

OPERATING YOUR PLAN WHEEL

Remove the two AAA batteries from the battery compartment of the packaging, insert them into the battery compartment of the PlanWheel. Observe polarity.

The PlanWheel automatically shuts off if it is not used for about seven minutes.

Turn the PlanWheel on again by pressing any button. The display will contain all the same information, including the same scale factor, as when it was last used.

Battery life depends on many factors such as the type of battery and the temperature. Expect about 100 to 400 hours of operation (on-time) from one set of batteries. The batteries will last about 2 to 6 months in a PlanWheel which is turned off.

When the batteries get low, the low battery indicator flashes. Replace both batteries at the same time. Observe the correct polarity as shown inside the battery compartment.

The PlanWheel requires no maintenance. However, you should keep the wheel clean and free from dirt. Check the correct operation of the PlanWheel occasionally by rolling it over a known distance.

If you store the PlanWheel for an extended period, remove the batteries.

MAKING A MEASUREMENT

If necessary, press **MODE** to select the units of readout, such as miles, yards, feet, or inches. Press **SCALE** to zero the measurement.

The tip of the PlanWheel is pointed to make it easier to take accurate measurements. Roll the wheel along the plan and read the measurement on the PlanWheel display.

If you scale a distance which is too large to display, the display will show all dashes (---). In this case, you may be able to recover the measurement by switching to a larger unit; for example from feet to yards.

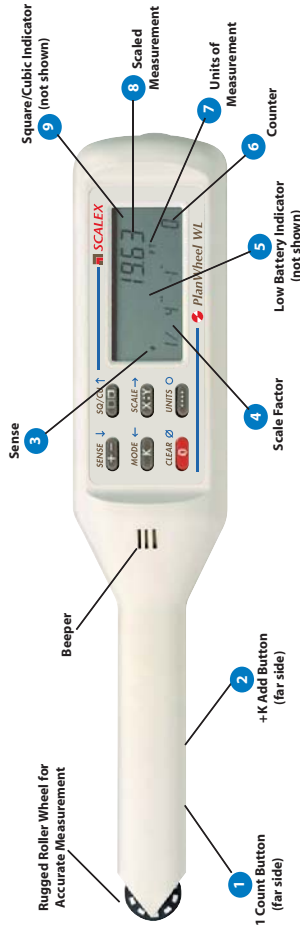
SENSE BUTTON

Press **SENSE** to change the way the scaler adds length. + - Add in forward, subtract in reverse. (If you scale past the end, simply back up.) + - Add in both directions. (Scale in any direction.) - - Subtract in both directions.

BEEPER

The PlanWheel beeps when you roll it. The beep is slightly longer when adding length and shorter when subtracting.

To turn the beeper off, hold down **BEEP** and press **SCALE**. Repeat to turn the beeper back on.



User scale factors are saved. Press **MODE** until the wheel symbol appears then press **SCALE** to select from the last 2 user scale factors.

AUTO-SCALE FACTORS

You may also calculate the scale factor from a known distance on the plan:

Press **MODE** until the **⊗** appears. Hold **MODE** down for two seconds until the display shows all zeroes. Roll the PlanWheel over the known distance. Enter the distance onto the display (SEE ENTERING NUMBERS).

COUNTERS

Press **SCALE** to zero the counter. Press **+1** to count items. The count is independent of the wheel. Count each item as you roll the wheel past it or count separately. The SENSE affects the counter:

- + Counts up.
 - Counts down.
- The counter can count up to 999 or down to -99.

ADDER

Press **+K** to add a constant to the length. To see the constant, press and hold **+K** for two seconds, the constant is displayed in place of the length and "K=" is displayed in the upper left of the display. Press **SCALE** to accept the constant or enter a new value (SEE ENTERING NUMBERS).

MEASURING AREAS AND VOLUMES

The PlanWheel can be used to measure regular area or volume. Regular measures are those with straight, perpendicular sides.

TO MEASURE AREA

Set the scale factor and roll the PlanWheel as usual along one side of the rectangular area to be measured.

Press **SCALE**. The square measure symbol (□) will begin flashing. Roll the wheel along the other side of the rectangle. The PlanWheel will display the resulting area.

TO MEASURE VOLUME

Scale the area shown on the plan as described above. Press **SCALE** a second time. The cubic measure symbol (⊟) will flash. Roll the wheel over a distance equal to the height. (Since most drawings are flat plan layouts, you may be necessary to draw a small line equal to this distance.) The PlanWheel will display the resulting volume.

To cancel the square or cubic measurement and start over, press **SCALE**.

ENTERING NUMBERS

When one digit is flashing on the PlanWheel display, you are ready to enter a number according to the blue symbols:

- ← Move flashing digit one to the left.
 - Move flashing digit one to the right.
 - ↑ Increase flashing digit.
 - ↓ Decrease flashing digit.
- When the number is correct, press **UNITS**. The PlanWheel will return to normal operation.

Or to cancel, press **SCALE**. The PlanWheel will return to normal operation without entering the new value (the old value is kept).

METRIC MEASUREMENTS

While holding down **SCALE**, press **UNITS** to select the desired indicators. MI YDS FT IN
KM M CM
MI YDS FT IN KM M CM
Both

After you release **SCALE**, press **UNITS** to select the units you want.

SETTING SCALE FACTORS

Press **MODE** if you need to change the scale factor group.

Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9
Metric	Metric	Metric	Engineering	Engineering	Map	Architectural	Auto-Scale	Auto-Scale
1:1	1:100	1:1,000	1:10	1:100	1:1,000	1:32'	1:1	1:32'
1:2	1:150	1:1,500	1:30	1:200	1:2,000	1:64'	1:2	1:64'
1:3	1:200	1:2,000	1:40	1:250	1:2,500	1:96'	1:3	1:96'
1:4	1:250	1:2,500	1:50	1:300	1:3,000	1:128'	1:4	1:128'
1:5	1:300	1:3,000	1:60	1:333 1/3	1:3,333 1/3	1:160'	1:5	1:160'
1:6	1:350	1:3,500	1:70	1:350	1:3,500	1:192'	1:6	1:192'
1:7.5	1:400	1:4,000	1:80	1:400	1:4,000	1:224'	1:7.5	1:224'
1:10	1:500	1:5,000	1:100	1:500	1:5,000	1:288'	1:10	1:288'
1:15	1:750	1:7,500	1:150	1:750	1:7,500	1:432'	1:15	1:432'
1:20	1:1,000	1:10,000	1:200	1:1,000	1:10,000	1:576'	1:20	1:576'
1:25	1:1,250	1:12,500	1:250	1:1,250	1:12,500	1:720'	1:25	1:720'
1:30	1:1,500	1:15,000	1:300	1:1,500	1:15,000	1:864'	1:30	1:864'
1:33	1:1,650	1:16,500	1:330	1:1,650	1:16,500	1:912'	1:33	1:912'
1:40	1:2,000	1:20,000	1:400	1:2,000	1:20,000	1:1,152'	1:40	1:1,152'
1:50	1:2,500	1:25,000	1:500	1:2,500	1:25,000	1:1,440'	1:50	1:1,440'
1:60	1:3,000	1:30,000	1:600	1:3,000	1:30,000	1:1,728'	1:60	1:1,728'
1:70	1:3,500	1:35,000	1:700	1:3,500	1:35,000	1:2,016'	1:70	1:2,016'
1:75	1:4,000	1:40,000	1:750	1:4,000	1:40,000	1:2,160'	1:75	1:2,160'
1:80	1:4,500	1:45,000	1:800	1:4,500	1:45,000	1:2,304'	1:80	1:2,304'
1:90	1:5,000	1:50,000	1:900	1:5,000	1:50,000	1:2,592'	1:90	1:2,592'
1:100	1:6,000	1:60,000	1:1,000	1:6,000	1:60,000	1:2,880'	1:100	1:2,880'
1:150	1:9,000	1:90,000	1:1,500	1:9,000	1:90,000	1:4,320'	1:150	1:4,320'
1:200	1:12,000	1:120,000	1:2,000	1:12,000	1:120,000	1:5,760'	1:200	1:5,760'
1:300	1:18,000	1:180,000	1:3,000	1:18,000	1:180,000	1:8,640'	1:300	1:8,640'
1:400	1:24,000	1:240,000	1:4,000	1:24,000	1:240,000	1:11,520'	1:400	1:11,520'
1:500	1:30,000	1:300,000	1:5,000	1:30,000	1:300,000	1:14,400'	1:500	1:14,400'
1:600	1:36,000	1:360,000	1:6,000	1:36,000	1:360,000	1:17,280'	1:600	1:17,280'
1:700	1:42,000	1:420,000	1:7,000	1:42,000	1:420,000	1:20,160'	1:700	1:20,160'
1:800	1:48,000	1:480,000	1:8,000	1:48,000	1:480,000	1:23,040'	1:800	1:23,040'
1:900	1:54,000	1:540,000	1:9,000	1:54,000	1:540,000	1:25,920'	1:900	1:25,920'

After you reach the group you want, press **SCALE** until you reach the scale factor you want.

USER SCALE FACTORS

If the correct scale-factor is not listed, you may enter it yourself:

Press **MODE** until the correct group appears. (Scale-Factors cannot be altered in Group 5 Architectural).

Hold **MODE** down for two seconds. The left-most digit of the scale factor will begin to flash. Enter the new scale factor (SEE ENTERING NUMBERS).