



THE GRAND COMPLICATION
INSTRUCTION MANUAL

Main Features

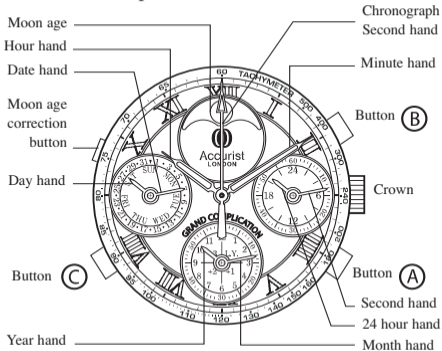
This watch is a multi-hand analogue watch equipped with numerous functions including a chime function using an electronic tone, fully automatic calendar function, which corrects the date for each month including leap years, moon age function and a chronograph function that is able to measure time for up to 12 hours.


Specifications

1. Type - Multi-hand analogue quartz watch
2. Time Accuracy - Within +/- 20 seconds per month on average.
3. Operating temperature range: -10°C - +60°C
4. Display Functions:
 - Time: Hours, minutes, seconds, 24 hour clock
 - Calendar: Year, month, date, day, moon age
 - Chronograph: 12 hour time measurement, 1/4 second units, split time measurement function
5. Additional functions:
 - Calendar: Leap year and monthly correction function
 - Moon age: Graphic wheel display function
 - Chime function (chime clock)
 - Reference position failure alarm function
 - Second hand arbitrary stop function
6. Battery: Battery code: SR927W
7. Battery life: Approximately 2 years

Specifications are subject to change without notice.

Names of Components



Hand \ Display	Time / Calendar	Chronograph
Hour hand	Continuously indicates hours	
Minute hand	Continuously indicates minutes	
Second hand	Continuously indicates seconds	
24 hour hand	Continuously indicates the 24 hour clock	
Chronograph second hand		Chronograph seconds
Date hand	Continuously indicates the date	
Day hand	Continuously indicates the day	
Month hand	Months or minutes (when chiming)	Chronograph minutes
Year hand	Year or hours (when chiming)	Chronograph hours

Crown position display	Normal Position	
	Time / Calendar	Chronograph
Button A	_____	Zero position check Split Reset
Button B	Chime	Start / Stop
Button C	To chronograph display	To time / calendar
Crown	_____	_____
Moon age correction button	Moon age correction (can be performed at any time regardless of crown position).	

Crown position display	1st Position Setting the calendar	2nd Position Setting the time
Button A	Yearly / Monthly Correction; Clockwise	Setting of chime; Clockwise direction
Button B	Yearly / Monthly Correction; Clockwise	Setting of chime; Counter clockwise direction
Button C	Date correction	_____
Crown	_____	Setting of hour, minute, 24 hour clock and day
Moon age correction button	Moon age correction (can be performed at any time regardless of crown position).	

Before Use

Before using this watch, please check the reference positions of each hand using the following procedure to ensure that each function operates properly. (Reference position: The initial position of each hand to ensure that this watch functions properly).

1. Confirmation of the reference position.

(1) Put the crown in the normal position.

- Press button C for at least two seconds to switch to the Chronograph display. Check that the hands are at the positions in fig 1.

Chronograph second hand: 00.00 seconds.

Year and month hands: 00.00 (12.00 position)

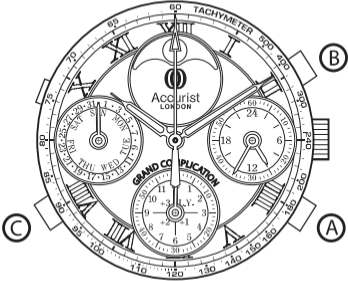
- Press button A for at least 2 seconds and check that the date hand is at the position shown in fig 1.

Date hand: ▼ (Between 31 and 1)

(2) Once you have confirmed that the hands are at the reference position, press button C for at least 2 seconds to return the watch to the calendar display.

- If the hands are not at the reference position, set the reference position of each hand by following the procedure described in “5. Setting the Reference Position”

Fig 1. Confirmation of Reference Position



Setting the Reference Position

The hands of the watch will not indicate the correct positions unless the reference position is set properly. If the reference position has changed, reset it by following the procedure described below. (The reference position must also be reset when the battery has been replaced).

1. Perform the All-Reset procedure (see fig 2).

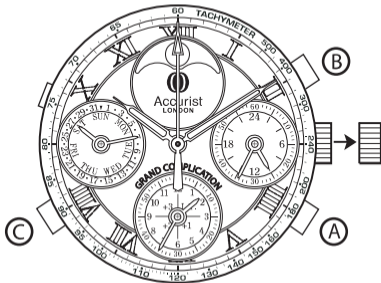
(1) Pull out the crown to the 2nd position.

(2) Press buttons A, B and C simultaneously.

(3) When the buttons are released, the hands will move in the order of the chronograph hand, date hands and year and month hands. A tone will sound confirming that All Reset has been performed when this procedure is complete.

If the crown is returned to the normal or 1st position without setting the reference position after performing the All-Reset procedure, the reference position failure alarm will be activated. At this time, the date hand will turn counter-clockwise indicating that the reference position has not been set. When this happens, pull out the crown to the 2nd position again, and perform the procedure for setting the reference position.

Fig 2. Perform the All-Reset procedure



2. Setting the reference position (see fig 3).

(1) Press button A and set the year and month hands to 00.00

(2) Press button B and set the chronograph second hand to 00.00 seconds.

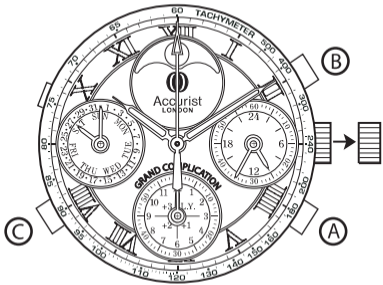
(3) Press button C and set the date hand to the ▼ position.

- Pressing button A, B or C continuously causes the hands to advance rapidly.

(4) Always make sure to return the crown to normal position.

- After setting the reference position, always make sure to reset the time. (basic time and chime time) and the calendar.

Fig 3. Setting the reference position



Setting the time

1. Setting the time and day of the basic clock (see fig 4).

Once the time has been set for the basic clock, always make sure to set the time of the chime clock according to the time of the basic clock. If the time is different between the basic clock and chime clock the chime will not sound at the correct time shown on the basic clock.

(1) Pull out the crown to the 2nd position so that the second hand stops at 0 seconds.

(2) Turn the crown in the clockwise direction (so that the hour and the minute hands rotate clockwise) to set the day.

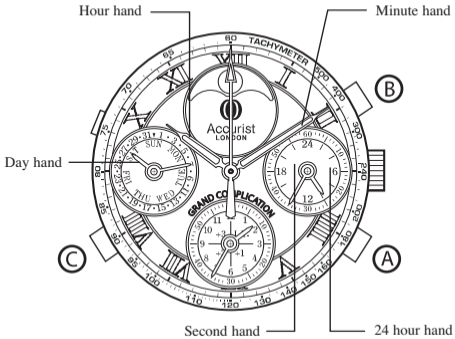
- The day can be corrected rapidly by moving back and forth between 9.00pm and 1.00am

(3) Turn the crown either to the right or left to set the hours, minutes and 24 hour hand to the current time.

- Set the time while paying attention to **am** and **pm** by looking at the 24 hour hand.

(4) Always make sure to return the crown to the normal position.

Fig 4. Setting the time and day of the basic clock



2. Setting the time of the chime clock (see fig 5).

(1) Pull out the crown to the 2nd position so that the second hand of the basic clock stops at 0 seconds.

(2) Push button A or B and set the year and month hands to the time of the basic clock.

- Button A: Hands move forward 1 minute each time it is pressed.

- Button B: Hands move backward 1 minute each time it is pressed.

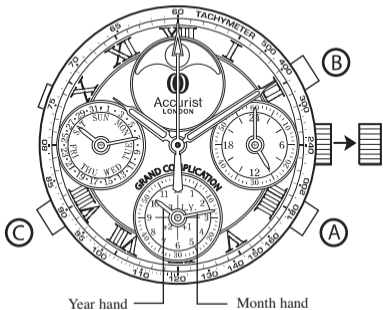
Pressing button A or B continuously causes the hands to advance rapidly.

(3) The basic clock and chime clock can be synchronized with a telephone time service or other official time service by pushing in the crown to the 1st or normal position at the same time you hear the tone.

(4) The chime clock will return to the year and month display when the crown is pushed in.

Setting the chime clock to the time in another city based on the time of the basic clock enables the chime clock to be used to indicate local time in that city. Press button B to find out local time.

Fig 5. Setting the time of the chime clock



3. Using the chime clock (see fig 6).

The chime clock is a convenient function that lets you know the time (hours and minutes).

(1) Pressing button B in the time and calendar display informs you of the current time with an electronic tone.

- The crown should be in the normal position.

(Interpretation of Chime Tones)

Hour Tone: A high-pitched tone will sound at 1 second intervals for the number of hours from 1.00 to 12.00 (there is no distinction between am or pm).

Minute Tone: A combination high pitch and low pitch tone will sound for every 15 minutes past the hour. The number of minutes past that 15 minute interval is sounded with a low-pitch tone.

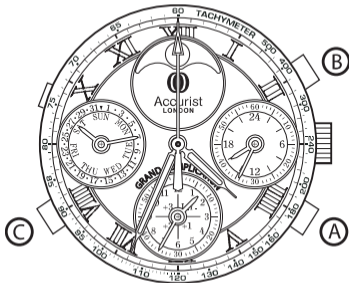
(Example) Current time is 4.34

4 hours: A high-pitched tone sounds four times at one second intervals.

30 minutes: A combination high-pitched and low-pitched tone sounds twice at 1 second intervals 1 second after the hour tone has sounded.

4 minutes: A low-pitched tone sounds 4 times at 1 second intervals 1 second after the 30 minute tone has sounded.

Fig 6. Using the chime clock



Setting the calendar *(see fig 8).*

- (1) Pull out the crown to the 1st position.
 - (2) Press button A or B to set the month and year (leap year for the number of years passed since the last leap year).
- Button A: the hand moves forward each time it is pressed.
 - Button B: The hand moves backwards each time it is pressed.

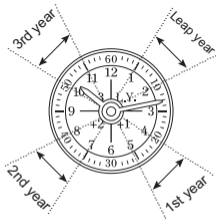
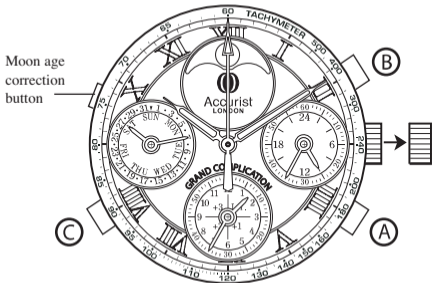


Fig 7. Determination of the number of years that have elapsed since the most recent leap year.

Fig 8. Setting the calendar



(Leap Year Time Difference Chart)

Year	Time differences from leap year (years)	Year	Time differences from leap year (years)
2000	Leap year	2004	Leap year
2001	1st Year	2005	1st Year
2002	2nd Year	2006	2nd Year
2003	3rd Year	2007	3rd Year

(3) Press button C to set the date.

- The date advances by 1 day each time button C is pressed. Pressing button A, B or C continuously causes the hands to advance rapidly.

(4) Return the crown to the normal position.

Since the day is linked with the operation of the basic clock (24 hour, hour and minute hands), make sure to also set the day when setting the time.





Always return the crown to normal position.

2. Setting the Moon Age

The moon age can be corrected regardless of the position of the crown.

(1) Press the moon age correction button to set the age of the moon (*see fig 8*).

- Look in a newspaper to find out the moon age for the day, and then set the moon mark while referring to the moon age reference chart shown below.

New Moon Age: 0 weeks (high tide)	First Quarter Age: approx 7 weeks (low tide)
	
Full Moon Age: approx 15 weeks (high tide)	Last Quarter Age: approx 28 weeks (low tide)
	

Moon age can be set more accurately by setting the moon age either during a new moon or during a full moon.

Using the Chronograph

The chronograph is able to measure time in 1/4 second units to a maximum of 12 hours. After 12 hours have elapsed, the chronograph returns to the chronograph reset display and stops. The chronograph can also be used to measure split time (intermediate elapsed time).

1 Switching to the chronograph (see fig 9).

(1) Press button C for at least 2 seconds to switch from the calendar display to the chronograph display.

- At this time, the month and year hands move to the 00.00 position (12.00 position) and stop.

Interpretation of display

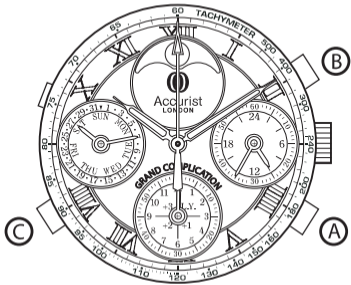
Chronograph seconds: Seconds are read with the chronograph second hand.

Chronograph minutes: Minutes are read with the month hand.

Chronograph hours: Hours are read with the year hand.

- Measurement is cancelled when the watch is switched to calendar display during chronograph measurement.

Fig 9. Switching to the chronograph



2. Simple Measurement (see Fig 10)

- (1) Press button B to start measuring time.
- (2) Press button B again to end measurement and display elapsed time.
- (3) Pressing button A resets the chronograph and returns each chronograph hand to zero.

3. Integrated measurement (see Fig 10)

- (1) Press button B to start measuring time.
 - (2) Press button B again to end measurement and display elapsed time.
 - (3) Pressing button B again restarts measurement and that time is integrated with the previous time.
- Measurement is started and stopped repeatedly each time button B is pressed.
- (4) After ending measurement by pressing button B, pressing button A resets the chronograph and returns each hand to zero.

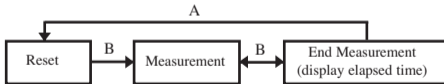
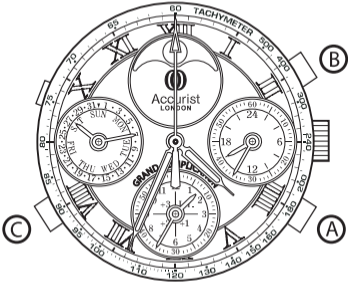
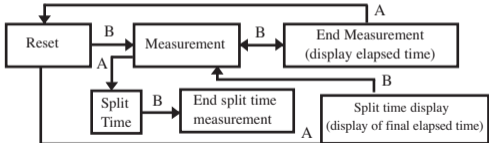


Fig 10. Simple & Integrated Measurements



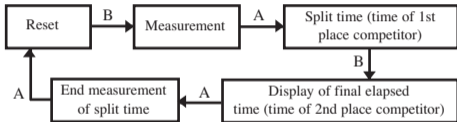
4. Measurement of Split Time (Intermediate Elapsed Time)

- (1) Press button B to start measuring time.
- (2) Pressing button A stops each chronograph hand to display the split time.
 - Measurement of time continues even though the hands are not moving.
- (3) Pressing button A again cancels the display of split time after which measurement continues with the time elapsed during display of split time added to the measured time (the chronograph hands begin to move again).
 - Repeat steps (2) and (3) in the case of repeatedly displaying split time.
- (4) Pressing button B when the split time is displayed ends split time measurement.
- (5) When button A is pressed, the time that elapsed during display of split time is added to the measured time and that time is displayed.
- (6) Pressing button A again resets the chronograph and each of the chronograph hands return to zero.



5. Simultaneous Measurement of 1st Place and 2nd Place Times

- (1) Press button B to start measuring time.
- (2) Press button A when 1st place competitor crosses the finish line. The time of the 1st place competitor is displayed.
 - Measurement of the time of the 2nd place competitor continues even while the time of the 1st place competitor is being displayed.
- (3) Press button B when the 2nd place competitor crossed the finish line. Time measurement will stop at this point.
 - The time of the 1st place competitor is still displayed.
- (4) Press button A to display the time of the 2nd place competitor.
- (5) Pressing button A again resets the chronograph and returns each of the hands to zero.



Troubleshooting

1. The date hand is moving backward (in 1 second intervals)

- This indicates that the Reference Position Failure Alarm has been activated a result of not setting the reference position. Perform the All-Reset and Reference Position Setting procedures by referring to “5. Setting the Reference Position”.

2. The hands do not indicate the correct positions in each mode

- The hand reference positions may shift if the watch is subjected to a strong impact and so forth. Perform the All-Reset and Reference Position Setting procedures by referring to “5. Setting the Reference Position”

3. Abnormal display or operation

- There may be extremely rare occasions on which the watch exhibits an abnormal display or operation (such as the hands continually turning) as a result of the effects of static electricity or strong impact. When this happens, perform the All-Reset and Reference Position Setting procedures by referring to “5. Setting the Reference Position”.

After replacing a battery

- Always make sure to perform the All-Reset and Reference Position Setting procedures by referring to “5. Setting the Reference Position” after replacing the battery. If these procedures are not performed, the watch may not operate properly.

Precautionary Items and Usage Limitations

Water Resistance

 **WARNING** Water Resistance

Water-resistance for daily use (to 3 atmospheres) means that the watch may be worn while washing your face or in the rain but it is not to be immersed in water.

Name	Indication		Specification
	Dial	Case (Case back)	
Everyday-use water resistant watch	No indication	WATER RESIST 3 bar	Water-resistant to 3 atmospheres

Precautionary Items and Usage Limitations continued...

Water Resistance

Refer to the watch dial and the case back for the indication of the water resistance of your watch. The following list provides examples of use for reference to ensure that your watch is used properly. (The unit “bar” is roughly equal to 1 atmosphere).

- ✓ When water is simply splashed onto the watch (washing your face or in rain).
- ✗ Swimming and general washing work (kitchen work / swimming etc..).
- ✗ Water sports and skin diving (without an air tank).
- ✗ Scuba Diving (with air tank).
- ✗ Operate the crown when watch is wet.

Precautionary Items and Usage Limitations continued...

Before using this watch, read this instruction manual carefully to ensure correct use. After reading this manual store it in a safe place for future reference.

Safety precautions (Instructions to be followed at all times)

This manual contains the following instructions that should be strictly followed at all times to prevent injury to yourself and other persons as well as damage to property.

■ **Injuries and damage that might be caused by using the watch improperly or neglecting any of the instructions or precautions contained in this manual are classified with the following symbols.**



WARNING Can cause serious injury or death

Important instructions that should be followed are classified with the following symbol.



Warning (caution) symbol followed by instructions that should be followed or precautions that should be observed.



CAUTION Always keep your watch clean

- Small amounts of dirt may become trapped in the tiny gap between the crown and case making it difficult to pull out the crown. It is recommended to occasionally turn the crown in its normal position to remove any dirt.
- The case and band of the watch come into direct contact with the skin in the same manner as undergarments. Corrosion of the metal or unnoticed soiling such as that caused by perspiration and dirt can soil sleeves and other portions of clothing.
- Wearing this watch may cause itching or rash if you have sensitive skin or certain physical conditions. If you think there is something wrong discontinue wearing the watch immediately and consult your physician.
Possible causes of rashes include:
 1. Allergy to certain metals or leather.
 2. Rust, dirt or perspiration present on the watch's body or band.
- Leather bands may become discoloured by perspiration or dirt. Always keep your leather band clean by wiping with a dry cloth.
- Do NOT wear the band too tightly. Try to leave enough space between the band and your skin to allow adequate ventilation.

Caring for your watch

- Wipe any dirt or moisture such as perspiration from the case and crystal with a soft cloth.
- Remove any dirt from a leather band with a dry cloth.
For a metallic, plastic or rubber watchband wipe with a damp cloth.
- Remove the small amounts of dirt trapped between the crevices of the metallic band with a soft brush.
- Do NOT use solvents (such as paint thinner or benzene) for cleaning since they may mar the surface of the band.



Warning Handling of the battery

- Keep the battery out of reach of small children.
- In the event a battery is swallowed consult a physician.



Warning Battery Replacement

- If a depleted battery is left in your watch damage may be caused by the leakage of battery fluid. Be sure to replace the battery promptly.
- Always be sure to select a battery of the correct specifications when replacing the battery.

Temperature

- The function of the watch may be impaired or the watch may even stop if the ambient temperature is outside the range of -10°C to $+60^{\circ}\text{C}$.
- If the watch is left for an extended period under temperatures outside the normal range ($+5^{\circ}\text{C}$ to $+35^{\circ}\text{C}$) fluid may leak from the battery resulting in considerable shortening of battery life.

Magnetism

- Do NOT allow the watch to come into close proximity with magnets. If the watch is used near a magnetic health device (magnetic necklace, magnetic elastic band etc...) or the magnets used in the latches of refrigerator doors, earphone of a mobile phone and so forth it will not keep time accurately. If this should happen move the watch away from the magnet and reset it to the correct time.

Static Electricity

- The integrated circuits used in the watch are sensitive to static electricity. If exposed to static electricity the watch's display may become incorrect.

Strong Shock

- Avoid dropping the watch or subjecting it to other strong impact.

Chemicals, Corrosive Gasses and Mercury

- If paint thinner, benzene or other solvents or products containing these solvents (including gasoline, nail polish remover, bathroom cleaner and adhesives) are allowed to come into contact with the watch they may discolour, dissolve or crack the materials. Be careful when handling these chemicals. Contact with mercury such as that used in thermometers may also cause discolouration of the band and case.

Storage

- If you will not be using your watch for an extended period of time, carefully wipe off any excess perspiration, dirt or moisture and store in a proper location avoiding locations subject to excessively high or low temperatures and high humidity. Do NOT leave a depleted battery in the watch for a long time. Be sure to replace with a new one. If battery fluid leaks out, it is likely to damage the watch.

