

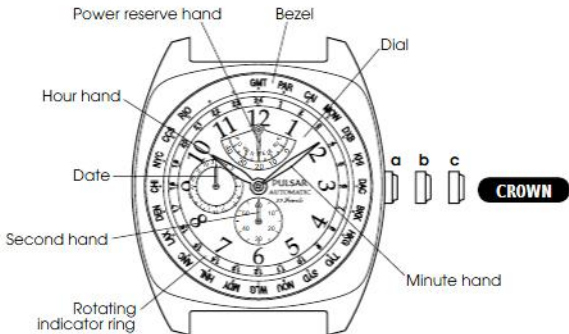
PULSAR

CAL. Z46H MECHANICAL WATCHES

- Automatic winding
- Time and date calendar
- World time function
- Power reserve indicator

ENGLISH

DISPLAY AND CROWN



a: Normal position

b: First click

c: Second click

HOW TO START THE WATCH

- This is an automatic-winding mechanical watch.

To initially start your watch:

Swing it from side to side in a horizontal arc for about 30 seconds, to start the second hand moving.

** If the watch is worn on the wrist, the mainspring will be wound automatically through normal wrist movement.*



SCREW DOWN CROWN

[for models with screw down crown]

Unlocking the crown

- 1 Turn Crown counterclockwise until you no longer feel the threads turning.
- 2 Crown can be pulled out.



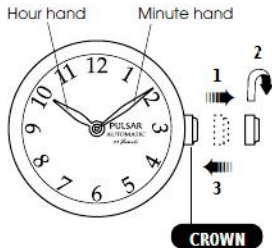
Locking the crown

- 1 Push Crown back in to normal position.
- 2 Turn Crown clockwise while pressing it lightly until tight.



TIME/CALENDAR SETTING

Setting the time



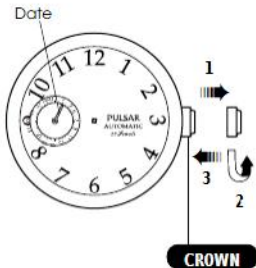
CROWN

- 1 Pull the crown out to the second click. (Second hand does not stop.)
- 2 Turn the crown clockwise and set it to the current time.
- 3 Press in the crown to the normal position.

English

How to adjust the calendar (date)

English



CROWN

- 1 Pull the crown out to the first click.

* *The crown of this watch can be pulled out to the first and second click.*

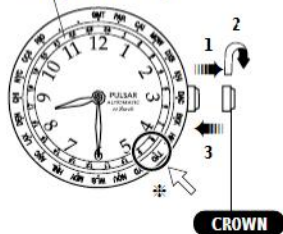
- 2 Turn the crown counterclockwise until you reach today's date.
- 3 Press in the crown to the normal position.

WORLD TIME FUNCTION

(1) Model on which times are indicated on the rotating indicator ring

- Check and make sure that the watch is set to the current time.

Rotating Indicator ring



✦ In case of 8:30 a.m. in Japan, you can read it is 0:30 a.m. in Paris.

CROWN

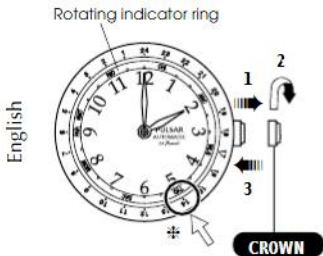
- 1 Pull the crown out to the first click.

* The crown of this watch can be pulled out to the first and second click.

- 2 Turn the crown clockwise, and set the current time of the rotating indicator ring to the city in which you now live. (The rotating indicator ring turns counterclockwise in the unit of 30 minutes.)
- 3 Press in the crown.
- 4 Read the current times of the respective cities in the bezel from the 24-hour indicator in the rotating indicator ring.

(2) Model on which city names are indicated on the rotating indicator ring

- Check and make sure that the watch is set to the current time.



CROWN

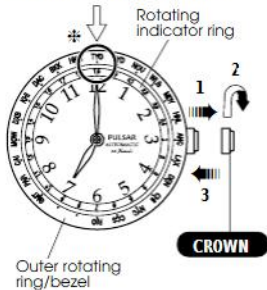
- 1 Pull the crown out to the first click.

* *The crown of this watch can be pulled out to the first and second click.*

- 2 Turn the crown clockwise, and set the name of city - in which you now live - of the rotating indicator ring to the current time. (The rotating indicator ring turns counterclockwise in the unit of 30 minutes.)
- 3 Press in the crown.
- 4 Read the current times of the respective cities in the rotating indicator ring from the outer 24-hour indicator.

(3) Model on which city names are indicated on outer rotating ring/bezel

- Check and make sure that the watch is set to the current time with correct AM/PM.
- For model with rotating bezel, turn the bezel manually without crown operation.



⌘ In case of 7:00 p.m. in Japan, you can read it is 11:00 a.m. in Paris.

CROWN

- 1 Pull the crown out to the first click.
- 2 Turn the crown clockwise, and set the current time of the city - in which you now live - in the inner rotating indicator ring to the 12 o'clock position.
- 3 Press in the crown.
- 4 Turn the outer rotating ring/bezel manually, and set the name of the city - in which you now live - to the 12 o'clock position. (The outer rotating ring/bezel turns counterclockwise in the unit of 30 minutes.)
- 5 Read the current times of the respective cities in the rotating ring/bezel from the 24-hour indicator.

Comparison table of standard times

English

GMT ± (hours)	Name of citys		Other cities
0	GMT	Greenwich Mean Time	London, Casablanca, Dakar
+ 1	PARIS (PAR)	Paris	Rome, Amsterdam, Tripoli, Frankfurt, Berlin
+ 2	CAIRO (CAI)	Cairo	Athens, Istanbul, Cape Town
+ 3	MOSCOW (MOW)	Moscow	Mecca, Nairobi, Kiev
+ 4	DUBAI (DXB)	Dubai	
+ 5	KARACHI (KHI)	Karachi	
+ 6	DHAKA (DAC)	Dhaka	Tashkent
+ 7	BANGKOK (BKK)	Bangkok	Phnom Penh, Jakarta
+ 8	HONG KONG (HKG)	Hong Kong	Singapore, Peking, Manila
+ 9	TOKYO (TYO)	Tokyo	Seoul, Pyongyang
+ 10	SYDNEY (SYD)	Sydney	Guam, Khabarovsk
+ 11	NOUMEA (NOU)	Noumea (New Caledonia)	Solomon Islands
+ 12	WELLINGTON (WLG)	Wellington	Auckland, Fiji Islands
- 11	MIDWAY (MDY)	Midway	

GMT ± (hours)	Name of citys		Other cities
- 10	HONOLULU (HNL)	Honolulu	
- 9	ANCHORAGE (ANC)	Anchorage	Dawson (Canada)
- 8	LOS ANGELES (LAX)	Los Angeles	San Francisco, Vancouver
- 7	DENVER (DEN)	Denver	Edmonton (Canada)
- 6	CHICAGO (CHI)	Chicago	Mexico City
- 5	NEW YORK (NYC)	New York	Washington, Montreal
- 4	CARACAS (CCS)	Caracas	Santiago (Chile)
- 3	RIO DE JANEIRO (RIO)	Rio de Janeiro	Buenos Aires
- 2			Cape Verde
- 1	AZORES	Azores	

- * There may be some countries where the daylight saving time is going on, and there can be cases where the time difference and daylight saving time of various countries are subject to change, suiting their own convenience.
- * Major cities in the various countries of the world are described as the names of cities. Furthermore, please understand in advance that some specifications of our product are subject to change for the purpose of improvement.

POWER RESERVE INDICATOR

English



The power reserve indicator shows the amount the watch is wound as an amount of time, so you can see how long the watch will run at a glance. The power reserve hand indicates the remaining amount. The time pointed to by the power reserve hand is the remaining amount of time.

NOTES ON OPERATING THE WATCH

TIME/CALENDAR SETTING

- Do not set the date between 8:00 p.m. and 2:00 a.m. Otherwise, it may not change properly.
 - * *If it is necessary to set the date during that time period, first change the time to any time outside it, set the date and then reset the correct time.*
- When setting Hour hand, check that AM/PM is correctly set.
 - * *The watch is so designed that the date changes once in 24 hours. Turn the hands past the 12 o'clock marker to determine whether the watch is set for the A.M. or P.M. period. If the date changes, the time is set for the A.M. period. If the date does not change, the time is set for the P.M. period.*
- When setting Minute hand, be sure to turn back the hands a little behind the desired time and then advance them to the exact time.
- It is necessary to adjust the date at the end of February and 30-day months.

AUTOMATIC WINDING

- This is an automatic winding mechanical watch and cannot be wound manually.
- This watch will run approximately 40 hours after it is fully wound. If it is not wound enough, the watch may lose time. In order to maintain the watch's accuracy, we recommend wearing the watch at least 8 hours a day.

POWER RESERVE INDICATOR

- The remaining time shown is only an approximation. The time shown may be different from actual remaining time.

This product has an automatic-winding system which comes with a power reserve indicator function. The mainspring will be automatically wound by your natural arm movements while you wear it on your wrist. The power reserve hand is pointing to the fully-wound position (40H). The amount the watch is wound will change with the frequency of your arm movements and the amount of time you wear the watch, so the hand will not always point to the fully-wound position. If you remove the watch from your arm and do not wind manually, the power reserve hand will move toward zero as time passes.

SPECIFICATIONS

- Vibration : 21,600 Oscillations / 1hr
- Loss/Gain : Within +25 and -15 Second (Daily Rate)*
- Jewels : 23 Jewels

** The mechanism of mechanical watches is very precise and delicate. Time accuracy may change depending of which direction the watch faces. Therefore, any actual loss/gain may not fall within the range of time accuracy specified above, and depends on the condition of use, such as the length of time during which the watch is worn on the wrist, temperature, affection of strong magnetism, vibration like motorcycles or chain saws, life style (whether much arm movement is involved or not), whether the watch is wound up fully or not, etc.*

TO PRESERVE THE QUALITY OF YOUR WATCH

WATER RESISTANCE

● Non-water resistant



If "WATER RESISTANT" is not inscribed on the case back, your watch is not water resistant, and care should be taken not to get it wet as water may damage the movement. If the watch becomes wet, we suggest that you have it checked by an AUTHORIZED PULSAR DEALER or SERVICE CENTER.

● Water resistance (3 bar)



If "WATER RESISTANT" is inscribed on the case back, your watch is designed and manufactured to withstand up to 3 bar, such as accidental contact with splashes of water or rain, but it is not designed for swimming or diving.

● Water resistance (5 bar)*



If "WATER RESISTANT 5 BAR" is inscribed on the case back, your watch is designed and manufactured to withstand up to 5 bar and is suitable for swimming, yachting and taking a shower.

● Water resistance (10 bar/15 bar/20 bar)*



If "WATER RESISTANT 10 BAR", "WATER RESISTANT 15 BAR" or "WATER RESISTANT 20 BAR" is inscribed on the case back, your watch is designed and manufactured to withstand up to 10 bar/15 bar/20 bar and is suitable for taking a bath, shallow diving, but not for scuba diving. We recommend that you wear a PULSAR Diver's watch for scuba diving.

- * Before using the water resistance 5, 10, 15 or 20 bar watch in water, be sure the crown is pushed in completely.
Do not operate the crown when the watch is wet or in water. If used in sea water, rinse the watch in fresh water and dry it completely.
- * When taking a shower with the water resistance 5 bar watch, or taking a bath with the water resistance 10, 15 or 20 bar watch, be sure to observe the following:
 - Do not operate the crown when the watch is wet with soapy water or shampoo.
 - If the watch is left in warm water, a slight time loss or gain may be caused. This condition, however, will be corrected when the watch returns to normal temperature.

NOTE:

Pressure in bar is a test pressure and should not be considered as corresponding to actual diving depth since swimming movement tends to increase the pressure at a given depth. Care should also be taken on diving into water.

TEMPERATURES



Your watch works stably within a temperature range of 5°C and 35°C (41°F and 95°F). Do not leave your watch in very low or high temperatures.

MAGNETISM



Your watch will be adversely affected by strong magnetism. Keep it away from close contact with magnetic objects.

CARE OF CASE AND BRACELET

To prevent possible rusting of the case and bracelet caused by dust, moisture and perspiration, wipe them periodically with a soft dry cloth.

SHOCKS

Light activities will not affect your watch, but be sure to take the watch off your wrist when you engage in strenuous sports. Also be careful not to drop your watch on the floor.

CHEMICALS

Be careful not to expose the watch to solvents, mercury, cosmetic spray, detergents, adhesives or paints. Otherwise, the case, bracelet, etc. may become discolored,

deteriorated or damaged.

PERIODIC CHECK

It is recommended that the watch be checked once every 2 to 3 years. Have your watch checked by an **AUTHORIZED PULSAR**

DEALER or **SERVICE CENTER** to ensure that the case, crown, buttons, gasket and crystal seal remain intact.

PRECAUTION REGARDING CASE BACK PROTECTIVE FILM

If your watch has a protective film and/or a sticker on the case back, be sure to peel them off before using your watch.