

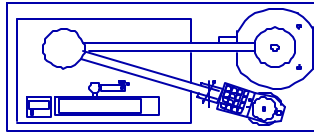
# BRIEF INSTRUCTIONS FOR THE USE OF LASICO 1281 Area / Line Meters

16inst11281br1

## Unpacking

Your instrument is supplied in a solid cardboard container to ensure safe transportation.

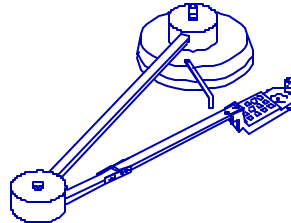
We recommend to keep it for future use.



## Setup of the Digitizer Base

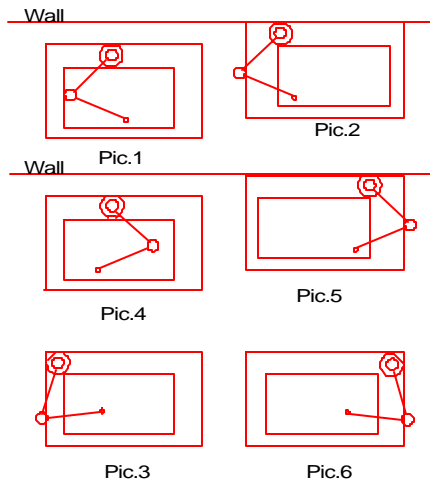
If the table is not tilted beyond 15 degrees, the digitizer base need not be clamped to the table.

If it is, you can hang it onto the table via a supplied eye bolt or else via the optional



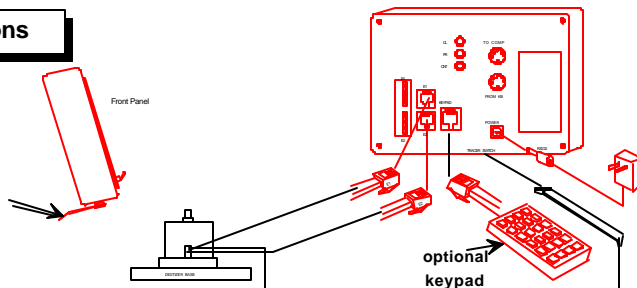
## Instrument Setup

The instrument can meet almost any requirement as far as physical set up is concerned. It can be configured for either right (Pic.1,2,3) or left hand operation. (Pic.4,5,6) Lasico's Model 1281W may also be used on transparent light and projection tables. Pic.1 and 4 show the optimal position. In this setup it is necessary to have a 1-2 ft. / 30-60 cm clearance between wall and table. Pic.2 and 5 shows a setup directly against the wall. Here it is necessary to position the drawing to the right or left of the digitizer base. Pic.3 and 6 show the optimal position for work on tilted tables. The weight of the heavier arm is largely neutralized. For work on severely tilted tables, Lasico offers a weight balancing kit as an option.



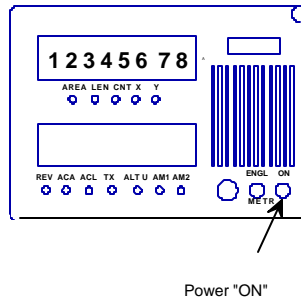
## Electrical Connections

The edge connectors of both the cursor switch-pad and serial cable must be plugged in in such a manner, that the wiring exits the connector towards the rear.



## Preparations

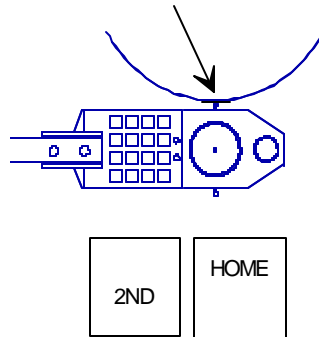
- Set up your instrument as shown on page 1.
- Check page 1 for details on electrical connections.
- Connect the DC connector of the power supply to the power jack on the rear panel and plug the power supply into an electric outlet.
- Insert the labeled transducer connectors into the E1 and E2 receptacles.
- Plug the cursor switch-pad into the "tracer switch" edge connector on the bottom of the processor box.
- If you purchased the optional keypad, it must be connected to the phone jack labeled "keypad".
- Make sure that your drawing, blueprint, etc. is securely attached to the table in such a manner, that it cannot move.
- Move the power switch to the upper "ON" position
- Set the English / Metric switch to the measuring



## Initializing the Instrument.

Whenever the instrument is switched on, it must be "**homed**" first.

Simply move and press the cursor slightly against the base and then, while you are holding the cursor against the base, activate the **2ND HOME** buttons of either the cursor switch-pad or the optional key-pad. The picture illustrates the homing procedure for right hand users. (with the arms to the left of the base) If you want to "home" with the arms to the right of the base, you must change the parameter 12 :



## Program your scale ratio into the processor after selecting area or length display mode (press Area or Len button)

**For Engineering Scales** press : **2ND Sc** *key in scale* **ENT ENT**  
**Example** : To enter a scale ratio of 1"=40' press **2ND Sc 40 ENT ENT**

**For an Architectural Scale** of 3/32"=1' press: **2ND Sc 3 ENT 32 ENT**

**Metric Proportional Scales** are entered by pressing **2ND Sc** *key in scale* **ENT ENT**

**Example**: Scale is 1:8000 for results in m<sup>2</sup> press: **2ND Sc 8000 ENT ENT**

**Note**: If an English (Imperial) Ratio is expressed as a proportional scale, it must be converted into an engineering scale before it can be programmed into the processor. Example: A scale of 1 : 240 means that 1" = 240 inches. For results in ft. we must convert the 240 inches into feet (= 20' ) . Subsequently the scale must be programmed as : 1" = 20' .  
**2ND Sc 20 ENT ENT**

## The Measuring Operation

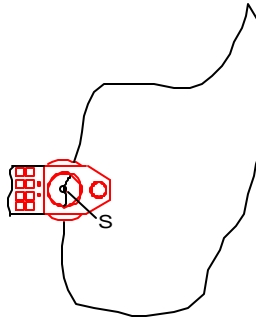
### MEASURING IN THE STREAM MODE

If you want to measure an area or a length of irregular shape, you must "trace" around or along it using the "Stream Mode".

To change from point to stream mode and vice versa simply push the P/S button on the instrument cursor.

When in the stream mode, the display numerals move whenever the position of the cursor changes and the P/S LED indicator on the tracer handle is not illuminated.

Whenever you measure an area, you will also get the peripheral length.

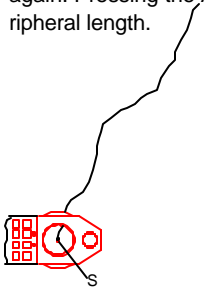


#### Area Measurement Procedure in the Stream Mode:

- Select a starting point (S) somewhere on the periphery and move the cursor over it.
- Clear the display using the "CL" button on the cursor.
- Carefully trace the cursor around the periphery with the cursor on top of the peripheral line (preferably in a clockwise direction) until you reach the starting point 'S' again. Pressing the AREA button will show the area, pressing the LEN button, the peripheral length.

#### Length Measuring Procedure in the Stream Mode :

- Again make sure you are in the stream mode (the display numerals are moving if the cursor is repositioned and the P/S LED is not turned on)
- Move your cursor over the starting point and clear the display via the CL button.
- Move the cursor carefully along the line which is to be measured until the end of the line is reached.
- Press the LEN button to see the length.
- Pressing the AREA button will show a completely meaningless result.



### MEASUREMENTS OF 'STRAIGHT LINE' FIGURES IN THE POINT MODE.

Whenever figures consist of straight lines, the "Point Mode" is recommended. It is faster and more precise.

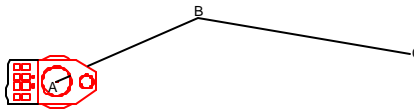
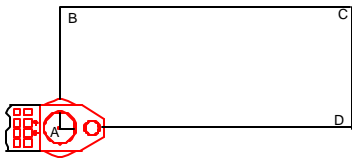
To activate the point mode press the **P/S** button of the tracer switch-pad. The P/S LED indicator located in front of the P/S button will turn on.

#### For Areas and peripheral Lengths:

Move the cursor over the starting point A. Clear the display with the "CL" button. Move cursor to B corner, press **PNT**, then to C, press **PNT**, to D, press **PNT** and back to the starting point A. Press **PNT** once more. Find the area result by pressing the AREA

#### For Lengths :

Move cursor to starting point A, clear your display via the **CL** button, then move the cursor to B, press **PNT** and subsequently to C and press **PNT** again. Find your Length result by pressing the **LEN** button. Pressing AREA will show a meaningless value.

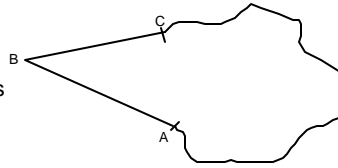


## MEASUREMENTS USING A COMBINATION POINT / STREAM MODE.

If areas and or lengths consist of straight and curved sections, a combination of stream/point mode can be employed.

In our example we start with the straight line sections. Engage the point mode, move the cursor over A and clear the display. Now move the cursor to B and press *PNT*, then to C and press *PNT*.

Now toggle into the stream mode by activating the *P/S* button once and continue by tracing the area section between C and A. After arriving at A you find your result on display.

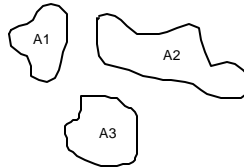


### AREA / LENGTH ACCUMULATION

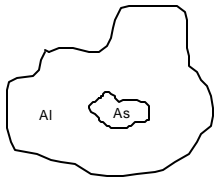
Different areas and (or) lengths may be added up or subtracted from each other via the "ACCU" feature.

Example: You need the total of Areas A1, A2 and A3.

- Measure A1 as outlined earlier.
- Engage the "ACCU" feature by pressing the **ACC** button. The LED located below this button as well as the AC.A and AC.L LED's on the front panel will turn on.
- Now move the instrument cursor to A2.
- Disengage the "ACCU" feature by pressing the **ACC** button again. (the LED's go off)
- Measure A2. Subsequently turn the "ACCU" feature on again
- Move the cursor to A3, toggle ACCU off and measure it.
- Press AREA and find: The sum of areas A1+A2+A3.



*To subtract a smaller area AS from a larger one (AL) proceed as outlined:*



- Measure the large area AL first and then engage the ACCU feature by pressing **ACC**.
- Move your cursor to the small area AS and disengage the ACCU feature again (press **ACC**).
- Now measure the small area AS in the opposite direction. If you measured AL clockwise, measure AS counter clockwise or vice versa.
- In the AREA mode you will find the result of the large area AL minus the small areas AS (AL - AS).
- In LEN mode you will find the sum of the AL periphery plus the AS periphery. (LL + LS)

**Note:** Lengths cannot be subtracted by measuring counter clockwise. You need to use the REV function to subtract one length from another. Please check the instruction book

### The Item Counter

is always active and may be used simultaneously while measuring areas and lengths. Item counts may be performed using the *CNT* button of the instrument cursor or by using an optional counter pen (No. 70AA) connected to the rear panel jack labeled CNT.

- Before making any counts clear the count register by pressing the *CL CNT* button of the tracer switch-pad.
- To see the result of an item count select the CNT mode by pressing the CNT button.