

(rolled forward) as time passes, such an update may be executed, for instance, once an hour or every 30 minutes. In the standby state, power is supplied to the clock **111** at all times to engage it in time count operation but power is supplied to the character display module **20** only when the display needs to be updated, e.g., once every 30 minutes or every hour.

[0161] FIG. 26(c) presents an example of a display that may be brought up at the display device **100B** located at the rear surface in the standby state, providing the date and current news. This display can be provided by accessing a news site and downloading the latest information in the online service mode. By selecting a setting that automatically downloads the latest information and automatically updates the display accordingly every few hours, the user is able to check the latest news at all times in the standby state. The update interval may be set freely by the user.

[0162] In the standby state, power is supplied to the communication control unit **110** every few hours in order to download online service information and in synchronization with the download, power is supplied to update the display at the character display module **20** of the display device **100B** with the downloaded information. In addition, the portable telephone may adopt a structure that also allows it to sustain the standby state in response to an operation of a specific operating member in the online service mode and, in such a case, the user is able to download the latest information and update the display at the character display module **20** with minimum power whenever he desires by operating the specific operating member. It is to be noted that the display at the character display module **20** may be automatically selected regardless of whether or not the portable telephone is currently in the standby state whenever the online service mode is selected and an online service contents display instruction is issued. Such a structure, too, reduces power consumption at the device.

[0163] Since the display at the character display module **20** is provided by using ambient light, the display cannot be viewed with ease and its contents cannot be checked readily in a dark environment. Accordingly, the display at the character display module **20** may be disabled during a time block corresponding to nighttime and, during this period of time, all displays may be provided via the image display module **10** (in the display mode shown in FIG. 5). Since this time block is bound to vary with different users, it is desirable to allow the user to preset this time block. For instance, the user may enter "midnight 0:00~5:00" to indicate a specific time block during which the display at the character display module **20** is to be disabled and all displays are to be provided via the image display module **10**. Furthermore, for a time block (e.g., 7:00~17:00) during which the surrounding environment is assumed to be reasonably light, the display at the display module **20** may be selected as the default setting and displays may be provided either via the display module **10** or the display module **20**.

[0164] The following advantages are achieved in the second embodiment and the third embodiment described above.

[0165] (1) Displays in the first display mode, at least can be provided via the image display module **10** in the power ON state, whereas in the power OFF state, the display in the first display mode is disabled and the character display module **20** is enabled to provide displays in the second

display mode. Thus, while displays achieving a high level of visibility are provided through light emitting display in the power ON state, displays can be provided by using the ambient light and thus minimizing power consumption in the power OFF state. Through a display brought up in the power OFF state in this manner, information that cannot be read without first turning on the power in the related art can be read even in the power OFF state, and thus, better user convenience is assured.

[0166] (2) If a display brought up at the image display module **10** in the first display mode is sustained over a specific length of time with no further operation performed, the display mode is switched to the second display mode to provide a display via the character display module **20**. As a result, a display can be provided with minimum power consumption in the auto power OFF state or the standby state to assure better user convenience, as in (1).

[0167] (3) If any operation is performed while a display is up at the character display module **20** in the second display mode, the display mode is switched to the first display mode to bring up a display via the image display module **10**. In other words, a display with a higher level of visibility, achieved through light emitting display, can be selected as desired by the user. (4) Either the first display mode, which engages the image display module **10**, or the second display mode, which engages the character display module **20**, is selected for the display device in correspondence to the operating mode. As a result, the optimal display suited to a specific operating mode can be provided while assuring better energy efficiency.

[0168] (5) Since either the first display mode, which engages the image display module **10**, or the second display mode, which engages the character display module **20**, is selected at the display device in correspondence to the display contents to be displayed, an optimal display best suited for the particular display contents can be provided while assuring better energy efficiency.

[0169] (6) During a preselected time block, the display in the second display mode at the character display module **20** is disabled and only the display at the image display module **10** in the first display mode is enabled. During the rest of the time, displays can be brought up either in the first display mode or in the second display mode. Thus, in the time block during which the surrounding environment is bound to be dark and displays brought up at the character display module **20** in the second display mode could not be easily viewed, the image display module **10** is exclusively engaged to provide easily readable displays in the first display mode (light emitting display).

[0170] Next, variations of the display device are explained.

[0171] The display device shown in FIG. 28 includes an image display module constituted with an organic EL module **50** instead of the liquid crystal module described earlier. As known in the related art, the organic EL module **50** comprises a drive substrate **51**, a light emitting layer made up with a plurality of organic EL elements arrayed on the substrate **51** in a matrix pattern, a glass plate **53** covering the light emitting layer **52**, a color filter (not shown) and the like.