HARIO

CST-2000 Coffee Scale Polaris

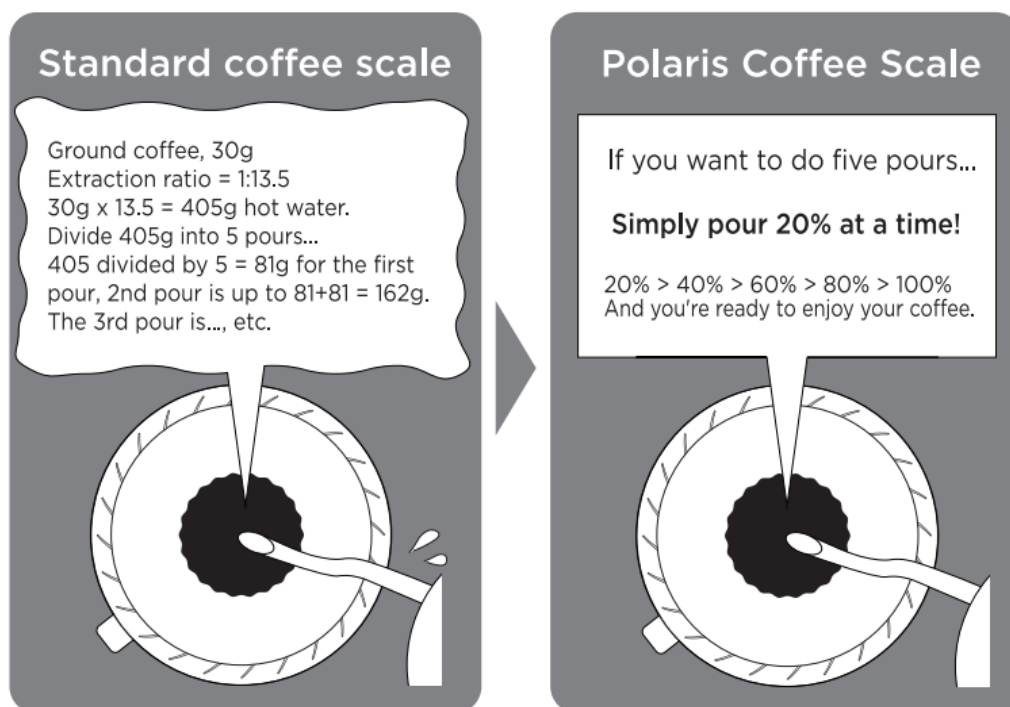# HARIO CST-2000 Coffee Scale Polaris Instruction Manual

Contents

HARIO

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Product features

Polaris Mode

This mode allows you to see the extraction progress at a glance, and makes complex recipes easier to manage and reproduce.

Standard coffee scale

Ground coffee, 30g
Extraction ratio = 1:13.5
30g x 13.5 = 405g hot water.
Divide 405g into 5 pours...
405 divided by 5 = 81g for the first pour, 2nd pour is up to 81+81 = 162g.
The 3rd pour is..., etc.

Polaris Coffee Scale

If you want to do five pours...

Simply pour 20% at a time!

20% > 40% > 60% > 80% > 100%
And you're ready to enjoy your coffee.

Practical Use of the Polaris Mode

The Polaris Mode supports your brewing with the built-in percentage display. Even if the amount of coffee or water is adjusted, you only need to focus on pouring; no more need to calculate each pour. This allows you to focus on exploring, and finding your ideal recipe.

Classic Mode

- In contrast to Polaris Mode, Classic Mode hides the extraction ratio, total water volume and percentage display, and allows you to extract traditionally, using only time and weight.
- You can switch between modes by holding down the TIME MODE button for about 1.5 seconds.

Auto Timer and Manual Timer

- The Auto Timer feature automatically starts the timer when it senses a change in weight, so you can start brewing right away. To turn this feature on, press the TIME MODE button (the percentage display and timer will light up).
- Press the TIME MODE button again to turn the Auto Timer function off, and press the TIME MODE button once more to manually start the timer.

Polaris Mode display

- **A. Extraction Ratio**
    - This ratio measures the total volume of hot water. The amount of coffee is considered to be 1 in this ration.
    - For example, if the amount of coffee is 10g and the extraction ratio is 1:15, the total volume of hot water required is 150g.
        - **For stronger coffee**

          Press the+ and – buttons to set a smaller value (for example 1:1-14).
        - **For lighter coffee**

          Press the + and – buttons to set a bigger value (for example 1:15-30).
- **B. Brewing Percentage**
    - During your brew, you can check the percentage of water poured, based on the amount of coffee and the extraction ratio.
    - Press the TIME MODE button and it will light up when the timer is on standby.
- **C. Water Volume (g)**

  This is the amount of hot water needed for your brew (in grams), based on the extraction ratio. It is automatically calculated and displayed based on the weight of coffee.
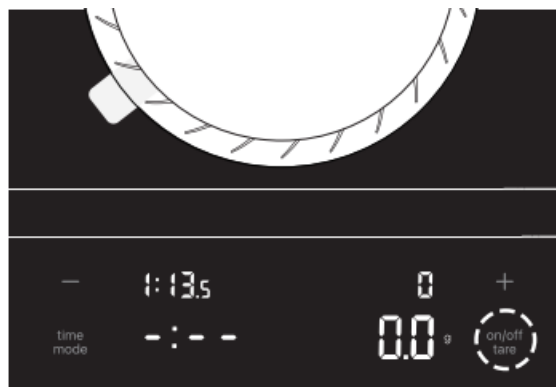
How to brew coffee using the Polaris Mode

1. Press the ON/OFF TARE button to turn on the Polaris Scale.
   Polaris Mode is active when the extraction ratio, total hot water volume, and percentage are displayed at the top.

2. Place the server and dripper with paper filter on the scale and press the ON/OFF TARE button to reset the weight to zero.


3. Add ground coffee and press the + and – buttons to adjust the extraction ratio. The total hot water volume (upper right) is updated to match the selected extraction ratio.
   If the power is turned off and on again, Polaris Mode will remember the previously set extraction ratio.
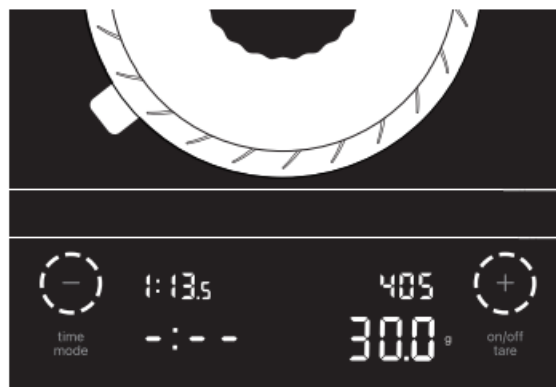

4. Once you have set your brewing recipe, press the TIME MODE button to confirm the extraction ratio and total amount of hot water, and set the Polaris Scale into Auto Timer mode.
   The weight will be displayed as zero, the percentage will be displayed, and the timer will blink.
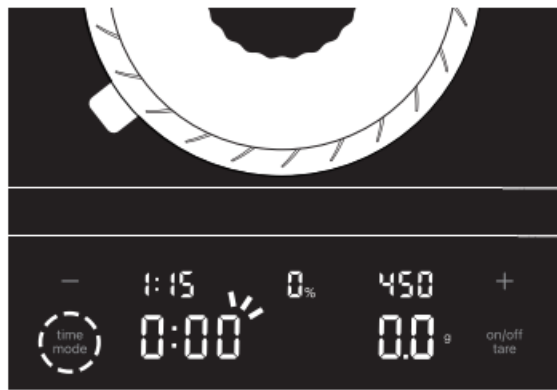
5. When starting to pour, the timer display will blink, and the timer will start automatically. You can check the amount of each pour using the percentage display as an indicator.
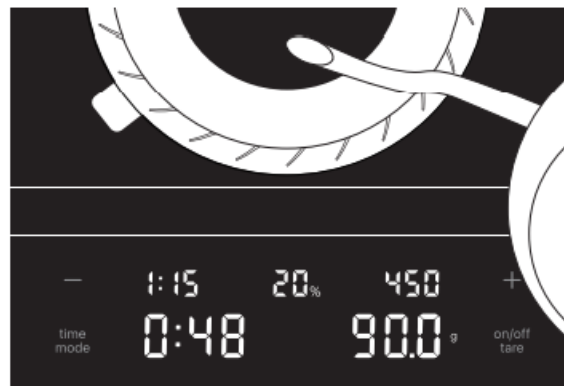

For brewing inspiration, please refer to the recipes below.

Basic extraction recipe 4:6 Method ® supervised by Tetsu Kasuya	How to adjust flavor			

Basic extraction recipe 4:6 Method ® supervised by Tetsu Kasuya

< Grind size >
Medium coarse to coarse

< Ratio >
1:15

< Water temperature >
93℃ for light roast
88℃ for medium roast
About 83℃ for dark roast

< Extraction model >
0:00 20% pour
0:45 20% pour
1:30 20% pour
2:15 20% pour
2:45 20% pour
3:30 Remove dripper

How to adjust flavor

	Basic	Increase sweetness	Increase acidity	
1st pour	20%	15%	25%	40% of total brew volume Adjust taste
2nd pour	20%	25%	15%	

✕

|	Basic	Stronger	Lighter	
3rd pour	20%	30%	60%	60% of total brew volume Adjust body
4th pour	20%			
5th pour	20%	30%		

6. After the extraction is complete, press the TIME MODE button to stop the timer and display the final extraction results.
Press the TIME MODE or the ON/OFF TARE button to return to step 2 and start your next brew.
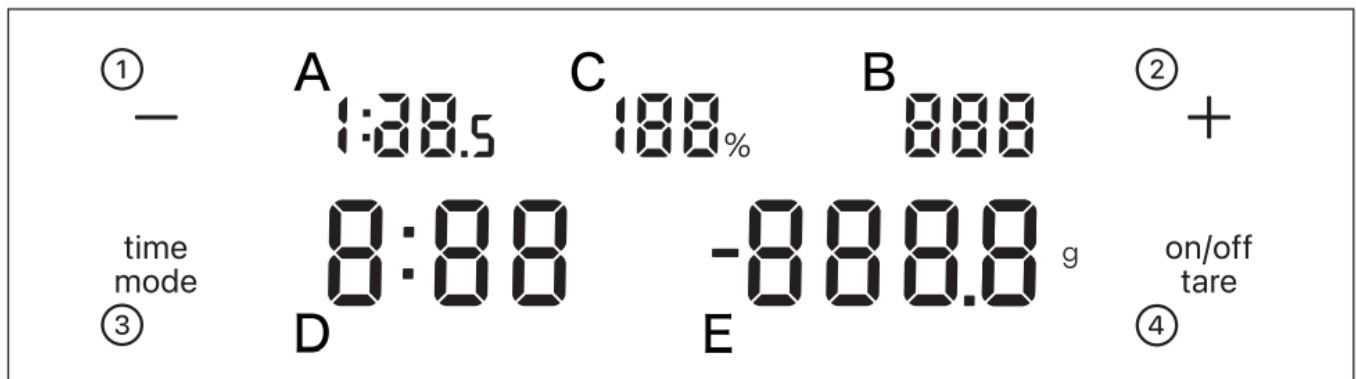Or press and hold the ON/OFF TARE button for about 1.5 seconds to turn off the power.
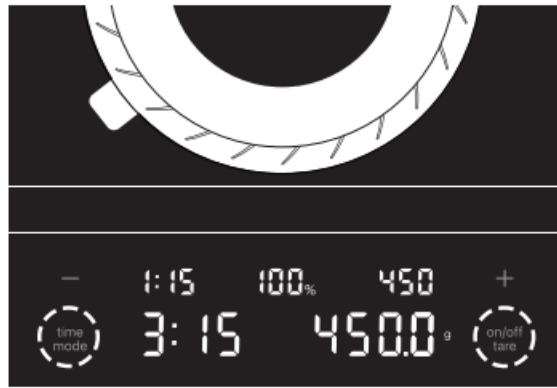
Parts list
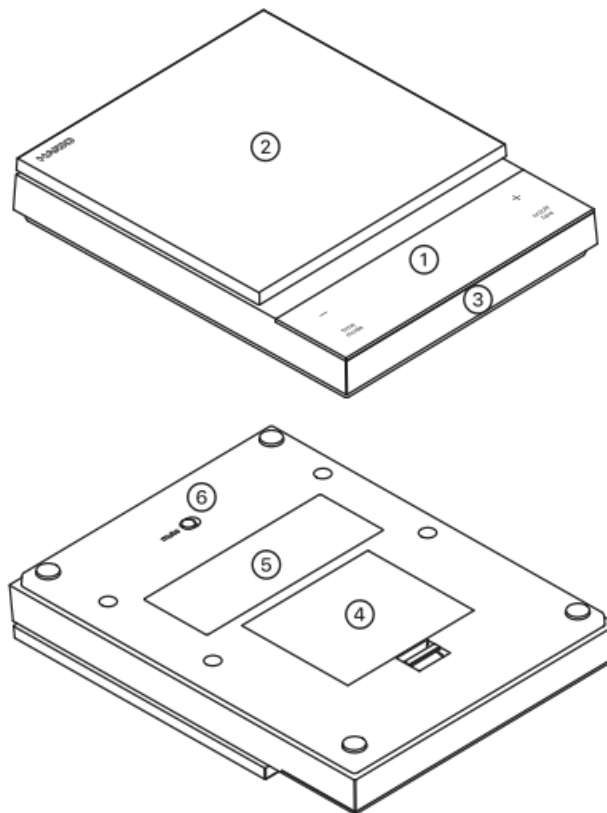
1. Display surface: Acrylic resin
2. Measuring plate: ABS resin
3. Body: ABS resin
4. Battery cover: ABS resin
5. Rating sticker: Do not peel off this sticker.

   Doing so may cause malfunction.
6. Mute button: Slide the button to mute/unmute the sound.

Display

- **A Extraction ratio**
  - Display or hide by pressing and holding TIME MODE button.
  - Adjust ratio between 1:1?1 :30 (in 0.5 increments) by pressing + or – button.
- **B. Total water volume**
  - Display or hide by pressing and holding TIME MODE button.
  - Necessary amount of water is automatically updated to reflect the extraction ratio.
- **C. Percentage**

  Percentage is displayed when the TIME MODE button is pressed and Auto Timer is on standby.
- **D. Timer**

  Max. 9:59
- **E. Weight**

  Max. 2.000g

1. **button**
   - **Short press:** Decrease extraction ratio.
   - **Hold:** Continuously decrease extraction ratio.
2. **+button**
   - **Short press:** Increase extraction ratio.
   - **Hold:** Continuously increase extraction ratio.
3. **TIME MODE button**
   - **Long press:** Display or hide extraction ratio, percentage, and total water volume.
   - **Short press:** Auto Timer standby mode.
     - **Press once**: Timer starts when weight is detected.
     - **Press twice:** Turn Auto Timer off.
   - Press the TIME MODE button again to start timer (Manual Timer).
4. **ON/OFF TARE button**
   - **Short press:** Power on/tare
   - **Long press:** Power off

Using Classic Mode

How to use the scale in Classic Mode

1. Press the ON/OFF TARE button to turn on the power. Touch and hold the TIME MODE button for about 1.5 seconds to disable Polaris Mode (extraction ratio, total water volume, and percentage displays). Classic Mode

is active when only the timer and weight are displayed.

- When the power is turned off and then turned on again, the machine will automatically start up in the previously set mode.
- Switching modes is not possible while brewing (when using Auto Timer).
- Please use the machine on a flat, stable, non-slippery surface.
- When turning on the power, do not place anything on the scale.

2. The weight is displayed when the object to be weighed is placed on the scale.
   - Check that the display shows "0.0" before placing anything on the scale.
   - Place any items in the center of the weighing plate.
   - The maximum displayable weight is 2,000g. If the weight exceeds the maximum display range, the message "EEEEE" will be displayed instead.

3. Remove all items from the scale and press the ON/OFF TARE button for about 1.5 seconds to turn off the power.

Using tare to subtract the weight of the container

1. Press the ON/OFF TARE button to turn on the power.
2. Place a container on the scale. The weight of the container will be displayed.
   - Ensure that the display shows "0.0" before placing the container on the scale.
   - Place the container in the center of the weighing plate.
3. Press the ON/OFF TARE button to reset the display to "0.0".
4. Place the weighing object in the container to weigh the object only.
   When the total weight of the container and the weighed object exceeds the maximum display range of 2,000g, the message "EEE" will be displayed instead.
5. When the container and other items are removed from the scale, a minus symbol will be displayed. Remove all items from the scale and press the ON/OFF TARE button for about 1.5 seconds to turn off the power.

How to use the timer function

1. When you press the TIME MODE button, the timer enters Auto Timer standby mode, and the timer will start to blink. The timer will now sense any changes in weight, so when you start pouring water for your brew, the timer will automatically start (see Fig. 1). Alternatively, by pressing the TIME MODE button again. the timer will blink. and then stay on. The Auto Timer is now turned off (see Fig. 2). The timer can now be started manually by pressing the TIME MODE button again (see Fig. 3).

Fig. 1 — Auto Timer on standby
Fig. 2 — Auto Timer standby turned off
Fig. 3 — Manual Timer, started

2. The timer can be stopped by pressing the TIME MODE button while it is active. However, the timer cannot be started again after it has been stopped.
3. After the timer has been stopped. press the TIME MODE button or the ON/OFF TARE button to reset the weight to "0.0", and reset the timer to the Auto Timer standby mode.

Product care instructions

- Please use a damp cloth to clean the weighing plate. If necessary, you can use a neutral detergent for heavy stains.
- When cleaning, do not use thinner, benzene, gasoline, kerosene, alcohol, etc. They may cause discoloration or other damage to the product.

Replacing the battery

1. Remove the battery cover on the underside of the unit.
2. Remove the old battery and insert the new battery. Make sure to correctly align the + and – sides.
3. Replace the battery cover, making sure it clicks shut.
    - When the batteries run out, the "Lo" symbol will appear on the display. Please make sure to replace the batteries as soon as possible.
    - When using new, regular batteries, this product can be used for approximately 10 months. (Assuming around six minutes of use per dav)
    - The batteries that come packaged with the product are only for the purpose of checking scale functionality and may have a short lifespan
    - Please follow the instructions of your local government when disposing of batteries.

Battery warning

- Do not short-circuit, disassemble, heat, or place this product in an open flame, as this may cause overheating, leakage, or rupture.
- If any parts are swallowed, consult a doctor immediately. If alkaline batteries come into contact with skin or clothing, rinse with clean water and avoid contact with eyes.
- If alkaline solution gets into contact with your eyes, rinse with clean water and seek medical attention immediately.
- If batteries come into contact with other metals or batteries, they may cause sparks or explode. So when disposing of or storing batteries, please tape the battery terminals.

Note on batteries
Be sure to observe the following precautions; incorrect use of batteries may cause leakage or rupture, resulting in equipment malfunction and/or injury.

- Make sure to insert the batteries with the correct polarity(+ and-).
- Remove used, empty batteries from the device immediately.
- If you will not use the product for a longer period of time, please remove the batteries.

Guaranteed accuracy range

- The product is manufactured and inspected in accordance with the technical standards set forth in the Measurement Law. This product's accuracy is guaranteed within the ranges specified in the table on the right.
- This product is intended for home use only. Please do not use this product for business transactions or for

social proof of weight.

- Depending on your location, there can be minute variations in gravitational pull. This can cause errors in high-precision weighing instruments.
- The weight may fluctuate by ±29 immediately after a hot object is placed on the scale.
- Weight range is O.lg-2000g

(As suming use at an environmental temperature of 23°C±5° Cand humidity of 50±20%.)

Amount to be weighed	Accuracy
0.1g-300g	
300g-500g	±0.2g
500g-1000g	±lg
1000g-2000g	±1.Sg

Main Specifications

Scale	Maximum weighting capacity	2000g
	Scale interval	0.1g~300g: 0.1g 300g~1000g: 0.5g 1000g~2000g: 1g
Timer	Display method	3-digit digital LED
	Count-up maximum measurement time	9 minutes 59 seconds
	Time required for stabilization	3 seconds
	Power source	DC4.5V × AA batteries Batteries included for testing purposes
	Power consumption (when in use)	About 40mA
	Automatic power off	About 5 minutes Timer (when in use) 9'59"
Ratio	Adjustment range	1:1~1:30 (0.5 increments)
Total hot water	Display range	1~999
Percentage	Display range	1~199

Precautions for handling

- This scale is a precision instrument: do not drop it or subject it to strong impact as this could cause a malfunction.
- Place items to be weighed on the scale carefully as a strong impact from a dropped item could cause a malfunction.
- When storing the scale do not place any objects on top of the weighing area as this could cause a malfunction.
- Make sure to use the scale on a flat. stable. non-slip surface. as usage on an unstable surface may result in incorrect weight readings and create a risk of the scale falling down.
- Do not put your fingers in the gaps on the scale. to prevent possible injury.

- Do not leave the scale near a stove or other heating appliance. Do not leave the scale in direct sunlight
- Do not place the instrument in a humid or magnetic place. as this could cause a malfunction.
- Do not heat disassemble or modify the scale and do not use it in water as this could cause a malfunction.
- Due to the sensitive nature of the measuring equipment direct exposure to airflow from outside wind air conditioners and other such sources may incorrectly influence the weight registered by the device.When this happens the error message "EEE" will be displayed. Please reposition the
- Polaris so that it is not directly exposed to the airflow.

Regional settings

Regional settings
Before using the scale for the first time, please follow the procedure below to set your region.
(By default, the scale is set to the value of GI.)

Region set-up

1. While the power is turned off, press and hold the ON/OFF TARE button for at least 5 seconds.
2. The display will show GI as the set region.

Press and hold for 5 seconds

3. You can cycle through the regions by pressing the + or – buttons. The cycling order is:
   GI→G2→G3→G4→G5→G6→G7→G8→G9→GI (etc.)
4. With your desired region displayed, press and hold the ON/OFF TARE button. The word PASS will be displayed, and the power will turn off. Your region is now stored.

Regional selection

Regional settings

- The regional setting is stored in the scale, even after replacing the battery.
- If no actions are performed during step 3 or 4, the scale will automatically turn off. In this case, please start again from step 1.

G1
Kanto-Kyushu(Japan) **9.797m/s^2**

G2
Tohoku(Japan) **9.801m/s^2**

G3
Hokkaido (Japan) **9.805m/s^2**

G4
Okinawa (Japan) **9.792m/s^2**

G5

9.78 m/s^2

Bangkok 9.783 m/s^2
Calcutta 9.788 m/s^2
Djakarta 9.781 m/s^2
Havana 9.788 m/s^2
Manila 9.784 m/s^2
Rio de Janeiro 9.788 m/s^2
Sao Paulo 9.789 m/s^2
Singapore 9.781 m/s^2
Mexico City 9.779 m/s^2

G6

9.79 m/s^2

Auckland NZ 9.799 m/s^2
Buenos Aires 9.797 m/s^2
Cape Town 9.796 m/s^2
Cyprus 9.797 m/s^2
Dobai 9.793 m/s^2
Kuwait 9.793 m/s^2
Los Angeles 9.796 m/s^2
Seoul 9.7994 m/s^2
Sydney 9.797 m/s^2
Taipei 9.790 m/s^2

G7

9.80 m/s^2

Athens 9.807 m/s^2
Chicago 9.803 m/s^2
Hong Kong 9.8099 m/s^2
Lisbon 9.801 m/s^2
Madrid 9.800 m/s^2
Melbourne 9.800 m/s^2
Milan 9.806 m/s^2
New York 9.802 m/s^2
Ottawa 9.806 m/s^2
Paris 9.809 m/s^2
Rome 9.803 m/s^2
San Francisco 9.800 m/s^2
Shanghai 9.802 m/s^2
Toronto 9.8054 m/s^2
Vancouver, BC 9.809 m/s^2
Washington DC 9.801 m/s^2
Wellington NZ 9.803 m/s^2
Zurich 9.807 m/s^2

G8

9.81 m/s^2

Amsterdam 9.813 m/s^2
Birmingham 9.813 m/s^2
Brussels 9.811 m/s^2
Copenhagen 9.815 m/s^2
Frankfurt 9.810 m/s^2
Glasgow 9.816 m/s^2
Helsinki 9.819 m/s^2
London (Greenwich) 9.812 m/s^2
Oslo 9.819 m/s^2
Stockholm 9.818 m/s^2

G9

9.83 m/s^2

Berlin 9.838 m/s^2
Moscow 9.843 m/s^2
Seattle 9.829 m/s^2
Vienna 9.830 m/s^2

Documents / Resources

HARIO CST-2000 Coffee Scale Polaris [pdf] Instruction Manual
CST-2000, CST-2000 Coffee Scale Polaris, CST-2000, Coffee Scale Polaris, Scale Polaris, Polaris

References

- **User Manual**