

DESCRIPTION

Title Of Invention: CEILING FAN

5 TECHNICAL FIELD

[0001] The present disclosure relates to a ceiling fan that acts by an external operation.

BACKGROUND ART

10 [0002] A ceiling fan that can be fixed to a ceiling can increase cooling efficiency and warming efficiency by generating cool air in the summer and circulating warm air collected near the ceiling in the winter.

[0003] Such a ceiling fan requires a user to easily recognize an action status of the ceiling fan. Thus, a conventional ceiling fan includes a reception unit and a color indicator. A display color of the color indicator is turned on and off or is changed whenever the
15 reception unit receives a signal transmitted from a remote controller by a user operation, and the reception of the signal can be visually confirmed (see, for example, PTL 1).

Citation List

Patent Literature

[0004] PTL 1: Unexamined Japanese Patent Publication No. H6-288387
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SUMMARY OF THE INVENTION

[0005] Such a conventional ceiling fan is set to be connectable to a network, and thus, the ceiling fan can be operated by an information terminal from outside the home.

25 [0006] However, when the ceiling fan can be operated from outside the home, there is a possibility that the ceiling fan is acted by an operation by an operator from outside the home when a non-operator such as a construction worker is working near the ceiling fan. Since the non-operator does not constantly monitor the color indicator, there is a concern that the non-operator does not notice the start of the action of the ceiling fan.

[0007] Therefore, an object of the present disclosure is to provide a technique for
30 improving safety during action of a ceiling fan.

[0008] A ceiling fan according to an aspect of the present disclosure is a ceiling fan that is capable of being fixed to a ceiling, and includes a first communication unit, a second communication unit, and a controller. The first communication unit executes

communication conformable to a first communication scheme. The second communication unit executes communication conformable to a second communication scheme different from the first communication scheme. The controller starts driving the ceiling fan after a first delay time elapses when the first communication unit receives an instruction to start driving the ceiling fan, and starts driving the ceiling fan after a second delay time longer than the first delay time elapses when the second communication unit receives the instruction to start driving the ceiling fan.

[0009] Another aspect of the present disclosure is also a ceiling fan. The ceiling fan is a ceiling fan that is capable of being fixed to a ceiling, and includes a first communication unit, a second communication unit, and a controller. The first communication unit executes communication conformable to a first communication scheme. The second communication unit executes communication conformable to a second communication scheme different from the first communication scheme. The controller causes first sound to be produced when the first communication unit receives an instruction to start driving the ceiling fan, and causes second sound different from the first sound to be produced when the second communication unit receives the instruction to start driving the ceiling fan.

[0010] Still another aspect of the present disclosure is also a ceiling fan. The ceiling fan is a ceiling fan that is capable of being fixed to a ceiling, and includes a first communication unit, a second communication unit, and a controller. The first communication unit executes communication conformable to a first communication scheme. The second communication unit executes communication conformable to a second communication scheme different from the first communication scheme. The controller starts driving the ceiling fan at a first rotation increase rate when the first communication unit receives an instruction to start driving the ceiling fan, and starts driving the ceiling fan at a second rotation increase rate lower than the first rotation increase rate when the second communication unit receives the instruction to start driving the ceiling fan.

[0011] Any combinations of the above-described components and modifications of the expressions of the present disclosure among methods, devices, systems, recording media, and computer programs are also effective as aspects of the present disclosure.

[0012] The ceiling fan according to the present disclosure can improve safety during action.

BRIEF DESCRIPTION OF THE DRAWINGS

[0013] Fig. 1 is a diagram illustrating an installation situation of a ceiling fan according to the exemplary embodiment according to an exemplary embodiment of the present disclosure in a house and a schematic configuration of the ceiling fan.

Fig. 2 is a diagram illustrating a configuration of an illumination unit of the ceiling fan according to the exemplary embodiment.

Fig. 3 is a diagram for describing control by a controller of the ceiling fan according to the exemplary embodiment.

Fig. 4 is a diagram illustrating a data structure of a table stored in a storage unit of the ceiling fan according to the exemplary embodiment.

DESCRIPTION OF EMBODIMENT

[0014] Hereinafter, a ceiling fan according to an exemplary embodiment of the present disclosure will be described in detail with reference to the drawings. The following exemplary embodiment illustrates preferred specific examples of the present disclosure.

Therefore, numeric values, shapes, materials, constituents, dispositions and connection modes of the constituents, and the like, which are illustrated in the following exemplary embodiment, are merely examples, and are not intended to limit the present disclosure. Accordingly, among the constituents in the following exemplary embodiment, constituents which are not recited in the independent claims for the most generic concept of the present disclosure are described as arbitrary constituents. Each of the drawings is a schematic view, and is not necessarily precisely illustrated. Therefore, for example, scales and the like are not necessarily matched in the respective drawings. In each drawing, substantially the same components are denoted by the same reference marks, and the redundant description will be omitted or simplified.

[0015] Fig. 1 is a diagram illustrating an installation situation of ceiling fan 1000 according to the exemplary embodiment in house 1 and a schematic configuration of ceiling fan 1000. Hereinafter, as illustrated in Fig. 1, a vertical direction in a state where ceiling fan 1000 is installed on ceiling 10 may be described as an upper-lower direction.

[0016] As illustrated in Fig. 1, access point 330 is installed in house 1, and ceiling fan 1000 is fixed to ceiling 10. Ceiling fan 1000 is connected to operation device 300, first information terminal 310a, and access point 330, and access point 330 is connected to base station apparatus 320 and second information terminal 310b. First information terminal 310a and second information terminal 310b are collectively referred to as information

terminals 310.

[0017] Ceiling fan 1000 includes main body 100 and rotating body 200. Main body 100 includes shaft 110, motor 120, motor shaft 122, controller 130, and wiring 140, and rotating body 200 includes blades 210, illumination unit 220, and second communication unit 250. Illumination unit 220 includes light source 222, first communication unit 230, and buzzer 240.

[0018] Main body 100 is fixed to ceiling 10 while being pivotally supported by shaft 110. Motor 120 incorporated in main body 100 is, for example, a direct current (DC) motor, and rotates cylindrical motor shaft 122 extending downward. Rotating body 200 is provided in a lower portion of motor shaft 122. A plurality of blades 210 are provided in an outer portion of rotating body 200. That is, ceiling fan 1000 includes motor 120 for rotating blades 210. Illumination unit 220 capable of illuminating downward is disposed in a central portion of rotating body 200.

[0019] Rotating body 200 includes first communication unit 230 and second communication unit 250. First communication unit 230 is a communication interface for executing infrared communication with operation device 300 in house 1, and receives an instruction signal from operation device 300.

[0020] Here, operation device 300 is a communication device (so-called remote controller) operated by a user to instruct an action of ceiling fan 1000. Operation device 300 includes an interface such as a button, and receives an operation by the user. The action of ceiling fan 1000 received by an operation of the user is, for example, start and stop of rotation of rotating body 200, a change in a rotation speed, and turning on and off and a change in luminance of illumination unit 220. Operation device 300 can execute infrared communication, and transmits an instruction signal indicating contents of the received operation to ceiling fan 1000 by infrared communication.

[0021] Second communication unit 250 is a communication interface for executing wireless local area network (LAN) communication with access point 330 in house 1.

[0022] Here, access point 330 is connected to base station apparatus 320 outside house 1, and base station apparatus 320 can execute mobile phone communication such as long term evolution (LTE) with second information terminal 310b outside house 1.

[0023] Second communication unit 250 receives an instruction signal from first information terminal 310a via access point 330. Second communication unit 250 receives an instruction signal from second information terminal 310b via base station apparatus 320

and access point 330.

[0024] Here, first information terminal 310a is a communication device such as a smartphone, and is assumed to be used in house 1 in the present exemplary embodiment. First information terminal 310a can execute application software having a function equivalent to the function of operation device 300, and receives an operation by the user. First information terminal 310a can execute wireless communication, and transmits an instruction signal indicating the content of the received operation to ceiling fan 1000 via access point 330 by wireless communication.

[0025] Second information terminal 310b is a communication device such as a smartphone, and is assumed to be used outside house 1 in the present exemplary embodiment. Second information terminal 310b can execute application software having a function equivalent to the function of operation device 300, and receives an operation by the user. Second information terminal 310b can execute mobile phone communication and transmits an instruction signal indicating the content of the received operation. First information terminal 310a and second information terminal 310b may have the same configuration.

[0026] Infrared communication by first communication unit 230 corresponds to communication conformable to a first communication scheme executed in the first communication unit according to the present disclosure. Wireless LAN communication by second communication unit 250 corresponds to communication conformable to a second communication scheme different from the first communication scheme executed in the second communication unit according to the present disclosure. That is, ceiling fan 1000 includes first communication unit 230 that executes infrared communication, which is an example of communication conformable to the first communication scheme according to the present disclosure. Ceiling fan 1000 includes second communication unit 250 that executes wireless LAN communication that is an example of communication conformable to the second communication scheme according to the present disclosure.

[0027] Controller 130 receives an instruction signal from first communication unit 230 or second communication unit 250, and controls motor 120, the illumination unit 220, and buzzer 240 according to an instruction indicated by the instruction signal. For example, upon receiving an instruction to start rotating rotating body 200, that is, an instruction to start driving ceiling fan 1000, controller 130 controls motor 120 to rotate. Motor 120 rotates motor shaft 122 according to the control of controller 130, and thus, the plurality of

blades 210 rotate together with rotating body 200. Controller 130 is connected to illumination unit 220 via wiring 140 passing through motor shaft 122, and turns on and off illumination unit 220 or adjusts the luminance of illumination unit 220 according to the instruction to illumination unit 220 indicated by the instruction signal.

5 [0028] Controller 130 includes, for example, a computer system including a processor and a memory. The processor executes a program stored in the memory, and thus, the computer system functions as controller 130. Here, the program executed by the processor is assumed to be recorded in advance in the memory of the computer system. The program may be provided by being recorded in a non-temporary recording medium such as a
10 memory card, or may be provided through a telecommunication line such as the Internet.

[0029] Fig. 2 is a diagram illustrating a configuration of illumination unit 220.

[0030] As illustrated in Fig. 2, illumination unit 220 includes a plurality of light sources 222, first communication unit 230, and buzzer 240. Fig. 2 corresponds to a diagram of illumination unit 220 of Fig. 1 as viewed from below. Two wirings 140 extend to
15 illumination unit 220. Hereinafter, a set of two wirings may be referred to wiring 140, and one wiring may be referred to as wiring 140. A plurality of light sources 222 are connected in parallel or in series to two wirings 140. Each of the plurality of light sources 222 is, for example, an LED, and illuminates with luminance corresponding to the magnitude of the direct current flowing through wiring 140. Thus, as the direct current increases, the
20 luminance of light source 222 increases.

[0031] As described above, first communication unit 230 can execute infrared communication with operation device 300 and receives an instruction signal from operation device 300. Although not particularly illustrated in Fig. 1, first communication unit 230 and controller 130 are connected by a signal line, and first communication unit
25 230 transmits the received instruction signal to controller 130 via a signal line. Buzzer 240 is connected to controller 130 via a signal line (not illustrated), and produces a buzzer sound under the control of controller 130. In the present exemplary embodiment, the production of the buzzer sound is expressed as "sound producing".

[0032] In house 1 of Fig. 1, a construction worker may work near ceiling fan 1000. At
30 this time, since the user in house 1 recognizes the presence of the construction worker, the user does not rotate ceiling fan 1000 by operating operation device 300 or first information terminal 310a. Alternatively, after asking the construction worker, the user operates operation device 300 or first information terminal 310a to rotate ceiling fan 1000. Thus, it

can be said that there is no risk for the construction worker due to the action of ceiling fan 1000. On the other hand, since the user outside house 1 does not recognize the presence of the construction worker, the user can operate second information terminal 310b to rotate ceiling fan 1000. Since the construction worker does not recognize the start of the driving of ceiling fan 1000, it can be said that there is a risk for the construction worker due to the action of ceiling fan 1000. When the user is an operator who operates ceiling fan 1000, the construction worker is a non-operator who does not operate ceiling fan 1000. In order to improve safety during the action of the ceiling fan by the non-operator, controller 130 executes the following control processing.

[0033] Fig. 3 is a diagram for describing control by controller 130. As illustrated in Fig. 3, ceiling fan 1000 includes controller 130, drive circuit 170, storage unit 180, first communication unit 230, buzzer 240, and second communication unit 250.

[0034] As described above, first communication unit 230 executes infrared communication, which is an example of communication conformable to the first communication scheme, and receives an instruction signal from operation device 300 by infrared communication. First communication unit 230 transmits an instruction signal to controller 130 via a signal line (not illustrated). Second communication unit 250 executes wireless LAN communication, which is an example of communication conformable to the second communication scheme, and receives an instruction signal from access point 330 by wireless LAN communication. The instruction signal is transmitted from first information terminal 310a and is received by access point 330. The instruction signal is transmitted from second information terminal 310b and is received by access point 330 via base station apparatus 320. Second communication unit 250 transmits the instruction signal to controller 130. Hereinafter, the control processing executed by controller 130 will be described in conjunction with an example in which the instruction indicated by the instruction signal is the start of the driving of ceiling fan 1000 (hereinafter, also simply referred to as "driving start").

[0035] Controller 130 receives an instruction signal from first communication unit 230 or second communication unit 250, and determines a control content based on table 181 stored in storage unit 180 when the instruction signal indicates driving start.

[0036] Fig. 4 is a diagram illustrating a data structure of table 181 stored in storage unit 180. As illustrated in Fig. 4, in table 181, processing 183 is registered in association with each condition 182. Fig. 4 illustrates that, for example, when condition 182 is "received by

the first communication unit", processing 183 is "driving start after a first delay time elapses, producing of first sound, or driving start at a first rotation increase rate". That is, when first communication unit 230 receives an instruction signal, controller 130 determines a control content in which the driving start after the first delay time elapses, the
5 producing of the first sound, or the driving start at the first rotation increase rate is executed.

[0037] Fig. 4 illustrates that, for example, when condition 182 is "received by the second communication unit", processing 183 is "driving start after a second delay time elapses, producing of second sound, or driving start at a second rotation increase rate". That is,
10 when second communication unit 250 receives the instruction signal, controller 130 determines a control content in which the driving start after the second delay time elapses, the producing of the second sound, or the driving start at the second rotation increase rate is executed.

[0038] Here, the first delay time and the second delay time are times from a timing at
15 which controller 130 receives the instruction signal or a timing at which it is confirmed that the instruction indicated by the instruction signal is driving start to a timing at which motor 120 starts to rotate. The second delay time is defined to be longer than the first delay time. As an example, for example, the first delay time may be 1 second, and the second delay time may be 5 seconds.

[0039] The second sound is different from the first sound. For example, the second sound
20 may have a larger volume than the first sound.

[0040] The first rotation increase rate and the second rotation increase rate are time
changing rates of a rotation speed when motor 120 rotates. The second rotation increase rate is defined to be smaller than the first rotation increase rate. For example, the second
25 rotation increase rate may be 30% of the first rotation increase rate.

[0041] In the present exemplary embodiment, although controller 130 determines the control content based on table 181 stored in storage unit 180, the content of table 181 may be implemented in a program executed by controller 130, and a specific implementation method is a design matter.

[0042] The control processing performed by controller 130 based on the determined control content will be specifically described with reference to Fig. 3.

[0043] First, a case where an instruction signal indicating driving start is received from first communication unit 230 will be described. When the instruction signal is received

from first communication unit 230, controller 130 causes drive circuit 170 to start driving after the first delay time elapses, and to start driving at the first rotation increase rate. Here, drive circuit 170 is a circuit that rotates or stops motor 120 in accordance with an instruction from controller 130. Controller 130 causes buzzer 240 to produce the first sound. It is desirable that buzzer 240 is instructed to produce the first sound immediately after the instruction signal is received from first communication unit 230.

[0044] That is, when first communication unit 230 receives the instruction to start driving ceiling fan 1000, controller 130 of ceiling fan 1000 causes the first sound to be produced, and starts driving ceiling fan 1000 at the first rotation increase rate after the first delay time elapses.

[0045] Next, a case where an instruction signal indicating driving start is received from second communication unit 250 will be described. When the instruction signal is received from second communication unit 250, controller 130 causes drive circuit 170 to start driving after the second delay time elapses, and to start driving at the second rotation increase rate. Controller 130 causes buzzer 240 to produce the second sound. It is desirable that buzzer 240 is instructed to produce the second sound immediately after the instruction signal is received from second communication unit 250.

[0046] That is, when second communication unit 250 receives the instruction to start driving ceiling fan 1000, controller 130 of ceiling fan 1000 causes the second sound to be produced, and starts driving ceiling fan 1000 at the second rotation increase rate after the second delay time elapses.

[0047] Even when an instruction signal is received from either first communication unit 230 or second communication unit 250, it is possible to call attention to the non-operator such as the construction worker by causing buzzer 240 to produce sound immediately after the reception. As a result, the non-operator can take a behavior to avoid danger, such as interrupting a work before ceiling fan 1000 starts to rotate and moving to a place where blades 210 do not hit. That is, ceiling fan 1000 according to the exemplary embodiment can improve safety during the action of the ceiling fan by the non-operator.

[0048] A subject of devices, systems, or methods in the present disclosure includes a computer. This computer executes the program, and thus, the function of the subject of devices, systems, or methods in the present disclosure is realized. The computer includes, as a main hardware configuration, a processor that acts according to a program. The type of the processor is not limited as long as the processor can realize the function by

executing the program. The processor includes one or a plurality of electronic circuits including a semiconductor integrated circuit (IC) or a large scale integration (LSI). The plurality of electronic circuits may be integrated on one chip or may be provided on a plurality of chips. The plurality of chips may be aggregated into one device or may be provided in a plurality of devices. The program is recorded in a computer-readable non-transitory recording medium such as a read-only memory (ROM), an optical disk, or a hard disk drive. The program may be stored in advance in a recording medium, or may be supplied to the recording medium via a wide area communication network including the Internet.

[0049] When second communication unit 250 receives the driving start instruction, ceiling fan 1000 according to the present exemplary embodiment sets a delay time until the driving start to be longer than when first communication unit 230 receives the driving start instruction, the safety during the action of ceiling fan 1000 can be improved. When the instruction signal is received from second communication unit 250, it is assumed that the operator who is the user gives the driving start instruction from the outside of house 1 by using second information terminal 310b. In this case, there is a high possibility that the non-operator such as the construction worker does not recognize that ceiling fan 1000 starts to drive. Thus, a time until the driving start is set to be longer than when the driving start instruction is given from the inside of house 1, and thus, the non-operator can take a behavior to avoid danger such as interrupting a work before ceiling fan 1000 starts to rotate and moving to a place where blades 210 do not hit. That is, ceiling fan 1000 according to the exemplary embodiment can improve safety during the action of the ceiling fan by the non-operator.

[0050] Since ceiling fan 1000 according to the present exemplary embodiment changes the sound to be produced when second communication unit 250 receives the driving start instruction and when first communication unit 230 receives the driving start instruction, it is possible to improve the safety during the action of ceiling fan 1000. For example, when the second sound has a larger volume than the first sound, it is possible to call attention to the non-operator by producing the second sound with the larger volume when the driving start instruction is given from the outside of house 1. Therefore, ceiling fan 1000 according to the exemplary embodiment can improve safety during the action of the ceiling fan by the non-operator.

[0051] Since ceiling fan 1000 according to the present exemplary embodiment decreases

the rotation increase rate when the driving start instruction is received in second communication unit 250 as compared with when the driving start instruction is received in first communication unit 230, it is possible to improve the safety during the action of ceiling fan 1000. Since ceiling fan 1000 increases the rotation speed of motor 120 more slowly when the driving start instruction is given from the outside of house 1, blades 210 start to rotate slowly. Since the non-operator who notices the rotation of blades 210 can immediately take a behavior to avoid danger, ceiling fan 1000 according to the exemplary embodiment can improve safety during the action of the ceiling fan by the non-operator.

[0052] An outline of one aspect of the present disclosure is as follows. Ceiling fan (1000) according to an aspect of the present disclosure is ceiling fan (1000) that can be fixed to a ceiling, and includes first communication unit (230), second communication unit (250), and controller (130). First communication unit (230) executes communication conformable to the first communication scheme. Second communication unit (250) executes communication conformable to the second communication scheme different from the first communication scheme. When first communication unit (230) receives the instruction to start driving ceiling fan (1000), controller (130) starts driving ceiling fan (1000) after the first delay time elapses. When second communication unit (250) receives the instruction to start driving ceiling fan (1000), controller (130) starts driving ceiling fan (1000) after the second delay time longer than the first delay time elapses.

[0053] Ceiling fan (1000) may further include buzzer (240) that produces a buzzer sound under the control of controller (130). When first communication unit (230) receives the instruction to start driving ceiling fan (1000), controller (130) may cause buzzer (240) to produce the first sound. When second communication unit (250) receives the instruction to start driving ceiling fan (1000), controller (130) may cause buzzer (240) to produce the second sound different from the first sound.

[0054] Ceiling fan (1000) includes motor (120) for rotating blades (210). When first communication unit (230) receives the instruction to start driving ceiling fan (1000), controller (130) may start rotating motor (120) at the first rotation increase rate. When second communication unit (250) receives the instruction to start driving ceiling fan (1000), controller (130) may start rotating motor (120) at the second rotation increase rate smaller than the first rotation increase rate.

[0055] Another aspect of the present disclosure is also ceiling fan (1000). Ceiling fan (1000) is ceiling fan (1000) that can be fixed to a ceiling, and includes first communication

unit (230), second communication unit (250), and controller (130). First communication unit (230) executes communication conformable to the first communication scheme. Second communication unit (250) executes communication conformable to the second communication scheme different from the first communication scheme. Controller (130) produces the first sound when first communication unit (230) receives the instruction to start driving ceiling fan (1000), and produces the second sound different from the first sound when second communication unit (250) receives the instruction to start driving ceiling fan (1000).

[0056] Still another aspect of the present disclosure is also ceiling fan (1000). Ceiling fan (1000) is ceiling fan (1000) that can be fixed to a ceiling, and includes first communication unit (230), second communication unit (250), and controller (130). First communication unit (230) executes communication conformable to the first communication scheme. Second communication unit (250) executes communication conformable to the second communication scheme different from the first communication scheme. When first communication unit (230) receives the instruction to start driving ceiling fan (1000), controller (130) starts driving ceiling fan (1000) at the first rotation increase rate. When second communication unit (250) receives the instruction to start driving ceiling fan (1000), controller (130) starts driving ceiling fan (1000) at the second rotation increase rate smaller than the first rotation increase rate.

[0057] The first communication scheme executed in first communication unit (230) may be infrared communication, and the second communication scheme executed in second communication unit (250) may be wireless local area network (LAN) communication.

[0058] The ceiling fan according to the present disclosure has been described above based on the exemplary embodiment. It will be understood by those skilled in the art that the ceiling fan according to the exemplary embodiment is merely an example. Further, in modifications of the exemplary embodiment, components or processes of the exemplary embodiment are variously combined. Further, the modifications fall within the scope of the present disclosure.

[0059] Controller 130 according to the present exemplary embodiment changes the delay time, the sound, and the rotation increase rate in accordance with whether the instruction is received by first communication unit 230 or second communication unit 250. However, controller 130 may be modified so as to change at least one of the delay time, the sound, and the rotation increase rate in accordance with whether the instruction is received by first

communication unit 230 or second communication unit 250. The controller according to the present modification can simplify the configuration.

[0060] Ceiling fan 1000 according to the present exemplary embodiment includes illumination unit 220. However, the present disclosure is not limited thereto, and for

5 example, ceiling fan 1000 may be deformed so as not to include illumination unit 220. The ceiling fan according to the present modification can improve a degree of freedom in configuration.

REFERENCE MARKS IN THE DRAWINGS

- 10 **[0061]** 1: house
10: ceiling
100: main body
110: shaft
120: motor
15 122: motor shaft
130: controller
140: wiring
170: drive circuit
180: storage unit
20 181: table
182: condition
183: processing
200: rotating body
210: blade
25 220: illumination unit
222: light source
230: first communication unit
240: buzzer
250: second communication unit
30 300: operation device
310: information terminal
310a: first information terminal
310b: second information terminal

320: base station apparatus

330: access point

1000: ceiling fan

CLAIMS

1. A ceiling fan that is capable of being fixed to a ceiling, the ceiling fan comprising:

5 a first communication unit that executes communication conformable to a first communication scheme;

a second communication unit that executes communication conformable to a second communication scheme different from the first communication scheme; and

10 a controller that starts driving the ceiling fan after a first delay time elapses when the first communication unit receives an instruction to start driving the ceiling fan, and starts driving the ceiling fan after a second delay time longer than the first delay time elapses when the second communication unit receives the instruction to start driving the ceiling fan.

15 2. The ceiling fan according to Claim 1, further comprising a buzzer that produces buzzer sound under control by the controller,

wherein the controller causes the buzzer to produce first sound when the first communication unit receives the instruction to start driving the ceiling fan, and causes the buzzer to produce second sound different from the first sound when the second
20 communication unit receives the instruction to start driving the ceiling fan.

3. The ceiling fan according to Claim 1 or 2, further comprising a motor that rotates blades,

25 wherein the controller starts rotating the motor at a first rotation increase rate when the first communication unit receives the instruction to start driving the ceiling fan, and starts rotating the motor at a second rotation increase rate lower than the first rotation increase rate when the second communication unit receives the instruction to start driving the ceiling fan.

30 4. A ceiling fan that is capable of being fixed to a ceiling, comprising:

a first communication unit that executes communication conformable to a first communication scheme;

a second communication unit that executes communication conformable to a

second communication scheme different from the first communication scheme; and
a controller that causes first sound to be produced when the first communication unit receives an instruction to start driving the ceiling fan, and causes second sound different from the first sound to be produced when the second communication unit receives

5 the instruction to start driving the ceiling fan.

5. A ceiling fan that is capable of being fixed to a ceiling, comprising:

a first communication unit that executes communication conformable to a first communication scheme;

10 a second communication unit that executes communication conformable to a second communication scheme different from the first communication scheme; and

a controller that starts driving the ceiling fan at a first rotation increase rate when the first communication unit receives an instruction to start driving the ceiling fan, and starts driving the ceiling fan at a second rotation increase rate lower than the first rotation

15 increase rate when the second communication unit receives the instruction to start driving the ceiling fan.

6. The ceiling fan according to any one of Claims 1 to 5, wherein

20 the first communication scheme executed in the first communication unit is infrared communication, and

the second communication scheme executed in the second communication unit is wireless local area network (LAN) communication.