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(54) **CONTROL CONSOLE AUTOMATICALLY  
PLANNING A PERSONAL EXERCISE  
PROGRAM IN ACCORDANCE WITH THE  
MEASURED VALUE OF THE  
CARDIOPULMONARY CONDITION**

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(57) **ABSTRACT**

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The present invention relates to a control console automatically planning a personal exercise program in accordance with the measured value of the cardiopulmonary condition and comprising a cardiopulmonary condition sensor which is installed in a body-building device. Besides, the control console is fitted with a microprocessor which automatically plans an optimal exercise program for the operator after receiving the cardiopulmonary condition data measured by the cardiopulmonary condition sensor. After input of personal data of the body weight and height, the microprocessor will calculate the difference between the real body weight and the standard weight. Accordingly, an optimal exercise program for a certain operator can be automatically decided additionally in taking the measured value of the cardiopulmonary condition into account.

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**CONTROL CONSOLE AUTOMATICALLY  
PLANNING A PERSONAL EXERCISE PROGRAM  
IN ACCORDANCE WITH THE MEASURED VALUE  
OF THE CARDIOPULMONARY CONDITION**

**BACKGROUND OF THE INVENTION**

**[0001]** 1. Fields of the Invention The present invention relates to a control console automatically planning a personal exercise program in accordance with the measured value of the cardiopulmonary condition, and more particularly, to a control console which measures the cardiopulmonary condition of the operator in prior to the exercise session so that the measured data can be used to automatically decide an optimal exercise program for the operator.

**[0002]** 2. Description of the Prior Art

**[0003]** At present, the automatic planning and setting exercise program of the sports apparatuses are professionally oriented in order to provide the users with a more professional effect in exercise, rehabilitation and body-building. However, the automatic planning and setting of the sports apparatuses are dependent on the programming of the software of the control console. Therefore, an optimal exercise program for the operator is made after the personal data (e.g. age, sex or the desire consumption calories) are inputted, whereupon the sports apparatus is automatically activated to execute the planned exercise program.

**[0004]** The conventional control consoles are provided with many built-in exercise programs of simple design for the operators to choose one of them. For example, a microprocessor automatically controls the exercise time, speed, resistance or slope, etc. It's convenient and practical.

**[0005]** However, the built-in control program is in form of universal control mode and not necessarily meets the personal needs of all users. Therefore, a few personal details of the operator, such as age, sex, etc. can't represent the body type and the physical condition of the operator. If the calculation parameters of the basic program include only the data of age and sex, a considerable error will be produced. In brief, the exercise program created by the conventional control consoles doesn't meet the needs of each operator.

**[0006]** The so-called optimal "calorie consumption value" is a reference value suggested by the physicians or fitness trainers in accordance with the personal height and weight. However, the height and especially the weight of a person are not a constant value. Unless the user always takes care of the change of his height and weight or constantly gets the new suggestion of the optimal "calorie consumption value" from the physicians or fitness trainers, the optimal "calorie consumption value" will lose its reference value.

**[0007]** In addition, another conventional control console is provided with a heartbeat sensor. When the real heartbeat number sensed by the heartbeat sensor approaches to the preset maximal heartbeat value, a command is given to decelerate the motor to prevent from danger since the heartbeat number of the user is too high. However, the maximal heartbeat value is based on the age and the sex of a person or is a reference value suggested by physician which is variable according to the personal body type and the physical condition; therefore, its reference value is lost degree by degree.

**SUMMARY OF THE INVENTION**

**[0008]** It is a primary object of the present invention to eliminate the above-mentioned drawbacks and to provide a control console which constantly in command of the cardiopulmonary condition of the operator in order to decide an optimal personal exercise mode. Therefore, the best duration of the exercise session and the exercise effect can be achieved for prevention from the exercise accidents.

**[0009]** It is another object of the present invention to provide a control console which provides a certain and safe personal exercise program in accordance with the real body type of each operator. By means of automatic or manual input of the value of the height and the weight of the operator together with the international standard weight, the difference between the real weight and the standard weight is always calculated so that the weight difference and the measured value of the cardiopulmonary condition of the operator can be used to be primary data to decide an optimal personal exercise mode which completely meets the exercise need of the operator each time and the unnecessary error can be avoided.

**DETAILED DESCRIPTION OF THE  
PREFERRED EMBODIMENT**

**[0010]** The present invention features:

**[0011]** 1. The control console is connected with a cardiopulmonary condition sensor which is installed in a body-building device. Besides, the control console is fitted with a microprocessor which automatically plans an optimal exercise program for the operator after receiving the cardiopulmonary condition data measured by the cardiopulmonary condition sensor.

**[0012]** 2. The control console is connected with a cardiopulmonary condition sensor which is installed in a body-building device. Besides, the control console is fitted with a microprocessor. Meanwhile, the international standard weight data are inputted in the microprocessor. After input of personal data of the body weight and height, the microprocessor will calculate the difference between the real body weight and the standard weight. Accordingly, an optimal exercise program for a certain operator can be automatically decided additionally in taking the measured value of the cardiopulmonary condition into account.

**[0013]** The cardiopulmonary condition sensor is a widely used and reliable medical measuring device so that the operation and the measuring procedure are well-known. Thus, it's not the feature of the present invention, and no further descriptions thereof are given hereinafter.

**[0014]** In brief, the control console of the present invention is almost an accompanying fitness trainer or nurse giving every user an optimal exercise suggestion and the most proper exercise session. Meanwhile, the cardiopulmonary condition of the user is taken into account in order to ensure the safety of the user during the exercise session.

**[0015]** Since the international standard weight data are derived from the international medical reports. Thus, its reference value admits of no doubt. Therefore, no further descriptions thereof are given hereinafter.

**[0016]** In all of the conventional control consoles, they only take the body weight value into account to calculate the

calorie consumption value during the exercise session. However, the present invention is based on the medical theory. The body height, weight and cardiopulmonary function are taken into account to learn about the body type and the cardiopulmonary condition of the user. An optimal personal exercise session is therefore decided. Accordingly, the practical value and the body building effect of the present invention can't be reached by other products of the same type.

[0017] Many changes and modifications in the above-described embodiment of the invention can, of course, be carried out without departing from the scope thereof. Accordingly, to promote the progress in science and the useful arts, the invention is disclosed and is intended to be limited only by the scope of the appended claims.

What is claimed is:

1. A control console automatically planning a personal exercise program in accordance with the measured value of the cardiopulmonary condition and comprising a cardiopulmonary condition sensor which is installed in a body-building device, a microprocessor being disposed within said control console and automatically planning an optimal

exercise program for the operator after receiving the cardiopulmonary condition data measured by said cardiopulmonary condition sensor.

2. A control console automatically planning a personal exercise program in accordance with the measured value of the cardiopulmonary condition and comprising a cardiopulmonary condition sensor which is installed in a body-building device, a microprocessor being disposed within said control console, the international standard weight data being inputted in said microprocessor so that said microprocessor will calculate the difference between the real body weight and the standard weight after input of personal data of the body weight and height, whereupon an optimal exercise program for a certain operator can be automatically decided additionally in taking the measured value of the cardiopulmonary condition into account.

3. The control console as recited in claim 1, wherein the input personal data, such as age and sex, are taken into account to obtain a better reference value of the weight difference.

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