DIGITAL COMPASS

Instruction Manual

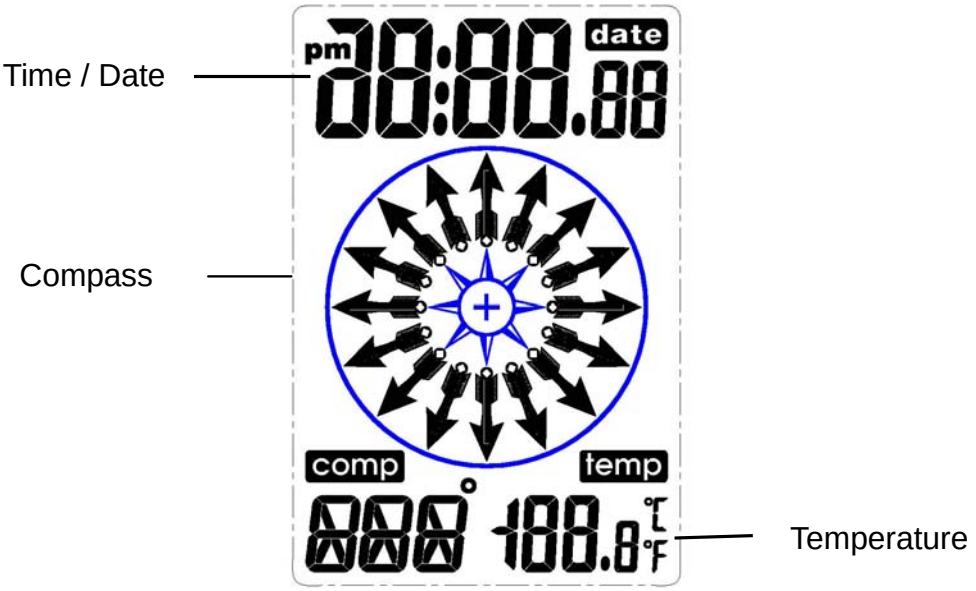
1. Introduction

1.1 Features:

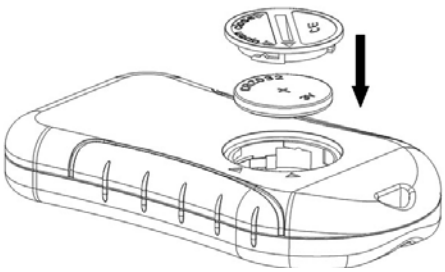
- Digital compass
- Temperature (℃ or ℉)
- 12/24 clock format
- Calendar
- Time and date by manual setting
- Lanyard included for easy carrying

1.2 LCD display

The following illustration shows the full segment of the LCD for description purpose only and will not appear like this during normal operation.



1.3 Insert battery



1). First use a large coin to open the battery cover at the back of the anemometer.

2). Checking the correct polarization, insert 1 x 3V (CR2032) lithium cell, positive (+) pole up into the battery compartment and replace the cover.

3). When the battery is inserted, all the segments of the LCD and backlight will light up briefly.

Caution: Do not reverse polarity of the batteries

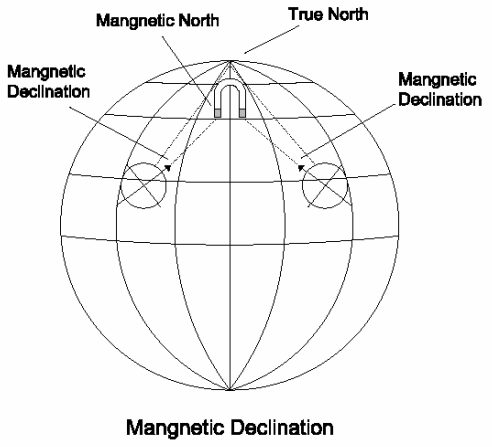
Wait 10 seconds before re-insert the battery again to make a proper reset

2. Precautions when using the Compass

- Keep your digital compass away from magnets or appliances which may contain magnetic objects, such as: mobile phones, speakers, motors, etc.
- This compass like most magnetic compasses, points to the magnetic North, which is slightly difference from the true North. Check section '3.4 Magnetic Declination' for more information.
- To achieve a accurate result, you should avoid measuring a direction on the following conditions:
  The compass is too close to magnetic objects
  The compass is too close to metal objects
  The compass is too close to an electrical appliance.
  The compass is inside a moving object or a concrete building

3. Magnetic Declination

3.1 What is Magnetic Declination



Mangnetic Declination

- The Magnetic North Pole is slightly difference from the True North Pole. Most magnetic compasses, point to the Magnetic North Pole. On the contrary, everything measured from a map is related to the True North Pole.
- The angular difference between Magnetic North Pole and True North Pole is called magnetic declination. Its amount (degrees and minutes) and direction (easterly and westerly) depend on where you are.

- For serious compass user or users who intends to perform accurate navigation, the compass must be adjusted to compensate for magnetic declination.

3.2 Magnetic Declination Information

- Most topographic maps show magnetic north pole and or the magnetic declination information.
- The manual includes the magnetic declination for some major cities. Check the 'Magnetic Declination at Major Cities' section for more detail.
- For those cities whose names are not included in the list, you may like to refer to the online magnetic declination information.

3.3 Magnetic Declination Compensation

- compensate an object's bearing by subtract westerly (W) magnetic declination or add easterly (E) magnetic declination with the magnetic bearing.

Example

- 26° Westerly magnetic declination and the compass needle points 326° (MB).
- The true bearing will be 326°(MB)-26°(W) = 300°

compass will compensate the compass bearing wherever the magnetic declination is either westerly declination or Easterly declination automatically, if the user inputs the magnetic declination angle of the city which is close to the user's current location during the calibration. Check the **4.5 Calibrating the compass** section for more details on the calibration.

3.4 Magnetic Declination at Major Cities

No.	Country/Place	Major City	Declination	No.	Country/Place	Major City	Declination
1	Afghanistan	Kabul	2-E	33	Netherlands	Amsterdam	1-W
2	Australia	Canberra	12-E	34	New Zealand	Wellington	22-E
3	Austria	Vienna	2-E	35	Norway	Oslo	0
4	Bahrain	Manama	2-E	36	Pakistan	Islamabad	2-E
5	Bangladesh	Dhaka	0	37	Philippines	Manila	1-W
6	Belgium	Brussels	1-W	38	Portugal	Lisbon	5-W
7	Brazil	Brasilia	19-W	39	Russia	Moscow	9-E
8	Canada	Ottawa	14-W	40	Singapore	Singapore	0
9	Chile	Santiago	5-E	41	South Africa	Cape Town	23-W
10	China	Beijing	6-W	42	Spain	Madrid	3-W
11	China	Hong Kong	2-W	43	Sweden	Stockholm	3-E
12	Costa Rica	San Jose	0	44	Switzerland	Bern	0
13	Cuba	Havana	3-W	45	Taiwan	Tai-pei	3-W
14	Czech Republic	Prague	2-E	46	Thailand	Bangkok	0
15	denmark	Copenhagen	1-E	47	UAE	Abu Dhabi	1-E
16	Egypt	Cairo	3-E	48	United Kingdom	London	3-W
17	Finland	Helsinki	6-E	49	United States	Washington, DC	10-W
18	France	Paris	1-W	50		Juneau	25-E
19	Germany	Berlin	1-E	51		Phoenix	12-E
20	Greece	Athens	3-E	52		Little Rock	2-E
21	Hungary	Budapest	4-E	53		Sacramento	16-E
22	India	New Delhi	1-E	54		Denver	10-E
23	Indonesia	Jakarta	1-E	55		Atlanta	4-W
24	Isreal	Jerusalem	3-E	56		Honolulu	10-E
25	Italy	Rome	1-E	57		Boston	16-W
26	Japan	Tokyo	7-W	58		Saint Paul	2-E
27	Jordan	Amman	3-E	59		Jackson	1-E
28	Kenya	Nairobi	1-E	60		Santa Fe	10-E
29	Korea	Seoul	7-W	61		Oklahoma City	6-E
30	Malaysia	Kuala Lumpur	1-E	62		Salem	18-E
31	Mexico	Mexico City	6-E	63		Harrisburg	11-E
32	Nepal	Katmandu	0	64		Slat Lake City	14-E

4. Program Modes

The compass has two keys for easy operation: **SET** key, **COMPASS** key.

4.1 SET Mode

- While in normal display, press “SET” button to shift the display of time and date

- While in normal display, hold the “SET” button for 3s to enter setting mode

- Press “ SET” button to select the following setting in sequence:

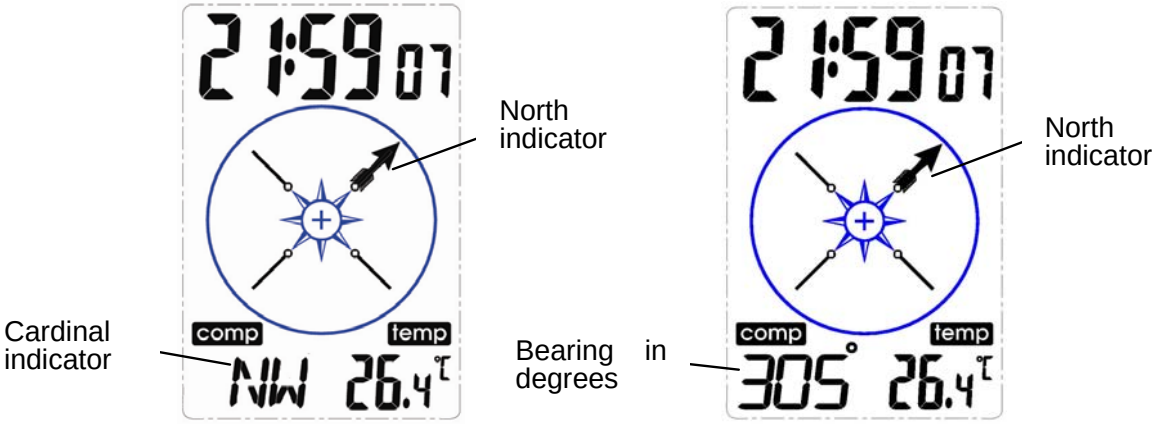
- 12/24 hour format
- Manual time setting (hours/minutes)
- Calendar setting (year/month/date
- Temperature display unit degree Celsius or Fahrenheit

In the above setting modes, press “COMPASS” button to change or scrolls the value. Hold the “COMPASS” button for 3 second will increase/decrease digits in great steps. Press the “SET” button to accept the change and advance to the next setting mode. Continue to press the “SET” button to toggle through the setting mode until return to the normal Mode

4.2 The “COMPASS/-” Mode

- While in normal display, press “COMPASS/-” button to enter compass mode

- While in compass mode, press “COMPASS/-” to shift the display of the bearing direction in compass points and in digital.



- Hold the “COMPASS” button for 3s to enter Calibration mode.

5. Compass Calibration mode

5.1 Perform the compass calibration in the following conditions:

1) When the compass is used the first time

2) The battery has been replaced,

3) When using the compass in a location different from the place in which the compass had been calibrated.

5.2 Calibration procedure:

1) Hold the “COMPASS” button until “CAL” is shown on the display, which indicates the calibration screen.
2) Hold the compass a flat surface which is parallel to the horizon, then rotate the compass

clockwise for 1-2 turns. The rotation should be completed in a slow and steady practice (around 20s per one turn).

3) When the turning is completed, press “SET” button to enter the Magnetic Declination mode

4) The “DEC” indicator is shown on the display. The digit will start flashing.

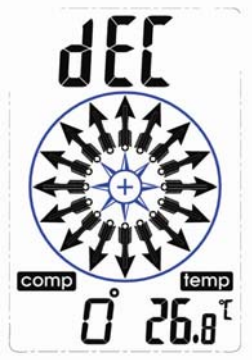
5) Press “COMPASS” button to increase the angle (from -90 to 90), until the desire magnetic declination has appeared.

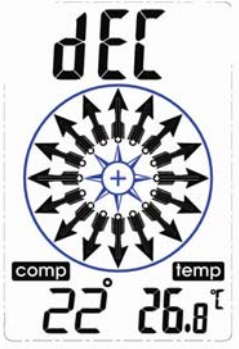
NOTE:

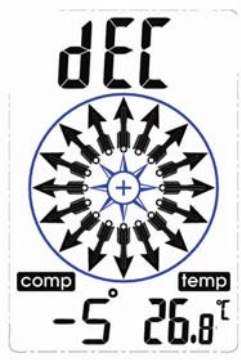
Check section “3.4 Magnetic Declination at Major Cities” to get the magnetic declination of the city nearest to your current position. Input this angle into the compass during the calibration

Example 1:

Compensate the magnetic declination for Wellington in New Zealand (22-E), select +22 in the magnetic declination setting.







Example 2:

Compensate the magnetic declination for Lisbon in Portugal (5-W), select -5 in the magnetic declination setting:

Note: 1. the compass must be kept in a level position when in use.

2. Compass readings are easily affected by disturbing sources of magnetism, so the compass should always be used in the open air.

6. Specification

- Compass range : 0° to 359°
  1 to 16 pointers (graphical)
- Anger accuracy : +/-8°
- Temperature range : -20℃ to +60℃ (-4℉ to +140℉)
- Temperature accuracy : +/-1.0℃
- Measuring temperature interval l : 15 sec

Power consumption

Single 3V lithium battery (CR2032)

Battery life: Minimum 6 months at normal display mode