This invention relates to a monitor for exercise machine that comprises a panel with function of display, a panel base for mounting the panel and a casing for fixing the panel base; a pivot unit with pivot hole being implemented on the casing, a relative pivot being implemented on the panel base, the pivot of the panel base is installed in the pivot hole of the casing, thereof the panel base is fixed on the casing with pivot, and then the panel base together with the panel would be tilt relatively to the casing; by simply pressing the panel base, users in different heights of statue can adjust the tilt angle of the panel to the casing to have their needs satisfied, and then the convenience on using is achieved.
MONITOR FOR EXERCISE MACHINE

FIELD OF THE INVENTION

[0001] The present invention relates to a monitor for exercise machine, specifically a monitor comprising a panel, a panel base and a casing, of which the panel base is pivotally installed into the casing such that the panel base together with the panel can be tilted relatively to the casing, and then the purpose of convenience in using is achieved.

BACKGROUND OF THE INVENTION

[0002] The generally recognized exercise machines are equipped with monitors for displaying the functions of the machines or to play multi-media programs, which are normally installed near the instrument control panel of the machines. The generally recognized monitor comprises a casing, a panel base and a panel with the function of display, of which the panel is mounted on the panel base, the panel base together with the panel is installed inside the casing. In spite, the panel or the panel base of the generally recognized monitor is not able to be tilted relatively to the casing; when users want to tilt the panel to adjust per user’s height, there would be no easy way to adjust the panel by simply pressing on the panel, unless the mechanism of installation for the whole set of the monitor on the exercise machine is designed to be capable of being turned relatively to the machine. Nevertheless, such design has never been seen, even if such design would have been realized, the monitor is so heavy that vibrations caused from using the machine would be so big to get the monitor loosen from the machine. Besides, the adjusting and fixing mechanism would be so complicated to cause inconvenience in using and difficulties in assembly and maintenance.

SUMMARY OF THE INVENTION

[0003] The first intention of this invention is to provide a monitor for exercise machine with function of having the panel tilt to improve the problem of user’s vision angle to the monitor being limited, meanwhile easy to operate and convenient to use; with a panel base provided for mounting the panel and pivotally installed into a casing, the panel base together with the panel can be tilted relatively to the casing.

[0004] The second intention of this invention is to provide a monitor for exercise machine which has a tilt angle adjustable panel, meanwhile easy to operate; with a ring of big friction coefficient mounted on the pivot of the panel base, being installed in-between the pivot and the pivot hole, the features of friction and elasticity of the ring make the panel base fixed on the casing without need of help from other locking device, the user will only have to press on the panel to tilt it and the tilt angle will stay fixed when the pressing is removed without need of locking, and then the purpose of convenience in operation is achieved.

[0005] The third intention of this invention is to provide a monitor for exercise machine which has a tilt angle adjustable panel, meanwhile easy to assemble; a first pivot unit being implemented on the casing and onto which a semicircle first pivot hole being implemented, a cover being installed on the casing with a second pivot unit implemented and onto which a semicircle second pivot hole being implemented to be matched with the first pivot hole to form an integrated circle, there is at least one pivot implemented on the panel base to be installed in the pivot hole which is integrated by the first hole on the first pivot unit and the second pivot hole on the second pivot unit.

[0006] 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

[0007] FIG. 1 is an exploded view of the basic construction of the present invention.
[0008] FIG. 2 shows the assembly appearance of the panel and the panel base of the present invention.
[0009] FIG. 3 shows the assembly appearance of the panel base and the casing of the present invention.
[0010] FIG. 4 is a complete assembly appearance of the cover and the casing of the present invention.
[0011] FIG. 5 shows the panel tilted downward referring to FIG. 4.
[0012] FIG. 6 shows the panel tilted upward referring to FIG. 4.
[0013] FIG. 7 shows the monitor is installed on the exercise machine.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0014] As shown on FIG. 1, the basic embodiment of the monitor for exercise machine comprises a panel 10 with a function of display, a panel base 20 for mounting the panel 10 and a casing 30 for installing the panel base 20. The main feature of the embodiment is that the panel base 20 being pivotally installed into a casing 30 and the panel base 20 together with the panel 10 capable of being tilted relatively to the casing.

[0015] As shown on FIG. 7, the monitor of this invention is specifically a kind of monitor applied for exercise machine, e.g. treadmill, exercise bike or elliptical trainer. One better embodiment of the monitor is having its casing 30 accommodated in a room 62 on an instrument rack 61 which is installed on top of the exercise machine 60. Since the casing 30 of the monitor is set inside the room 62, it is easy to get the whole set of the monitor out of the room 62 for replacement and put it back into, which makes installation and maintenance easy and convenient.

[0016] As shown on FIG. 1, one embodiment of this invention, at least one pivot unit 31 is implemented on the casing 30 and onto the pivot unit 31 a pivot hole 32 is implemented; at least one pivot 21 is implemented on the panel base 20, which would be installed in said pivot hole 32 of the pivot unit 31 on the casing 30, so the panel base 20 can be tilted relatively to the casing 30. A better embodiment than the mentioned embodiment is that two pivot units 31 implemented on the casing 30 and two pivots 21 implemented on the panel base 20. Another better embodiment than the basic embodiment is equipped with a ring 40 of bigger friction coefficient mounted on the pivot 21, being installed in-between the pivot 21 and the pivot hole 32, appropriate amount of friction is created from the contact of the ring 40 on the pivot 21 and the pivot hole 32, with which the panel base 20 would be not easy to be turned relatively to the casing 30, the user will only have to press a little harder on the panel base 20 to tilt it to the desired angle relative to the casing 30, then the purpose of convenience in
adjusting the tilt angle of the panel 10 is achieved without helps from some other locking devices. Furthermore, the better embodiment is that said ring 40 is elastic which might be made of rubber, with characteristics of rubber in elasticity and excellent friction, the panel base 20 can avoid randomly turning relatively to the casing 30, but pressed to tilt by the user.

[0017] As shown on FIG. 1, one embodiment of the invention, at least one first pivot unit 31a is implemented on the casing 30 onto the first pivot unit 31a, a semicircle first pivot hole 32a is implemented. A cover 50 is installed on the casing 30 with a second pivot unit 51 implemented and onto which a semicircle second pivot hole 52 is implemented to be matched with the first pivot hole 32a to form an integrated circle. The panel base 20 equips with at least one pivot 21 which being installed in the first pivot hole 32a of the first pivot unit 31a on the casing 30 and the second pivot hole 52 of the second pivot unit 51 on the cover 50. The ring 40 is installed in-between the pivot 21 and the pivot hole 32 being integrated by the first pivot hole 32a and the second pivot hole 52. A better embodiment than the above-mentioned one is that on the walls of the first pivot hole 32a and the second pivot hole 52, grooves 33 and 53 are implemented along each arc line of the pivot holes 32a/52. A flange 41 is implemented around the circumference of the ring 40, with infixing of the flange 41 into the grooves 33 and 53, the ring 40 would avoid running off randomly from the first pivot hole 32 or the second pivot hole 52 and then the convenience on assembly is improved.

[0018] As shown on FIGS. 1 to 4, details of assembling for the embodiment of this invention are first getting the panel 10 installed on the panel base 20, then installing the ring 40 on the pivot 21 of the panel base 20, fixing the panel base 20 into the casing 30 with the pivot 21 installed inside the first pivot hole 32 of the casing 30, infixing the flange 41 of the ring into the groove 33 of the first pivot hole 32, putting the cover 50 and the casing 30 together such that the second pivot hole 52 of the cover 50 and the first pivot hole 32 of the casing 30 are integrated into a round pivot hole for the pivot 21 to be fixed into, the flange 41 of the ring 40 being infixed into the groove 53 of the second pivot hole 52, thereby present the assembly status of this invention.

[0019] As shown on FIGS. 2 and 4 to 6, when a user of short stature wants to adjust the panel 10 tilt downward relatively to the casing 30, the user only has to press on the lower part of the panel base 20 to properly deform the ring 40 and overwhelmed the friction on the ring 40 with the walls of the first pivot hole 32 and the second pivot hole 52, the panel base 20 together with the panel 10 would be turned downward relatively to the casing 30 till a desired tilt angle and then stay in the desired downward position as shown on FIG. 5 when the user let go the pressure. Likewise, when a user of tall stature wants to adjust the panel 10 tilt upward relatively to the casing 30, the user only has to press on the upper part of the panel base 20 to properly deform the ring 40 and overwhelmed the friction on the ring 40 with the walls of the first pivot hole 32 and the second pivot hole 52, the panel base 20 together with the panel 10 would be turned upward relatively to the casing 30 till a desired tilt angle and then stay in the desired upward position as shown on FIG. 6 when the user let go the pressure.

[0020] Therefore, with the above-mentioned design in mechanism, the function of adjustable monitor viewing angle is employed in this invention, as well as the advantages of ease in operation and convenience on using.

[0021] 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 monitor of exercise machine comprising:
   a panel having a function of display;
   a panel base for mounting the panel; and
   a casing for installing the panel base;
   wherein the panel base being pivotally installed into the casing and the panel base together with the panel capable of being tilt relatively to the casing.

2. The monitor as claimed in claim 1, wherein the casing has at least one pivot unit with a pivot hole therein, and the panel base has at least one pivot which would be installed in said pivot hole of the pivot unit on the casing, so the panel base can be tilt relatively to the casing.

3. The monitor as claimed in claim 2, wherein the number of the pivot unit on the casing is 2 and the number of the pivot on the panel base is also 2.

4. The monitor as claimed in claim 2, wherein the pivot is equipped with a ring of bigger friction coefficient, the ring is installed in-between the pivot and the pivot hole, and contacts with the pivot and the wall of the first and second pivot hole at the same time.

5. The monitor as claimed in claim 4, wherein the ring is made by rubber.

6. The exercise machine as claimed in claim 1 is a treadmill, an exercise bike or an elliptical trainer.

7. The exercise machine as claimed in claim 1 has an instrument rack equipping with a room which can accommodate the casing, said casing is accommodated in the room.

8. A monitor of exercise machine comprising:
   a panel having a function of display;
   a panel base for mounting the panel; and
   a casing for installing the panel base;
   wherein the panel base being pivotally installed into the casing and the panel base together with the panel capable of being tilt relatively to the casing, said casing having at least one pivot unit with a pivot hole therein, and the panel base having at least one pivot which being installed in the pivot hole of the pivot unit on the casing, said pivot being equipped with a ring of bigger friction coefficient, the ring being installed in-between the pivot and the pivot hole, and contacting with the pivot and the wall of the pivot hole at the same time.

9. The monitor as claimed in claim 8, wherein the casing has at least one first pivot unit, the first pivot unit has a semicircle first pivot hole, the casing has a cover thereof with a second pivot unit which is relative to the first pivot unit, the second pivot unit has a semicircle second pivot hole which implemented to be matched with the first pivot hole to form an integrated circle, the panel base equips with at least one pivot which is pivotal in the pivot hole being formed by the first pivot hole of the first pivot unit on the casing and the second pivot hole of the second pivot unit on the cover, the ring is installed in-between the pivot and said pivot hole being integrated by the first pivot hole and the second pivot hole.
10. The monitor as claimed in claim 8, wherein on the walls of the first pivot hole and the second pivot hole, there are grooves implemented along each arc line of the pivot holes, a flange is implemented around the circumference of the ring, and the flange is infixed into the grooves.

11. The monitor as claimed in claim 8, of which the numbers of the first pivot unit of the casing and the second pivot unit of the cover are two for each, the number of the pivot of the panel base is two.

12. The monitor as claimed in claim 8, wherein the ring is made by rubber.

13. The exercise machine as claimed in claim 8 is a treadmill, an exercise bike or an elliptical trainer.

14. A monitor of exercise machine comprising:
   a panel having a function of display;
   a panel base for mounting the panel, and
   a casing for installing the panel base;
wherein the panel base being pivotally installed into the casing an the panel base together with the panel capable of being tilted relatively to the casing, said casing having at least one first pivot unit with a semicircle first pivot hole therein, the casing having a cover thereof with a second pivot unit which is relative to the first pivot unit, said second pivot unit having a semicircle second pivot hole which implemented to be matched with the first pivot hole to form an integrated circle, the panel base equipping with at least one pivot which is pivoted into the pivot hole being integrated by the first pivot hole of the first pivot unit on the casing and the second pivot hole of the second pivot unit on the cover.

15. The monitor as claimed in claim 14, of which the numbers of the first pivot unit of the casing and the second pivot unit of the cover are two for each, the number of the pivot of the panel base is two.

16. The monitor as claimed in claim 14, wherein the pivot is equipped with a ring of bigger friction coefficient and elasticity, the ring is installed in-between the pivot and the pivot hole being integrated by the first pivot hole and the second pivot hole, and contacted with the pivot and the wall of the first pivot hole and the second pivot hole at the same time.

17. The monitor as claimed in claim 16, wherein the ring is made by rubber.

18. The monitor as claimed in claim 14, wherein the pivot is equipped with a ring of bigger friction coefficient, the ring is installed in-between the pivot and the pivot hole being integrated by the first pivot hole and the second pivot hole, on the walls of the first pivot hole and the second pivot hole, there are grooves implemented along each arc line of the pivot holes, a flange is implemented around the circumference of the ring, and the flange is infixed into the grooves.

19. The monitor as claimed in claim 18, wherein the ring is elastic.

20. The monitor as claimed in claim 14, wherein the exercise machine is a treadmill, an exercise bike or an elliptical trainer.

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