

Another advantage of the device in accordance with the invention is that newly retrieved information can be instantly read by suitably actuating the input element in the respective reading position. This is particularly of great help when working with tables which with input/output devices known hitherto is an awkward operation and, consequently, very prone to mistakes.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

In a preferred embodiment of the invention, the input element is a control bar arranged to advantage parallel to the output elements, e.g., the Braille elements. This control bar may be configured longer or just as long as the line of output elements. It is also conceivable, however, to configure the control bar shorter than the line of output elements, it then being necessary to ensure that the control bar continues to remain accessible with one hand and that, e.g., thumb actuation is possible when an output element located on the edge of the output element line is read with one finger, without having to remove the finger from the output element, e.g., the Braille element.

It is likewise conceivable that the input element, or the control bar, consists of two or more subdivided elements which can be actuated independently of each other. This would be of advantage to fast Braille readers who are able to read two-handedly. Here, care must be taken that, for example, in the case of a two-part input element or a control bar made up of two elements having, for instance, a right and left part, each of these two parts of the input element is arranged so that as regards a first array of output elements arranged e.g. on the right, the first input element is at such a maximum distance from the first array of output elements that, during reading of each and every output element of the first array of output elements, the first input element can be actuated with one hand without having to leave the reading position on any output element of the first array of output elements.

Correspondingly, the second, e.g. left hand, input element is arranged relative to a second, e.g. left hand, array of output elements so that, using one hand, both reading and input is possible at the same time, as described above. Thus, for instance, when a division into a left and a right portion is made, highly efficient two-handed operation is possible, wherein a first or a second array of output elements can be read with each hand whilst the first and second input elements assigned thereto in each case can be operated with the left or right hand without needing to remove the respective hand from the array of output elements assigned thereto in each case. In this arrangement particular care needs to be taken, as mentioned above, to ensure that the output elements located on the edge of the corresponding output array are still arranged so that this edge reading position also does not have to be left in order to operate the corresponding input element.

It is, of course, just as possible to configure the device in accordance with the invention with the input element in three separate parts, or even in further sub-divisions, the corresponding input elements then being assigned the corresponding output elements in each case.

In the configuration of the device in accordance with the invention as just described it is also possible, however, to arrange specific output elements so that when these are read, also two or more input elements can be actuated without having to leave the reading position on the output element. This may, for instance, be the case when an input element

located more or less parallel to an output bar is made up of, for example, two or more control elements arranged in parallel so that the user is able to select, e.g., between an upper and a lower control bar to input various control information or data. Naturally, three or more control bars can be arranged parallel to each other.

In one preferred embodiment of the invention the input element is configured so that it can be moved in a first direction so as to permit inputting of, for example, two different control data by a shift to the right or to the left. A resting location can also be provided enabling the input element to be shifted from the resting location in a first direction, e.g. parallel to a longitudinal direction of the output elements arranged at the input element, e.g. to the left and to the right to thus achieve three different conditions for inputting three different control information, wherein, e.g., in the resting location no control information is entered. However, it is just as possible to move the input element not to the left or to the right as regards the longitudinal direction of the line of output elements, but, e.g., upwards or downwards. In this arrangement it is likewise possible, as already discussed, to provide a resting location between, e.g., two different positions.

The input element, e.g. the control bar, can be placed in more than just two or three different positions in a first direction. For instance, the device in accordance with the invention can be configured so that the input device can be moved from a resting location into two, e.g., latching, right hand positions and, likewise into two latching left hand positions to thus achieve four different positions of the input element, wherein the input device may comprise a resting location between the two right hand and left hand positions.

Of course, several different input positions may also be provided in each direction which advantageously latch into place to indicate a certain position to the user at this time.

Another possibility is to configure the input device so that a double-click (as when working with a computer mouse) can be performed so that, by only one input switch position, different control information or data can be entered depending on whether a single click or a double-click is made.

Preferably the input device is also configured so that it is movable or can be actuated in a second direction in addition to a first direction. This may, e.g., be done by providing a control bar which can be positioned to the right, to the left, upwards and downwards in various positions, it being possible in this arrangement to configure the control bar so that it can be, e.g., pivoted around a fulcrum. The control bar can also be configured so that it can be simply moved upwards or downwards without pivoting around a fulcrum, it being of advantage in this embodiment to arrange the first and second movement direction of the input element more or less perpendicular to each other, that is, for example, right to left and upwards-downwards.

The device in accordance with the invention may also be configured so that the first and second movement direction of the input element forms an acute or obtuse angle to each other, it also being conceivable to configure the input element so that it is movable in more than just two different directions to thus increase the number of different data or control information entered. In the preferred embodiment of the invention as described above comprising more than one direction of movement of the input element, more than just one or two specific input positions can be provided in each direction of movement of the input element to thereby increase the number of data or control information that may be input.