

Thank you for purchasing this Campanola watch. To ensure correct use, please read these instructions carefully. Please confirm that the International Guarantee Card is included for your possible claim.

Nous vous remercions d'avoir porté votre choix sur cette montre Campanola. Pour une utilisation correcte, veuillez lire ces instructions attentivement. Veuillez vous assurer que la carte de garantie internationale est fournie pour toute réclamation éventuelle.

Muchas gracias por la compra de este reloj Campanola. Para asegurar un uso correcto, lea detenidamente estas instrucciones. Verifique de que la tarjeta de Garantía Internacional le sea suministrada con el reloj en el momento de la compra, de esta manera, podrá reclamar servicios de acuerdo con los términos de la garantía.

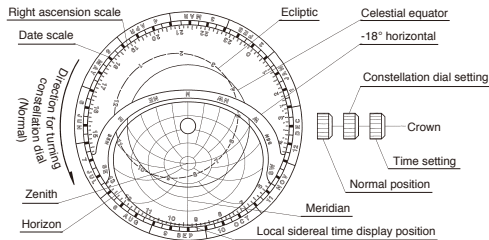
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1. Constellation Watch Cosmo Sign

The Constellation Watch Cosmo Sign is a precisely designed analog quartz watch that displays not only the current time but also the correct positions of the constellations as they move across the celestial sphere. The Cosmo Sign Constellation Watch gives the azimuth and altitude of the major fixed stars, nebulae and star clusters, displays local sidereal time, stellar spectral type, pole star hour angle, the hours for astronomical twilight and other functions useful for astronomical observations. The Cosmo Sign Constellation Watch also has features that provide such convenient information as the number of hours before sunrise, the remaining hours of daylight and the position of the sun.

2. Constellation Display of Entire Sky at 35° North Latitude



Because distortion is minimal in the northern hemisphere, approximately 97.4% of the celestial sphere visible at 35° north latitude is displayed. (The range shown on the constellation dial is from -55.57° to +72.28° declination.)

* The illustrations shown in this manual may differ from the actual watch you have purchased.

3. Features

- The constellation display includes the positions of 452 fixed stars with a brightness of the 4.0th magnitude or brighter, 119 major nebulae and star clusters, delimitation of constellations, and the ecliptic and the celestial equator based on their positions for the year 2000.0. (Maximum magnitude values are indicated for variable stars. Fixed stars are represented by a four-color spectrum at 0.1 magnitude intervals.)
 - The constellation dial not only automatically displays the present positions of constellations but can also be used as a planisphere dial in which the constellation dial is independently rotated.
 - The solar position display shows the position of the sun along the ecliptic (the sun's apparent path on the celestial sphere during the year) on the 1st, 11th and 21st of each month (for 12 noon Universal Time over the mean year). Times for the sunrise and sunset as well as the number of daylight hours are determined by looking on the horizon line.
 - The altazimuth display lets you determine the altitude and azimuth of the sun as well as the major fixed stars, nebulae and star clusters on the celestial sphere. (The equidistant almucantar lines at intervals of 20° are corrected for atmospheric aberration.)
- The local sidereal time display lets you easily determine the location of the constellations. (Local sidereal time can be designated by reading the right ascension graduations on the constellation dial that intersect with the meridian.)
 - The twilight indicator lets you identify the hours of increasing darkness, especially convenient for astronomical observations. (Astronomical twilight line: use the -18° horizontal to determine the beginning and ending times for the hours of astronomical twilight.)
 - The pole star hour angle display lets you align an astronomical telescope to the polar axis. (Right ascension values for the pole star between the years 2000.0 ~ 2050.0 are marked on the constellation dial for every ten years.) Hour angle is the angle measured counterclockwise from the meridian to the point marking the value for the right ascension the present pole star.
- ※ Celestial sphere at the center of the rotating constellation dial is not displayed due to attachment of the watch hands.

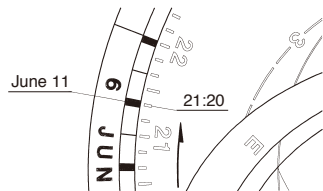
4. Setting the Time and Constellation Dial

Setting the time

- (1) When the second hand indicates 0 seconds, pull the crown out to the second click position.
- (2) Turn the crown and set the hour and minute hands to the correct time.
Move the minute hand 4 to 5 minutes ahead of the correct position and then return it to the correct position.
- (3) Push the crown into its normal position in accordance with a standard time signal or the like.

Setting the constellation dial

- (4) Check the time difference in sidereal time between observation point longitude and standard time longitude. Local sidereal time depends on longitude, and is advanced four minutes per degree eastward.
- (5) Pull the crown out to the first click position.
- (6) Calculate the time obtained by adding the present time (displayed on the 24 hour time scale) to the sum of the difference between local sidereal time and present time. Find the value corresponding to this time on the right ascension scale, and align it with the date scale by turning the crown counterclockwise (turning the constellation dial clockwise).



Example: To align the constellation dial for 21:00 on June 11 at a position 5° east of the standard time longitude, turn the constellation dial clockwise until the point on the dial's right ascension scale opposite 21:20 is in line with the point on the date scale corresponding to June 11.

(7) Push the crown into its normal position.

- ※ **Increments on the date scale are calibrated for 12 noon Universal Time over the mean year. Wide lines of the date scale are indicated for the 1st, 11th and 21st of each month. Narrow lines of the date scale are indicated for the 6th, 16th and 26th of each month.**
- ※ **During the time the right ascension scale of the constellation dial is hidden, align with the right ascension scale approximately 2 hours ahead of the current time at the same date position of the previous month.**
- ※ **In areas where summer time is in force, align with the right ascension scale one hour before the calculated time at the date scale.**

5. Concerning the Constellation Dial Display

- The fixed stars are generally classified into the following four spectral types according to their spectra.

Light blue · ·	spectrum O or B type stars	128 stars
Silver · · · · ·	spectrum A or F type stars	134 stars
Yellow · · · · ·	spectrum G or K type stars	161 stars
Orange · · · · ·	spectrum M type stars	29 stars
- Stellar magnitudes are displayed near the right ascension graduations of 2h ~ 3h on the constellation dial.
- Hard-to-differentiate neighboring stars (including multiple stars) are indicated in terms of synthetic brightness, with the color being that of the spectral class for the main (brightest in appearance) star in the binary stars.
- Variable stars are not distinguished from other fixed stars.
- The major nebulae and star clusters are displayed in light green on the constellation dial.
- The star clusters of Pleiades and Hyades are shown together in the fixed star group.

6. Abbreviations of Constellations and their Full Spellings

Abbreviations	Full spellings	Abbreviations	Full spellings	Abbreviations	Full spellings	Abbreviations	Full spellings
And	Andromeda	Cet	Cetus	Dor	Dorado	LMi	Leo Minor
Ant	Antlia	Cha	Chamaeleon	Dra	Draco	Lup	Lupus
Aps	Apus	Cir	Circinus	Equ	Equuleus	Lyn	Lynx
Aql	Aquila	CMA	Canis Major	Eri	Eridanus	Lyr	Lyra
Aqr	Aquarius	CMi	Canis Minor	For	Fornax	Men	Mensa
Ara	Ara	Cnc	Cancer	Gem	Gemini	Mic	Microscopium
Ari	Aries	Col	Columba	Gru	Grus	Mon	Monoceros
Aur	Auriga	Com	Coma Berenices	Her	Hercules	Mus	Musca
Boo	Bootes	CrA	Corona Australis	Hor	Horologium	Nor	Norma
Cae	Caelum	CrB	Corona Borealis	Hya	Hydra	Oct	Octans
Cam	Camelopardalis	Crt	Crater	Hyi	Hydrus	Oph	Ophiuchus
Cap	Capricorn	Crv	Corvus	Ind	Indus	Ori	Orion
Car	Carina	Cru	Crux	Lac	Lacerta	Pav	Pavo
Cas	Cassiopeia	CVn	Canes Venatici	Leo	Leo	Peg	Pegasus
Cen	Centaurus	Cyg	Cygnus	Lep	Lepus	Per	Perseus
Cep	Cepheus	Del	Delphinus	Lib	Libra	Phe	Phoenix

Abbreviations	Full spellings	Abbreviations	Full spellings
Pic	Pictor	Sge	Sagitta
PsA	Piscis Austrinus	Sgr	Sagittarius
Psc	Pisces	Tau	Taurus
Pup	Puppis	Tel	Telescopium
Pyx	Pyxis	TrA	Triangulum Australe
Ret	Reticulum	Tri	Triangulum
Scl	Sculptor	Tuc	Tucana
Sco	Scorpius	UMa	Ursa Major
Sct	Scutum	UMi	Ursa Minor
Ser	Serpens	Vel	Vela
Ser	Serpens Caput	Vir	Virgo
Ser	Serpens Cauda	Vol	Volans
Sex	Sextans	Vul	Vulpecularnus

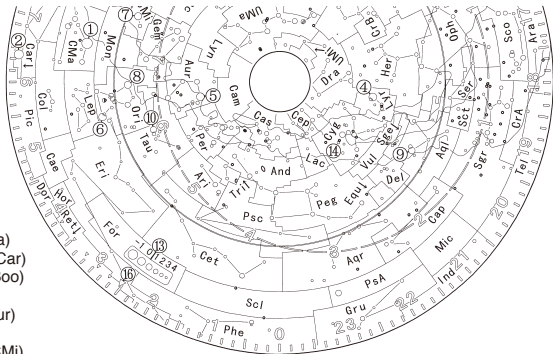
※ Abbreviations are not shown for the constellations Aps, Cha, Cir, Cru, Hyi, Men, Mus, Oct, Pav, TrA, Tuc and Vol since they are included in the entire or nearly entire range of the celestial sphere unable to be viewed from 35° north latitude.

7. Nebulae and Star Clusters on the Constellation Dial in Light Green

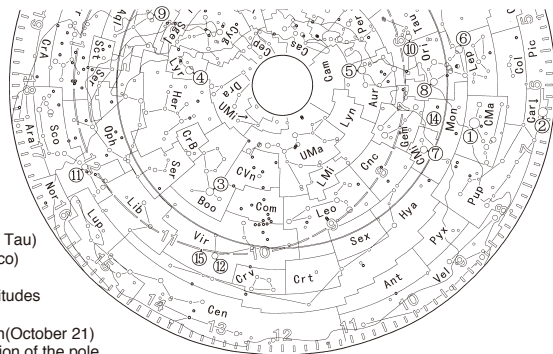
M31(And) NGC752(And) M72(Aqr) NGC7009(Aqr) M2(Aqr) NGC7293(Aqr) NGC6397(Ara) M38(Aur) M36(Aur) M37(Aur) M30(Cap) NGC281(Cas) M103(Cas) M52(Cas) NGC5128(Cen) NGC5139(Cen) M77(Cet) M41(CMa) M44(Cnc) M67(Cnc) NGC1851(Col) M99(Com) M100(Com) M85(Com) M88(Com) NGC4565(Com) M64(Com) M53(Com) NGC6541(CrA) NGC4258(CVn) NGC4631(CVn) M94(CVn) M63(CVn) M51(CVn) M3(CVn) I.1318(Cyg) M29(Cyg) NGC6992-5(Cyg) NGC7000(Cyg) M39(Cyg) M35(Gem) NGC2392(Gem) M13(Her) M92(Her) M48(Hya) NGC3242(Hya) M68(Hya) M83(Hya) NGC2903(Leo) M96(Leo) NGC3379(Leo) M66(Leo) M79(Lep) M57(Lyr) M56(Lyr) NGC2237-9(Mon) M50(Mon) NGC6067(Nor) NGC6171(Oph) M12(Oph) M10(Oph) M62(Oph) M19(Oph) M9(Oph) M14(Oph) M42(Ori) M78(Ori) M15(Peg) M76(Per) NGC869(Per) NGC884(Per) M34(Per) NGC1499(Per) M74(Psc) M47(Pup) M46(Pup) M93(Pup) NGC55(Scl) NGC253(Scl) M80(Sco) M4(Sco) M6(Sco) M7(Sco) M26(Sct) M11(Sct) M5(Ser) M16(Ser) M71(Sge) M23(Sgr) M20(Sgr) M8(Sgr) M21(Sgr) M24(Sgr) M17(Sgr) M28(Sgr) M69(Sgr) M25(Sgr) M22(Sgr) M70(Sgr) M54(Sgr) NGC6723(Sgr) M55(Sgr) M75(Sgr) M1(Tau) M33(Tri) M81(UMa) M82(UMa) NGC3556(UMa) M97(UMa) M101(UMa) NGC3132(Vel) M61(Vir) M84(Vir) M49(Vir) M87(Vir) M58(Vir) M104(Vir) M60(Vir) M27(Vul)

※ Nebulae and star clusters are arranged in alphabetical order of the constellations to which they belong, and in the order of right ascension within a particular constellation (moving to the right around the constellation dial).

8. Diagram of the Constellation Dial



- ① Sirius (α CMa)
- ② Canopus (α Car)
- ③ Arcturus (α Boo)
- ④ Vega (α Lyr)
- ⑤ Capella (α Aur)
- ⑥ Rigel (β Ori)
- ⑦ Procyon (α CMi)
- ⑧ Betelgeuse (α Ori)



- ⑨ Altair (α Aql)
- ⑩ Aldebaran (α Tau)
- ⑪ Antares (α Sco)
- ⑫ Spica (α Vir)
- ⑬ Stellar magnitudes
- ⑭ Milky Way
- ⑮ Solar position (October 21)
- ⑯ Right ascension of the pole star (2000.0)

9. Precautions






WARNING: Water-resistance performance

There are several types of water-resistant watches, as shown in the following table.

The unit "bar" is roughly equal to 1 atmosphere.

* WATER RESIST(ANT) xx bar may also be indicated as W.R. xx bar.

For correct use within the design limits of the watch, confirm the level of water-resistance of your watch, as indicated on the dial and case, and consult the table.

Indication		Specifications	Examples of use				
Dial	Case (case back)						
WATER RESIST or no indication	WATER RESIST(ANT)	Water-resistant to 3 atmospheres	Minor exposure to water (washing face, rain, etc.)	Moderate exposure to water (washing, kitchen work, swimming, etc.)	Marine sports (skin diving)	Scuba diving (with air tank)	Operation of the crown with moisture visible
WR 50 or WATER RESIST 50	WATER RESIST(ANT) 5 bar or WATER RESIST(ANT)	Water-resistant to 5 atmospheres	OK	NO	NO	NO	NO
WR 100/200 or WATER RESIST 100/200	WATER RESIST(ANT) 10bar/20 bar or WATER RESIST(ANT)	Water-resistant to 10/20 atmospheres	OK	OK	OK	NO	NO

WARNING: Water-resistance performance

- Water-resistance for daily use (to 3 atmospheres): This type of watch is water-resistant to minor exposure to water. For example, you may wear the watch while washing your face; however, it is not designed for use underwater.
- Upgraded water-resistance for daily use (to 5 atmospheres): This type of watch is water-resistant to moderate exposure to water. You may wear the watch while swimming; however, it is not designed for use while skin diving.
- Upgraded water-resistance for daily use (to 10/20 atmospheres): This type of watch may be used for skin diving; however, it is not designed for scuba or saturated diving using helium gas.

CAUTION

- Be sure to use the watch with the crown pressed in (normal position). If your watch has a screw-lock type crown, be sure to tighten the crown completely.
- Do NOT operate the crown with wet fingers or when the watch is wet. Water may enter the watch and compromise water-resistance.
- If the watch is used in seawater, rinse with fresh water afterward and wipe with a dry cloth.
- If moisture has entered the watch, or if the inside of the crystal is fogged up and does not become clear within a day, immediately take the watch to your dealer or Citizen Service Center for repair. Leaving the watch in such a state will allow corrosion to form inside.

- If seawater enters the watch, place the watch in a box or plastic bag and immediately take it in for repair. Otherwise, pressure inside the watch will increase, and parts (crystal, crown, buttons, etc.) may come off.

CAUTION: Keep your watch clean.

- Leaving dust and dirt deposited between the case and crown may result in difficulty in pulling the crown out. Rotate the crown while in its normal position, from time to time, to loosen dust and dirt and then brush it off.
- Dust and dirt tend to be deposited in gaps in the back of the case or band. Deposited dust and dirt may cause corrosion and soil your clothing. Clean the watch occasionally.

Cleaning the Watch

- Use a soft cloth to wipe off dirt, perspiration and water from the case and crystal .
- Use a soft, dry cloth to wipe off perspiration and dirt from the leather band.
- To clean a metal, plastic, or rubber watchband, wash away dirt with mild soap and water. Use a soft brush to remove dust and dirt jammed in the gaps in the metal band. If your watch is not water-resistant, take it to your dealer.

NOTE: Avoid using solvents (thinner, benzine, etc.), as they may damage the finish.

WARNING: Handling of the battery

- Keep the battery out of the reach of small children. If a child swallows the battery, contact a physician immediately.

CAUTION: Replacing the battery

- For replacement of the battery, take your watch to your dealer or Citizen Service Center.
- Replace the battery as soon as possible if the service life of the battery has expired. Leaving a depleted battery in the watch may result in leakage, which can damage the watch severely.

CAUTION: Operating environment

- Use the watch within the operating-temperature range specified in the instruction manual. Using the watch where temperatures are outside the specified range, may result in deterioration of functions or even stoppage of the watch.
- Do NOT use the watch in places where it is exposed to high temperature, such as in a sauna.
Doing so may result in a skin burn.
- Do NOT leave the watch in a place where it is exposed to high temperature, such as the glove compartment or dash-board of a car.
Doing so may result in deterioration of the watch, such as deformation of plastic parts.

- Do NOT place the watch close to a magnet.
Timekeeping will become inaccurate if you place the watch close to magnetic health equipment such as a magnetic necklace or a magnetic latch of a refrigerator door or handbag clasp or the earphone of a mobile phone. If this has occurred, move the watch away from the magnet and reset the time.
- Do NOT place the watch close to household appliances that generate static electricity.
Timekeeping may become inaccurate if the watch is exposed to strong static electricity, such as is emitted from a TV screen.
- Do NOT subject the watch to a strong shock such as dropping it onto a hard floor.
- Avoid using the watch in an environment where it may be exposed to chemicals or corrosive gases.
If solvents, such as thinner and benzene, or substances containing such solvents come in contact with the watch, discoloration, melting, cracking, etc. may result. If the watch comes in contact with mercury used in thermometers, the case, band or other parts may become discolored.

Periodical inspections

Your watch needs inspection once in every two or three years for safety and long use. To keep your watch water-resistant, the packing needs to be replaced regularly. Other parts need to be inspected and replaced if necessary. Ask for Citizen genuine parts upon replacement.

10. Specifications

- 1. Caliber number :** 4391
- 2. Frequency of crystal oscillator :** 32,768Hz(Hz : frequency per second)
- 3. Accuracy :** Within ± 20 seconds per month
(when worn at normal temperature of $+5^{\circ}\text{C} \sim +35^{\circ}\text{C}$ / 41°F to 95°F)
- 4. Operating temperature range :** $-10^{\circ}\text{C} \sim +60^{\circ}\text{C}$ / 14°F to 140°F
- 5. Additional functions :**
 - Constellation display function
(period of constellation dial rotation : approximately 23 hours 56 minutes and 04 seconds)
 - Planisphere
 - Display of solar position
 - Display of altitude and azimuth
 - Display of local sidereal time
 - Twilight identification function
 - Display of pole star hour angle
- 6. Battery :** Silver oxide battery 1 pce. 280-39 (SR626SW)
- 7. Battery life :** Approximately 3 years (after installing a new battery)

※ Specifications are subject to change without notice.