SHOOTING METHOD AND APPARATUS OF ELECTRONIC DEVICE, AND ELECTRONIC DEVICE

[0001] ~~This application claims priority to Chinese Patent Application No. 201310061987.3, filed with the Chinese Patent Office on February 27, 2013 and entitled "SHOOTING METHOD AND APPARATUS OF ELECTRONIC DEVICE, AND ELECTRONIC DEVICE", which is hereby incorporated by reference in its entirety~~.

TECHNICAL FIELD

[0002] Embodiments of the present invention relate to photography techniques, and in particular, to a shooting method and apparatus of an electronic device, and the electronic device.

BACKGROUND

[0003] As multimedia electronic devices develop rapidly, most of multimedia electronic devices, such as mobile phones and tablet computers, have been equipped with a front-facing camera, so as to meet a user's requirement for taking a self-portrait.

[0004] Different from a rear-facing camera, a front-facing camera does not have a flash; therefore, when a user performs shooting at night or in another dim environment, a shooting effect is dim, a color is not bright, and definition is low. In the prior art, a front flash may be added for a front-facing camera or an external supplementary light may be used to supplement light, so as to resolve a problem of a dim shooting effect of the front-facing camera.

[0005] If a front flash is added for supplementing light, the front flash occupies large space and affects appearance; in addition, it is not proper to enable the flash directly in the eyes of people.

[0006] If an external supplementary light is used to supplement light, the external supplementary light is not easy to carry or easy to use.

light environment.

[0031] In the shooting method of an electronic device provided in this embodiment, a problem that a shooting effect is dim, a color is not bright, and definition is low when a front-facing camera is used to perform shooting in a dim or low-light environment can be resolved. In addition, there is no need to additionally dispose a flash or an external supplementary light; therefore, product costs are not increased, a product volume is not increased, and good usability and portability are obtained.

[0032] Based on the foregoing technical solution of this embodiment, the operation of adjusting the pixel grayscale of the liquid crystal display to the set grayscale value is preferably: adjusting pixel transmittance of the liquid crystal display and/or adjusting brightness of backlight of the liquid crystal display, so as to adjust the pixel grayscale of the liquid crystal display to the set grayscale value.

[0033] A light supplementing effect of the liquid crystal display is mainly affected by the pixel transmittance and the brightness of the backlight of the liquid crystal display. The pixel grayscale is adjusted by adjusting the pixel transmittance of the liquid crystal display and/or adjusting the brightness of the backlight of the liquid crystal display, any one of which can be used to adjust the light supplementing effect of the liquid crystal display. Adjusting the pixel transmittance of the liquid crystal display may be adjusting torsion angles of liquid crystal molecules by controlling the electric field, so as to further adjust the pixel transmittance of the liquid crystal display.

[0034] In the foregoing solution, adjusting the brightness of the backlight of the liquid crystal display may be specifically adjusting the brightness of the backlight of the liquid crystal display to maximum brightness. Adjusting the brightness of the backlight of the liquid crystal display to the maximum brightness is easy to operate, supplementary light is brighter, and a light supplementing effect is better during shooting.

[0035] Based on the foregoing technical solution in this embodiment, adjusting the pixel grayscale of the liquid crystal display to the set grayscale value and adjusting the color of the liquid crystal display to the set color may be specifically adjusting the liquid crystal display to an all white mode. The all white mode generally is a state in which the liquid crystal display displays an overall image; and generally is implemented by adjusting the pixel grayscale of the liquid crystal display to the maximum and then cooperating with adjustment of RGB colors. For example, all pixel grayscales of red, green, and blue may be adjusted to the maximum, and then an

crystal display 360, a front-facing camera 370, and a shooting apparatus 310 of an electronic device. The shooting apparatus 310 of an electronic device includes a liquid crystal display adjusting module 320 and a camera enabling module 330. The liquid crystal display adjusting module 320 includes a grayscale adjusting unit 340 and a color adjusting unit 350.

[0058] Before shooting, the electronic device enables the front-facing camera ~~340~~370 by using the camera enabling module 330, so as to prepare for shooting; when the front-facing camera ~~340~~ 370 is used to perform shooting, the shooting apparatus 310 of the electronic device adjusts a pixel grayscale of the liquid crystal display to an all white mode by using the liquid crystal display adjusting module 320, and brightness of backlight of the liquid crystal display 360 to maximum brightness simultaneously, so as to supplement light to an object being photographed in a dim or low-light environment. The shooting apparatus 310 of an electronic device may further adjust a color of the backlight of the liquid crystal display 360 by using the color adjusting unit 350 in the liquid crystal display adjusting module 320, so as to supplement a light supplementing source of an object being photographed.

[0059] The electronic device may be a mobile phone or a tablet computer, for example.

[0060] By using the foregoing shooting apparatus of an electronic device, the electronic device provided in this embodiment executes a shooting method of an electronic device provided in an embodiment of the present invention and has corresponding function modules and beneficial effects, and details are not described herein.

[0061] Finally, it should be noted that the foregoing embodiments are merely intended for describing the technical solutions of the present invention, but not for limiting the present invention. Although the present invention is described in detail with reference to the foregoing embodiments, persons of ordinary skill in the art should understand that they may still make modifications to the technical solutions described in the foregoing embodiments or make equivalent replacements to some or all technical features thereof, without departing from the scope of the technical solutions of the embodiments of the present invention.

CLAIMS

What is claimed is:

1. A shooting method of an electronic device, comprising:

enabling a front-facing camera to prepare for shooting; and

when the front-facing camera is used to perform shooting, adjustinga pixel grayscale of a liquid crystal display to a set grayscale value and/or adjusting a color of the liquid crystal display to a set color, so as to supplement light to an object being photographed.

2. The method according to claim 1, wherein the adjusting a pixel grayscale of a liquid crystal display to a set grayscale value comprises:

adjusting pixel transmittance of the liquid crystal display and/or adjusting brightness of backlight of the liquid crystal display, so as to adjust the pixel grayscale of the liquid crystal display to the set grayscale value.

3. The method according to claim 2, wherein the adjusting brightness of backlight of the liquid crystal display comprises:

adjusting the brightness of the backlight of the liquid crystal display to maximum brightness.

4. The method according to claim 1, wherein the adjusting a pixel grayscale of a liquid crystal display to a set grayscale value and adjusting a color of the liquid crystal display to a set color comprises:

adjusting the liquid crystal display to an all white mode.

5. The method according to claim 1, wherein the adjusting a color of the liquid crystal display to a set color comprises:

adjusting a color of backlight of the liquid crystal display to the set color.

6. A shooting apparatus of an electronic device, comprising:

a camera enabling module, configured to enable a front-facing camera to prepare for shooting; and

a liquid crystal display adjusting module, configured to: when the front-facing camera is used to perform shooting, adjust a pixel grayscale of a liquid crystal display to a set grayscale value and/or adjust a color of the liquid crystal display to a set color, so as to supplement light to an object being photographed.

7. The apparatus according to claim 6, wherein the liquid crystal display

adjusting module comprises:

a grayscale adjusting unit, configured to: when the front-facing camera is used to perform shooting, adjust pixel transmittance of the liquid crystal display and/or adjust brightness of backlight of the liquid crystal display, so as to adjust the pixel grayscale of the liquid crystal display to the set grayscale value.

8. The apparatus according to claim 6, wherein the liquid crystal display adjusting module is specifically configured to: when the front-facing camera is used to perform shooting, adjust the liquid crystal display to an all white mode.

9. The apparatus according to claim 6, wherein the liquid crystal display adjusting module further comprises:

a color adjusting unit, configured to: when the front-facing camera is used to perform shooting, adjust a color of backlight of the liquid crystal display, so as to adjust the color of the liquid crystal display to the set color.

10. An electronic device, comprising a front-facing camera and a liquid crystal display and further comprising the shooting apparatus of an electronic device according to any one of claims 6 to 9.

11. The electronic device according to claim 10, wherein the electronic device is a mobile terminal.

CLAIMS

1. A shooting method of an electronic device, the electronic device including a front-facing camera and a liquid crystal display, which are disposed on a same side of the electronic device, the method comprising:

enabling the front-facing camera to prepare for shooting; and

when the front-facing camera is used to perform shooting, adjusting pixel transmittance of the liquid crystal display and adjusting brightness of backlight of the liquid crystal display, to adjust a pixel grayscale of the liquid crystal display to a set grayscale value, so as to simulate a flash to supplement light to an object being photographed.

2. The method according to claim 1, wherein the adjusting pixel transmittance of the liquid crystal display and adjusting brightness of backlight of the liquid crystal display comprises:

adjusting pixel transmittance of the liquid crystal display and adjusting brightness of backlight of the liquid crystal display simultaneously.

3. The method according to claim 1 or 2, wherein the adjusting brightness of backlight of the liquid crystal display comprises:

adjusting the brightness of the backlight of the liquid crystal display to maximum brightness.

4. The method according to claim 1, 2 or 3, wherein the adjusting pixel transmittance of the liquid crystal display comprises:

adjusting the liquid crystal display to an all white mode.

5. The method according to any one of claims 1-4, wherein when the front-facing camera is used to perform shooting, adjusting pixel transmittance of the liquid crystal display and adjusting brightness of backlight of the liquid crystal display comprises:

when determining a shooting icon is tapped, adjusting pixel transmittance of the liquid crystal display and adjusting brightness of backlight of the liquid crystal display .

6. The method according to any one of claims 1-5, wherein the enabling the front-facing camera to prepare for shooting comprises:

entering a framing page of the front-facing camera.

7. A shooting apparatus of an electronic device, the electronic device including a

front-facing camera and a liquid crystal display, which are disposed on a same side of the electronic device, the apparatus comprising:

a camera enabling module, configured to enable the front-facing camera to prepare for shooting; and

a liquid crystal display adjusting module, configured to: when the front-facing camera is used to perform shooting, adjust pixel transmittance of the liquid crystal display and adjust brightness of backlight of the liquid crystal display, to adjust a pixel grayscale of the liquid crystal display to a set grayscale value, so as to simulate a flash to supplement light to an object being photographed.

8. The apparatus according to claim 7, wherein the liquid crystal display adjusting module further configured to: when the front-facing camera is used to perform shooting, adjust pixel transmittance of the liquid crystal display and adjust brightness of backlight of the liquid crystal display simultaneously.

9. The apparatus according to claim 7 or 8, wherein the liquid crystal display adjusting module is specifically configured to: when the front-facing camera is used to perform shooting, adjust the liquid crystal display to an all white mode.

10. The apparatus according to claim 7, 8 or 9, wherein the liquid crystal display adjusting module further configured to: when the front-facing camera is used to perform shooting, adjust the brightness of the backlight of the liquid crystal display to maximum brightness.

11. The apparatus according to any one of claims 7-10, wherein the liquid crystal display adjusting module further configured to: when determining a shooting icon is tapped, adjust pixel transmittance of the liquid crystal display and adjust brightness of backlight of the liquid crystal display.

12. The apparatus according to any one of claims 7-11, wherein the camera enabling module further configured to: enter a framing page of the front-facing camera.

13. An electronic device, comprising a front-facing camera and a liquid crystal display, which are disposed on a same side of the electronic device, and further comprising the shooting apparatus of an electronic device according to any one of claims 7 to 12.

14. The electronic device according to claim 13, wherein the electronic device is a mobile terminal.