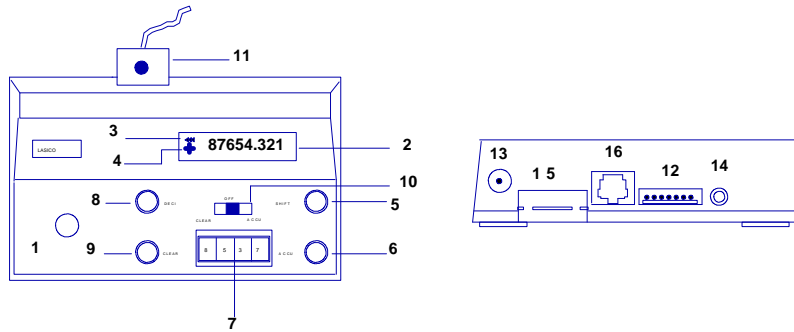


# LASICO INSTRUCTIONS : MODEL SM2 PROCESSOR



1. PROCESSOR BOX
2. 8 DIGIT LCD DISPLAY
3. INDICATOR FOR "ACCU ON" MODE
4. +/- SIGN
5. DISPLAY SHIFT KEY. MUST BE ACTIVATED IF DISPLAY EXCEEDS 8 DIGITS. IT WILL PROVIDE 4 MORE DIGITS (= THE 4 MOST SIGNIFICANT DIGITS.)
6. ACCU BUTTON. IF DEPRESSED, THE "ACCU" FUNCTION CAN BE TOGGLED ON OR OFF. IF ENGAGED, THE CONTENT OF THE DISPLAY WILL BE FROZEN UP AND NO ENCODER INPUT IS POSSIBLE. THIS PERMITS THE ADDITION OR SUBTRACTION OF INDIVIDUAL MEASURING RESULTS .
7. SCALE INPUT SWITCHES . USED TO PROGRAM A MULTIPLIER INTO THE PROCESSOR.
8. DECIMAL SWITCH
9. CLEAR BUTTON. USED FOR DISPLAY / COUNTER CLEARANCE.
10. POWER ON-OFF / REMOTE SELECTOR SWITCH. POWER IS TURNED OFF IN THE CENTER POSITION. IF MOVED TO THE LEFT (CLEAR) THE REMOTE FACILITY IS ASSIGNED TO THE CLEAR FUNCTION, IF MOVED TO THE "ACCU" POSITION, THE REMOTE FACILITY IS ASSIGNED TO THE ACCU FUNCTION.
11. TRANSDUCER PLUG FROM THE MEASURING INSTRUMENT. INSERT INTO RECEPTACLE 12 WITH RED MARKER POINTING UP.
12. TRANSDUCER RECEPTACLE
13. POWER INPUT JACK. FOR 7.5-12 V.DC. POWER SUPPLIES.
14. REMOTE JACK. FOR USE WITH VARIOUS REMOTE SWITCHES.
15. SERIAL OUTPUT (EDGE CONNECTOR) USED FOR COMPUTER / PRINTER INTERFACING.
16. TRANSDUCER INPUT RECEPTACLE (MODULAR PHONE TYPE) SUPPLIED WITH SOME MEASURING INSTRUMENTS

## BASIC OPERATION

Insert DC plug of power supply into power input jack (13) and plug the wall transformer into an electric outlet (Fig. 1, and 2)

Insert the transducer plug (11) into receptacle (12). The red marker must be pointing up. (Fig. 2)

Enter the calibration constant (multiplier) into the scaler switches (7)

Move the power switch to either "Clear" or "Accu" position , depending on which function is to be controlled by the remote switch . (Fig. 3)

The number entered into the scaler switch array will appear on display. (note: if the measuring instrument is moved while the instrument is being turned on, the display may show a different value) However the correct multiplier (constant) is automatically programmed into the microcomputer of the SM2 processor. (Fig. 4)

Set the decimal point via switch (8) . On display: The calibration constant (multiplier) (Fig. 5)

Fig.1

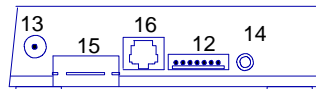


Fig.2

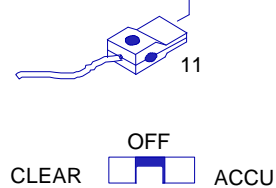


Fig.3



Fig.4

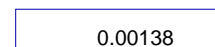


Fig.5

**IMPORTANT:**

If you enter a new constant into the scaler switches (7), it is necessary to reset the computer, i.e. the processor must be switched off and on again.

If the processor was turned off while the new constant (multiplier) was entered, it is automatically programmed into the system whenever the power is first turned on.

**THE MULTIPLIER** (C, CA, CL, CV, etc.)

Each count generated by the measuring transducer is multiplied by the value programmed into the scaler switches. (7) If the switches are set to 1253 , each count is multiplied by 1253. If they are set to 0075, each count is multiplied by 75.

If the processor should display unscaled counts, 0001 must be programmed into the scaler switches. (this is necessary for calibration purposes)

**DETERMINATION OF THE CALIBRATION CONSTANT (MULTIPLIER) C.**

Formula :

$$C = \frac{D}{R};$$

C: Calibration constant to be programmed into the processor  
D: Value of known dimension, area, length, weight, time, etc.  
R: Unscaled result obtained by measuring the known dimension, area, length, etc. with 0001 programmed into the processor.

**PROCEDURE:**

Program 0001 into the processor, measure the known dimension D and find the unscaled result R on display. Divide D by R and obtain C. Program C into the processor. All measurements are subsequently expressed in the measuring unit value desired.

**EXAMPLE:**

A known length of D =12. A length probe is to be calibrated to measure directly in inches and fractions of inches.

Program 1 (=0001) into the processor.

Measure D (=12 inches)

Result R = 8676 (assumed)

subsequently 12

$$C = \frac{12}{8676} = 0.00138 ; \quad \text{Now program } 138 \text{ (0138) into the processor and press the decimal key until the display shows } 0.00138 \text{ and the system is ready for operation..}$$

**EXAMPLE:**

A known length (of a bridge) of 125.5 feet is shown on an aerial photograph. Scale ratio and "photo-altitude "is unknown. The photograph is to be evaluated for linear distances in feet.

Program 1 (0001) into the processor.

Measure the bridge (D = 125.5 feet)

R on display shows 9678. (assumed)

Subsequently C = 125.5 / 9678 = 0.01296; Program this value into the processor, set the correct decimal point and you are ready for work with results in feet and fractions of feet.

**THE ACCUMULATIVE FEATURE**

Depressing the "ACCU" button freezes the counter and the display until it is activated a second time. This permits the addition of a second, third, etc.result to the first one.

**PROCEDURE:** Measure, find first result on display. Push "Accu". (display is frozen up) Move instrument to next measurement section, push "accu" again and measure second section. On display: Total of section 1 + section 2.

**THE DISPLAY**

The SM2 processor has a 12 digit counting capacity with an 8 digit display. If an 8 digit result is shown and there is reason to suspect a larger value, simply press the "SHIFT" key and UP TO 4 more digits (the most significant ones) will become visible.

**EXAMPLE:** RESULT ON DISPLAY 24843.012 PRESS SHIFT AND FIND 1 RESULT IS 124843.012