

SPECIFICATION

TITLE OF THE INVENTION: REMOTE CONTROL DEVICE ATTACHED TO
MASSAGER MACHINE

TECHNICAL FIELD

[0001]

The present invention relates to a remote control device suited to be used for a massager machine such as a chair massager machine.

BACKGROUND ART

[0002]

A remote control device including a display device is often attached to a massager machine such as a chair massager machine (see, for example, Patent Document 1). In a conventional remote control device, the display device is configured to draw a graphic or characters of a human body on a display panel, and to arrange an LED in an appropriate portion of the display panel on which the human body graphic or characters are drawn. The display device is designed to tell a user a type of a massage that is being applied or a part to which the massage is applied by turning on the LED.

CITATION LIST

PATENT LITERATURE

[0003]

Patent literature 1: Japanese Unexamined Patent
Publication JP-A59-149144

SUMMARY OF INVENTION

TECHNICAL PROBLEM

[0004]

In recent years, a massager machine including a function to execute a series of massages or a massage course by combining a plurality of massages has been developed. Further, there is proposed making it possible to arbitrarily change massage strengths (strengths of a pressing force) according to a user's preference, a user's physique or the like for every type of massage.

Accordingly, the display device of the remote control device needs to make a user accurately understand a content (menu) of the massage course or to display a method of changing a massage strength in an easy-to-understand manner. Needless to say, it is necessary to elaborately prepare a display content on the display device so that the user can easily handle a change in the massage course or the massage strength.

[0005]

However, in the conventional remote control device, the display device using the LED can display only a limited number of massage names or only a part to which a massage is applied. Due to this, it is difficult to convey various pieces of information such as the content of the massage course and the method of changing the massage strength accurately in an easy-to-understand manner. Furthermore, it is naturally

difficult to allow the user to easily handle various operations such as changes in the massage course, the massage strength and the like.

[0006]

The reasons are as follows. To display various pieces of information and a manipulation method on the display device, many graphics and characters are required. To print such large quantities of graphics and characters and to display the graphics and characters by means of LEDs arranged in respective parts of a printed surface leave the display device and a remote control device main body problems related to a display space and external magnitude and, therefore, impractical.

The present invention has been achieved in light of the above-stated problems. It is an object of the present invention to provide a remote control device attached to a massager machine capable of conveying various pieces of information accurately in an easy-to-understand manner and causing a user to easily manipulate various operations without increasing a display space and making a remote control device main body larger in size.

SOLUTION TO PROBLEM

[0007]

To attain the above-stated object, the present invention takes the following technical measures.

That is, a remote control device according to the present

invention is a remote control device attached to a massager machine including a massaging unit massaging a treatment target part, and configured to manipulate the massaging unit, including: a "screen unit" displaying an operation content of a massage applied by the massaging unit by an icon; and a "display operation button unit" selecting and confirming selection of the icon in the screen unit.

[0008]

Preferably, a "character display unit" displaying information on the massager machine by characters is provided in the screen unit. The information on the massager machine includes various pieces of information such as the operation content of the massaging unit displayed by the icon, cautions or messages to a user, information about error that occurred to the massager machine, news obtained from the Internet, and information about weather.

[0009]

Preferably, the screen unit is configured to display information on the massager machine by at least one of the icon, a graphic, and a numeric number. The graphic means herein a display form such as a bar display or a graph appealing to the eye.

Preferably, the information on the massager machine displayed in the screen unit is a set value relating to the massager machine. It is to be noted that examples of the set

value relating to the massager machine include not only set values (for example, kneading strength and pressing strength) relating to a content of each massage but also set values (for example, time before automatic off) relating to operation performed by the massager machine.

[0010]

Preferably, the display operation button unit is configured to enable switching over from one screen displayed in the screen unit to another screen.

Preferably, a skip operation button for switching over to a predetermined screen is provided in the display operation button unit.

Preferably, the predetermined screen is a main screen showing a selection start point.

[0011]

Preferably, the screen unit is configured to display the main screen showing a selection start point when the skip operation button is manipulated while the massaging unit is operating, and to switch over the main screen to a screen displaying an operation situation of the massaging unit.

Preferably, a "driving operation button unit" for manipulating the massager machine without via an icon selection operation and a confirmation operation in the screen unit.

[0012]

Preferably, the massage machine includes a seat portion, a backrest portion provided in a rear portion of the seat portion, and a footrest portion provided in a front portion of the seat portion, and the driving operation button unit includes a backrest operation button changing a reclining angle of the backrest portion with respect to the seat portion, and a footrest operation button changing a position of the footrest relative to the seat portion.

Preferably, the driving operation button unit includes a stop button stopping driving the massaging unit.

[0013]

Preferably, the screen unit can be displayed in different languages.

Preferably, a speaker capable of playing back music is provided at the massager machine, and the driving operation button unit includes a mute button temporarily stopping the speaker from playing back the music.

Preferably, a sensor detecting biological information on a user is provided in the massager machine, and the screen unit is configured to display the biological information detected by the sensor.

ADVANTAGEOUS EFFECTS OF INVENTION

[0014]

According to the present invention, the remote control device according to the present invention can convey various

pieces of information to a user accurately in an easy-to-understand manner and can make the user easily handle various operations without increasing a display space and making a remote control device main body larger in size.

BRIEF DESCRIPTION OF THE DRAWINGS

[0015]

[Fig. 1] Fig. 1 is a perspective view of a massager machine to which a remote control device is attached according to the present invention.

[Fig. 2] Fig. 2 is a front view of the remote control device.

[Fig. 3] Fig. 3 is an image transition diagram showing a main screen ([1-5] screen) displayed in a screen unit of the remote control device and a screen selectable from the main screen.

[Fig. 4] Fig. 4 is a diagram showing screen transition in the case where a central icon is selected on the main screen shown in Fig. 3.

[Fig. 5] Fig. 5 is a diagram showing screen transition in the case where an upper icon is selected on the main screen shown in Fig. 3.

[Fig. 6] Fig. 6 is a diagram showing screen transition in the case where a right icon is selected on the main screen shown in Fig. 3.

[Fig. 7] Fig. 7 is a diagram showing screen transition

in the case where a left icon is selected on the main screen shown in Fig. 3.

[Fig. 8] Fig. 8 is a diagram showing screen transition in the case where a lower icon is selected on the main screen shown in Fig. 3.

[Fig. 9] Fig. 9 is a diagram showing screen transition in the case where an upper central icon is selected from among nine icons on a screen [1-1-1] shown in Fig. 5.

[Fig. 10] Fig. 10 is a diagram showing transition of screens that can be displayed in a screen unit of the remote control device.

DESCRIPTION OF EMBODIMENTS

[0016]

Embodiments of the present invention will be described hereinafter based on the drawings.

Fig. 1 shows an example of a massager machine 2 equipped with this remote control device 1.

The massager machine 2 shown in Fig. 1 is a chair massager machine that includes a seat portion 3 wide enough to support a user's buttock from below, a backrest portion 4 provided in a rear portion of this seat portion 3, and a footrest 5 provided in a front portion of the seat portion 3.

[0017]

A leg body 6 for installing this massager machine 2 on a floor is provided in a lower portion of the seat portion 3,

and this leg body 6 supports the seat portion 3 at a predetermined height.

In the following, front-back directions and left-right directions of the massager machine 2 will be described based on arrows indicating the front, back, left, and right directions, respectively. These respective directions coincide with those seen from a user seated in the massager machine 2.

[0018]

A lower end portion of the backrest portion 4 is pivotally supported with respect to a rear portion of the seat portion 3 or that of the leg body 6, and is held swingably in the back and forth directions. This backrest portion 4 can recline against the seat portion 3 by means of such a reclining mechanism as a linear actuator mechanism provided in the leg body 6.

Furthermore, a back massage mechanism (not shown) performing massaging operations such as kneading, tapping and vibration is provided in the backrest portion 4 vertically movably.

[0019]

Side kneading mechanisms 7 are provided on both sides of the backrest portion 4, respectively. These side kneading mechanisms 7 are configured to repeatedly expand and contract airbags in a predetermined rhythm or do other things, thereby

pressing and massaging sides of both arms or both shoulders of a user leaning against the backrest portion 4 from left and right, respectively.

The footrest 5 is designed to be able to support legs (left and right calves to feet) of the user seated in the seat portion 3. A footrest moving mechanism provided in the leg body 6 makes this footrest 5 movable among a storage position in which the footrest 5 is stored below the seat portion 3 (Fig. 1 indicates a state in which the footrest 5 is stored in this storage position), a use position (first position) in which the footrest 5 protrudes forward from the seat portion 3 and ties a forward floor F of the seat portion 3 to an upper surface of the seat portion 3 in a stooping and inclined attitude, and a use position (second position) in which the footrest 5 floats above the floor F from this inclined attitude into a generally horizontal attitude at the same height as that of the seat portion 3.

[0020]

A pair of left and right holding grooves is formed in a surface (front surface) of the footrest 5 which surface supports the legs of the user so as to be able to fit the user's legs into the holding grooves, respectively, when the footrest 5 stops at the first use position, the second use position or between these first and second use positions. Foot kneading mechanisms are included in internally opposing surfaces of

these left and right holding grooves, respectively.

These foot kneading mechanisms are configured so that a pair of left and right kneading plates repeatedly approaches each other and separates from each other in a predetermined rhythm, thereby pressing and massaging the use's legs fitted into between the kneading plates from left and right, respectively. That is, a treatment target part to which each of these foot kneading mechanisms is to apply a massage is a user's leg (calf to foot).

[0021]

Moreover, armrest portions 8 are provided on both of left and right sides of the seat portion 3, respectively. Thigh and waist massaging mechanisms (note that only storage spaces of the thigh and waist massaging mechanisms are shown in the drawing) are provided on opposing inner side surfaces (a right side surface of the left armrest portion 8 and a left side surface of the right armrest portion 8) of these armrest portions 8, respectively. Further, an arm massaging mechanism is provided in each armrest portion 8.

Each of these thigh and waist massaging mechanisms is configured to repeatedly expand and contract an airbag in a predetermined rhythm, thereby massaging the thigh or waist of the user seated in the seat portion 3. That is, a treatment target part to which this thigh and waist massaging mechanism is to apply a massage is the user's thigh to waist.

[0022]

In this way, this massager machine 2 includes a plurality of massaging units (the back massaging mechanism, the side kneading mechanisms 7, the foot kneading mechanisms, the thigh and waist massaging mechanisms, and the arm massaging mechanisms) massaging various treatment target parts.

In the massager mechanism 2 configured as stated above, a cable 10 is led out from a lower portion of a rear surface of the backrest portion 4, and the remote control device 1 is connected to a tip end of this cable 10. The cable 10 is designed to have such a length at which the remote control device 1 reaches a hand of the user seated in the seat portion 3 and to have flexibility. However, the remote control device 1 may be configured to be connected to a driving mechanism of each of the mechanisms or the like so as to transmit or receive a signal to or from the driving unit without via the cable 10 but wirelessly.

[0023]

In the massager machine 2, a cup-shaped remote control device holder 11 opening upward on a front end thereof is provided in one (left in an example shown in Fig. 1) armrest portion 8 out of the left and right armrest portions 8. The remote control device 1 can be held in a state of being inserted into this remote control device holder 11.

Furthermore, a cup-shaped player holder 12 opening

upward on a front end thereof is provided in the other (right in the example shown in Fig. 1) armrest portion 8. A small-sized player that can play back or play music such as a digital music player (MP3 player), a cellular telephone, a portable terminal or a portable radio can be held in a state of being inserted into this player holder 12.

[0024]

A male plug to be connected to the small-sized player is provided near this player holder 12. When this male plug is inserted into the small-sized player and music is played back, music is rolled forth from speakers 13 provided on both sides of upper portions of the backrest portion 4. The user can enjoy listening to the music while using the massager machine 2.

As shown in Fig. 2, the remote control device 1 is vertically long-shaped and a thickness of the remote control device 1 is quite small as compared with a longitudinal length thereof. On an upper front surface of the remote control device 1, a screen unit 20 is provided in an upper portion, a display operation button unit 21 is provided in a central portion, and a driving operation button unit 22 is provided in a lower portion.

[0025]

The screen unit 20 displays thereon contents of massaging operations performed by the respective massaging units (the

back massaging mechanism, the side kneading mechanisms 7, the foot kneading mechanisms, the thigh and waist massaging mechanisms, and the arm massaging mechanisms) of the massager machine 2 by icons. The number of icons displayed in the screen unit 20 may be either two or more or one. The "icon" means herein a graphic or a picture that symbolizes the content of a massaging operation in an easy-to-understand manner. It is assumed that the "icon" includes symbols such as points or lines representing a degree of strength step-by-step. The icon also includes a barcode display for displaying strength.

[0026]

Moreover, in the screen unit 20, a character display unit displaying the content of the massaging operation pointed out by the icon by "character information" is provided besides the above-stated icon. As shown in Figs. 3 to 9, this character display unit is arranged in each of two portions, that is, upper and lower portions of the screen unit 20 in the present embodiment. For example, in [1-5] of Fig. 3, a part displaying "MAIN MENU" and a part displaying "QUICK Efficient 5 minutes full body massage for instant recovery" correspond to the character display units.

[0027]

Information displayed in the character display units is not limited to the operation content of each massaging unit. Various pieces of information such as cautions or messages to

the user, information about error that occurred to the massager machine, news obtained from the Internet, and information about weather can be displayed in the character display units.

It is to be noted that this character display unit may display one piece of character information corresponding to each display content whenever a content (one page) displayed once in the screen unit 20 switches over to another.

Alternatively, this character display unit may continue to display the same character information even after display of the screen unit 20 switches over to another as long as relevant modes continue in sequence in the screen unit 20. In another alternative, the character display units may display character information about a selected icon whenever one icon is selected from among a plurality of icons displayed in the screen unit 20.

[0028]

The screen unit 20 is formed by a liquid crystal method, an organic electroluminescent (organic EL) method or the like. Specific display contents and switching situations of screens (those displaying thereon icons or the like) displayed in the screen unit 20 will be described later.

The display operation button unit 21 is to select an icon displayed in the screen unit 20 or to confirm selection of the icon (instruct executing operation indicated by the icon).

[0029]

This display operation button unit 21 allows the user to manipulate operations mainly relating to contents of massages such as selection of a massage course and strengths of massages. This display operation unit 21 is provided with a selection button 25, a decision button 26, and a skip operation button 27.

In the present embodiment, the selection button 25 is formed into a circular shape (ring shape) with a central hole, and upper, lower, left, and right portions along an outer circumference, that is, four portions of the selection button 25 in all can be pressed and manipulated individually. Further, the decision button 26 is arranged in the central hole of the selection button 25 and formed into a circular shape, and 'OK' is inscribed on a surface of the decision button 26. The skip operation button 27 is arranged in one portion (at an upper left position in Fig. 2) of the outer circumference of the selection button 25 and formed into a circular shape, and 'Menu' is inscribed on a surface of the skip operation button 27.

[0030]

Shapes and arrangements of the respective buttons 25 to 27 of the display operation button unit 21 are not limited to specific ones.

On the other hand, the driving operation button unit 22 is to allow the user to manipulate the massager machine 2 without need to perform an icon selection operation in the

screen unit 20.

This driving operation button unit 22 allows the user to perform mainly operations other than the content of the massage course such as changes in positions of the respective portions of the massager machine 2. This driving operation button unit 22 is provided with six buttons, that is, a backrest operation button 30, a footrest operation button 31, a power button 32, a pause button 33, a stop button 33, and a reset button 35.

[0031]

The backrest operation button 30 includes two upper and lower buttons, which can be pressed and manipulated, respectively. 'UP' is inscribed on the upper button whereas "DOWN" is inscribed on the lower button.

Furthermore, the footrest operation button 31 includes two upper and lower buttons, which can be pressed and manipulated, respectively. 'OUT' is inscribed on the upper button whereas 'IN' is inscribed on the lower button.

[0032]

The three buttons, that is, the power button 32, the pause button 33, and the stop button 33 are formed into small-diameter circles and arranged side-by-side. A symbol (symbol based on universal design) intended to make an operation content easily understandable and understandable universally is added on each of surfaces of the respective buttons 32 to 33. Moreover, the

reset button 35 is arranged at a generally central position (position that facilitates user's prompt operation) in an overall button arrangement of the display operation button unit 21 and the driving operation button unit 22, and formed into a circular shape. 'Reset' is inscribed on a surface of the reset button 35.

[0033]

It is to be noted that shapes and arrangements of the respective buttons 30 to 35 of the driving operation button unit 22 are not limited to specific ones.

Moreover, in the present embodiment, a mute button 36 for temporarily muffling sound from the speakers 13 is provided on a side surface of the remote control device 1. When the user manipulates this mute button 36, it is preferable to display an icon or a character display indicating a mute state in the screen unit 20. Needless to say, a shape of such a mute button 36 is only an example, and the mute button 36 can be arranged differently or eliminated.

[0034]

Next, a relation between a display situation of the screen unit 20 and operation situations of the respective buttons in the remote control device 1 as well as an operation situation of the massager machine 2 using the remote control device 1 will next be described.

First, in a state subsequent to a state of stopping the

massager machine 2 (not using the massager machine 2), the user presses the power button 32 in the driving operation button unit 22. By doing so, a screen indicating that the massager machine 2 and a control system of the massager machine 2 are active is displayed in the screen unit 20 of the remote control device 1, and the screen switched over to a main screen [1-5] shown at the center of Fig. 3. It is to be noted that after user's pressing the power button 32, a screen displayed first can be assumed as the main screen [1-5].

[0035]

On this main screen [1-5], an icon arranged at the center of the screen and icons arranged upward, downward, leftward, and rightward of this central icon, respectively, that is, five icons in all are displayed.

Situations for manipulating the contents of massages (selection of the massage course, strengths of the massages and the like) using the display operation button unit 21 (see Fig. 2) in a state subsequent to this state will first be described.

To select one icon from among the five icons in the main screen, the user presses a corresponding portion in an up, a down, a left or a right direction using the selection button 25 of the display operation button unit 21 according to an arrangement of the desired icon, thereby turning on a light of the icon to be selected. It is assumed, for example, that

the central icon is selected (a light of the central icon is turned on) on the main screen [1-5] shown in Fig. 3.

Furthermore, after turning the predetermined icon into a selected state, the user presses the decision button 26 of the display operation button unit 21 to confirm that the icon is selected.

[0036]

Situations of screen transition centering around the main screen [1-5] are roughly as follows.

In Fig. 3, on the main screen [1-5], the central icon is 'Quick icon' for moving to "message operation content: quick message mode". In the case where the user selects and confirm selection of the "quick message mode" by this 'quick icon', display of the screen unit 20 changes from the main screen [1-5] to a display situation (screen [1-5-1]) shown in Fig. 4 (arrow A in Fig. 3).

[0037]

On the main screen [1-5], an icon arranged above the central 'Quick icon' is a 'Full body icon' for moving to "message operation content: full body message mode". In the case where the user selects and confirm selection of the "full body message mode" by this 'Full body icon', display of the screen unit 20 changes from the main screen [1-5] to [1-1] and then to a screen shown in Fig. 5 (arrow B in Fig. 3).

[0038]

On the main screen [1-5], an icon arranged at the right of the central 'Quick icon' is a 'Neck & Shoulder icon' for moving to "massage operation content: neck and shoulder massage mode". In the case where the user selects and confirm selection of the "neck and shoulder massage mode" by this 'Neck & Shoulder icon', display of the screen unit 20 changes from the main screen [1-5] to [1-4] and then to a display situation shown in Fig. 6 (arrow C in Fig. 3).

[0039]

On the main screen [1-5], an icon arranged at the left of the central 'Quick icon' is a 'Manual icon' for moving to "massage operation content: favorite massage mode". In the case where the user selects and confirm selection of the "favorite massage mode" by this 'Manual icon', display of the screen unit 20 changes from the main screen [1-5] to [1-3] and then to a display situation shown in Fig. 7 (arrow D in Fig. 3).

[0040]

On the main screen [1-5], an icon arranged downward of the central 'Quick icon' is a 'Settings icon' for moving to "massage operation content: setting mode". In the case where the user selects and confirm selection of the 'setting mode' by this 'Settings icon', display of the screen unit 20 changes from the main screen [1-5] to [1-2] and then to a display situation shown in Fig. 8 (arrow E in Fig. 3).

[0041]

In this way, a plurality of screens can be changed over in a preset order whenever the user manipulates the display operation button 21 (selection button 25 or decision button 26) in the screen unit 20. Fig. 10 shows overall transition situations of display in the screen unit 20. It is to be noted that such transition situations are only an example and can be appropriately changed according to equipment or the like of the massager machine 2.

[0042]

However, when the user manipulates the skip operation button 27 of the display operation button unit 21, the display of the screen unit 20 moves to the main screen [1-5] by skipping over the preset order whatever screen is displayed. This can facilitate returning to the main screen [1-5] at the time the user is in doubt as to the operation.

Next, screen transitions in the screen unit 20 will be described while exemplarily referring to first to fifth operation examples.

<FIRST OPERATION EXAMPLE>

As shown in Fig. 4, in a state subsequent to the state in which the main screen [1-5] is displayed in the screen unit 20, the user selects the central 'Quick icon' by the selection button 25, confirms selection of the 'Quick icon' by the decision button 26, and changes the mode to "quick message mode".

By this button operation, the display of the screen unit 20 switches over to the screen [1-5-1] next in the order to the main screen [1-5] (arrow A in Figs. 3 and 4).

[0043]

The switched screen [1-5-1] is an operation screen and a 'human icon' indicating treatment target parts of the user is displayed at the center of the screen. The switched screen [1-5-1] is configured so that three icons aligned horizontally are displayed below this 'human icon', and so that information about the massager machine is displayed by at least one of the icon, graphic, and numeric number above the 'human icon'.

[0044]

Specifically, remaining time before the massaging operation is automatically turned off is indicated by a numeric number and bar display above the 'human icon'. Alternatively, passing time (accumulated time) for which the massaging operation is performed may be displayed in this display portion by a numeric number and bar display.

Among the three icons aligned horizontally below the 'human icon', the leftmost icon is a 'strength adjustment icon' for moving to a screen for adjusting a strength of a massage in the case of applying a shoulder massage or the like, the central icon is a 'pattern selection icon' for moving to a screen for selecting a pattern in the case of applying a leg massage or the like, and the rightmost icon is a 'position

change icon' for moving to a screen for changing massage positions (upper and lower positions of a kneading ball) in the case of applying the shoulder massage or the like.

[0045]

Therefore, it is assumed that the user presses a left portion of the selection button 25 and selects the leftmost 'strength adjustment icon' in a state, for example, in which the screen [1-5-1] is displayed in the screen unit 20. When the user then presses the decision button 26, the display of the screen unit 20 switches over to a screen [3-1].

On the switched screen [3-1], a linear to quadrangular 'level icon' representing the strength of the shoulder massage or the like by the back massaging mechanism step-by-step is displayed. At the same time, the strength can be displayed thereon by a numeric value. Therefore, the user presses a right position or lower position of the selection icon 25, selects the 'level icon' corresponding to a desired strength of the massage, and sets the strength of the massage.

Thereafter, the user presses the decision button 26, whereby the display of the screen unit 20 switches over to display returning to the screen [1-5-1] one step before the screen [3-1].

[0046]

On the other hand, when the user presses a right position of the selection button 25 in a state subsequent to the state

of displaying this screen [1-5-1], the selection of the 'strength adjustment icon' is excluded (a light of the 'strength adjustment icon' is turned off) and the 'pattern selection icon' at the right of the 'strength adjustment icon' is selected in turn. That is, the display of the screen unit 20 switches over from the screen [1-5-1] to a screen [1-5-2].

When the user then presses the decision button 26, the display of the screen unit 20 switches over to a screen [3-2-2] next in the order to the screen [1-5-2]. On this switched screen [3-2-2], a plurality of 'pattern icons' each representing a kneading pattern and a kneading position by the foot kneading mechanism by characters is displayed. Therefore, the user presses a lower position of the selection button 25 and selects the 'pattern icon' corresponding to a desired kneading pattern and a desired kneading position.

[0047]

Thereafter, by user's pressing the decision button 26, the display of the screen unit 20 switches over to the display returning to the screen [1-5-2] one step before the screen [3-2-2].

Furthermore, when the user presses the right position of the selection button 25 in a state subsequent to a state in which this screen [1-5-2] is displayed on the screen unit 20, the selection of the 'pattern selection icon' is excluded (a light of the 'pattern selection icon' is turned off) and

the 'position change icon' at the right of the 'pattern selection icon' is selected in turn. That is, the display of the screen unit 20 switches over from the screen [1-5-2] to a screen [1-5-3].

[0048]

When the user then presses the decision button 26, the display of the screen unit 20 switches over to a screen [3-3]. On this switched screen [3-3], a 'position icon' representing a vertical position of the shoulder massage by the back massaging mechanism by a numeric value is displayed. Therefore, the user presses the upper or lower position of the selection button 25 so as to set the 'position icon' corresponding to a desired position (to change a numeric value).

[0049]

Thereafter, by user's pressing the decision button 26, the display of the screen unit 20 switches over to the display returning to the screen [1-5-3] one step before the screen [3-3].

Furthermore, it suffices that the user manipulates the skip operation button 27 to switch over the display of the screen unit 20 to the main screen [1-5]. As stated above, when the user is in doubt as to the operation (is not sure at which step the display of the screen unit 20 is) or the like, the user may manipulate the skip operation button 27 to switch over

the display the screen unit 20 to the main screen [1-5] and starts over the operation.

[0050]

In the meantime, in the case where any one of the massaging units (the back massaging mechanism, the side kneading mechanisms 7, the foot kneading mechanisms, and the thigh and waist massaging mechanisms) of the massager machine 2 is operating when the user manipulates the skip operation button 27, the screen unit 20 is configured to move the screen to a screen indicating the operation performed by the operating massaging unit. When the user manipulates the skip operation button 27 in the case where, for example, the back massaging mechanism is performing the massaging operation, the screen of the screen unit 20 temporarily switches over to the main screen [1-5] but then switches over to the screen [1-5-1] relating to the operation performed by the back massaging mechanism in several seconds to several tens of seconds. It is to be noted that no problem occurs even if the main screen [1-5] remains displayed after manipulation of the skip operation button 27.

<SECOND OPERATION EXAMPLE>

As shown in Fig. 5, in a state subsequent to the state in which the main screen [1-5] is displayed in the screen unit 20, the user selects the 'Full body icon' arranged above the central 'Quick icon' by the selection button 25, confirms

selection of the 'Full body icon' by the decision button 26, and changes the mode to "full body massage mode". By doing so, the display of the screen unit 20 switches over from the main screen [1-5] to the screen [1-1] and then to a screen [1-1-1] that is a next page to the screen [1-1] (arrow B in Figs. 3 and 5).

[0051]

On the switched screen [1-1-1], three icons are displayed in the horizontal direction and three icons are displayed in the vertical direction, that is, nine icons are displayed in all. These nine icons refer to nine massage courses preset as types of a "random full body mode" and having different contents of massage patterns and different combinations of massage patterns, respectively.

For example, the screen [1-1-1] shown in Fig. 5 is in a state of selecting a coffee cup-shaped 'relax icon' arranged in an upper left corner. By user's selecting this 'relax icon' and pressing the decision button 26, selection of a massage course of the 'relax mode' set to emphasize relaxing the user is confirmed and display of the screen unit 20 switches over to a screen [1-1-1-1] next in the order to the screen [1-1-1].

[0052]

On this screen [1-1-1-1], similarly to the screen [1-5-1] shown in Fig. 4, the 'human icon', the 'strength adjustment icon' for moving to the screen for adjusting the strength of

the massage in the case of applying the shoulder massage or the like, the 'pattern selection icon' for moving to the screen for selecting the pattern in the case of applying the leg massage or the like, and the 'position change icon' for moving to the screen for vertically changing massage positions in the case of applying the shoulder massage or the like are displayed. [0053]

Therefore, as described in the first operation example, it suffices that the user selects and confirms selection of a desired icon from among these 'strength adjustment icon', 'pattern selection icon', and the 'position change icon' to perform various operations.

As for the eight icons other than the 'relax icon' displayed on the screen [1-1-1], screens corresponding to the screen [1-1-1-1] are prepared, respectively, and the user can make various selections and confirmations on the respective screens.

<THIRD OPERATION EXAMPLE>

As shown in Fig. 6, in a state subsequent to the state in which the main screen [1-5] is displayed in the screen unit 20, the user selects the 'Neck & Shoulder icon' arranged at the right of the central 'Quick icon' by the selection button 25, confirms selection of the 'Neck & Shoulder icon' by the decision button 26, and changes the mode to the "neck and shoulder massage mode". By doing so, the display of the screen

unit 20 switches over from the main screen [1-5] to the screen [1-4] and then to a screen [1-4-1] that is a next page to the screen [1-4] (arrow C in Figs. 3 and 6).

[0054]

On this screen [1-4-1], similarly to the screen [1-5-1] shown in Fig. 4, the 'human icon', the 'strength adjustment icon', the 'pattern selection icon', and the 'position change icon' are displayed. Therefore, it suffices that the user selects and confirms selection of a desired icon from among these icons to perform various operations.

<FOURTH OPERATION EXAMPLE>

As shown in Fig. 7, in a state subsequent to the state in which the main screen [1-5] is displayed in the screen unit 20, the user selects the 'Manual icon' arranged at the left of the central 'Quick icon' by the selection button 25, confirms selection of the 'Manual icon' by the decision button 26, and changes the mode to the "favorite massage mode". By doing so, the display of the screen unit 20 switches over from the main screen [1-5] to the screen [1-3] and then to a screen [1-3-1] that is a next page to the screen [1-3] (arrow D in Figs. 3 and 7).

[0055]

On this screen [1-3-1], similarly to the screen [1-5-1] shown in Fig. 4, the 'human icon', the 'strength adjustment icon', the 'pattern selection icon', and the 'position change

icon' are displayed. Therefore, it suffices that the user selects and confirms selection of the respective icons so as to perform various operations.

<FIFTH OPERATION EXAMPLE>

As shown in Fig. 8, in a state subsequent to the state in which the main screen [1-5] is displayed in the screen unit 20, the user selects the 'Settings icon' arranged below the central 'Quick icon' by the selection button 25, confirms selection of the 'Settings icon' by the decision button 26, and changes the mode to the "setting mode". By doing so, the display of the screen unit 20 switches over from the main screen [1-5] to the screen [1-2] and then to a screen [1-2-1] that is a next page to the screen [1-2] (arrow E in Figs. 3 and 8).
[0056]

On this screen [1-2-1], three icons, that is, the 'position change icon' for moving to the screen for vertically changing the massage positions in the case of applying the shoulder massage or the like, a 'timer setting icon' for moving to a screen for setting massage time, and a 'language change icon' for moving to a screen for switching languages used for screen display are displayed to be aligned in the horizontal direction.

In the case where the user selects the leftmost 'position change icon', the display of the screen unit 20 switches over to the screen [3-3]. Therefore, the user can select the

desired 'position icon' and confirms vertical positions of the shoulder massage by the back massaging mechanism.

[0057]

Furthermore, in the case where the user selects the central 'timer setting icon' on the screen [1-2-1], the display of the screen unit 20 switches over to a screen [1-2-2-1] via a screen [1-2-2]. On this screen [1-2-2-1], a plurality of 'time icons' representing massage time by numeric icons, respectively is displayed. Therefore, it suffices that the user selects and confirms selection of the 'time icon' corresponding to desired massage time. Alternatively, to select the massage time, a count-up/count-down method in which a numeric value increases or decreases by pressing a button can be used.

[0058]

Moreover, in the case where the user selects the rightmost 'language change icon' on the screen [1-2-1], the display of the screen unit 20 switches over to a screen [1-2-3-1] via a screen [1-2-3]. On this screen [1-2-3-1], a plurality of 'language icons' referring to languages such as English and Chinese is displayed. Therefore, it suffices that the user selects and confirms selection of the 'language icon' corresponding to a language that the user can understand.

[0059]

At the time of selecting and confirming the selection

of this 'language icon', character information displayed in the character display unit of the screen unit 20 is changed to various languages. In the case where the icon is a graphic or picture in the form that enables the user to understand (read) the icon as characters or a numeric number, this icon may be changed to an icon corresponding to each of the various languages.

In case of the present embodiment, various messages are displayed at the laterally left of the 'human icon' on an operation screen displayed during operation. In other words, a laterally left portion of the 'human icon' corresponds to the character display unit.

[0060]

As shown in Fig. 9, in the case, for example, the user manipulates the pause button 33 in the driving operation button unit 22, a display of "PAUSED" and the icon representing pause are displayed at the laterally left of the 'human icon'.

Moreover, the footrest 5 provided in the front portion of the seat portion 3 is provided with a knob for operating mechanical mechanisms in the footrest 5 from outside, and a foot safety cover is provided to prevent the user from manipulating this knob in an ordinary state.

[0061]

However, there is no avoiding a probability that the footrest 5 is made into a state in which the footrest 5 is stored

with this foot safety cover opened for some reason. In that case, the foot safety cover is possibly broken. Due to this, as shown in Fig. 9, a display of "Foot safety cover opened" and an icon representing that the foot safety cover is in an open state are displayed at the laterally left of the 'human icon'.

Furthermore, in the case where the footrest 5 provided in the front portion of the seat portion 3 is stored below the seat portion 3, a display of "Foot massage shut down" and the icon representing that the foot rest 5 is in the stored state are displayed at the laterally left of the 'human icon'.

[0062]

While it is described above that the characters such as 'PAUSED' and the icon meaning this are simultaneously displayed, it is not always necessary to simultaneously display the characters and the icon. Alternatively, only one of the characters or the icon may be displayed.

Next, situations of performing operations (such as changes in positions of the respective parts of the massager machine 2 or basic ON/OFF switching) other than those for the contents of massages using the driving operation button unit 22 of the remote control device 1 will be described based on Fig. 2.

[0063]

This driving operation button unit 22 is to manipulate

the massager machine 2 without via icon selection or the like in the screen unit 20. Therefore, whatever the display of the screen unit 20 is like, it is possible to perform operations by the driving operation button unit 22.

The screen unit 20 may be configured either so that the display of the screen unit 20 does not switch over (for example, the main screen [1-5] remains displayed) even by user's manipulating the driving operation button unit 22 or so that the display of the screen unit 20 switches over to a screen (an icon and the like) indicating which button in the driving operation button unit 22 the user is manipulating.

[0064]

Furthermore, in the case where any of the massaging units (the back massaging mechanism, the side kneading mechanisms 7, the foot kneading mechanisms, the thigh and waist massaging mechanisms, and the arm massaging mechanisms) of the massager machine 2 is already operating (performing a massaging operation) while the user is manipulating the driving operation button unit 22, the operation performed by the massaging unit is temporarily interrupted before the driving operation button unit 22 is used to execute the manipulation of the massager machine 2.

[0065]

Specific operation examples are as follows.

That is, in the case where the user seated in the seat

portion 3 desires to change the reclining angle of the backrest portion 4 with respect to the seat portion 3, the user manipulates the backrest operation button 30. That is, in the case where the user presses the lower button on which 'DOWN' is inscribed, the backrest portion 4 moves to fall down backward. In the case where the user presses the upper button on which 'UP' is inscribed, the backrest portion 4 moves to rise forward. By user's stopping manipulating the backrest operation button 30 at a timing at which the reclining angle of the backrest portion 4 coincides with a user's desired angle, the backrest portion 4 stops while the angle at that timing is being kept.

[0066]

In the case where the user seated in the seat portion 3 desires to stretch the legs (thighs of the left and right legs to the legs) forward, the user manipulates the footrest operation button 31. That is, by user's pressing the upper button on which 'OUT' is inscribed, then the footrest 5 protrudes forward from the storage position below the seat portion 3 and turns into a state of protruding forward and floating from the first position to the second position between the floor F in front of the seat portion 3 and the upper surface of the seat portion 3. By user's stopping manipulating the footrest operation button 31 at a timing at which a position and a height of the footrest 5 coincide with a user's desired height, the footrest 5 stops while keeping the height at that

timing. Alternatively, the footrest operation button 31 may be configured to change a floating height of the footrest 5 step-by-step for every operation.

[0067]

To lower the height of the footrest 5 from a state in which the footrest 5 floats above the floor F or to stop using the footrest 5 (to store the footrest 5 in the storage position below the seat portion 3), the user manipulates the lower button on which 'IN' is inscribed of the footrest operation button 31.

In the case where the user desires to return the reclining angle of the backrest portion 4 or the use position of the footrest 5 to the initial position or to do other things even while each massaging unit of the massager machine 2 is still operating, the user presses the reset button 35.

[0068]

On the other hand, to temporarily stop all the massaging operations of the massager machine 2, it suffices to manipulate the pause button 33. Furthermore, to stop all massage driving of the massager machine 2, the user manipulates the stop button 34. By user's pressing the power button 32 after manipulating this stop button 34, the display of the screen unit 20 of the remote control device 1 is turned off.

It is to be noted that when the user manipulates the reset button 35, power of the massager machine 2 is still turned on

(the massager machine 2 is on standby) even with all the mechanisms of the massager machine 2 returned to their initial states. Therefore, it is convenient to use the reset button 35 in the case where the user is to start over various settings, operations or the like (for example, when the user changes to another user). In the case where the user is to stop using the massager machine 2 in this phase, it suffices to manipulate the power button 32 to disconnect a power supply.

[0069]

Meanwhile, it is to be interpreted that the embodiments disclosed herein are all given for illustrative purposes and not for limiting purposes. It is intended that the scope of the present invention is shown not by the aforementioned description but by claims and contains all changes in a range and meanings equivalent to those of the claims.

For example, the back massaging mechanism, the reclining mechanism, the footrest 5, the foot kneading mechanisms, the thigh and waist massaging mechanisms, the arm massaging mechanisms and the like as the massaging units of the massager machine 2 exemplarily shown above are merely examples of massaging units that can be adopted in the chair massager machine and are not intended to limit presence or absence and detailed structures of the massaging units of the massager machine 2.

[0070]

The massager machine 2 is not limited to the chair massager machine but may be a small-sized massager machine such as a leg massager machine.

In the remote control device 1, the screen unit 20 includes an instance of displaying only icons and that of displaying the character display unit. Furthermore, the screen unit 20 includes an instance of displaying neither the icons nor the character display unit and that of displaying images (for example, animations) other than the icons and the character display unit.

[0071]

It suffices to add an automatic power off function to the screen unit 20. That is, in the case where the massager machine 2 stops and the display operation button unit 21 or the driving operation button unit 22 are not at all manipulated for predetermined time, the display of the screen unit 20 is set to be turned off. This can save power consumption of the entire massager machine 2.

Moreover, a sensor detecting biological information on the user (for example, blood pressure, heartbeat or pulse, temperature, weight, and a body fat ratio of the user can be provided in the massager machine 2. In this case, the screen unit 20 may be configured to display the biological information detected by the sensor provided in the massager machine 2 by icons and/or numeric numbers.

REFERENCE SIGNS LIST

[0072]

- 1 Remote control device
- 2 Massager machine
- 3 Seat portion
- 4 Backrest portion
- 5 Footrest portion
- 6 Leg body
- 7 Side kneading mechanism
- 8 Armrest portion
- 10 Cable
- 11 Remote control device holder
- 13 Speaker
- 12 Player holder
- 20 Screen unit
- 21 Display operation button unit
- 22 Driving operation button unit
- 25 Selection button
- 26 Decision button
- 27 Skip operation button
- 30 Backrest operation button
- 31 Footrest operation button
- 32 Power button
- 33 Pause button
- 34 Stop button

35 Reset button

36 Mute button

F Floor

CLAIMS

1. A remote control device attached to a massager machine including a massaging unit massaging a treatment target part, and configured to manipulate said massaging unit, comprising:

a "screen unit" displaying an operation content of a massage applied by said massaging unit by an icon; and

a "display operation button unit" selecting and confirming selection of the icon in said screen unit.

2. The remote control device attached to the massager machine according to claim 1, wherein a "character display unit" displaying information on the massager machine by characters is provided in said screen unit.

3. The remote control device attached to the massager machine according to claim 1 or 2, wherein said screen unit is configured to display information on the massager machine by at least one of the icon, a graphic, and a numeric number.

4. The remote control device attached to the massager machine according to claim 3, wherein the information on the massager machine displayed in said screen unit is a set value relating to the massager machine.

5. The remote control device attached to the massager

machine according to any one of claims 1 to 4, wherein said display operation button unit is configured to enable switching over from one screen displayed in said screen unit to another screen.

6. The remote control device attached to the massager machine according to any one of claims 1 to 5, wherein a skip operation button for switching over to a predetermined screen is provided in said display operation button unit.

7. The remote control device attached to the massager machine according to claim 6, wherein said predetermined screen is a main screen showing a selection start point.

8. The remote control device attached to the massager machine according to claim 6 or 7, wherein said screen unit is configured to display the main screen showing a selection start point when the skip operation button is manipulated while said massaging unit is operating, and then to switch over the main screen to a screen displaying an operation situation of the massaging unit.

9. The remote control device attached to the massager machine according to any one of claims 1 to 8, wherein a "driving operation button unit" for manipulating the massager machine

without via an icon selection operation and a confirmation operation in said screen unit.

10. The remote control device attached to the massager machine according to claim 9, wherein said massage machine includes a seat portion, a backrest portion provided in a rear portion of the seat portion, and a footrest portion provided in a front portion of said seat portion, and

said driving operation button unit includes a backrest operation button changing a reclining angle of the backrest portion with respect to said seat portion, and a footrest operation button changing a position of the footrest relative to said seat portion.

11. The remote control device attached to the massager machine according to claim 9 or 10, wherein said driving operation button unit includes a stop button stopping driving said massaging unit.

12. The remote control device attached to the massager machine according to any one of claims 1 to 11, wherein said screen unit can be displayed in different languages.

13. The remote control device attached to the massager machine according to any one of claims 9 to 11, wherein

a speaker capable of playing back music is provided at said massager machine, and

said driving operation button unit includes a mute button temporarily stopping said speaker from playing back the music.

14. The remote control device attached to the massager machine according to any one of claims 1 to 13, wherein

a sensor detecting biological information on a user is provided in said massager machine, and

said screen unit is configured to display the biological information detected by said sensor.