

NEW BENCHMARK OF MEASURING



PRECASTER
SINCE 1977

Next Generation Has Arrived,
Yet A New Benchmarking

**TICK-TOCK
MEASURING
RIGHT IN
YOUR HANS**

CA6100



Operation Manual
Read Carefully Before Use

Before Start Using

- Thanks for choosing Precaster Hans CA6 Series. Please read safety instruction carefully.
- Laser radiation is emitted from this product. Use of controls, adjustment procedures other than those specified herein may result in laser radiation exposure. Never stare directly into beam or aim the laser beams at others.
- HANS contains semiconductor laser diodes with wavelengths of 650 nanometers.
- The total continuous output of the beams never exceeds 1.0 milli-watts.
- HANS complies with EMC test according to EN61000-6-3:
2001+A11:2004, EN 61000-6-1: 2001, EN 61000-4-2, EN 61000-4-3, EN 60825, FCC test according to PART 15.



FCC Statement:

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.
- (2) This device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

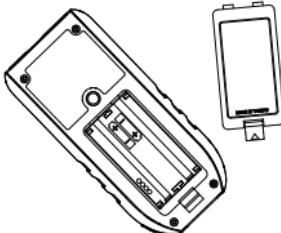
This device complies with Industry Canada license-exempt RSS standard(s).

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

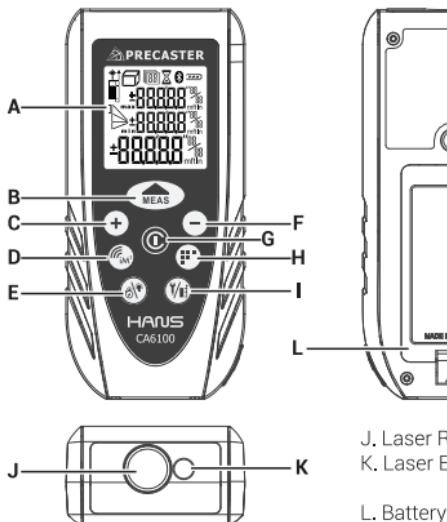
Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Battery Installation

- HANS is powered by 2*AA Batteries
- Battery status will be showed in initial screen.
- In case if battery icon is displayed continuously, it shows battery is about 1,000 measure times left.
- Low power indicator will be twinkling when battery is low.
- To change new batteries, remove back lid and observe correct polarity when install new batteries, then close back lid.

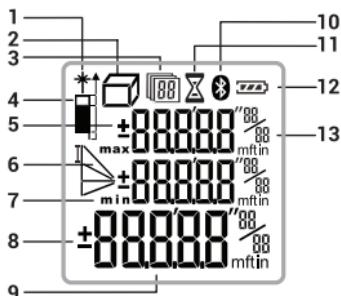


Overview



- A. LCD
- B. Single Measurement
Continuously Measurement
- C. Addition
- D. iM2 Switch
- E. Timer / Backlight
- F. Subtraction
- G. Clear / Power Button
- H. Measure Applications
Area
Volume
- I. 3 Indirectly Measurements
by Pythagoras
- J. Reference Switch / Setting
- K. Laser Receiving Window
- L. Laser Emitted Window
- M. Battery Aid

Overview For Screen



- 1. Laser Indicator
- 2. Area & Volume
- 3. Memory Index
- 4. Reference
- 5. Addition and Subtraction
- 6. Indirectly Measurement
- 7. Maximum & Minimum display
- 8. Addition and Subtraction
- 9. Main display
- 10. Bluetooth indicator
- 11. Timer
- 12. Batteries Indicator
- 13. Unit

Specification

Measuring Range*	0.05M-100M	Battery Life	Up to 10,000 measures
Resolution	0.001M	Dimension	120mm x 55mm x 32mm
Accuracy*	±1.5mm	Operation Temperature	-5°C - 40°C
Measure Speed*	0.5 sec.	Storage Temperature	-20°C - 60°C
Laser Type	650 nm, Class 2, <1mW	Automatic Switch-off	
Beam Size	25mm@30M	-Laser	30 seconds
Battery	2 x AA Batteries	-Device	180 seconds

*The working range and accuracy depend on how well the energy of laser is reflected from surface (Mostly comes from scattered light) and the target reflectivity. The brightness of laser point to ambient light intensity or use a target plate (Lodak White) may helps for increasing the working range and the stability of accuracy.

- In favorable condition, accuracy could be in ±1.5mm and a deviation influence of ±0.25mm/m must be taken into count after ten meters.
- In unfavorable condition, such as bright sunlight, rough surface, very short distance, or a poor and extra strong reflected signal may cause the deviation reach or over ±10mm and also may bring an ambiguous cycle which may lead the measures to an unexpected result.

Turn On Your HANS

Before using, please be sure two well condition batteries are installed, For batteries installation, please refer to BATTERY INSTALLATION



Press it to turn the device on.

The screen will be flashed with icons for self-calibration than enter standby mode.

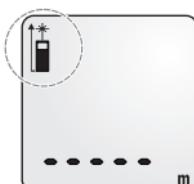


Standby Screen

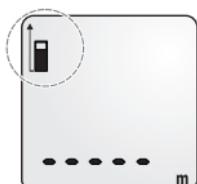
Measuring Distance

· CAUTION !!

Laser will be emitted upon when you turn HANS on. Check icon on the upper-left corner to check if laser is emitted.



Laser Activated



Laser Disactivated



Press it to enable laser, if the laser isn't activated.

Then, move the laser dot of HANS onto your target and try to keep the dot on the target.



Press it to activate measure.

The whole measure will be finished until a beep is heard or measured result is appeared on the main screen.

Laser will be turned off after measuring.



Finished Measuring

Add / Subtract Your Measures

NOTICE: Be sure to add and subtract in same unit

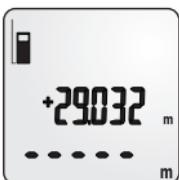
Calculating the **Summary / Different** of measures are simple only with few buttons.

Press it to save into memory (temporary saved), when you got your first measure .

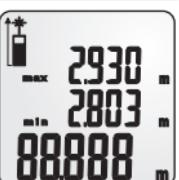
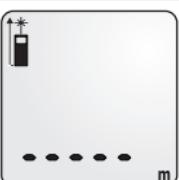
Then find your next desired distance, once you find it,



Press it again

The result will display in main screen and you could see what you had **Added / Subtract**.**Add Measures****Subtract Measures****Continuous Measuring**To **Activate** Dyna Measuring (continuous measure)

Tap and hold for **2 seconds**

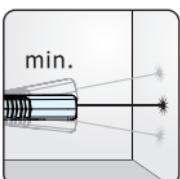
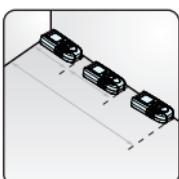
To **Pause** Dyna Measuring (continuous measure)

Standby Screen

Dyna-Measuring Mode

Back to normal mode.

Tap it **Twice**



Maximum and Minimum value will be displayed on screen

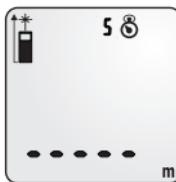
Countdown Measure

Timer could set from 3 seconds to 15 seconds.

For a more stable measurement or you could use countdown measure function to trigger measuring in setting times.



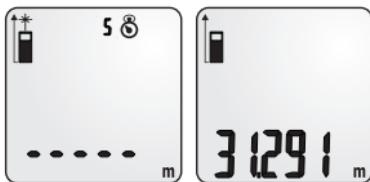
Press it to set your preferred self-trigger time.



After the time is set,



Press it to active measuring



After a beep, the measure result is displayed on screen.

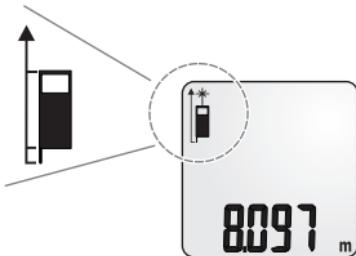
Measuring Reference

Changing sequence is front → rear → pintail.

- By default, reference is set at rear.
- HANS has three reference: rear, front and pintail.



Press it to change reference.



Indicator for reference

Measuring Function

Changing Function is **Area** → Volume → Indirect

a. Area Measurement



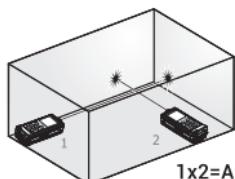
Press it Once for enabling Area measuring.



Standby Screen

Area Measuring

- Laser will be activated when entering Area measuring
- Follow the instructions on main screen to measure width and length.



Area Measuring Instructions

Measuring Function

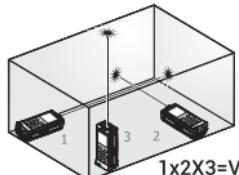
Changing Function is Area → **Volume** → Indirect

b. Volume Measurement



Press it Twice for enabling Area measuring.

- Laser will be activated when entering Area measuring
- Follow the instructions on main screen to measure width and length.



Volume Measuring Instructions

Measuring Function

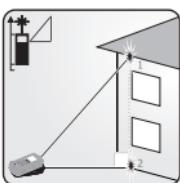
Changing Function is Area → **Volume** → **Indirect**

c. Indirect Measurement

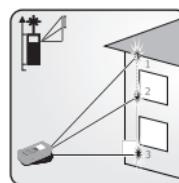


Press it 3, 4 or 5 times to enter **indirect measurement I, II and III**

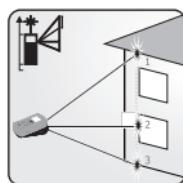
- All the calculation is based on Pythagorean theorem ($a^2+b^2=c^2$) to measure height indirectly.
- **Press it** to enable laser beam and follow the instructions on screen to get slant range, horizon range then the height will be displayed on screen.
- For Pythagorean II (summary of two height) and III (different of two height) are advanced calculating based on Pythagorean I.



First Press for Single Pythagoras



Second Press for Double Pythagoras (Subtract)



Second Press for Double Pythagoras (Summary)

Setting Menu

Menu provide Unit Change, Memory Recall, Stackout Setup, Activation of Laser Pointer mode.



Tap and hold for **2 seconds** to entering menu.



Press to make selections in each function,

Changing Function is



Memory Recall



Unit



Stackout Setup



Point



Press it to exit menu.



Press it to move to next item in menu.

Memory Recall

The first item in menu is memory recall.

There are latest 20 measurements in records.



To look up records **press** it to move up



To look up records **press** it to move down



Press it to exit menu.



Press it to move to next item in menu.

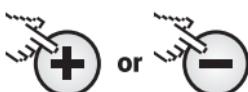


Memory Recall



Unit

The second item in menu is setting unit.

**Press** to change unit of measuring,**Press** it to exit menu.**Press** it to move to next item in menu.**Unit****Unit Switch Reference**

	meter	feet	inch	0'0" 1/32	inch	inch	inch	尺
Length	m	ft	in	0'0" 1/32	1/32 in	1/16 in	1/8 in	10/33
Area	m ²	ft ²	P					
Volume	m ³	ft ³	m ³					

Stake-Out

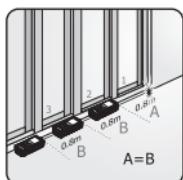
The Stake-out function to accelerate your measuring jobs.

a. Setting

Set your stake and easily get notified when using with continuous measurement mode.

**Press** it to **increase / decrease** your value.**Press** it to **shift** between numbers.**Press** it to **finish** setting.**Press** it to **restore zero**.**b. Measuring with Stakes**

- When in continuous measurement mode, You could notice arrows will be appeared at the left side of number.
- Follow the arrow, you could get every stakes you need.
- When approaching to set Stakes, it will alert you by beeping.



Laser Pointer



Hold it to enable Laser Pointer.

Also laser icon will also display continuously.



Point

Back-Light Switch



Press it to **Enable / Disable** Back-Light Switch.



iM² Connection

CA6100 Supports BLE4.0, for detail of Bluetooth version on your phone, Please contact with your phone manufacturer.



Press to turn on Bluetooth in pairing mode.

- The Bluetooth icon will keep flashing during paring.
- Select proper device in the Connection Manager of APP
- After connected with a beep sound the icon will stop flashing.
- Enjoy with measuring.



Laser Distance Meter

Error Code

Code	Description	Solution
Err01	Out of measuring range	Measure in a proper range
Err02	Reflected signal is too weak	Select a better surface
Err03	Out of display range (max volume : 99999) e.g : result of area or dimension is out of display range.	Divide calculation into intermediate steps
Err04	pythagorean calculation error	Check and verify values and steps are correct
Err05	Low Battery	Install a new battery
Err06	Out of working temperature	Measure in an environment within specified working temperature
Err07	Ambient light is too strong	Measure in a darker place (shadow target)

Service Support Warranty

Please contact your local dealer for further assistance, Thank you.

All Accessories

a. Carrying Case	b. Device
c. AA batteries	d. Safety Strap
e. Engineering Pencil	f. Operation Manual



PRECASTER
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