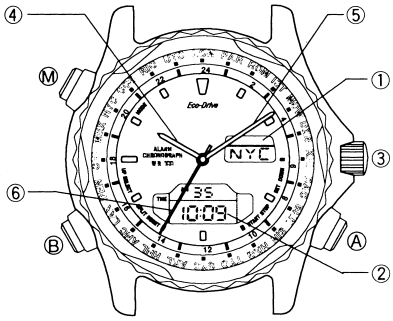
CITIZEN QUARTZ
Eco-Drive
World Time

Model No. JROXXX Cal. No. C60

• INSTRUCTION MANUAL

CTZ-B6810



• Several types with different design are also available.

When reading this instruction manual please keep the watch diagram above unfold and in view. Symbols used in the sections on operating instructions refer to the symbols indicated in this diagram.

Thank you for purchasing a CITIZEN QUARTZ WATCH.

To ensure correct use, please read these instructions carefully. Please confirm that the Citizen International Guarantee Card is included for your possible claim.

1. Main Features
this analog/digital combination solar watch works on Citizen's environmentally clean Eco-Drive system. the Eco-Drive converts the energy oflight to electrical energy using the solar charger set in the dial of the watch, generating power to operate various analog and digital functions. the watch also has the world time display function. by operating the button, you can easily check the time and day in 24 major cities of the world.

2. Before Use
If the solar battery is insufficiently charged, you cannot operate the watch as explained in the instruction manual.
To recharge, place the watch under a fluorescent or incandescent lamp at a distance of approx. 20 cm for approx. 40hours, or under direct sunlight for approx. one hour. **The secondary battery is an environmentally clean energy source since it does not contain mercury or other pollutive materials. Once the battery is charged to the full, the watch will keep on running for 2.3 months without recharging.**

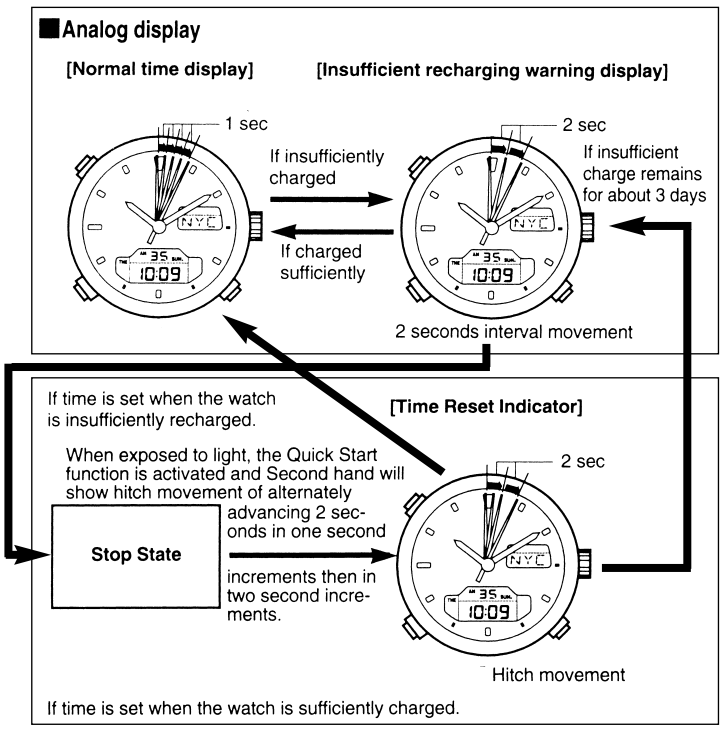
• For Trouble Free Use
Be sure that the solar battery is sufficiently charged to ensure smooth operation of Alarm, Chronograph and other functions. The watch has an Overcharge Prevention function. You can charge the battery without worrying about overcharging. **We recommend that you recharge the watch every day.**

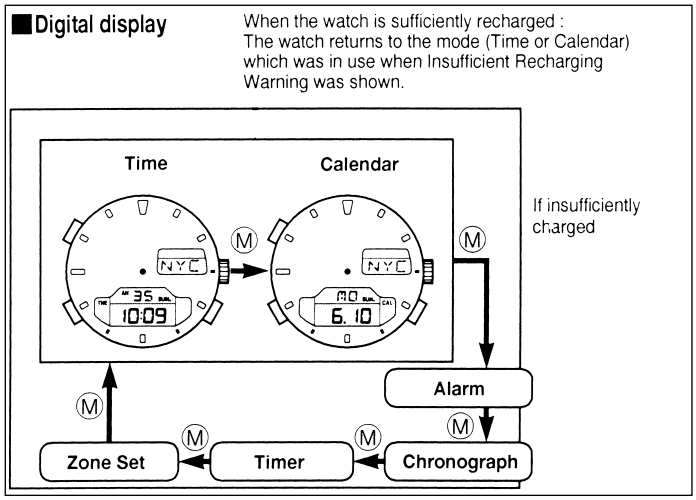
3. Part Names and Functions Fold out the watch diagram at the beginning of this instruction manual and refer to the location of the parts.

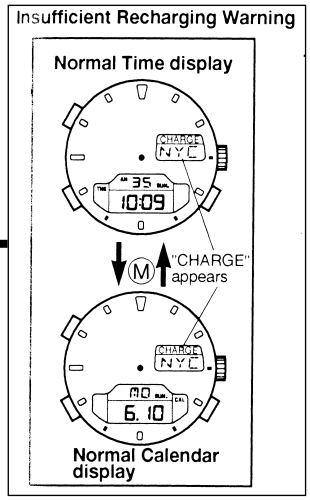
Part Name		Time mode	Calendar mode	Alarm mode
Ⓐ button	Normal mode	City name change (Downward)		
	Adjustment mode	Summertime change Hours, Min., Sec., 12/24hour	Month,Date,Day,Year	ON/OFF setting Hours, Minutes
Ⓑ button	Normal mode	City name change (Upward)		
	Adjustment mode	Ajustment digit change		
Ⓜ button	Normal mode	Changes to the next mode		
	Adjustment mode	Returns to the normal display		
①	Digital display-1	City name CHARGE (Insufficient charge indication)		eity name
②	Digital display-2	Hours, Min., Sec., AM/PM SUM. (Summertime set) Mode Indication (TME)	Month, Date, Day, SUM. (Summertime set) Mode Indication (CAL)	Hours, Minutes, (AM/PM) ON/OFF, SUM. (Summertime set) Mode Indication (ALM)
③	Crown	Analog time setting		
④	Hour hand	Always indicates hours		
⑤	Minute hand	Always indicates minutes		
⑥	Second hand	Always indicates seconds		

Chronograph mode	Timer mode	Zone set mode
start/stop	start/stop	City name change (Down)
		City indication set (ON/OFF)
split/reset	Timer set/flyback	City name change (Up) Ajustment digit change (Zone set, Sum. time)
Changes to the next mode		
Time measurement (Hours)	Set time (Minutes)	City name
Time measurement (Min., Sec., 1/100sec.) Mode Indication (CHR)	Remaining time (Min., Sec.) Mode Indication (TMR)	Hours, Min., Sec. (AM/PM) SUM. (Summertime set) Mode Indication (Set)
Analog time setting		
Always indicates hours		
Always indicates minutes		
Always indicates seconds		

4. Special Functions of the Solar Powered Watch
If solar battery becomes insufficiently charged, a warning function comes into operation and the display changes, as below.







(When the watch is insufficiently charged)

(1) If the watch has been set to Time or Calendar mode, it will keep the mode in use when Insufficient Recharging Warning was shown.
• In this state, you can switch modes between Time and Calendar and adjust display.

(2) If the watch has been set to alarm, Chronograph, Timer or Zone Set mode, it will automatically switch to Time display mode.

(3) If Chronograph measurement or Timer countdown is in progress, the watch will automatically stop operation and switch to time display mode from reset mode.

(4) Alarm will not sound

(5) "CHARGE" will appear in digital display-1.

(When the watch is sufficiently recharged)

(1) Insufficient Recharging Warning ("CHARGE" mark) disappears and the watch returns to normal time or Calendar mode.

(2) Mode switching by the M button will become active when the Insufficient recharging warning has released. In this case, readjust the display of each mode before use.

■ Insufficient Recharging Warning Feature

Analog display: Second hand starts advancing 2 seconds at a time indicating the watch is insufficiently charged. The watch keeps correct time even when power charge is insufficient. the watch will stop unless this condition is not corrected within about 3 days.

Digital display: "CHARGE" appears in digital display-1.

■ Quick Start Feature

The watch will stop if solar battery has completely lost its power charge. When watch face is exposed to light, Second hand will start advancing irregularly hitch movement after approx. 10 seconds (Time Reset Indicator). Length of time required for restarting Second hand will depend on intensity of light. If light is blocked when solar battery is not fully charged, the watch will stop again.

■ Time Setting Indication Feature

If the watch is exposed to light after it has stopped, it will activate the Quick Start function and start moving again. However, Second hand will show hitch movement to indicate the need to reset to the correct time. In this case, reset time. Otherwise, Second hand will continue to show irregular movement. If time is reset when power charge is too low, Insufficient Recharging Warning and Time Reset Indicator (Second hand hitch movement) will appear again.

• Be sure to set Analog Time, Calendar and other modes after adjusting display to the correct time.

■ Overcharging Prevention Feature

When secondary battery is charged fully, Overcharging Prevention function will activate automatically.

■ Special care for using solar watch

Make sure that solar battery is always charged to sufficient level. When you are wearing clothes with long sleeves, power charge may become too low because the watch is not exposed to light.

• Always keep the watch exposed to light when not using it. This will assure correct running of the watch.

WARNING Never use batteries other than the secondary battery specified for this watch. The watch is not structurally designed to operate on any other type of battery. However, if by chance a silver battery or other batteries are used, their is a danger that the battery will be overcharged and burst causing damage to the watch and the user. When replacing secondary battery, be sure to use the designated product.

■ Recharging solar watch

CAUTION The watch will be damaged during recharging if it gets too hot (about 60°C/140°F or more). Avoid recharging at high temperatures. Don't recharge near an incandescent lamp, halogen lamp and other high temperature light sources or on a car dashboard and other heat accumulating places.

• Solar battery may not be fully charged if placed in a dimly lit place.

■ Time required for recharging

Recharging time differs depending on model of the watch (colour of the dial).

The Table below shows standard time required for recharging.

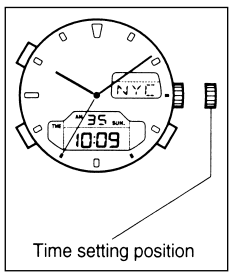
*Recharging time is length of time in which the watch is continuously exposed to light.

Illuminance (luxes)	Environment	Recharging time		
		For one day's use	From stopped state to the one second movement	Until fully charged
500	Inside ordinary office	3 hours 20 minutes	22 hours	242 hours
1,000	60-70 cm under fluorescent light (30W)	1 hour 40 minutes	10 hours	120 hours
3,000	20 cm under fluorescent light (30W)	35 minutes	3 hours	40 hours
10,000	Exterior, cloudy	10 minutes	1 hour`	12 hours
100,000	Exterior, summer, sunny	50 seconds 50 seconds	5 minutes 5 minutes	1 hour 1 hour

Full recharging time : time required for recharging fully from stopped state.

Recharging time for one day's use : recharging time required for the watch to run for one day.

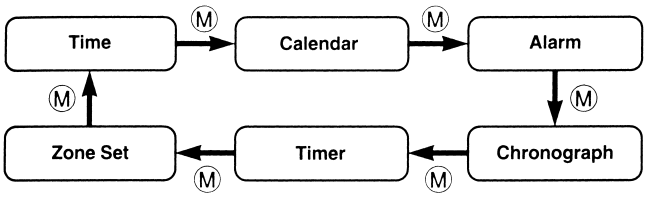
5. Setting The Analog Time Display



Time setting position
1) Pull the crown out and stop the second hand.
2) Turn the crown and set the hands to the correct time.
3) Press the crown back in to finalize the setting and start the watch.

How to adjust the watch to the correct time.
Stop the second hand at the "0" position. Move the minute hand to a few minutes past the time you want to set, then move it back to the correct time. Press the crown back in synchronizing to the correct time.

6. Switching Digital Modes (Functions)
In addition to Time mode, this watch has 5 other modes; Calendar, Alarm, Chronograph, Timer and Zone Set.



• The Auto-return to the Time mode will be activated when the watch is left in the alarm, or Zone Set mode for more than 2 minutes without any operation.

7. Using Digital Modes (Functions)
A To Call up Time, Calendar or Alarm in Each City
(1) Press Ⓜ button to set the watch to Time, Calendar or Alarm mode.
(2) Press Ⓐ or Ⓑ button to call up desired city.
• If Ⓐ button is pressed, City Names and Time will appear in downward order.
• If Ⓑ button is pressed, City Names and Time will appear in upward order.

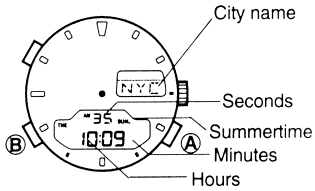
■ Setting City Names and Time ON/OFF
If a City has been set "OF" (OFF) in Zone Set mode, you cannot call up their City and its time (Calendar or Alarm) by pressing Ⓐ or Ⓑ button. In this case, the watch will call up the next City which has been set "ON" and show its time (Calendar or Alarm).

Time Difference Between the Local Time And UTC
(Unit : hour)

Press Ⓐ Button ↓ Press Ⓑ Button ↑

Indication	City	Time difference	Indication	City	Time difference
UTC	Universal time co-ordinated	±0	TYO	Tokyo	+9
LON	London	±0	SYD	Sydney	+10
PAR	Paris	+1	AKL	Auckland	+12
ROM	Rome	+1	HNL	Honolulu	–10
IST	Istanbul	+2	ANC	Anchorage	–9
MOW	Moscow	+3	LAX	Los Angeles	–8
DXB	Dubai	+4	DEN	Denver	–7
KHI	Karachi	+5	CHI	Chicago	–6
DAC	Dacca	+6	MEX	Mexico City	–6
BKK	Bangkok	+7	NYC	New York	–5
SIN	Singapore	+8	CSS	Caracas	–4
HKG	Hong Kong	+8	RIO	Rio de Janeiro	–3

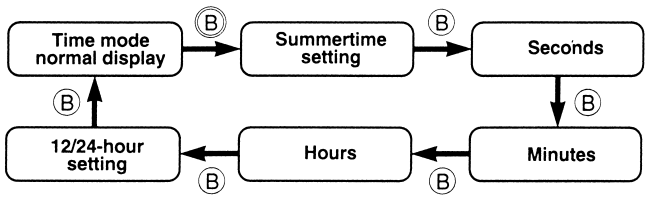
B Time Mode
If you set the time for any of the 24 cities, time of all other cities will be automatically adjusted.



To set to Summertime
(1) Press Ⓜ button to switch to Time mode.
(2) Press Ⓐ or Ⓑ button to select a City.
(3) Press and hold Ⓑ button for 2 seconds or longer. "ON SUM" or 'OF SUM" will flash.
(4) Press Ⓐ button while "ON SUM" or "OF SUM" is flashing.
Each time Ⓐ button is pressed, "ON" and "OFF" change, indicating that the watch is in summertime adjustment mode.
Note: Summertime cannot be set for UTC (universal time coordinated).
• When Summertime is set, "SUM" will appear and the hour will advance one unit.

Setting Time
<To adjust Seconds>
(1) Press Ⓑ button while in Summertime adjustment mode. Seconds will flash.
Note: If the watch is set to UTC, press Ⓑ button for more than 2 seconds. Seconds will flash for adjustment.
(2) Press Ⓐ button while seconds are flashing, seconds will return to "00" and restart.
• If seconds show 30 through 59, minutes display will advance one minute.

<To adjust Hours and Minutes>
(1) Press Ⓑ button while Seconds are flashing. Minutes will flash.
(2) Press Ⓐ button and adjust Minutes.
(3) Each time you press Ⓑ button, adjustment section changes and begins to flash as shown in the diagram on the next page.
(4) Press Ⓐ button to adjust flashing section. Press and hold Ⓐ button for rapid advancement.
(5) Press Ⓑ button again after switching to 12/24-hour display to return to normal time display.



<Button Operation>
Ⓑ Press and hold Ⓑ button for 2 seconds or longer.
Ⓑ Press Ⓑ button once.

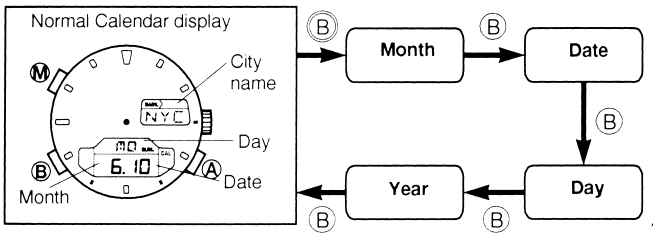
• Make sure that the AM/PM indication is correct when setting the time in the 12-hour display system.
• Auto-Return to the normal time display will activate when the watch is left in the adjustment mode for more than 2 minutes.
• While in the adjustment mode, the watch will be directly returned to the normal time display by pressing the Ⓜ button.
• When summertime is set for a certain city in the Time mode, it will be automatically synchronized to the Alarm and zone set mode.

C Calendar Mode

If you set Calendar for any of the 24 cities, Calendar of all other cities will be automatically adjusted.

To adjust Calendar

(1) Press Ⓜ button to switch to Calendar mode.
(2) Press Ⓐ or Ⓑ button to select a City for adjustment.
(3) Press and hold Ⓑ button for more than 2 seconds. Month will flash.
(4) Press Ⓐ button to adjust Month. press and hold Ⓐ button for rapid advancement.
(5) Each time you press Ⓑ button, adjustment section changes and start flashing as shown in the diagram on the previous page.
(6) Press Ⓐ button to adjust flashing section.
(7) Press Ⓑ button again to return to normal Calendar display.



■ Year Setting

• Calendar can be set from 1996 through 2099

■ Auto-Calendar function

• Month end adjustment will be made automatically.
• If Calendar is set to a non-existent date (e.g., February 30), display will automatically show first day of next month.

■ Auto-Return function

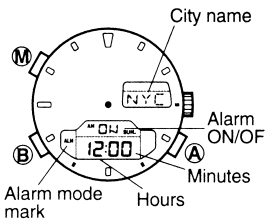
• If the watch is left in adjustment mode for more than 2 minutes without any buttons being operated, Auto-Return will activate and return to normal Calendar display.

■ Instant Manual Return

• Instant Manual Return to normal Calendar display can be made by pressing Ⓜ button in Calendar adjustment mode.

D Alarm Mode

Setting Alarm



(1) Press Ⓜ button to switch the watch to Alarm mode.
(2) Press Ⓐ or Ⓑ button to select City.
(3) Press and hold Ⓑ button for more than 2 seconds. "ON" or "OF" will flash. (When you press Ⓑ button at this time, the name of the next City will appear for an instant and then return to the City initially set.)
(4) "ON" and "OF" change each time Ⓐ button is pressed.
(5) Press Ⓑ button. Hours will flash.
(6) Press Ⓐ button and adjust Hours.
• Press and hold Ⓐ button for rapid advancement.
(7) Press Ⓑ button again. Minutes will flash.
(8) Press Ⓐ button and adjust Minutes.
(9) Finally press Ⓑ button to return to normal alarm display.

■ Alarm Buzzer

• Alarm will sound for 10 seconds.
• Press any button to stop alarm buzzer.
• To monitor Alarm buzzer, press Ⓐ button and hold for more than 2 seconds when the watch is set to normal alarm display. (Alarm sound will continue while Ⓐ button is being pressed.)

■ 12/24-hour display

• If the watch is set to 12-hour display in Time mode, Alarm will also be set to 12-hour display. Make sure that AM/PM is correct when setting Alarm.

■ Auto-Return function

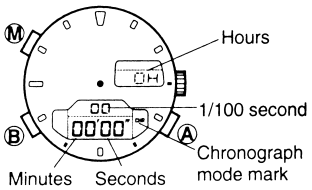
• If the watch is left in alarm adjustment mode for more than 2 minutes, it will automatically return to normal alarm display.
• If the watch is kept in normal alarm display mode for more than 2 minutes, it will automatically return to normal alarm display.

■ Instant Manual Return

• Press Ⓜ button in Alarm adjustment mode to return to normal alarm display.

E Chronograph Mode

[Chronograph Reset State]



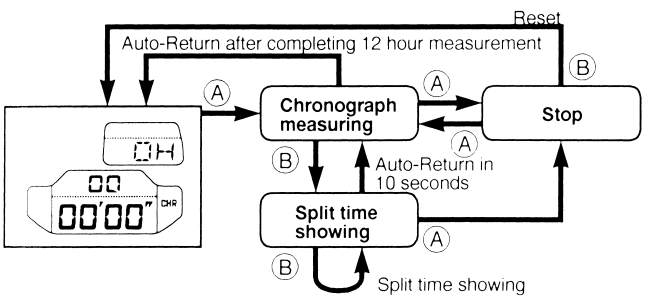
Chronograph measures in units of 1/100 of a second, up to 11 hours 59 minutes, 59 seconds and 99 hundredths seconds. After finishing 12-hour measurement, it will return to reset state (all digits are zero) and stop. you can also check split times while using Chronograph.

Elapsed Time Measurement

(1) Press Ⓐ button to start/stop Chronograph.
(2) If Ⓑ button is pressed when Chronograph is stopped, it will return to reset state.
• You will hear beep sound each time you press Ⓐ or Ⓑ button to start/stop or reset Chronograph. (Different tones will sound for start and stop.)

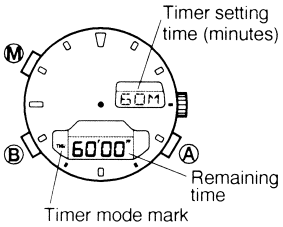
Split Time Measurement

(1) Press Ⓐ button to start/stop Chronograph.
(2) Press Ⓑ button while Chronograph is running. Split time will appear for 10 seconds.
• "SPLIT" will flash while split time is shown.
(3) Press Ⓑ button while measurement is stopped to reset Chronograph.
• You will hear the beep sound each time you press Ⓐ or Ⓑ button to start/stop or reset Chronograph and to call up split time.



■ If the watch is switched to another mode while Chronograph is in operation (reset, measuring or stopped) and then switched to Chronograph again, the watch will return to the initial state of use (if chronograph was showing split time, it will return to measuring state).

F Timer Mode



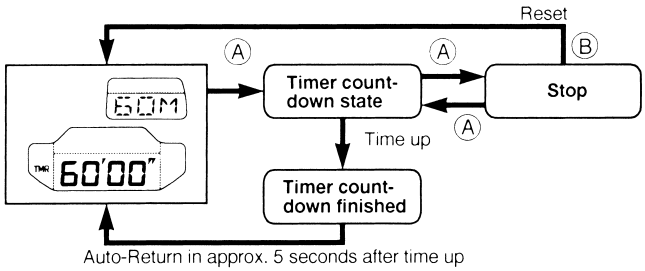
• Timer can be set in units of 1 minute up to 60 minutes. When Timer countdown is finished, buzzer will sound for approx. 5 seconds and Timer will return to the initially set time.

To set Timer

(1) Press Ⓜ button and switch to Timer mode.
(2) Press Ⓑ button until desired setting time is shown. Setting time will decrease minute-by-minute from 60 minutes. (Press and hold Ⓑ button to make rapid change of setting time.)

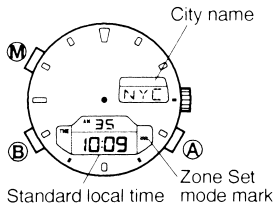
To use Timer

(1) Press Ⓐ button to start Timer.
(2) To stop timer, press Ⓐ button while countdown is in progress. Press Ⓐ button to start it again.
(3) If you press Ⓑ button while time is stopped, timer will return to the initially set time.
• You will hear a beep sound each time you press Ⓐ button to start/stop or reset Timer. (Different tones will sound for start and stop.)
(4) When Timer countdown is finished, watch will sound for approx. 5 seconds, after which Timer will automatically return to the initially set time.



■ If the watch is switched to another mode while Timer is in operation (countdown is in progress or stopped) and then switched to timer again, the watch will return to initial state of use. If countdown has been completed, the watch will return to the initially set time.

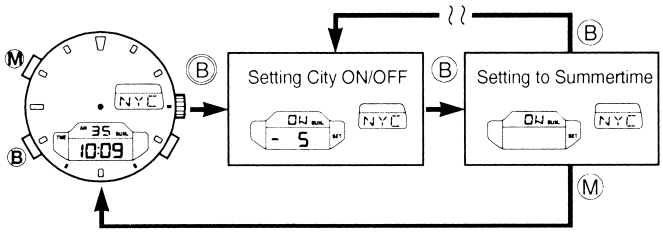
G Zone Set Mode



• Using Sone Set function, you can preselect desired Cities from among 24 major cities of the world and easily all up on the watch local time of any of these Cities.

To use Zone Set

(1) Press Ⓜ button to switch to Zone Set mode.
(2) Press Ⓐ or Ⓑ button to select desired Cities.
(3) Press and hold Ⓑ button for more than 2 seconds. "ON" or "OF" and the City name will flash. (When you press Ⓑ button at this time, the name of the next City will appear for an instant and then return to the City initially selected.)
(4) Press Ⓐ button and set each City "ON" or "OF".
(5) If you press Ⓑ button at their stage, "ON SUM" or "OF SUM" will flash for Summertime setting.
(6) Press Ⓐ button to set Summertime "ON" or "OF".
(7) Press Ⓑ button to select next City. Then repeat operations (4) through (6) to set a new City "ON".
(8) After setting of each city is completed, press Ⓜ button to return to normal Zone Set display.



■ **Summertime**

• If Summertime is set "ON" in Zone Set mode, display in time and alarm modes will be also switched to Summertime and show time one hour later than standard local time.

■ **Auto-Return**

• If the watch is left in adjustment mode for more than 2 minutes without any operation, it will automatically return to normal zone Set mode.
• If the watch is kept in zone Set mode for more than 2 minutes without any operation, it will automatically return to normal time display.

■ **Instant Manual Return**

• If you press Ⓜ button in adjustment mode, the watch will return to normal Zone Set mode. At this time, it will show city name which was on display when the watch was set to adjustment mode. If this city has been preset "OF", the watch will select another city in upward order and show next city which has been present "ON". If all cities have been preset "OF", it will return to UTC.

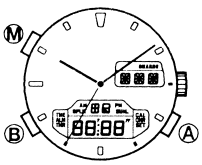
■ **Switching mode from Zone Set to normal Time display**

• If you switch mode from Zone Set to normal Time display and then reset to Zone Set, the watch will show city name which was on display when mode was switched. If you have changed city selection in Time or Calendar mode, newly selected city will be shown in Zone Set mode.

■ **City Name Display**

• You can set a city "OF" in Zone Set mode after setting this city "ON" in Time Calendar or Alarm mode. In this case, if the watch is set again to Time, Calendar or alarm mode, it will select another city in upward order and show next city which has been preset "ON". If all cities have been preset "OF", it will return to UTC.

8. All Reset Function



Use All Reset function to reset the watch after replacing secondary battery or if the watch is showing abnormal operation or display. All Reset function can be performed as follows:

(1) Press Ⓐ, Ⓑ and Ⓜ buttons simultaneously for more than 2 seconds. all digital displays will disappear. (If any one of the buttons is released, all displays will reappear.)
(2) Release all 3 buttons. the watch will restart from12:00 UTC.
(3) You will hear a beep sound 2 times indicating All Reset is complete.
(4) Adjust Time, Calendar and other modes to the correct time before use.

9. Precautions

1) Resistance to water

Indication			Water related use	
Dial	Caseback	Specification	Washing face or getting wet in the rain that is, when splashed over the watch and no water pressure is applied to it.	Swimming and general washing work (kitchen work/car washing etc.
–	WATER RESIST	3 bar water resistant watch	OK	NO
WATER RESISTANT (5bar)	WATER RESIST	5 bar water resistant watch	OK	OK
WATER RESISTANT (10—20bar)	WATER RESIST	10/20 bar water resistant watch	OK	OK
"WATER RESISTANT" may sometimes be abbreviated "WATER RESIST"				

Check the chart to determine the water resistant properties of this watch.

Water sports and skin diving (without air tank)	Scuba diving (Diving with air tank)	Pulling the crown out when the watch is wet.
NO	NO	NO
NO	NO	NO
OK	NO	NO
• Always set the crown in the normal position.		

Refer to the table for water-resistance performance after checking the water-resistance characteristics inscribed on the face and back of the watch.
- Always set the crown in the normal position.
- While working with water or using it as a water-resistant sports watch, if the watch is dipped in seawater or after a lot of sweating, please rinse it well in fresh water and dry it thoroughly with a soft cloth.
- Leather straps have characteristics that may affect durability after getting wet.
- Because there is always air inside the watch, when the air temperature outside remains temporarily, there is no problem, but if it doesn't disappear after a long period of time, please consult the shop you purchased it from or another Citizen dealer.

2) Avoid temperature extremes

Avoid leaving your watch in direct sunlight or in extremely warm locations for long periods of time.

3) Avoid wet conditions

Do not operate the crown or pushbuttons when your watch is wet.

4) Avoid strong shocks

5) Avoid strong magnetic fields

6) Avoid Static Electricity

The integrated circuits used in your watch are sensitive to static electricity. If exposed to intense static electricity, the watch's display may lose its accuracy.

7) Avoid chemicals, and corrosive gases

Avoid wearing your watch in the presence of strong chemicals, solvents and gases. If your watch comes in contact with materials such as gasoline, benzine, paint thinner, alcohol, spray cosmetics, nailpolish, nail polish remover, adhesives or paint, discoloration, deterioration or damage to the case, band or their components may occur.

8) Photosensitive eyeglasses

The watch's digital display may become difficult to read clearly when wearing photosensitive eyeglasses or sunglasses such as ski goggles and tinted fishing glasses. This problem can be corrected by turning your wrist slightly to change the angle between the eye and watch, providing a clear view of the display.

9) Keep your watch clean

Wipe off any water and moisture that adheres to the case, glass or band with a soft, clean cloth. Any dirt left on the case or band may cause skin rash. A watchband will easily become soiled with dust and perspiration since it is in direct contact with the skin. Even a stainless steel or gold-plated band may begin to corrode if it has not been cleaned for a long period of time. Mesh bands, because the mesh is very fine, will lose their particular "flexibility" if they are left soiled for a long time.
Metal watchbands are usually washed with a brush in mild, soapy water, rinsed and wiped with a soft, absorbent cloth to make sure all water is removed. Exercise care to prevent any water from getting inside your watch when the band is washed.

10) Periodic inspection

Getting your watch checked once every year or two is recommended to ensure long use and trouble-free operation.

11) Watch bands

Metal bands: Metal watch bands can be cleaned with a toothbrush, soap and water.
Leather bands: Wipe off the front side of the band with a soft dry cloth, and remove stains on the back side of the band with a cloth moistened in alcohol.
Plastic or rubber bands: Wash in water. (Avoid using solvents as they may cause the band to dissolve).

12) Be sure to keep secondary batteries out of reach of infants and small children. Should accidental ingestion occur, consult a doctor at once.

10. Specifications

(1) Caliber No.: C61∞

(2) Type: Analog/digital combination display solar watch

(3) Accuracy: ±20 seconds per month at 5-35˚C (41-95˚F) when used in normal temperatures.

(4) Operating temperature range : 0-55˚C (32-131˚F)

(5) Display functions:

Time: Hours, Minutes, Seconds, 12/24-hour display, Summertime, City time zone setting

Calendar: Month, Date, Day (Year), City time zone setting

Alarm: Hours, Minutes (AM/PM), ON/OFF, City time zone setting

Chronograph: 12-hour measurement (in 1/100 sec.),

Split time measurement

Race Time: 15 different lengths of Setting (Auto-chrono: 12hour measurement, 1 second unit)

(6) Additional functions: Insufficient recharging warning feature

Quick Start feature

Time setting indication feature

Overcharging prevention feature

*These specifications are subject to change for product improvement without prior notice.