

[0067] The apparatus for inputting coordinates **800** shields the light from the outside, and thereby, a detection accuracy can be improved. **FIG. 11** is a view to explain a shielding plate provided in the optical unit **801**. As shown in **FIG. 11**, a shielding plate **1001** is provided at an upper portion of the emission light mouth **106** of the optical unit **801**. The shielding plate **1001** is provided as described above, and thereby, the light from the outside is shielded. Therefore, light received by the optical unit **801** is limited to the light from the pointing stick **803**; as a result, it is possible to accurately detect a coordinate position. In **FIG. 11**, the shielding plate has been formed into a circular-arc shape. The shielding plate is not limited to the above shape, and may be formed into a rectangular shape or the like. Moreover, the shielding plate **1001** is received in the optical unit **801**, and thereby, it is possible to reduce a space of the optical unit **801**.

[0068] As is evident from the above description, according to apparatus for inputting coordinates of this invention, a projection of the optical unit is reduced. As a result, it becomes easy to operate the apparatus for inputting coordinates.

[0069] Further, since the height of the light is adjustable, it is possible to make close a position of the pointing means such as the finger or the pointing stick with respect to the coordinate input plane and a position of light irradiated to the pointing means. As a result, the apparatus for inputting coordinates can detect the coordinates more accurately.

[0070] Further, since the height of the reflecting section is adjustable, a projection of the reflecting section is reduced. As a result, the reflecting section does not block the view of the user.

[0071] Further, since the apparatus for inputting coordinates can be coupled with another apparatus for inputting coordinates, it is possible to reduce irregularities of portion where the apparatuses for inputting coordinates are coupled with each other. In addition, even if a plurality of apparatuses for inputting coordinates is connected to each other, it is possible to improve operability and visibility.

[0072] Further, since a plane including the coordinate input plane is interposed between the light source sections the light receiving section, the light source section or the light receiving section is arranged on the side opposite to the coordinate input plane. As a result, it is possible to reduce a projection on the coordinate input plane side, and improve the operability.

[0073] The present document incorporates by reference the entire contents of Japanese priority documents, 2000-074260 filed in Japan on Mar. 16, 2000.

[0074] Although the invention has been described with respect to a specific embodiment for a complete and clear disclosure, the appended claims are not to be thus limited but are to be construed as embodying all modifications and alternative constructions that may occur to one skilled in the art which fairly fall within the basic teaching herein set forth.

What is claimed is:

1. An apparatus for inputting coordinates, the apparatus comprising:

a coordinate input plate including a coordinate input plane for inputting a coordinate position;

a light source section which emits light that is substantially parallel to the coordinate input plane;

a reflecting section which reflects the light emitted from the light source section; and

a light receiving section which receives the light reflected by the reflecting section,

wherein the light source section and the light receiving section are integrated to form a single optical unit, and this optical unit is embedded in the coordinate input plate.

2. The apparatus for inputting coordinates according to claim 1 further comprising an irradiation height adjusting unit which adjusts a height, from the coordinate input plane, of light emitted from the light source.

3. The apparatus for inputting coordinates according to claim 2 further comprising a reflection height adjusting unit which adjusts a height, from the coordinate input plane, of the reflecting section.

4. The apparatus for inputting coordinates according to claim 3 further comprising a coupling unit through which the apparatus for inputting coordinates can be coupled with another apparatus for inputting coordinates.

5. The apparatus for inputting coordinates according to claim 1, wherein a plane including the coordinate input plane is interposed between the light source sections the light receiving section.

6. An apparatus for inputting coordinates, the apparatus comprising:

a coordinate input plate including a coordinate input plane for inputting a coordinate position;

a light source section which emits light that is substantially parallel to the coordinate input plane;

a pointing stick which reflects the light emitted from the light source section; and

a light receiving section which receives the light reflected by the pointing stick,

wherein the light source section and the light receiving section are integrated to form a single optical unit, and this optical unit is embedded in the coordinate input plate.

7. The apparatus for inputting coordinates according to claim 6 further comprising an emission light mouth, which is an outlet of light with respect to the coordinate input plane, provided with a shielding plate substantially parallel to the coordinate input plane.

8. The apparatus for inputting coordinates according to claim 6 further comprising an irradiation height adjusting unit which adjusts a height, from the coordinate input plane, of light emitted from the light source.

9. The apparatus for inputting coordinates according to claim 6 further comprising a shielding plate extending substantially vertical to the coordinate input plane at an outer edge of the coordinate input plane.

10. The apparatus for inputting coordinates according to claim 9 further comprising a shielding height adjusting unit which adjusts the height, from the coordinate input plane, of the shielding plate.