exercise environment controller which can automatically regulate the climate of that device’s exercise environment.

We claim:

1. An exercise environment controller that is integrated into an exercise device, the integrated exercise environment controller being usable to adjust one or more environmental parameters relative to an exercise device environment, the integrated exercise environment controller comprising:

- an input interface that receives environmental inputs from a user of the exercise device;
- an environment sensor that detects environmental inputs from a user of the exercise device environment;
- a communication module connected to the input interface and the environment sensor that communicates control signals to a home automation controller device that regulates climate for at least the exercise device environment, wherein upon receiving either an input from the input interface or an indication from the environment sensor,
one or more environmental settings of the home automation device are adjusted using the control command.

2. The integrated exercise environment controller of claim 1, wherein the input interface includes buttons that are selectively activatable by the user.

3. The integrated exercise environment controller of claim 2, wherein the buttons allow the user to modify environment parameters for the exercise device’s environment including air temperature.

4. The integrated exercise environment controller of claim 1, wherein the exercise device environment is located in a household, the environment of which is regulated by the home automation device.

5. The integrated exercise environment controller of claim 4, wherein the integrated exercise environment controller provides control over one or more environments in the household that are different than the exercise device’s environment.

6. The integrated exercise environment controller of claim 1, wherein the communication module communicates with the home automation device to control one or more heating or cooling devices.

7. The integrated exercise environment controller of claim 6, wherein the communication module communicates with the exercise device to control one or more of the following: fans, misters and central air circulation systems.

8. The integrated exercise environment controller of claim 1, wherein the environment sensor determines current exercise parameters including one or more of the following: user’s heart rate, user’s body temperature, current pace of the exercise machine, current incline of the exercise machine.

9. The integrated exercise environment controller of claim 1, wherein the communication module further comprises a network interface that communicates with the home automation device via a wired connection.

10. The integrated exercise environment controller of claim 9, wherein the communication module further comprises a wireless network interface that communicates with the home automation device wirelessly.

11. The integrated exercise environment controller of claim 1, further comprising a display that displays commands performable on the home automation device.

12. The integrated exercise environment controller of claim 11, wherein user input at the display causes the home automation device to perform one or more tasks.

13. The integrated exercise environment controller of claim 11, wherein the display further displays status data regarding one or more aspects of home automation including at least one of the following: home security, home lighting and home appliance control.

14. The integrated exercise environment controller of claim 1, wherein the communication module communicates with the home automation device to control lighting in the exercise device environment.

15. The integrated exercise environment controller of claim 1, further comprising a storage module to store user profiles, wherein each profile includes user-specific exercise environment settings.

16. An integrated exercise environmental control system, comprising:

an exercise device, comprising:
a movable element that is movable during the performance of exercise, the movable element having one or more adjustable operating parameters;
a receiver that receives control commands related to the one or more adjustable operating parameters; and

an actuator that causes the one or more adjustable operating parameters to be adjusted in response to the control commands received by the receiver; and

an integrated exercise environment controller, the integrated exercise environment controller comprising:
an input interface that receives environmental inputs from a user of the exercise device;
an environment sensor that detects current environment parameters of the exercise device’s environment; and

a communication module connected to the input interface and the environment sensor that communicates a control command to a home automation device that regulates climate for at least the exercise device environment, wherein upon receiving either an input from the input interface or an indication from the environment sensor, one or more environmental settings of the home automation device are adjusted using the control command.

17. The exercise system of claim 16, wherein the communication module further comprises a wireless network interface that communicates with the home automation device wirelessly.

18. The exercise system of claim 16, wherein the integrated exercise environment controller automatically controls the exercise device environment as sensor data is received from the environment sensor.

19. The exercise system of claim 16, further comprising a display that displays status data regarding one or more aspects of home automation including at least one of the following: home security, home lighting and home appliance control.

20. A method for controlling an exercise device environment using an integrated exercise environment controller communicatively connected to a home automation system, the method comprising:

running an exercise program on an exercise device, wherein the exercise program controls the one or more operating parameters of the exercise device, and wherein the exercise program is initiated via a user input mechanism on the exercise device;

receiving at least one of the following: user input indicating a desired change in exercise device environment and environment sensor input indicating one or more current workout parameters;

generating a control command based on at least one of the received user input and the received environment sensor input; and

transmitting the generated control command from the integrated exercise environment controller to the home automation system to control the exercise device environment.