Patent Search

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Abstract:

ABSTRACT: Title: Portable Digital Mini Drafter with IMU-Based Orientation Tracking for Precision Drawing We are familiar with mini drafters which we used in our first engineering course. The main purpose of the device is to make the process of drawing parallel lines easier. They are used by the engineers, surveyors, architects or sc convert their rough designs to technical drawings. To use these drafters we have to clamp the arm of the drafter to the drawing table. So this causes a problem that v on small tables. And also mini drafters are bulky in size so there is a chance of improvement in the mini drafter. So our objective is to digitalize the functionality of mi and resolve its drawbacks. We have used an IMU sensor for tracking the orientation of the scale, since for all parallel lines orientation remains same i.e orientation of should also remain same. So the IMU sensor sends the orientation values continuously to the microcontroller. Then we have an OLED display unit to display the angl reference line and device orientation on the plane. It will show zero if the reference line and device are exactly parallel. This process eliminated the requirement of cla arm. So in this way we developed our device which can be used on small tables and also is much compact in size. And after testing our digital mini drafter we found c error is + 1.5 degrees

Complete Specification

Description:DESCRIPTION:
Field of the invention:
[0001] A mini drafter is an important device used for preparing drawings quickly & accurately. With the use of mini drafters the drawing of buildings, apartments, ar
industries are planned accurately in very less time. Mini Drafter is a very convenient drawing instrument for students since it combines all the functions of a T-squa
squares and a protractor. There are special versions for A0 double-sized boards, to make large drawings, or copying-boards with background illumination, which ha
that is necessary to provide specific support. Drafters' drawings provide visual guidelines and show how to construct a product or structure. Drawings include techn
details and specify dimensions, materials, and procedures. Drafters fill in technical details using drawings, rough sketches, specifications, and calculations made by
engineers, surveyors, architects, or scientists. For example, drafters use their knowledge of standardized building techniques to draw in the details of a structure. Sc
their understanding of engineering and manufacturing theory and standards to draw the parts of a machine; they determine design elements, such as the numbers
kinds of fasteners needed to assemble the machine. Drafters use technical handbooks, tables, calculators, and computers to complete their work. In this project, w
consider the drawbacks of mini drafters. The hands of a human being can draw to a degree of accuracy that is 99% of the time inferior to that of a tool. A mini draft
help you in drawing parallel lines so when drawing a line and in the design you need to draw many parallel lines you only need to shift the ruler attached to the min
to draw the other parallel lines. A drafter consists of a scale, a scale screw, a scale plate, steel bars, a bar plate and a clamping mechanism. An L-shaped scale is grad
in mm along both the arms. It also carries a degree scale for angle measurement. The scale is joined to a clamping mechanism by means of steel bars, the bar plate
the scale plate in such a way that it can be moved to the desired location on the drawing board. So basically, this device draws the parallel line parallel angles throu

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