

the overall length of the phone **18** becomes shorter, and since the movable member **7** has only the receiver device **6**, the thickness of the section where the movable member **7** is folded does not become too thick, making the phone **18** a superior compact unit.

[0035] Furthermore, because the movable member **7** has only the receiver device **6**, the length of the movable member **7** itself can be made short, and even when the movable member **7** is in the folded position, the keyboard section **3** does not become hidden from the view, and although a portion of the display section **2** is covered by the movable member **7**, the lower portion of the display section **2** is visible to the user. Therefore, even while the movable member **7** is in the folded condition, it is possible to display a minimum amount of function keys to enable entering call number and other necessary data to contact the intended receiver. It is also permissible to arrange so that when the movable member **7** is in the folded position, all of the display section **2** and a portion of the keyboard section **3** are hidden in such a way that only the function keys are visibly accessible.

[0036] More specifically, in **FIG. 1A**, the region indicated by the reference numeral **2a** is arranged to be a visible display section, and the region indicated by the reference numeral **2b** is hidden from the view. In other words, the visible display section **2a** is that region in the overall display section **2**, which is visible to the user when the movable member **7** is in the folded position, and the not-visible display section **2b** is that region whose visibility is blocked by the movable member **7**.

[0037] The visible display section **2a** is the essential date display area where the critical data such as caller telephone number, signal sensitivity, cell boundaries, remaining battery life and the presence of stored messages can be displayed even when the phone is in the carrying mode, not in the transmission mode.

[0038] The not-visible display section **2b** is for displaying information, such as various functions and telephone numbers, which is necessary when the phone **18** is in the transmission mode.

[0039] In other words, the portable phone device **18** enables the user to view necessary information even when the movable member **7** is in the folded position for carrying, because a visible display section **2a** of the display section **2** can be viewed by the user, without having to rotate the movable member **7** from the carrying position to the viewing position

[0040] Also, as shown in **FIG. 1A**, the front and the back surfaces of the movable member **7** are provided, respectively, with acoustic holes **8**, **9** so that regardless of whether the movable member **7** is in the closed or open position, the user is able to hear calling tones.

[0041] A second embodiment of the portable phone device will now be presented with reference to **FIGS. 3A and 3B**. **FIG. 3A** is a front view and **FIG. 3B** is a side view of the portable phone device.

[0042] The portable phone device **28**, similar to the first embodiment the portable phone device **18**, comprises a casing member **1** and a movable member **7** which is rotatably joined to the casing member **1** through a transverse

hinge section **5**. The point of difference is that the keyboard section **3** is located on the side surface. Therefore, even when the movable member **7** is in the closed position, the essential keys are always exposed for ready accessibility. It can also be arranged so that the keyboard section **3** is located on the back surface of the casing member **1**.

[0043] It should be noted that, in both first and second embodiments, it is not necessary to provide separate display section **2** and the keyboard section **3**, because it would be possible to reduce the area occupied by the conventional display section **2** and the keyboard section **3** greatly, if the display section **2** and the keyboard section **3** can be combined into one unit by using a liquid crystal touch panel. In such a unit, both the keyboard and display sections can be exposed for viewing even when the movable member **7** is in the closed position.

[0044] **FIG. 4** shows an example of such a portable phone device **28** comprising a liquid crystal touch panel section **29**, having its display section **2** combined with its keyboard section **3**, disposed on the front surface of the casing member **1**. The liquid crystal touch panel section **29** combines the operations previously performed by the individual display section **2** and the keyboard section **3**, and shows liquid crystal displays of the information normally exhibited by the display section **2** and the image of the keyboard on the same panel.

[0045] **FIG. 5** shows a block diagram of the circuit configuration of the portable phone device **28**. That is, the control circuit **13** is operatively connected to the liquid crystal touch panel section **29** so as to perform signal exchanges between the control circuit **13** and the liquid crystal touch panel section **29**. In other words, data input operations are carried out by operating the keyboard section **3** displayed on the liquid crystal touch panel **29**, and various information is displayed on the display section **2** of the liquid crystal touch panel section **29**, according to the signals output by the control circuit **13**. In this variation also, that region of the display section **2** which is visible when the movable member **7** is in the closed position is designated as visible display section **2a**, and that region which is not-visible is designated as not-visible display section **2b**. Also, it should be noted that it is not necessary that the battery **10**, antennae **11**, radio circuit **12** and the control circuit **13** (shown in **FIG. 1C**) be all packed into the casing member **1**. These components can be distributed suitably between the casing member **1** and the movable member **7**, so long as a minimum required area of the keyboard section **3** or the display section **2** can be exposed for viewing. The placement sequence of the keyboard section **3** and the display section **2** does not need to be restricted to those shown in these drawings.

[0046] The present invention has demonstrated that a folding configuration comprises a first and second casing members which can be rotated with respect to a transverse rotation axis joining the first and second casing member in a hinged structure. The length dimensions of the first casing member is different from that of the second casing member in such a way that the overall length of the portable phone device is short when folded for carrying, and that a visible section is exposed for accessibility of function keys or display of essential information. The length dimensions of the casing members can be optimized for portability and