Claims

1. An earphone wire control device, comprising a switching unit (1), a first signal generating unit (2), a second signal generating unit (3) and a microphone (4);

the switching unit (1) and the first signal generating unit (2) being connected in series to form a first path; the switching unit (1) and the second signal generating unit (3) being connected in series to form a second path; the first path, the second path and a microphone path where the microphone (4) is located being connected in parallel;

wherein the switching unit (1) is to switch between the first path and the second path.

2. The earphone wire control device according to claim 1, wherein

when the switching unit (1) turns on the first path, the microphone path is short-circuited, the first signal generating unit (2) generates a recording start signal and cuts off the first path after generating the recording start signal;

when the switching unit (1) turns on the second path, the microphone path is short-circuited, the second signal generating unit (3) generates a recording stop signal and cuts off the second path after generating the recording stop signal.

3. The earphone wire control device according to claim 1, wherein the first signal generating unit (2) and the second signal generating unit (3) form a mirror circuit with same configuration.

4. The earphone wire control device according to claim 1, wherein the switching unit (1) is a single-pole double-throw switch.

5. The earphone wire control device according to claim 4, wherein the first signal generating unit (2) comprises a capacitor (21), a Zener diode (22), a transistor (23) and a resistor (24);

an anode of the capacitor (21) is connected to the single-pole double-throw switch and a cathode of the capacitor (21) is connected to both of an end of the resistor (24) and an anode of the Zener diode (22); a cathode of the Zener diode (22) is connected to a base

of the transistor (23); a collector of the transistor (23) is connected to a power supply and an emitter of the transistor (23) is grounded.

6. The earphone wire control device according to claim 4, wherein the second signal generating unit (3) comprises a capacitor (31), a Zener diode (32), a transistor (33) and a resistor (34),

an anode of the capacitor (31) is connected to the single-pole double-throw switch and a cathode of the capacitor (31) is connected to both of an end of the resistor (34) and an anode the Zener diode (32); a cathode of the Zener diode (32) is connected to a base of the transistor (33); a collector of the transistor (33) is connected to a power supply and an emitter of the transistor (33) is grounded.

7. An earphone comprising an earphone wire control device according to any one of claims 1-6.

8. A voice recording system, comprising an earphone and a recording signal processing terminal;

wherein the earphone comprises an earphone wire control device according to any one of claims 1-6, and is to transmit a recording start signal and a recording stop signal to the recording signal processing terminal;

the recording signal processing terminal is to control a microphone (4) in the earphone wire control device to record voice information after receiving the recording start signal, and to control the microphone (4) in the earphone wire control device to stop recording the voice information after receiving the recording stop signal.

9. The voice recording system according to claim 8, wherein the recording signal processing terminal is a mobile terminal, a notebook computer, a tablet computer or a personal digital assistant (PDA).

10. A voice recording method, comprising:

turning on, by a switch unit, a first path to short-circuit a microphone path where a microphone is located;

generating, by a first signal generating unit, a recording start signal; transmitting the

recording start signal to a recording signal processing terminal; and cutting off the first path after the recording start signal is generated;

controlling, by the recording signal processing terminal, the microphone to record voice information after receiving the recording start signal;

turning on, by the switch unit, a second path to short-circuit the microphone path;

generating, by a second signal generating unit, a recording stop signal, transmitting the recording stop signal to the recording signal processing terminal; and cutting off the second path after the recording stop signal is generated;

controlling, by the recording signal processing terminal, the microphone to stop recording the voice information after receiving the recording stop signal.

11. The voice recording method according to claim 10, wherein the recording signal processing terminal is a mobile terminal, a notebook computer, a tablet computer or a personal digital assistant.

Claims

1. An earphone wire control device, comprising a switching unit (1), a first signal generating unit (2), a second signal generating unit (3) and a microphone (4);

the switching unit (1) and the first signal generating unit (2) being connected in series to form a first path; the switching unit (1) and the second signal generating unit (3) being connected in series to form a second path; the first path, the second path and a microphone path where the microphone (4) is located being connected in parallel;

wherein the switching unit (1) is to switch between the first path and the second path; wherein the switching unit (1) is a single-pole double-throw switch;

the first signal generating unit (2) comprises a capacitor (21), a Zener diode (22), a transistor (23) and a resistor (24);

an anode of the capacitor (21) is connected to the single-pole double-throw switch and a cathode of the capacitor (21) is connected to both of an end of the resistor (24) and an anode of the Zener diode (22); a cathode of the Zener diode (22) is connected to a base of the transistor (23); a collector of the transistor (23) is connected to a power supply and an emitter of the transistor (23) is grounded.

2. The earphone wire control device according to claim 1, wherein

when the switching unit (1) turns on the first path, the microphone path is short-circuited, the first signal generating unit (2) generates a recording start signal and cuts off the first path after generating the recording start signal;

when the switching unit (1) turns on the second path, the microphone path is short-circuited, the second signal generating unit (3) generates a recording stop signal and cuts off the second path after generating the recording stop signal.

3. The earphone wire control device according to claim 1, wherein the first signal generating unit (2) and the second signal generating unit (3) form a mirror circuit with same configuration.

4. An earphone wire control device, comprising a switching unit (1), a first signal generating unit (2), a second signal generating unit (3) and a microphone (4);

the switching unit (1) and the first signal generating unit (2) being connected in series to form a first path; the switching unit (1) and the second signal generating unit (3) being connected in series to form a second path; the first path, the second path and a microphone path where the microphone (4) is located being connected in parallel;

wherein the switching unit (1) is to switch between the first path and the second path; wherein the switching unit (1) is a single-pole double-throw switch; wherein the second signal generating unit (3) comprises a capacitor (31), a Zener diode (32), a transistor (33) and a resistor (34),

an anode of the capacitor (31) is connected to the single-pole double-throw switch and a cathode of the capacitor (31) is connected to both of an end of the resistor (34) and an anode of the Zener diode (32); a cathode of the Zener diode (32) is connected to a base of the transistor (33); a collector of the transistor (33) is connected to a power supply and an emitter of the transistor (33) is grounded.

5. The earphone wire control device according to claim 4, wherein

when the switching unit (1) turns on the first path, the microphone path is short-circuited, the first signal generating unit (2) generates a recording start signal and cuts off the first path after generating the recording start signal;

when the switching unit (1) turns on the second path, the microphone path is short-circuited, the second signal generating unit (3) generates a recording stop signal and cuts off the second path after generating the recording stop signal.

6. The earphone wire control device according to claim 4, wherein the first signal generating unit (2) and the second signal generating unit (3) form a mirror circuit with same configuration.

7. An earphone comprising an earphone wire control device according to any one of claims 1-6.

8. A voice recording system, comprising an earphone and a recording signal processing terminal;

wherein the earphone comprises an earphone wire control device according to any one of claims 1-6, and is to transmit a recording start signal and a recording stop signal to the recording signal processing terminal;

the recording signal processing terminal is to control a microphone (4) in the earphone wire control device to record voice information after receiving the recording start signal, and to control the microphone (4) in the earphone wire control device to stop recording the voice information after receiving the recording stop signal.

9. The voice recording system according to claim 8, wherein the recording signal processing terminal is a mobile terminal, a notebook computer, a tablet computer or a personal digital assistant (PDA).

10. A voice recording method, comprising:

turning on, by a switch unit, a first path to short-circuit a microphone path where a microphone is located;

generating, by a first signal generating unit, a recording start signal; transmitting the recording start signal to a recording signal processing terminal; and cutting off the first path after the recording start signal is generated;

controlling, by the recording signal processing terminal, the microphone to record voice information after receiving the recording start signal;

turning on, by the switch unit, a second path to short-circuit the microphone path;

generating, by a second signal generating unit, a recording stop signal, transmitting the recording stop signal to the recording signal processing terminal; and cutting off the second path after the recording stop signal is generated;

controlling, by the recording signal processing terminal, the microphone to stop recording the voice information after receiving the recording stop signal; wherein the switch unit is a single-pole double-throw switch;

the first signal generating unit or the second signal generating unit comprises a capacitor, a Zener diode, a transistor and a resistor;

an anode of the capacitor is connected to the single-pole double-throw switch and a cathode of the capacitor is connected to both of an end of the resistor and an anode of the Zener diode; a cathode of the Zener diode is connected to a base of the transistor; a collector of the transistor is connected to a power supply and an emitter of the transistor is

grounded.

11. The voice recording method according to claim 10, wherein the recording signal processing terminal is a mobile terminal, a notebook computer, a tablet computer or a personal digital assistant.