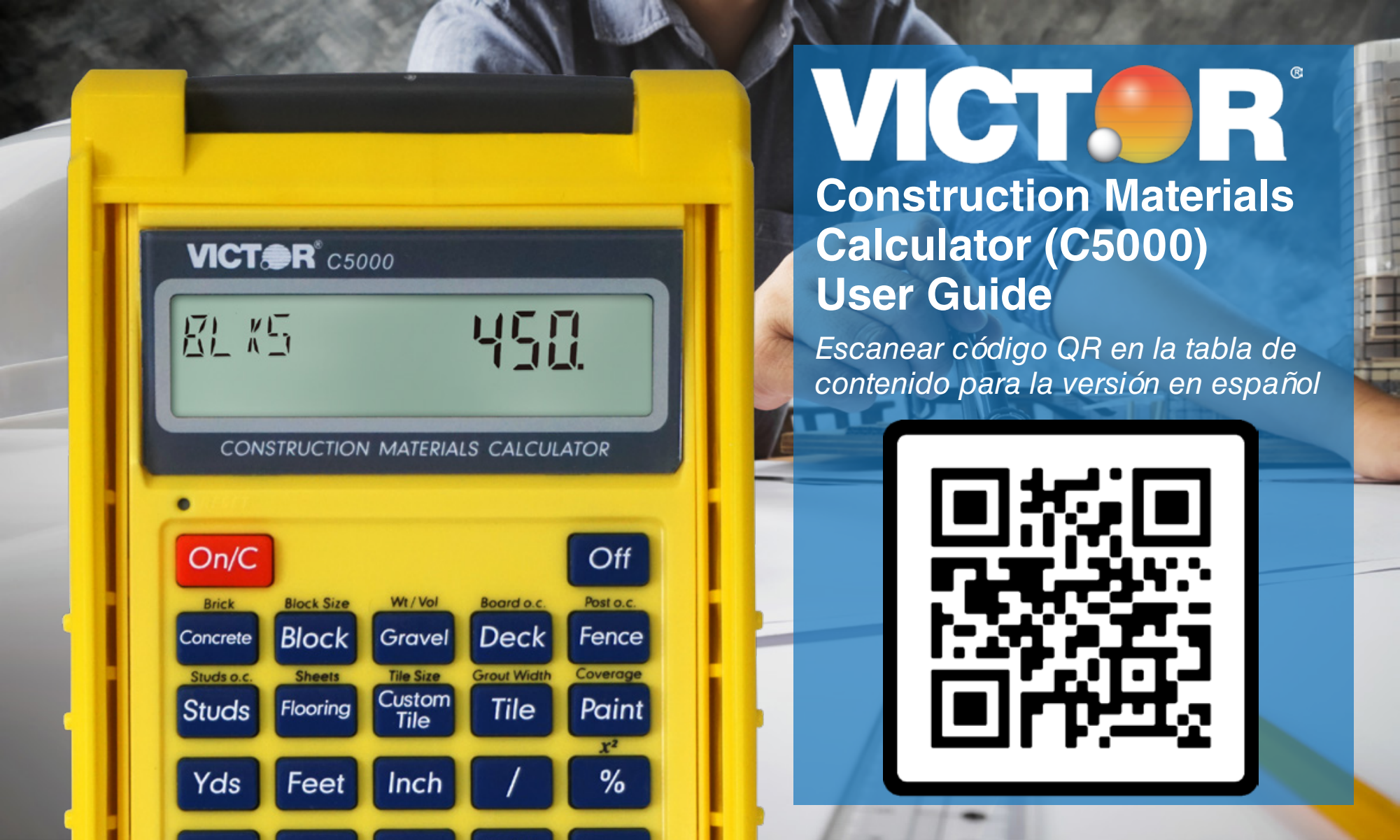

VICTOR®

Construction Materials Calculator (C5000) User Guide

Escanear código QR en la tabla de contenido para la versión en español

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Entering Linear, Square and Cubic Dimensions

Remember to press On/C On/C *to clear entries in between problems.*

LINEAR DIMENSIONS

Example: Enter 6 Feet 4-13/16 Inches.

On/C On/C

0

6 Feet 4 Inch 1 3 / 1 6

6_{Feet} $4\text{-}13/16_{\text{Inch}}$

SQUARE AND CUBIC DIMENSIONS

Example: Enter 54 Square Feet. Enter 54 Cubic

5 4 Feet Feet

$54_{\text{SQ Feet}}$

5 4 Feet Feet Feet

$54_{\text{CU Feet}}$

Basic Math Functions with Dimensions

Remember to press On/C On/C *to clear entries in between problems.*

ADDITION

Example: Add 3 Feet 6 Inches and 4-13/16 Inches.

3 Feet 6 Inch +

4 Inch 1 3 / 1 6 =

$3_{Feet}\ 6_{Inch}$

$3_{Feet}\ 10\text{-}13/16_{Inch}$

SUBTRACTION

Example: Subtract 11 Inches from 4 Feet 2 Inches.

4 Feet 2 Inch −

1 1 Inch =

$4_{Feet}\ 2_{Inch}$

$3_{Feet}\ 3_{Inch}$

MULTIPLICATION

Example: Multiply 14 Feet by 5 Feet.

1 4 Feet ×

14_{Feet}

5 Feet =

$70_{\text{SQ Feet}}$

DIVISION

Example: Divide 7 Feet 6 Inches by 2.

7 Feet 6 Inch ÷

$7_{\text{Feet}}\ 6_{\text{Inch}}$

2 =

$3_{\text{Feet}}\ 9_{\text{Inch}}$

PERCENTAGE CALCULATIONS

Example: Find 20% of 600 Feet.

6 0 0 Feet × 2 0 %

$120_{\text{Feet}}\ 0_{\text{Inch}}$

Converting Between Dimensions

Remember to press On/C On/C *to clear entries in between problems.*

1 3 Feet	13_{Feet}
Conv Yds	4.333333_{YD}
Conv Feet	13_{Feet}
Conv Inch	156_{Inch}
Conv m	3.962_{M}
Conv cm	396.24_{CM}
Conv mm	3962.4_{MM}

Note: When performing multiple conversions, you only have to press the Conv key once.

CONVERTING FEET-INCH-FRACTIONS TO DECIMAL FEET OR INCHES

Example: Convert 10 Feet 8-1/2 Inches to Decimal Feet.

Then convert back to Feet-Inch-Fractions. Then to Inch Fractions & Decimal Inch

1 0 Feet 8 Inch 1 / 2	$10_{Feet}\ 8\text{-}1/2_{Inch}$
Conv Feet	10.70833_{Feet}
Feet	$10_{Feet}\ 8\text{-}1/2_{Inch}$
Inch	$128\text{-}1/2_{Inch}$
Inch	128.5_{Inch}

Note: When performing multiple conversions, you only have to press the Conv key once.

Note: Use this same method to convert between square and cubic dimensions.

Area & Volume Calculations

Remember to press [On/C] [On/C] *to clear entries in between problems.*

SQUARE AREA (x^2)

Example: The area of a room with sides measuring 6 Feet 8 Inches

[6] [Feet] [8] [Inch] [Conv] [%]

$44.44444_{SQ\ Feet}$

AREA OF A RECTANGULAR ROOM (LxW)

Example: The area of a room measuring 10 Feet 6 Inches by 17 Feet 11 Inches

[1] [0] [Feet] [6] [Inch] [×]

$10_{Feet}\ 6_{Inch}$

[1] [7] [Feet] [1] [1] [Inch] [=]

$188.125_{SQ\ Feet}$

RECTANGULAR CONTAINERS (LxWxH)

Example: What is the volume of a rectangular container that measures 3 Feet by 2 Feet 10-5/8 Inches by 2 Feet 2 Inches?

1. Find volume in Cubic Feet:

3 Feet ×

3_{Feet}

2 Feet 1 0 Inch 5 / 8 ×

$2_{\text{Feet}}\ 10\text{-}5/8_{\text{Inch}}$

2 Feet 2 Inch =

$18.75521_{\text{CU Feet}}$*

*If “Volume Display Format” Preference Setting is set to Cubic Yards or Cubic Meters, result will display accordingly.

2. Convert to Cubic Yards

Conv Yds

$0.694637_{\text{CU YD}}$

Bricks and Blocks Calculations

Remember to press [On/C] [On/C] *to clear entries in between problems.*

Number of Bricks or Blocks for a Wall

Example: A client needs a wall built that is 20 feet long by 8 feet high. How many face and paver bricks are required for this? What if you are using concrete blocks? Add a 5% waste allowance to find how many you will need for the project.

1. Find the number of bricks required to build the wall:

[2] [0] [Feet] [×] [8] [Feet] [=]

160 SQ Feet

[Conv] [Concrete] *(Brick)*

FACE 1097.14

[Concrete]

PAVR 720.00

2. Find the number of blocks required (and check block size):

20 Feet × 8 Feet =

160 SQ Feet

Block

BLKS 180.00

Block *(Block Size)*

B-AR 128 SQ Inch
STORED

3. Add a 5% waste allowance:

20 Feet × 8 Feet =

160 SQ Feet

Block

BLKS 180.00

+ 5 %

189

Note: The default block area is 128 square inches. You can store a different value by entering or solving for then pressing Stor Block For Example: 6 Inch × 1 6 Inch Stor Block Reset to the default value by perfoming a “Clear All” operation (Conv ×)

Concrete Calculations

Remember to press On/C On/C *to clear entries in between problems.*

Quantity of Concrete Required for Project

Example: A client needs a concrete base for a storage shed, with dimensions measuring 10 Feet by 12.5 Feet and 4 Inches deep. Find the number of concrete bags required for this project.

Note: Concrete calculations are only for bags weighing 80, 60, or 40 pounds. The first bag weight to display is 80 lbs by default, or the last displayed weight value from a previous calculation.

1 0 Feet × 1 2 · 5 Feet × 4 Inch = **1.54321** CU YD

Concrete **BAGS 62.50 (80 Lb)**

Concrete **BAGS 83.33 (60 Lb)**

Concrete **BAGS 125.00 (40 Lb)**

Gravel Estimations

Remember to press [On/C] [On/C] *to clear entries in between problems.*

Amount of Gravel Required

Example: How many tons of gravel do you need to order for covering a parking lot that measures 40 Feet wide by 120 Feet long by 4 Inches deep?

4 0 [Feet] × 1 2 0 [Feet] × 4 [Inch] =	**59.25926** $_{\text{CU YD}}$
[Gravel]	**WGHT 88.89** $_{\text{Ton}}$
[Gravel]	**1.5** $_{\text{Ton Per CU YD}}$
[Gravel]	**VOL 59.25926** $_{\text{CU YD}}$

Note: The default value for Tons Per Cubic Yard is 1.5 $_{\text{Ton Per CU YD}}$. This can be changed using the [Stor] [Gravel] keys. For Example: 1 · 2 5 [Stor] [Gravel] allows you to calculate assuming that a cubic yard weighs 1.25 tons. Default value is restored, along with all other default values, when perfoming a "Clear All" operation ([Conv] ×)

Board and Lumber Calculations

How Many Boards are Needed (With Different Board Lengths)

Example: Your are working on a project with measurements of 8 Feet by 12 Feet, and need to know how many boards are needed. The “Deck” key will display the answer for a variety of sizes.

8 Feet × 12 Feet =	96 SQ Feet
Deck	BDS 17. (12 Ft)
Deck	BDS 21. (10 Ft)
Deck	BDS 26. (8 Ft)
Deck	BDS 11. (20 Ft)
Deck	BDS 12. (18 Ft)
Deck	BDS 13. (16 Ft)
Deck	BDS 15. (14 Ft)
Deck	* BDoc STORED 5-11/16 Inch

* Default Value for Custom Board Center. Store a different value by entering and pressing the keys Stor Deck
For Example: 5 Inch Stor Deck Reset to the default value by perfoming a “Clear All” (Conv ×)

Fence Materials

Example: A client needs a fence for their garden. The total length of the fence sgements is 46 Feet. Using the standard 8 Feet for Post On-center, how many fence boards, posts, and rails will you need to complete this project?

4 6 Feet	46_{Feet}
Fence	BDS 98.
Fence	POST 7.
Fence	2-RL 12.
Fence	3-RL 18.
Fence	* P-oc STORED $8_{\text{Feet}}\ 0_{\text{Inch}}$
Fence	BDoc STORED $5\text{-}11/16_{\text{Inch}}$

*Default Value for Post On-center. To change this number, enter a new value and then press Stor Fence

For Example: 5 Feet Stor Fence Reset to the default value by perfoming a “Clear All” (Conv ⊗)

Board Feet: Lumber Estimation

Board feet are automatically entered in the Inch x Inch x Feet sequence. Alternatively, you can enter a cubic value and convert to board feet.

Example: Calculate board feet for a board that is 2 Inches by 4 Inches by 12 Feet.

2 × 4 × 12 BdFt

BDFT 8.

Example: Convert 120 cubic feet to board feet.

1 2 0 Feet Feet Feet

$120_{\text{CU FEET}}$

BdFt

BDFT 1440.

Flooring Calculations

Remember to press [On/C] [On/C] *to clear entries in between problems.*

Length of Planks

Example: You are replacing the floor for a room that measures 12 Feet 6 Inches by 18 Feet in area. Find the length of flooring planks required.

[1] [2] [Feet] [6] [Inch] [×] [1] [8] [Feet] [=]

225.$_{\text{SQ FEET}}$

[Flooring]

LNTH 18.75$_{\text{FEET}}$ (12 Ft)

[Flooring]

LNTH 17.31$_{\text{FEET}}$ (13 Ft)

[Flooring]

LNTH 15.00$_{\text{FEET}}$ (15 Ft)

[Flooring]

LNTH 37.50$_{\text{FEET}}$ (6 Ft)

Studs Calculations

Remember to press On/C On/C *to clear entries in between problems.*

Studs Quantity

Example: A customer is dividing their basement into two separate rooms with a wall measuring 12 Feet 6 Inches. How many 16 Inch On-center studs would be required for this project?

1 2 Feet 6 Inch

$12_{FEET}\ 6_{INCH}$

Studs

STUD 11.*

**Note: 1 stud is automatically added for the end of the wall.*

The default Stud On-center is 16 Inches. To store a different number, enter the new value then press Stor Studs

For Example: 1 2 Inch Stor Studs Reset to the default value by perfoming a "Clear All" (Conv ×)

Drywall Sheets

Drywall Sheets Quantity

Example: You are making a room measuring 8 Feet tall with floor dimensions of 12 Feet by 18 Feet. Calculate for drywall sheet sizes measuring 4x8, 4x9, 4x10, and 4x12 to find how many you would need for which size you choose to work with.

1 2 Feet + 1 2 Feet +

1 8 Feet + 1 8 Feet × 8 Feet =

480. SQ FEET

Conv Flooring *(Sheets)*

4X8 15.00

Flooring

4X9 13.33

Flooring

4X10 12.00

Flooring

4X12 10.00

Flooring

480. SQ FEET

Tile Calculations

Remember to press On/C On/C *to clear entries in between problems.*

Number of Tiles, Preset Sizes

Example: How many 18 Inch tiles (with a 10% waste allowance) are required to cover a floor measuring 12 Feet by 16 Feet? Assume a grout width of 1/8 Inch.

1 / 8 Stor Tile *(Grout Width)*	GRT STORED 0-1/8 Inch
1 2 Feet × 1 6 Feet =	192. SQ FEET
+ 1 0 %	211.2 SQ FEET
Tile	TILE 92.58 (18 in)

Continuous presses of Tile displays the number of Tiles for the following sizes:
18” ; 16” ; 13” ; 12” ; 10” ; 8” ; 6” ; 4” ; 2” ; 1” ; 24”

Using Custom Size Tiles

Example: How many 4-1/2 Inch by 2-1/2 Inch tiles (with 10% waste allowance) are required to cover a floor measuring 12 Feet by 16 Feet? Grout width of 1/8 Inch.

4 Inch 1 / 2 × 2 Inch 1 / 2 = Stor Custom Tile

TILE STORED 11.25 SQ Inch

1 / 8 Stor Tile *(Grout Width)*

GRT STORED 0-1/8 Inch

1 2 Feet × 1 6 Feet =

192. SQ FEET

+ 1 0 %

211.2 SQ FEET

Custom Tile

TILE 2703.36

Paint Estimations

Remember to press [On/C] [On/C] *to clear entries in between problems.*

How Much Paint Required?

Example: A client has hired you to paint an office wall measuring 14 Feet long by 9 Feet tall. How much paint do you need? In quarts, pints, or gallons?

[1] [4] [Feet] [×] [9] [Feet] [=] **126.** SQ FEET

[Paint] **QT 1.44**

[Paint] **PINT 2.88**

[Paint] **GAL 0.36**

* Calculator assumes a default estimation of 350 SQ Feet of coverage per gallon of paint. A different value can be set by entering the new value and then pressing the keys [Stor] [Paint]

Example: [2] [2] [0] [Feet] [Feet] [Stor] [Paint] Reset to the default by perfoming a "Clear All" ([Conv] [×])

Finding Cost of Materials

Remember to press [On/C] [On/C] *to clear entries in between problems.*

Cost of Paint

Example: How much will it cost to cover 380 SQ Feet of surface with paint if the cost of the paint is $14.99 per gallon?

1 4 . 9 9 [Stor] 0	COST STORED Per 14.99
3 8 0 [Feet] [Feet]	380. SQ FEET
[Paint]	GAL 1.09
=	1.085714
[Conv] 0 *(Cost)*	TTL$ 16.27

Default Settings

After a Clear All (Conv ⊗), your calculator will return to the default stored value settings:

PREFERENCE	DEFAULT
Fractional Resolution	1/16
Area Display	Standard
Voume Display	Standard
Meter Linear Display	0.00
Fractional Mode	Standard

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

STORED VALUE	DEFAULT VALUE
Block Area	128. SQ INCH
Block Length	16 INCH
Weight per Volume	1.5 Ton Per CU YD
Board On-center	5-11/16 INCH
Post On-center	8 FEET 0 INCH
Studs On-center	16 INCH
Custom Tile Size	24 SQ INCH
Tile Grout Width	0 INCH
Paint Coverage Area	350. SQ FEET
Unit Cost	$0.00

Perfom a Full Reset (press Off, hold down ⊗, press On/C), or press the Reset hole over the On/C key to both stored values and preferences to the default.

Using Memory Keys

The stored memory value is semi-permanent, and clears when the calculator is turned off. Adding or subtracting from the memory adds or subtracts the value displayed on the screen. Operation of the memory function is as follows:

FUNCTION	KEYS
Add to Memory	M+
Subtract from Memory	Conv M+
Recall Total in Memory	Rcl M+
Display/Clear Memory	Rcl Rcl
Clear Memory	Conv Rcl
Clear All (All Custom Stored Values)	Conv ✕

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

Executing the Clear All function will clear not just the stored values for the memory keys, but also the changes made to stored default values for various equations.

Paperless Tape Function

Press Rcl = *to use the Paperless Tape function, which can be used to check through the past 20 calculations. Press* + *or* − *to scroll through previous entries. Press* = *to the exit the Paperless Tape function and continue the calculation or begin a new one.*

Example: You Add 44 Feet, Subtract 2 feet, and Add 6 feet. You think you entered the first number wrong so you use the Paperless Tape function to review your previous entries. You back up to the first entry and see you entered 4 instead of 44. Get out of the Paperless Tape mode and add 40 feet to the total.

4 Feet +	$4_{FEET}\ 0_{INCH}$
5 Feet +	$9_{FEET}\ 0_{INCH}$
2 Feet =	$11_{FEET}\ 0_{INCH}$
Rcl =	TTL= $11_{FEET}\ 0_{INCH}$
+	01 $4_{FEET}\ 0_{INCH}$
+	02 + $5_{FEET}\ 0_{INCH}$
+	03 + $2_{FEET}\ 0_{INCH}$
−	02 + $5_{FEET}\ 0_{INCH}$
=	TTL= $11_{FEET}\ 0_{INCH}$
+ 7 Feet =	$18_{FEET}\ 0_{INCH}$

Error Messages

Each calculation is carried out internally to twelve digits. The calculator displays only up to 8 digits and fractions. Most material calculations will result in an answer rounded up two places. Press the (=) key to see the non-rounded value.

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

Error	Meaning
OFLO	Overflow
MATH Error	Divide by zero
DIM Error	Dimensions error
ENT Error	Entry error

Auto Power Off / Battery

The calculator will automatically power off after 8 minutes of non-use.

The C5000 uses two (2) LR44 batteries (included). Should the display become dim or erratic, replace the batteries. Use caution when disposing of your old battery, as it contains hazardous chemicals.

⚠ 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.

2-Year Limited Warranty

Any warranty, statutory or otherwise, dose not include service and or replacement or repair of parts when damage or defect is a result of accident, abuse, or the elements.

Immediately dispose of used batteries and keep away from children.
Do NOT dispose of batteries in household trash.
Even used batteries may cause severe injury or death.
Call a local poison control center for treatment information.
Compatible battery type: LR44, 1.5V
Do not mix old and new batteries, different brands or types of batteries, such as alkaline, carbon-zinc, or rechargeable batteries.
Ensure the batteries are installed correctly according to polarity (+ and -)
Remove and immediately reycle or dispose batteries from equipment not used for an extended period of time according to local regulations and keep away from children.
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.
Non-rechargeable batteries are not to be recharged.
Do not force discharge, recharge, disassemble, heat above 150 degrees Fahrenheit or incinerate. Doing so may result in injury due to venting, leakage or explosion resulting in chemical burns.