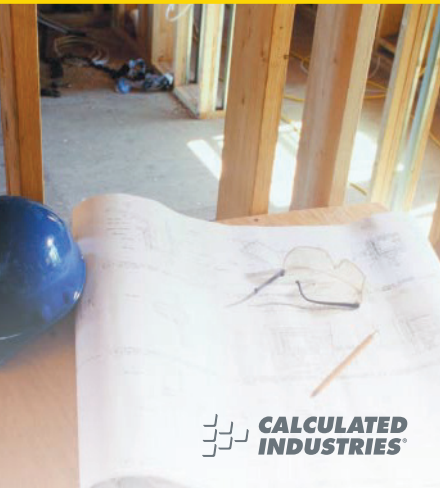


MEASURE MASTER PRO™

FEET-INCH-FRACTION AND METRIC CALCULATOR

Model 4020 v3.1

Pocket Reference Guide



**CALCULATED
INDUSTRIES®**

MEASURE MASTER PRO v3.1

The *Measure Master Pro* calculator helps you save time, cut costly errors and measure and estimate *like a pro!*

Quickly Solve:

- *Feet-Inches-Fractions, Yards, and Metric Dimensional Problems*
- *Feet-Inches-Fractions, Yards, and Metric Conversions*
- *Problems Involving All Fractions – 1/2-1/64ths!*
- *Instant Areas, Volumes and Weights*
- *Circle/Arc Calculations*
- *Material Quantity (e.g., Concrete, Flooring)*
- *Squaring-up, and more*

TABLE OF CONTENTS

KEY DEFINITIONS.....	1
Basic Function Keys	1
Unit Keys	2
Circle/Arc Keys	4
Miscellaneous Functions	5
Paperless Tape Example	7
Preference Settings	8
EXAMPLES	10
Adding and Subtracting Strings of Dimensions	10
Multiplying Dimensions	10
Dividing Dimensions	11
Percent Calculations	11
Square Area.....	12
Square Root.....	12
Rectangular Area and Volume.....	13
Multi-Function Height Key.....	14
Entering Square and Cubic and Adding a Waste Allowance	14
Linear Conversions.....	15
Square and Cubic Conversions.....	16
Weight Conversions.....	17
Weight per Volume	17
Using the Memory	18
Using the Memory— <i>Finding Quantity of Carpet Required</i>	20
Board Feet and Cost	20

CircleArea and Circumference	21
Arc Properties.....	22
Concrete Volume for Driveway.....	23
Squaring-up a Foundation.....	23
APPENDIX	24
Setting Fractional Resolution	24
Default Settings	25
Auto-Shut Off.....	26
Accuracy/Errors.....	26
Reset	27
Batteries	27
Replacing the Batteries	27
Battery Warnings.....	28
AREAAND VOLUMEFORMULAS.....	31
Area Formulas.....	31
Volume Formulas	32
REPAIR AND RETURN	33
Warranty, Repair and Return Information.....	33
WARRANTY.....	33
LOOKING FOR NEW IDEAS.....	35

KEY DEFINITIONS

Basic Function Keys



Arithmetic operation keys.



Keys used for entering numbers.



Percent Key — Four-function (+, −, x, ÷) percent key.



Off Key — Turns all power off, clearing all non-permanent registers.



On/Clear Key — Turns on power. Pressing once clears the display. Pressing twice clears all temporary values.



Convert Key — Used with the dimensional keys to convert between dimensions or with other keys to access special functions.



Store Key — Used for storing values.



Recall Key — Used for recalling stored values.

Unit Keys

Yds

Yards Key — Enters or converts to *Yards*.

Feet

Feet Key — Enters or converts to *Feet* as whole or decimal numbers. Also used with the **Inch** and **/** keys for entering Feet-Inch values (e.g., **6 Feet 9 Inch 1 / 2**). Repeated presses during conversions toggle between Fractional and Decimal Feet.

Inch

Inch Key — Enters or converts to *Inches*. Entry can be whole or decimal numbers. Also used with the **/** key for entering fractional inch values (e.g., **9 Inch 1 / 2**). Repeated presses during conversions toggle between Fractional and Decimal Inches.

/

Fraction Bar Key — Used to enter *Fractions*. Fractions can be entered as proper ($1/2$, $1/8$, $1/16$) or improper ($3/2$, $9/8$). If the

denominator (bottom) is not entered, the calculator's fractional accuracy setting is automatically used.

m

Meters Key — Enters or converts to *Meters*.

cm

Centimeters Key — Enters or converts to *Centimeters*.

mm

Millimeters Key — Enters or converts to *Millimeters*.

Conv **2**

Acres — Enters or converts (a square value) to *Acres*.

Bd Ft

Board Feet Key — Enters or converts Cubic values to Board Feet. One Board Foot is equal to 144 Cubic Inches.

Length

Length — Enters length for calculation of area or volume.

Width

Width — Enters width and calculates area, square-up and perimeter.

Height

Height — Enters height and calculates volume, wall area and total room area.

Conv **1**

Kilograms — Enters or converts to Kilograms.

Conv **3**

Metric Tons — Enters or converts to Metric Tons.

Conv **4**

Pounds — Enters or converts to Pounds.

Conv **6**

Tons — Enters or converts to Tons.

Circle/Arc Keys

Circ

Circle Key — Calculates circle area and circumference based on entered diameter.

Arc

Arc Key — Calculates Arc length or degree, Chord Length, Segment Area, Pie Slice Area and Segment Rise based on entered diameter/radius and Arc Degree or length (e.g., if Arc Degree is entered, it will calculate arc length, and vice versa).

Conv **Arc**

Radius — Enters or calculates the circle radius.

Miscellaneous Functions



Backspace key



($\sqrt{x}$) Square Root



($1/x$) **Reciprocal** — Finds the reciprocal of a number (e.g., **8** **Conv** **$\div$** **0.125**).



Clear All — Returns all stored values to the default settings (does not affect Preference Settings).



(+/-) Toggle



Pi (π) 3.141593



x^2 — Squares the value in the display.



Preference Settings



Weight per Volume — Stores a new *Weight per Volume* value as listed on the following page.

*Note: After entering a value and pressing **Stor** **0**, continue pressing the **0** digit key until you've reached the desired Weight per Volume format. To recall your setting, press **Rcl** **0**.*

- Ton Per CU YD
- LB Per CU YD
- LB Per CU FEET
- MET Ton Per CU M
- kG Per CU M

This value is stored until you change it or perform a *Clear All* (**Conv** **X**).

Conv **0**

Total Cost (based on entry of per unit cost)

Conv **◐**

Converts between D:M:S and Decimal Degrees.

M+

(M+) **Memory +**

Conv **M+**

(M-) **Memory -**

Rcl **Rcl**

Recall and Clear M+

Stor **1**

(M1) **Storage Register**

Stor **2**

(M2) **Storage Register**

Stor **3**

(M3) **Storage Register**

Rcl **M+**,

Recall M+, M1, M2 or M3

1, **2** or **3**

Rcl **=**

Paperless Tape – Useful for checking figures, as it scrolls through your past 20 entries or calculations. Press **Rcl** **=** to access Paperless Tape mode. Press **+** or **–** to scroll forward or backward. Press **=** to exit mode and continue with a new entry or calculation.

Paperless Tape Example

Add 6 Feet, 5 Feet and 4 Feet, then access the paperless tape mode and scroll back through your entries. Then, back up one entry, exit the tape mode and add 10 Feet to the total.

KEYSTROKE	DISPLAY
On/C On/C	0.
6 Feet +	6 FEET 0 INCH
5 Feet +	11 FEET 0 INCH
4 Feet =	15 FEET 0 INCH
Rcl =	TTL= 15 FEET 0 INCH
+	01 6 FEET 0 INCH
+	02 + 5 FEET 0 INCH
+	03 + 4 FEET 0 INCH
–	02 + 5 FEET 0 INCH
=	TTL= 15 FEET 0 INCH
+ 1 0 Feet =	25 FEET 0 INCH

Preference Settings

Press **Conv**, then **Stor**, then keep pressing **Stor** to toggle through the main settings. Press the **+** key to advance within sub-setting. Use the **-** key to back up. Press the **On/C** key to exit Preferences.

PRESS

Conv AND:

SETTING--FUNCTION

First press of Stor :	Fractional Resolution:
+	--1/16
+	--1/32
+	--1/64
+	--1/2
+	--1/4
+	--1/8
+	--1/16 (repeats options)

Second press of Stor :	Area Displays:
+	--Std.
+	--0. SQ FEET
+	--0. SQ YD
+	--0. SQ M
+	--Std. (repeats options)

Third press of Stor :	Volume Displays:
+	--Std.
+	--0. CU YD
+	--0. CU FEET
+	--0. CU M
+	--Std. (repeats options)

<i>Fourth press</i> of Stor :	<i>Exponential Mode:</i>
+	-- OFF
+	-- On
	-- OFF (<i>repeats options</i>)
<i>Fifth press</i> of Stor :	<i>Meter Linear Displays:</i>
+	-- 0.000 M
+	-- FLOAt M (<i>floating point</i>)
	-- 0.000 M (<i>repeats options</i>)
<i>Sixth press</i> of Stor :	<i>Decimal Degree Displays:</i>
+	-- 0.00°
+	-- FLOAt (<i>floating point</i>)
	-- 0.00° (<i>repeats options</i>)
<i>Seventh press</i> of Stor :	<i>Fractional Mode:</i>
+	-- Std.
+	-- COntSt
	-- Std. (<i>repeats options</i>)

EXAMPLES

Adding and Subtracting Strings of Dimensions

Add the following measurements:

- 6 Feet 2-1/2 Inches
- 11 Feet 5-1/4 Inches
- 18.25 Inches

Then subtract 2-1/8 Inches.

KEYSTROKE	DISPLAY
On/C On/C	0.
6 Feet 2 Inch 1 / 2 +	6 FEET 2-1/2 INCH
1 1 Feet 5 Inch 1 / 4 +	17 FEET 7-3/4 INCH
1 8 • 2 5 Inch =	19 FEET 2 INCH
- 2 Inch 1 / 8 =	18 FEET 11-7/8 INCH

Multiplying Dimensions

What is the perimeter of a room with three walls which measure 15 Feet 3-3/4 Inches each?

KEYSTROKE	DISPLAY
3 × 1 5 Feet 3 Inch 3 / 4 =	45 FEET 11-1/4 INCH

Multiply 5 Feet 3 Inches by 11 Feet 6-1/2 Inches:

KEYSTROKE

DISPLAY

5 **Feet** **3** **Inch** **X** **1** **1** **Feet**

6 **Inch** **1** **/** **2** **=** 60.59375 SQ FEET

Dividing Dimensions

Divide 15 Feet 3-3/4 Inches into thirds (divide by 3):

KEYSTROKE

DISPLAY

On/C **On/C**

0.

1 **5** **Feet** **3** **Inch** **3** **/** **4** **÷** **3** **=**

5 FEET 1-1/4 INCH

How many 3' 6" pieces can you cut from one 25' board?

KEYSTROKE

DISPLAY

On/C **On/C**

0.

2 **5** **Feet** **÷** **3** **Feet** **6** **Inch** **=** 7.142857

(or 7 whole pieces)

Percent Calculations

Add a 10% waste allowance to 2.78 Cubic Yards.

KEYSTROKE

DISPLAY

On/C **On/C**

0.

2 **.** **7** **8** **Yds** **Yds** **Yds** **+** **1** **0** **%**

3.058 CU YD

What is 25% of \$1,575?

KEYSTROKE	DISPLAY
On/C On/C	0.
1 5 7 5 × 2 5 %	393.75

Square Area

Find the area of a square room with sides measuring 15 Feet 8-1/2 Inches.

KEYSTROKE	DISPLAY
On/C On/C	0.
1 5 Feet 8 Inch 1 / 2	15 FEET 8-1/2 INCH
Conv % (x^2)	246.7517 SQ FEET

Square Root

What is the Square Root of 200?

KEYSTROKE	DISPLAY
On/C On/C	0.
2 0 0 Conv ← ($\sqrt{x}$)	14.14214

Rectangular Area and Volume

Find the area and volume:

- Length: 20 Feet 6-1/2 Inches
- Width: 12 Feet 8-1/2 Inches
- Height: 10 Inches

KEYSTROKE

DISPLAY

On/C **On/C**

0.

2 **0** **Feet** **6** **Inch** **1** **/** **2** **Length**

LNTH 20 FEET 6-1/2 INCH

1 **2** **Feet** **8** **Inch** **1** **/** **2** **Width** **Width***

AREA 261.0503 SQ FEET

1 **0** **Inch** **Height** **Height***

VOL 8.057109 CU YD

Press **Width and **Height** keys a second time (after entry of Width and Height) to calculate Area and Volume.*

Multi-Function **Height** Key

Find the volume, wall area, and total room area of an 18' x 25' room measuring 12' tall.

KEYSTROKE	DISPLAY
On/C On/C	0.
1 8 Feet Length	LNTH 18 FEET 0 INCH
2 5 Feet Width	WDTH 25 FEET 0 INCH
1 2 Feet Height	HGHT 12 FEET 0 INCH
Height	VOL 5400. CU FEET
Height	WALL* 1032. SQ FEET
Height	ROOM** 1482. SQ FEET

**Wall Area adds the length and width, multiplies them by two and then multiplies by height.*

***Room Area=Wall Area+Ceiling Area*

Entering Square and Cubic and Adding a Waste Allowance

Add a 10% waste allowance to 55 Square Feet. Then add a 20% waste allowance to 150 Cubic Feet:

KEYSTROKE	DISPLAY
On/C On/C	0.
5 5 Feet Feet + 1 0 %	60.5 SQ FEET
1 5 0 Feet Feet Feet + 2 0 %	180. CU FEET

Linear Conversions

Convert 10 feet 6 inches to other dimensions, including Metric:

KEYSTROKE	DISPLAY
On/C On/C	0.
1 0 Feet 6 Inch	10 FEET 6 INCH
Conv Yds	3.5 YD
Conv Inch	126 INCH
Conv m	3.200 M
Conv cm	320.04 CM
Conv mm	3200.4 MM

Convert 14 Feet 7-1/2 Inches to Decimal Feet:

KEYSTROKE	DISPLAY
On/C On/C	0.
1 4 Feet 7 Inch 1 / 2	14 FEET 7-1/2 INCH
Conv Feet	14.625 FEET

Convert 22.75 Feet to Feet-Inches:

KEYSTROKE	DISPLAY
On/C On/C	0.
2 2 • 7 5 Feet	22.75 FEET
Conv Feet	22 FEET 9 INCH

Square and Cubic Conversions

Convert 14 Square Feet to Square Yards:

KEYSTROKE	DISPLAY
On/C On/C	0.
1 4 Feet Feet	14 SQ FEET
Conv Yds	1.555556 SQ YD

Convert 25 Square Yards to Square Feet:

KEYSTROKE	DISPLAY
On/C On/C	0.
2 5 Yds Yds	25 SQ YD
Conv Feet	225. SQ FEET

Convert 12 Cubic Feet to Cubic Yards:

KEYSTROKE	DISPLAY
On/C On/C	0.
1 2 Feet Feet Feet	12 CU FEET
Conv Yds	0.444444 CU YD

Weight Conversions

*Convert 150 Pounds to other weights
(Tons, Metric Tons, Kilograms):*

KEYSTROKE	DISPLAY
On/C On/C	0.
1 5 0 Conv 4 (lbs)	150 LB
Conv 6 (tons)	0.075 Ton
Conv 3 (met tons)	0.068039 MET Ton
Conv 1 (kg)	68.03886 kG

Weight per Volume

*Convert 20 Cubic Yards of concrete to
Pounds, Tons, Metric Tons and Kilograms,
if concrete weighs 1.5 Tons per Cubic
Yard (default value):*

KEYSTROKE	DISPLAY
On/C On/C	0.
2 0 Yds Yds Yds	20 CU YD
Conv 4 (lbs)	60000. LB
Conv 6 (tons)	30. Ton
Conv 3 (met tons)	27.21554 MET Ton
Conv 1 (kg)	27215.54 kG

(Cont'd)

(Cont'd)

Now convert again, if concrete weighs
2 Tons per Cubic Yard (store new Weight
per Volume value):

KEYSTROKE	DISPLAY
2 Stor 0	STORED 2. Ton Per CU YD
2 0 Yds Yds Yds	20 CU YD
Conv 4 (lbs)	80000. LB
Conv 6 (tons)	40. Ton
Conv 3 (met tons)	36.28739 MET Ton
Conv 1 (kg)	36287.39 kG
Conv X	ALL CLEARed
	(Clear stored Wt/Vol)

Using the Memory

Whenever the **M+** key is pressed, the
displayed value will be added to the
Memory. Other Memory functions:

FUNCTION	KEYSTROKES
Add to Memory	M+
Subtract from Memory	Conv M+
Recall total in Memory	Rcl M+
Display/Clear Memory	Rcl Rcl
Clear Memory	Conv Rcl

Memory is semi-permanent, clearing only when you:

- 1) turn off the calculator;
- 2) press **Rcl** **Rcl**;
- 3) press **Conv** **Rcl**;
- 4) press **Conv** **X** (*Clear All*).

When Memory is recalled (**Rcl** **M+**), consecutive presses of **M+** will display the calculated average and total count of the accumulated values.

Example:

KEYSTROKE	DISPLAY
3 5 5 M+	M+ 355. M
2 5 5 M+	M+ 255. M
7 4 5 Conv M+ (<i>M-</i>)	M- 745. M
Rcl M+	TTL STORED - 135. M
M+	AVG - 45. M
M+	CNT 3. M
Rcl Rcl	M+ - 135.

Using the Memory — Finding Quantity of Carpet Required

--Room 1: 12' 4" x 15'

--Room 2: 14' 8" x 16'

--Add 10% waste allowance

KEYSTROKE	DISPLAY
On/C On/C	0.
1 2 Feet 4 Inch	12 FEET 4 INCH
× 1 5 Feet =	185. SQ FEET
M+	M+ 185. SQ FEET M
1 4 Feet 8 Inch	14 FEET 8 INCH M
× 1 6 Feet = M+	M+ 234.6667 SQ FEET M
Rcl Rcl	M+ 419.6667 SQ FEET
Conv Yds	46.62963 SQ YD
+ 1 0 %	51.29259 SQ YD

Board Feet and Cost

Find the total Board Feet for the following boards: 2 x 4 x 16, 2 x 10 x 18 and 2 x 12 x 20. What is the total cost at \$275 per MBM*?

**Per thousand Board Foot measure.*

KEYSTROKE	DISPLAY
On/C On/C	0.
2 × 4 × 1 6 Bd Ft M+	BDFT 10.66667 M

2	×	1	0	×	1	8	Bd Ft	M+		
									BDFT	30. M
2	×	1	2	×	2	0	Bd Ft	M+		
									BDFT	40. M
Rcl	Rcl								BDFT	80.66667
×	2	7	5	Conv	0		<i>(Cost)</i>			\$ 22.¹⁸

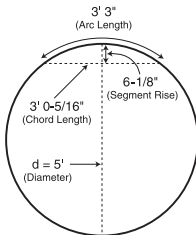
Circle Area and Circumference

Find the Area and Circumference of a circle with a diameter of 25 Inches:

KEYSTROKE	DISPLAY
On/C On/C	0.
2 5 Inch Circ	DIA 25 INCH
Circ	AREA 490.8739 SQ INCH
Circ	CIRC 78-9/16 INCH

Arc Properties

Find Arc properties given a 5-foot diameter and an Arc length of 3 Feet 3 Inches:



KEYSTROKE

DISPLAY

1. Enter Circle diameter and Arc length:

On/C **On/C**

0.

5 **Feet** **Circ**

DIA 5 FEET 0 INCH

3 **Feet** **3** **Inch** **Arc**

ARC 3 FEET 3 INCH

2. Find Degree of Arc, Chord Length, Segment Area, Pie Slice Area and Segment Rise:

Arc

ARC 74.48°

Arc

CORD 3 FEET 0-5/16 INCH

Arc

SEG 1.051381 SQ FEET

Arc

PIE 4.0625 SQ FEET

Arc

RISE 0 FEET 6-1/8 INCH

Concrete Volume for Driveway

Calculate the Cubic Yards of concrete required to pour a driveway that measures: 45 Feet 5 Inches long x 13 Feet 6 Inches wide x 5 Inches deep. If concrete is \$65 per Cubic Yard, what will it cost?

KEYSTROKE

DISPLAY

On/C On/C	0.
4 5 Feet 5 Inch	45 FEET 5 INCH
X 1 3 Feet 6 Inch	13 FEET 6 INCH
X 5 Inch =	9.461806 CU YD
X 6 5 Conv 0 (Cost)	\$ 615. ⁰² (total cost)

Squaring-up a Foundation

Square-up a foundation measuring 15 Feet 6 Inches by 10 Feet 2 Inches:

KEYSTROKE

DISPLAY

On/C On/C	0.
1 5 Feet 6 Inch Length	LNTH 15 FEET 6 INCH
1 0 Feet 2 Inch Width	WDTH 10 FEET 2 INCH
Width Width	SQUP 18 FEET 6-7/16 INCH

APPENDIX

Setting Fractional Resolution

Fractional resolution is permanently set via the Preference Settings (see **Preference Settings** section for instructions). To select other formats temporarily (e.g., 1/64ths, 1/32nds, etc.), see the example below:

Add 44/64th to 1/64th of an inch and then convert the answer to other fractional resolutions:

KEYSTROKE	DISPLAY
On/C On/C	0.
4 4 / 6 4	0-44/64 INCH
+ 1 / 6 4 =	0-45/64 INCH
Conv 1 (1/16)	0-11/16 INCH
Conv 2 (1/2)	0-1/2 INCH
Conv 3 (1/32)	0-23/32 INCH
Conv 4 (1/4)	0-3/4 INCH
Conv 6 (1/64)	0-45/64 INCH
Conv 8 (1/8)	0-3/4 INCH
On/C On/C	0.

*Note: Changing the Fractional Resolution on a displayed value does not alter your Permanent Fractional Resolution Setting. Pressing **On/C** will return your calculator to the permanently set fractional resolution.*

Default Settings

After a *Clear All* (**Conv** **X**), your calculator will return to the following setting:

STORED VALUE	DEFAULT VALUE
Weight per Volume	1.5 Ton Per CU YD

If you replace your batteries or perform a *Full Reset** (press **Off**, hold down **X**, and press **On/C**), your calculator will return to the following settings (in addition to that listed above):

PREFERENCE SETTINGS	DEFAULT VALUE
Fractional Resolution	1/16
Area Display	Standard
Volume Display	Standard
Exponent	Off
Meter Linear Display	0.000
Decimal Degree Display	0.00°
Fractional Mode	Standard

Depressing the Reset button located above the **Length key will also perform a Full Reset.*

Auto-Shut Off

Your calculator will shut itself off after about 8-12 minutes of non-use.

Accuracy/Errors

Accuracy/Display Capacity — Your calculator has a twelve-digit display made up of eight digits (normal display) and four fractional digits. You may enter or calculate values up to 19,999,999.99. Each calculation is carried out internally to twelve digits.

Errors — When an incorrect entry is made, or the answer is beyond the range of the calculator, it will display the word “ERROR.” To clear an error condition you must hit the **On/C** button once. At this point, you must determine what caused the error and re-key the problem.

Error Codes:

DISPLAY	ERROR TYPE
OFLO	Overflow (too large)
MATH Error	Divide by 0
DIM Error	Dimension error
ENT Error	Entry error

Auto-Range — If an “overflow” is created because of an input and calculation with small units that are out of the standard seven-digit range of the display, the answer will be automatically expressed in the next larger units (instead of showing “ERROR”) — e.g., 20,000,000 mm is shown as 20,000 m. Also applies to inches, feet and yards.

Reset

If your calculator should ever “lock up,” press Reset — a small hole located above the **Length** key — to perform a total reset.

Replacing the Batteries

To replace the batteries, slide open the battery door (at top backside of unit) and replace with new batteries. Make sure the batteries are facing positive side up.

Batteries

This model uses **two (2) LR44** batteries (included).

Should your calculator display become very dim or erratic, replace the batteries.

Note: Please use caution when disposing of your old battery, as it contains hazardous chemicals.

Auto-Range — If an “overflow” is created because of an input and calculation with small units that are out of the standard seven-digit range of the display, the answer will be automatically expressed in the next larger units (instead of showing “ERROR”) — e.g., 20,000,000 mm is shown as 20,000 m. Also applies to inches, feet and yards.

Reset

If your calculator should ever “lock up,” press Reset — a small hole located above the **Length** key — to perform a total reset.

Replacing the Batteries

To replace the batteries, slide open the battery door (at top backside of unit) and replace with new batteries. Make sure the batteries are facing positive side up.

Batteries

This model uses **two (2) LR44** batteries (included).

Should your calculator display become very dim or erratic, replace the batteries.

Note: Please use caution when disposing of your old battery, as it contains hazardous chemicals.

Battery Warnings

- Remove and immediately recycle or dispose of used batteries according to local regulations and keep away from children. Do NOT dispose of batteries in household trash or incinerate.
- Even used batteries may cause severe injury or death.
- Call a local poison control center for treatment information.
- Compatible battery type is LR44 (2x1.5 V).
- Non-rechargeable batteries are not to be recharged.
- Do not force discharge, recharge, disassemble, heat above manufacturer's specified temperature rating or incinerate. Doing so may result in injury due to venting, leakage or explosion resulting in chemical burns.

- Ensure the batteries are installed correctly according to polarity (+ and -).
- Do not mix old and new batteries, different brands or types of batteries, such as alkaline, carbon-zinc, or rechargeable batteries.
- Remove and immediately recycle or dispose of batteries from equipment not used for an extended period of time according to local regulations.
- Always completely secure the battery compartment. If the battery compartment does not close securely, stop using the product, remove the batteries, and keep them away from children.

WARNING

- **INGESTION HAZARD:** This product contains a button cell or coin battery.
- **DEATH** or serious injury can occur if ingested.
- A swallowed button cell or coin battery can cause **Internal Chemical Burns** in as little as **2 hours**.
- **KEEP** new and used batteries **OUT OF REACH** of **CHILDREN**.
- **Seek immediate medical attention** if a battery is suspected to be swallowed or inserted inside any part of the body.



AREA AND VOLUME FORMULAS

Area Formulas



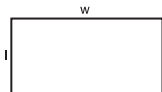
Square

$$\text{Area} = a^2$$



Triangle

$$\text{Area} = 1/2 ab$$



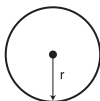
Rectangle

$$\text{Area} = lw$$



Octagon

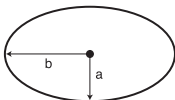
$$\text{Area} = (d/2)^2 \times 2.828$$



Circle

$$\text{Circumference} = 2\pi r$$

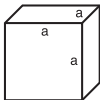
$$\text{Area} = \pi r^2$$



Ellipse

$$\text{Area} = \pi ab$$

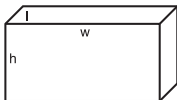
Volume Formulas



Cube

$$\text{Surface Area} = 6a^2$$

$$\text{Volume} = a^3$$



Rectangle

$$\text{Surface Area} =$$

$$2hw + 2hl + 2lw$$

$$\text{Volume} = l \times w \times h$$



Cone

$$\text{Surface Area} = \pi r \sqrt{r^2 + h^2}$$

(+ πr^2 if you add the base)

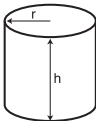
$$\text{Volume} = \frac{\pi r^2 h}{3}$$



Sphere

$$\text{Surface Area} = 4\pi r^2$$

$$\text{Volume} = \frac{4}{3}\pi r^3$$



Cylinder

$$\text{Surface Area} = 2\pi r h + 2\pi r^2$$

$$\text{Volume} = \pi r^2 h$$

REPAIR AND RETURN

WARRANTY, REPAIR AND RETURN INFORMATION

Return Guidelines

1. Please read the Warranty in this User's Guide to determine if your Calculated Industries product remains under warranty before calling or returning any device for evaluation or repairs.
2. If your product won't turn on, check the battery as outlined in the User's Guide.
3. If you need more assistance, please go to the website listed below.

www.calculated.com/warranty

WARRANTY

Warranty Repair Service

Calculated Industries ("CI") warrants this product against defects in materials and workmanship for a period of one (1) year from the date of original consumer purchase in the U.S. If a defect exists during the warranty period, CI at its option will either repair (using new or remanufactured parts) or replace (with a new or remanufactured calculator) the product at no charge.

THE WARRANTY WILL NOT APPLY TO THE PRODUCT IF IT HAS BEEN DAMAGED BY MISUSE, ALTERATION, ACCIDENT, IMPROPER HANDLING OR OPERATION, OR IF UNAUTHORIZED REPAIRS ARE ATTEMPTED OR MADE. SOME EXAMPLES OF DAMAGES NOT COVERED BY WARRANTY INCLUDE, BUT ARE NOT LIMITED TO, BATTERY LEAKAGE, BENDING, A BLACK "INK SPOT" OR VISIBLE CRACKING OF THE LCD, WHICH ARE PRESUMED TO BE DAMAGES RESULTING FROM MISUSE OR ABUSE.

To obtain warranty service in the U.S., please go to the website.

www.calculated.com/warranty

Non-Warranty Repair Service

Non-warranty repair covers service beyond the warranty period, or service requested due to damage resulting from misuse or abuse.

Contact Calculated Industries at the website listed below to obtain current product repair information and charges.

www.calculated.com/warranty

Disclaimer

CI MAKES NO WARRANTY OR REPRESENTATION, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO THE PRODUCT'S QUALITY, PERFORMANCE, MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE. AS A RESULT, THIS PRODUCT, INCLUDING BUT NOT LIMITED TO, KEYSTROKE PROCEDURES, MATHEMATICAL ACCURACY AND PREPROGRAMMED MATERIAL, IS SOLD "AS IS," AND YOU THE PURCHASER ASSUME THE ENTIRE RISK AS TO ITS QUALITY AND PERFORMANCE. IN NO EVENT WILL CI BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY DEFECT IN THE PRODUCT OR ITS DOCUMENTATION.

The warranty, disclaimer, and remedies set forth above are exclusive and replace all others, oral or written, expressed or implied. No CI dealer, agent, or employee is authorized to make any modification, extension, or addition to this warranty.

Some states do not allow the exclusion or limitation of implied warranties or liability for incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific rights, and you may also have other rights, which vary from state to state.

Looking For New Ideas

Calculated Industries, a leading manufacturer of special-function calculators and digital measuring instruments, is always looking for new product ideas in these areas. If you have an idea, or a suggestion for improving this product User's Guide, please submit your comments online at www.calculated.com under "ContactUs", "Product Idea Submittal Agreement". Thank you.



4840 Hytech Drive
Carson City, NV 89706 USA
www.calculated.com

Measure Master Pro™
and **Calculated Industries®**
are trademarks and
registered trademarks of
Calculated Industries, Inc.

© 2025 Calculated Industries

FCC Caution: *This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.*