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(54) **CONTROL SYSTEM FOR EXERCISING DEVICES**

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(57) **ABSTRACT**

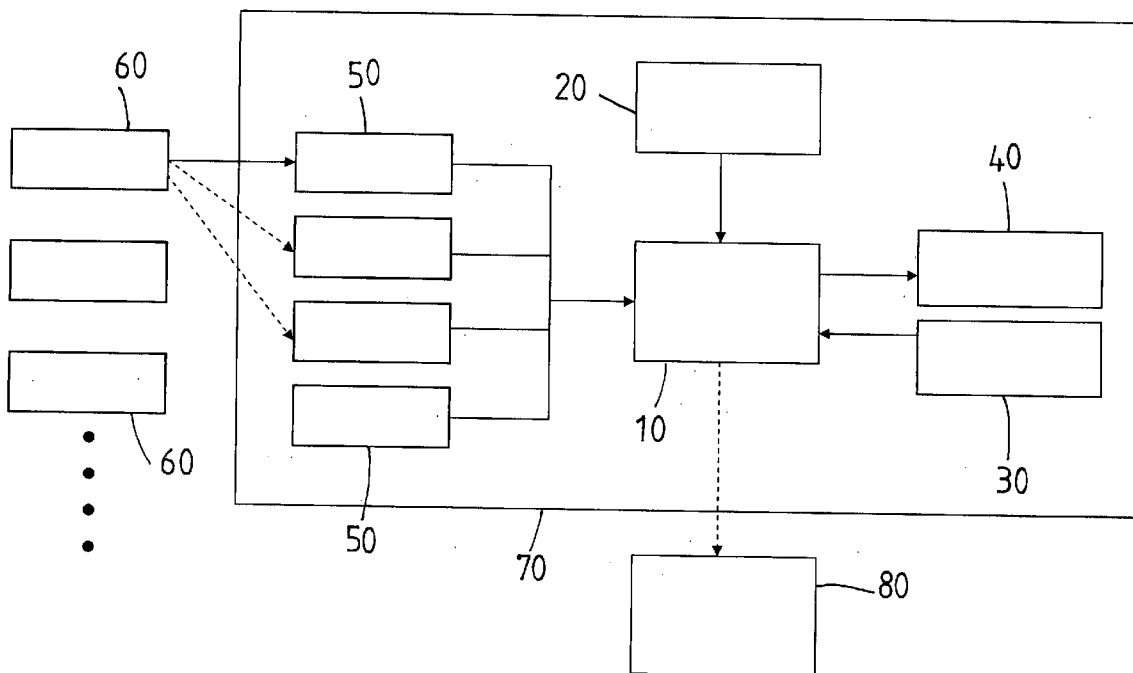
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A control system for exercising devices includes a central processing unit (CPU) with which an input interface, an output interface and at least one reading device are respectively connected thereto. At least one portable memory device is removably inserted into the at least one reading device and the CPU receives data from the portable memory device via the at least one reading device and sends commands to and control driving unit of the exercising device so as to set the exercising device at desired status quickly. The data of the portable memory device can also be displayed in the output interface.

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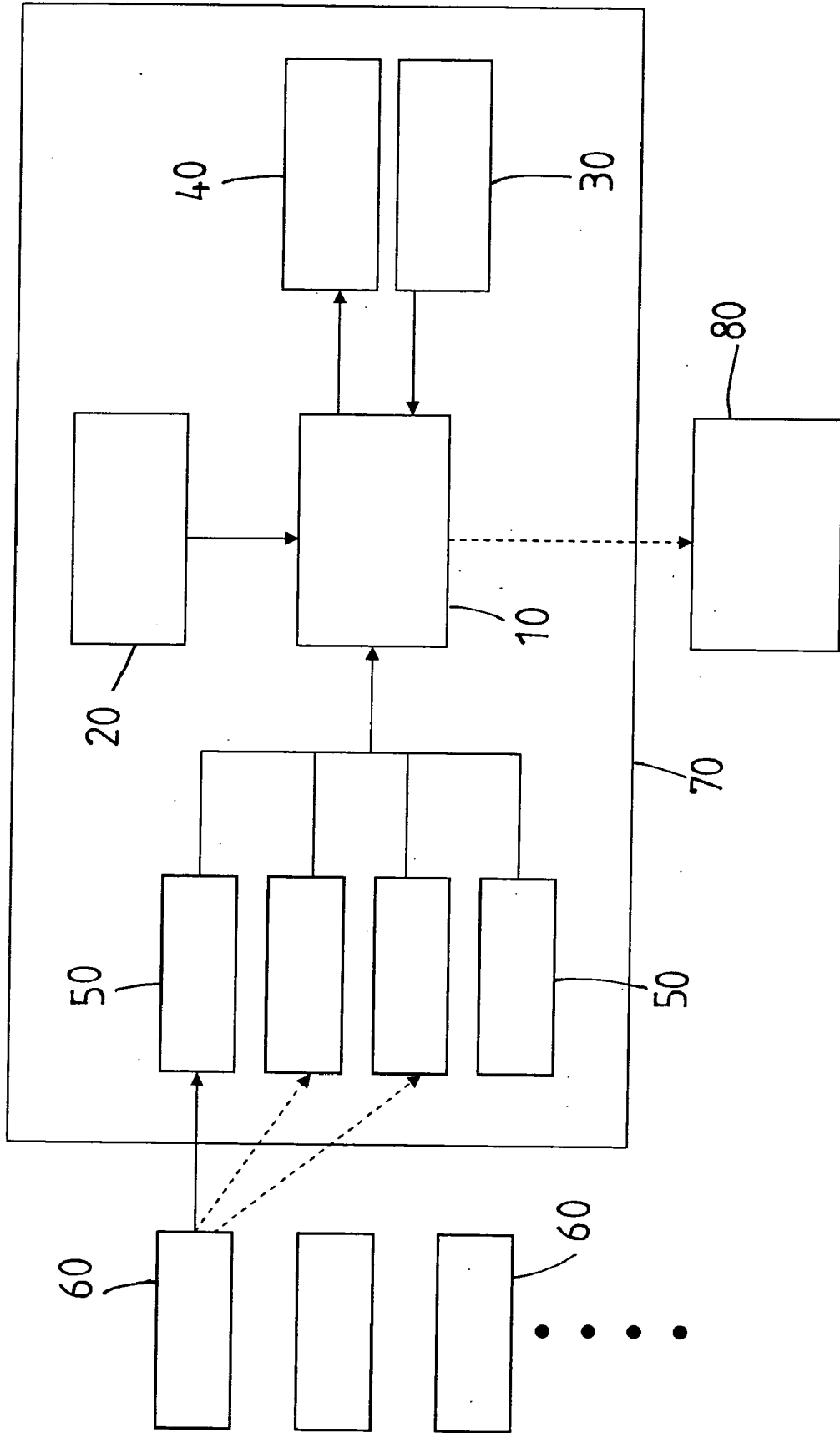


FIG. 1

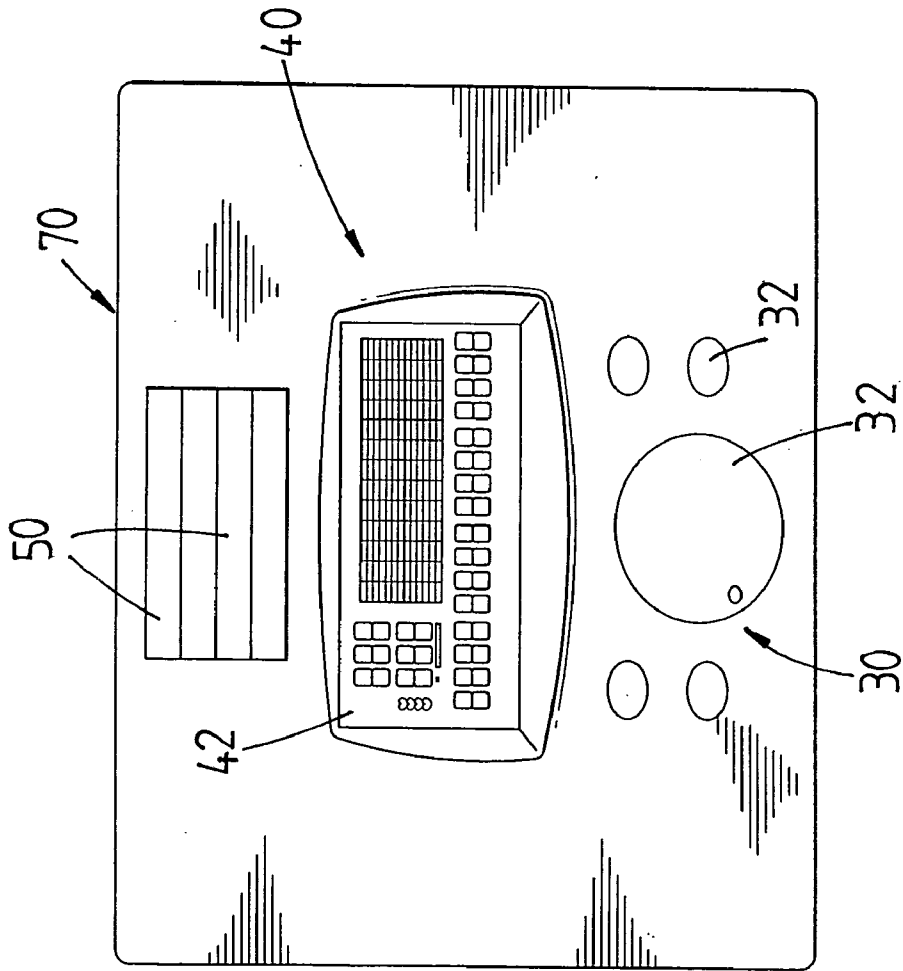


FIG. 2

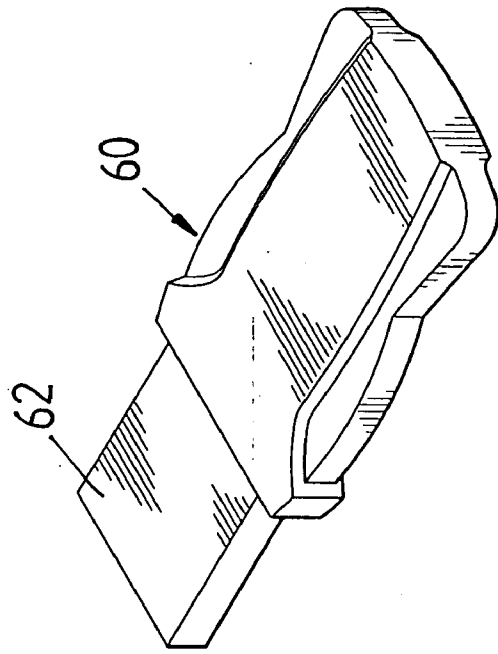


FIG. 3

CONTROL SYSTEM FOR EXERCISING DEVICES

FIELD OF THE INVENTION

[0001] The present invention relates to a control system including portable memory device for allowing the user to quickly record individual information and set the exercising device.

BACKGROUND OF THE INVENTION

[0002] A conventional exercising device simply provides pre-set function for the users to exercise. Although most of the modem exercising devices includes control panel so that the users may operate on the panel to set the exercising devices to desired status. For example, some treadmills are equipped with a control panel which includes several buttons which can be pressed to set the inclination of the frame with the endless belt, the speed, the resistance and the period of time. However, once the exercising device is reset when the user finishes his or her exercising program, all the settings are initialized. The following user has to set the exercising device again according individual needs. This takes a lot of time and the control panel cannot provide consistent information for the users. The users have to write the information on a note and bring the notes with them so as to remind the record of previous exercising results.

[0003] The present invention intends to provide a control system that includes a portable memory device which can be electronically connected with the CPU in the control panel and the exercising device is set to desired status for every individuals.

SUMMARY OF THE INVENTION

[0004] The present invention relates to control system for exercising devices and the system comprises a central processing unit (CPU), an input interface connected to the CPU, an output interface connected to the CPU for receiving commands from the CPU and at least one reading device connected to the CPU. At least one portable memory device is removably connected to the at least one reading device and the CPU receives data of the portable memory device via the at least one reading device, and sends commands to and control driving unit of the exercising device.

[0005] The present invention will become more obvious from the following description when taken in connection with the accompanying drawings which show, for purposes of illustration only, a preferred embodiment in accordance with the present invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0006] **FIG. 1** shows block diagram of the control system of the present invention;

[0007] **FIG. 2** shows a control panel with the control system of the present invention, and

[0008] **FIG. 3** shows the portable memory device used in the control system of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0009] Referring to **FIGS. 1 to 3**, the control system of the present invention comprises a central processing unit (CPU

10), an input interface **30** connected to the CPU **10**, a memory device **20**, an output interface **40** connected to the CPU **10** and receiving commands from the CPU **10**, four reading devices **50** connected to the CPU **10**, and a portable memory device **60** which includes an insertion end **62** in the form of universal serial bus (USB) so that the insertion end **62** can be inserted into a port of the reading device **50**. The CPU **10** can also be integrally connected with memory units. The input interface **30** includes several buttons **32** so as to input commands to the CPU **10**.

[0010] The output interface **40** is disposed to a control panel **70** and includes a display screen **42** to show information or status of the exercising device and/or the data of the users. The display screen **42** may use LCD's, diagrams or any known method for displaying the information.

[0011] The CPU **10** receives data of the portable memory device **60** via the reading device **50** and sends commands to and controls driving unit **80** of the exercising device. The CPU **10** calculates and processes the data in the portable memory device **60** and displays the data stored in the output interface **40**. The portable memory device **60** includes a random access memory (RAM) for storing the user's personal information such as the membership number, the authorization that the user may use the exercising device, and the dates and time that the user have used the exercising device and the reading device **50**. The CPU **10** may amend the data in the portable memory device **60** via the reading device **50** and displays the data on the display screen **42**. The portable memory device **60** may utilize magnetic strips, bar codes or chips and the reading device **50** includes a magnetic strip scanning device or an optimal scanning device for reading data in the chips.

[0012] The reading devices **50** can be designed to able to read different forms of data sources such as the magnetic strips, bar codes or chips as mentioned above. The reading device **50** can also be connected with other hard disks, personal computers, or internet information. Of course, other data transmission system can also be used such as wireless transmission.

[0013] The memory unit **20** is connected to the CPU **10** which is able to write data into or withdraw data from the memory unit **20**. The data in the portable memory device **60** is compared with data stored in the memory unit **20** when the portable memory device **60** is connected to the reading device **50**, and the CPU **10** sends commands to the driving unit **80** accordingly. By this way, the exercising device is immediately set to desired status for individual users. The CPU **10** can also write data of users into the memory unit **20** and sends commands to the driving unit **80** according to the data in the memory unit **20**. The CPU **10** calculates and processes the data in the memory unit **20** and displays the data stored in the output interface **40**.

[0014] The system is convenient for the users to set the exercising devices to be desired status by inserting the portable memory device **60** to the reading device **50** of the exercising device. The system provides correct information about how much time and how many times that the individual user has used the exercising device. This is especially helpful for those who pay for the period of time of use.

[0015] While we have shown and described the embodiment in accordance with the present invention, it should be

clear to those skilled in the art that further embodiments may be made without departing from the scope of the present invention.

What is claimed is:

1. A control system for exercising devices, comprising:
a central processing unit (CPU);
an input interface connected to the CPU;
an output interface connected to the CPU and receiving commands from the CPU;
at least one reading device connected to the CPU, and
a portable memory device removably connected to the at least one reading device, the CPU receiving data of the portable memory device via the at least one reading device and sending commands to and controlling driving unit of the exercising device.
2. The system as claimed in claim 1 further comprising a memory unit connected to the CPU which writes data into or withdraws data from the memory unit, the data in the portable memory device being compared with data stored in the memory unit and the CPU sending commands to the driving unit accordingly.

3. The system as claimed in claim 2, wherein the CPU writes data of users into the memory unit and sends commands to the driving unit according to the data in the memory unit.

4. The system as claimed in claim 2, wherein the CPU calculates and processes the data in the memory unit and displays the data stored in the output interface.

5. The system as claimed in claim 2, wherein the CPU amends the data in the portable memory device via the at least one reading device.

6. The system as claimed in claim 2, wherein the CPU calculates and processes the data in the portable memory device and displays the data stored in the output interface.

7. The system as claimed in claim 1, wherein the portable memory device includes random access memory (RAM) and the at least one reading device includes a port into which the portable memory device is inserted.

8. The system as claimed in claim 1, wherein the portable memory device includes magnetic strip or chips and the at least one reading device includes a magnetic strip scanning device or an optimal scanning device for reading data in the chips.

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