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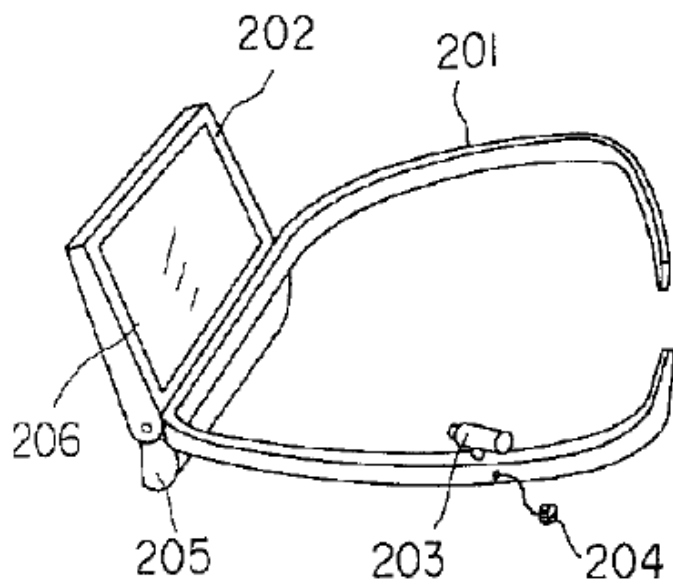
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[Title of Invention] Mobile Videophone Device

[Abstract]

[Purpose] To provide a mobile videophone device that can be used with hands free.

[Configuration] It includes image display 202, ring-shaped supporting member 201 to support this image display 202 on the upper body of a user so that it is located in a lower field of view of the user of the mobile videophone device, image reflecting surface 206 which is arranged on a front surface of the image display 202 to reflect the user's face image and to transmit an image on the image display 202, and camera 203 to pick up an image on this image reflecting surface 206.



[Claims]

[Claim 1] A mobile videophone device for transmitting and receiving a voice and an image wirelessly, including,

an image display means,

a supporting means for supporting this image display means on the upper body of a user so that it is located in a lower field of view of the user of the mobile videophone device,

an image reflecting means being arranged on a front surface of the image display means for reflecting the user's face image and transmitting an image on the image display means, and

an image pickup means for picking up an image on this image reflecting means.

[Claim 2] A mobile videophone device for transmitting and receiving a voice and an image wirelessly, including,

an image display means,

a supporting means for supporting this image display means on the upper body of a user so that it is located in a lower field of view of the user of the mobile videophone device,

an image reflecting means arranged at a position adjacent to the image display means for reflecting the user's face image, and

an image pickup means for picking up an image on this image reflecting means.

[Claim 3] A mobile videophone device for transmitting and receiving a voice and an image wirelessly, including,

a mobile videophone device main body configured to be foldable, and

an image pickup means provided in this mobile videophone device main body so as to be exposed in either of a state where the mobile videophone device main body is folded or a state of not being folded.

[Claim 4] A mobile videophone device for transmitting and receiving a voice and an image wirelessly, including,

a mobile videophone device main body configured to be foldable,

an image pickup means provided in this mobile videophone device main body so as to be exposed in either of a state where the mobile videophone device main body is folded or a state of not being folded, and

a supporting means configured to have a distance from a lowermost part of the mobile videophone device main body to the pickup means which is adjustable in a state where the mobile videophone device is folded.

[Claim 5] A mobile videophone device for transmitting and receiving a voice and an image wirelessly, including,

a mobile videophone device main body configured to be foldable,

an image pickup means provided in this mobile videophone device main body so as to be exposed in either of a state where the mobile videophone device main body is folded or a state of not being folded,

a first detection means for detecting whether the mobile videophone device main body is in a state of being folded or in a state of not being folded,

a second detection means for detecting whether the mobile videophone device main body is in an upright position or in an inverted position, and

an inverting means for turning a pickup image signal obtained by the pickup means upside down when the first detection means detects that the mobile videophone device main body is in a state of being folded and the second detection means detects that the mobile

videophone device main body is in a upright position, and when the first detection means detects that the mobile videophone device is in a state of not being folded and the second detection means detects that the mobile videophone device main body is in an inverted position.

[Claim 6] A mobile videophone device for transmitting and receiving a voice and an image wirelessly, including,

a mobile videophone device main body,

first and second operating means provided on the left and right side surfaces of this mobile videophone device main body, respectively, and

a setting means for setting to allocate a function to the first and second operation means.

[Claim 7] A mobile videophone device for transmitting and receiving a voice and an image wirelessly, including,

a mobile videophone device main body having an image pickup means and image display means,

first and second operating means provided on the left and right side surfaces of this mobile videophone device main body, respectively, for making adjustment of rates of magnification/reduction of the captured image captured by the image pickup means which is displayed on the image display means, and

a setting means for setting to allocate a function to the first and second operation means.

[Claim 8] A mobile videophone device for transmitting and receiving a voice and an image wirelessly, including,

a mobile videophone device main body having an image pickup means and image display means,

a supporting means for supporting this mobile videophone device main body in a standing position, and

an operation means being provided to be attachable and detachable to the mobile videophone device main body for operating the mobile videophone device main body.

[Claim 9] A mobile videophone device for transmitting and receiving a voice and an image wirelessly having a battery as a power source, including,

an image display means,

a battery power detection means for detecting the power level of the battery, and

a means for interrupting at least a part of the image display means or changing the display mode when the power level detected by this battery power detection means has reached a predetermined value or less.

[Claim 10] A mobile videophone device for transmitting and receiving a voice and an image wirelessly, including,

a mobile videophone device main body having a voice input and output,

a panel provided to be attachable and detachable to and from this mobile videophone device,

an image display means and an image pickup means provided on this panel, and

a connecting means for mechanically and electrically connecting these image display means and image pickup means with the mobile videophone device main body.

[Claim 11] A mobile videophone device for transmitting and receiving a voice and an image wirelessly, including,

a mobile videophone device main body having an antenna,

an image display means and an image pickup means, at least either one of which is provided to be attachable and detachable to and from this mobile videophone device main body, and

a connecting means for mechanically and electrically connecting at least one of these image display means and/or image pickup means configured to be attachable and detachable to and from the mobile videophone device main body with the mobile videophone device,

wherein the image display means, the image pickup means, at least a part of a component member of the connecting means, and the antenna constitute a space diversity antenna.

[Claim 12] A mobile videophone device for transmitting and receiving a voice and an image wirelessly, including,

a mobile videophone device main body including an image display means and an image pickup means, and

a supporting means for supporting this mobile videophone device main body at an arbitrary position and direction and also working as an antenna for signal transmission and reception.

[Claim 13] A mobile videophone device for transmitting and receiving a voice and an image wirelessly, including,

an area designation means being capable of designating a plurality of overlapping areas of high importance within a receiving image or a transmitting image, and

an encoding transmitter means for encoding and transmitting image information of the plurality of overlapping areas among image information of areas designated by this area designation means in higher quality than image information of areas not overlapping.

[Detailed Description of the Invention]

[0001] [Field of Industrial Application] This invention relates to a mobile videophone device for transmitting and receiving a voice and an image wirelessly.

[0002]

[Conventional Art] Research on mobile terminal devices that wirelessly transmit and receive a voice and image, namely mobile videophone devices, has been advanced. Such a mobile videophone device is disclosed in JP H3-109891, for example. By using a mobile videophone device, a user can communicate in the same manner as a normal conversation while transmitting an image of the user's own face to the other party and also receiving an image of the face of the other party, and thus the convenience is improved.

[0003] Figure 6 illustrates an appearance of a conventional mobile videophone device. On the front surface of mobile videophone device main body 211, a camera 212, display 213, microphone 124, speaker 215, and operation button 216 are arranged. Transmission and reception of voice signals and image signals are performed through antenna 217. When communicating, the mobile videophone device main body 211 is held in one hand in front of the face. However, such conventional videophones have the following problems.

[0004] (1) There are various possible cases where a mobile videophone device is used. For example, the possible cases may include when walking or standing on a street, when riding on a train, when driving a car, when sitting on a chair or a bench indoors or outdoors, when doing a light workout such as jogging, or the like. Among these, it is difficult to use a hand for holding or operating a mobile videophone device when driving a car or when walking with baggage held in both hands, but at least one hand must be used for holding or operating a conventional videophone and it is not adaptable for such usage. Even in other

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