## GENERAL GUIDE
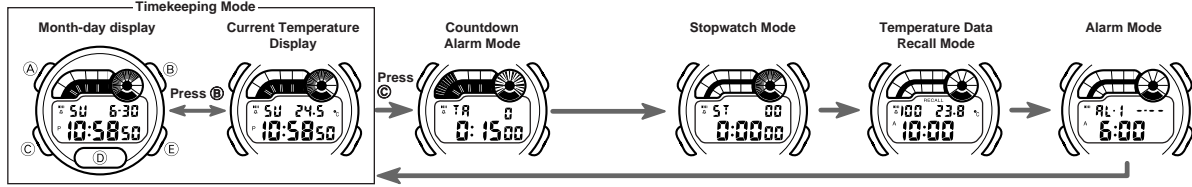
- Press Ⓒ to change from mode to mode.
- In the Timekeeping Mode, Temperature Data Recall Mode and Alarm Mode, press Ⓓ to illuminate the display for about two seconds. In the Countdown Alarm Mode and Stopwatch Mode, press Ⓔ to illuminate the display for about two seconds.

## TIMEKEEPING MODE

You can select display of either the current date (month and day) or temperature in the Timekeeping Mode. Press Ⓑ to toggle between the date and temperature display.

### To set the time and date
1. While the current date (not the temperature) is displayed in the Timekeeping Mode, hold down Ⓐ until the seconds digits flash on the display.
2. Press Ⓒ to change the selection (flashing) in the following sequence.

3. While the seconds setting is selected (flashing), press Ⓔ to reset it to 00. If you press Ⓔ while the seconds setting is in the range of 30 to 59, the seconds are reset to 00 and 1 is added to the minutes. If the seconds setting is in the range of 00 to 29, the minutes count is unchanged.
4. While any other setting (besides seconds) is selected (flashing), press Ⓔ to increase it or Ⓑ to decrease it. While the 12/24-hour format setting is selected, press Ⓔ to toggle it between 12 and 24.
- Except for the seconds or 12/24-hour setting, holding down a button changes the setting at high speed.
5. After you set the time and date, press Ⓐ to return to the Timekeeping Mode.
- The day of the week is automatically set in accordance with the date.
- The date can be set within the range of January 1, 1995 to December 31, 2039.
- If you do not operate any button for a few minutes while a setting is flashing, the flashing stops and the watch goes back to the Timekeeping Mode automatically.
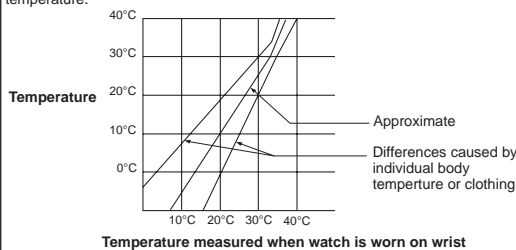
### Current Temperature Display
A built-in temperature sensor measures temperature and shows the measured value on the display. The readout from the temperature sensor can also be switched between Celsius (°C) and Fahrenheit (°F). The thermometer can be calibrated to correct for errors.

**Important**
Temperature measurements are affected by your body temperature (while you are wearing the watch), direct sunlight, and moisture. To achieve a more accurate temperature measurement, remove the watch from your wrist, place it in a well ventilated location out of direct sunlight, and wipe off all moisture from the case. It takes approximately 20 to 30 minutes for the case of the watch to reach the actual surrounding temperature.

Accurate temperature measurements cannot be achieved while you are wearing the watch. The following graph illustrated affects of body temperature on actual temperature.

**Temperature measured when watch is worn on wrist**

### About Temperature Measurement

- A temperature measurement operation is performed whenever you switch from month-day display to temperature display.
- Temperature measurements are performed and the temperature value is updated every two minutes while the current temperature is displayed.
- Pressing Ⓔ while the current temperature is displayed executes a temperature measurement operation and stores the result in memory along with the time of the measurement.
- At the top of each hour, the current temperature is measured and stored in memory along with the time of the measurement.

\* The display shows "– – . – °C (or °F)" if a measured value falls outside the range of –20°C to 60°C (–4°F to 140°F). The normal display will return as soon as the temperature returns within the allowable range.
- Memory can hold up to 100 temperature data entries, which are managed on a first-in, first-out basis. See "TEMPERATURE DATA RECALL MODE" of this manual for details on how to recall memory data.
- The first data item is stored as data item 1, the second as data item 2, and so on up to 100 data items.
- When a new data item is stored while there are already 100 data items (numbered 1 to 100) in memory, the new data item is "pushed" into memory from the top (on top of item 100). This shifts all of the previous data items down one position (item 100 becomes item 99, 99 becomes 98, and so on), and item 1 is deleted.

### Switching between Celsius and Fahrenheit
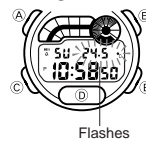
Flashes

1. Hold down Ⓐ while in the Current Temperature Display and the current temperature digits flash.
2. Press Ⓒ to select either Celsius ""°C" or Fahrenheit ""°F".
3. After you select the Celsius or Fahrenheit, press Ⓐ to return to the Temperature Display.
- If you do not operate any button for a few minutes while a selection is flashing, the flashing stops and the watch goes back to the Current Temperature Display automatically.

### Calibrating the Temperature Measurement
The temperature sensor of this watch is calibrated at the factory before shipment and further adjustment is normally not required. If noticeable error is found in the temperature readings produced by the watch, you can adjust it to correct the error.

**Important**
Incorrectly calibrating the temperature measurement of this watch can result in incorrect readings. Carefully read the following before doing anything.
- Compare the readings produced by the watch with those of another reliable, accurate thermometer.
- If calibration is required, remove the watch from your wrist and wait for 20 or 30 minutes to give the temperature of the watch time to stabilize.
- Perform the temperature calibration before procedure as quickly as possible to avoid the temperature of the watch being affected by your body temperature.
- You can also perform temperature calibration underwater, if the water temperature is stable.

### To calibrate the temperature

Flashes

1. Hold down Ⓐ while in the Current Temperature Display and the current temperature digits flash.
2. Each press of Ⓔ increase the displayed temperature by 0.1°C, and pressing the Ⓑ decrease it by 0.1°C.
- If you have selected Fahrenheit as your unit of measurement, the above operations change the reading by 0.2°F.
- You can calibrate the temperature within a range of –9.9°C to +9.9°C (–18.0°F to +18.0°F).
- Press Ⓑ and Ⓔ at the same time to reset the temperature calibration to the factory setting.
3. After calibrating the temperature, press Ⓐ to return to the Current Temperature Display.
- If you do not operate any button for a few minutes while a selection is flashing, the flashing stops and the watch goes back to the Current Temperature Display automatically.

## ABOUT THE BACKLIGHT

### About the Auto Light Switch Function
When the auto light switch function is turned on, the backlight automatically turns on for two seconds under the conditions described below. Avoid wearing the watch on the inside of your wrist. Doing so causes the auto light switch to operate when not needed, which shortens battery life.

Moving the watch to a position that is parallel to the ground and then tilting it towards you approximately 40 degrees causes the backlight to illuminate.
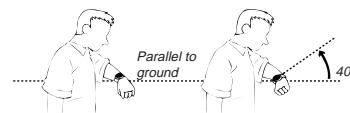
- The backlight may not illuminate if the face of the watch is more than 15 degrees off parallel to the left or right. Make sure that the back of your hand is parallel to the ground.

Parallel to ground / More than 15 degrees too high / More than 15 degrees too low

- Static electricity or magnetic force can interfere with proper operation of the auto light switch function. If the auto backlight does not illuminate, try moving the watch back to the starting position (parallel with the ground) and then tilt it back toward you again. If this does not work, drop your arm all the way down so it hangs at your side, and then bring it back up again.
- Under certain conditions the backlight may not light until about one second or less after turn the face of the watch towards you. This does not necessarily indicate malfunction of the backlight.

## To switch the auto light switch function on and off

In the Timekeeping Mode, hold down Ⓔ for one or two seconds to turn the auto light switch function on and off.

Auto light
switch indicator

ON ← Hold down Ⓔ → OFF
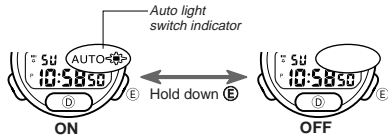
- The auto light switch indicator is shown on the display in all modes while the auto light switch function is on.
- In order to protect against running down the battery, the auto light switch function is automatically turned off approximately three hours after you turn it on. Repeat the above procedure to turn the auto light switch function back on if you want.
- Pressing Ⓓ (Timekeeping Mode, Temperature Data Recall Mode, Alarm Mode) or Ⓔ (Countdown Alarm Mode, Stopwatch Mode) illuminates the display, regardless of the auto light switch's on/off setting.

### Caution

- The backlight of this watch employs an electro-luminescent (EL) light, which loses its illuminating power after very long term use.
- Frequent use of the backligfht shortens the battery life.
- The watch emits an audible sound whenever the display is illuminated. This is because the EL light vibrates slightly when lit. It does not indicate malfunction of the watch.

### Warning!

- **Never try to read your watch when mountain climbing or hiking in areas that are dark or in areas with poor footing. Doing so is dangerous and can result in serious personal injury.**
- **Never try to read your watch when running where there is the danger of accidents, especially in locations where there might be vehicular or pedestrian traffic. Doing so is dangerous and can result in serious personal injury.**
- **Never try to read your watch when riding on a bicycle or when operating a motorcycle or any other motor vehicle. Doing so is dangerous and can result in a traffic accident and serious personal injury.**
- **When you are wearing the watch, make sure that its auto backlight function is turned off before riding on a bicycle or operating a motorcycle or any other motor vehicle. Sudden and unintended operation of the auto backlight can create a distraction, which can result in a traffic accident and serious personal injury.**

## COUNTDOWN ALARM MODE

Mode indicator / 1/10 seconds

Hours / Seconds
Minutes
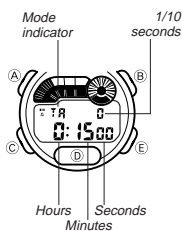
The countdown alarm can be set within a range of 1 second to 24 hours. When the countdown reaches zero, an alarm sounds for 10 seconds or until you press any button.

### To set the countdown start time

1. Hold down Ⓐ while in the Countdown Alarm Mode. The hour digits flash on the display because they are selected.
2. Press Ⓒ to change the selection in the following sequence.

Hour → Minutes → Seconds
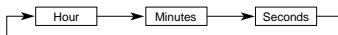
3. Press Ⓔ to increase the selected number or Ⓑ to decrease it. Holding down either button changes the selection at high speed.
- To set the starting value of the countdown time to 24 hours, set 0:00'00".
4. After you set the countdown start time, press Ⓐ to return to the Countdown Alarm Mode.
- If you do not operate any button for a few minutes while a selection is flashing, the flashing stops and the watch goes back to the Countdown Alarm Mode automatically.

### To use the countdown alarm

1. Press Ⓓ while in the Countdown Alarm Mode to start the countdown alarm.
2. Press Ⓓ again to stop the countdown alarm.
- You can resume countdown alarm operation by pressing Ⓓ.
3. Stop the countdown alarm and then press Ⓑ to reset the countdown time to its starting value.
- When the end of the countdown is reached and auto repeat timing is off, the alarm sounds for 10 seconds or until you stop the alarm by pressing any button. Countdown timing stops and the countdown time is automatically reset to its starting value after the alarm stops.

### To switch auto repeat timing on and off

1. Hold down Ⓐ while in the Countdown Alarm Mode. The hour digits flash on the display because they are selected.
2. Press Ⓓ to toggle auto repeat on and off.

Auto repeat indicator

OFF ← Press Ⓓ → ON
Flashes         Flashes
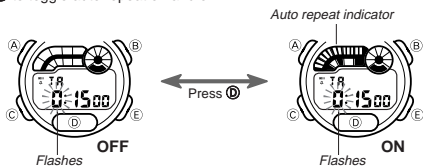
3. Press Ⓐ to return to the Countdown Alarm Mode.
- When the end of the countdown is reached while auto repeat is on, the alarm sounds, but the countdown restarts from the beginning without stopping. You can stop the countdown by pressing Ⓓ and manually reset to the start time by pressing Ⓑ.
- If you set a starting time of 10 seconds or less and have Auto Repeat turned on, the countdown alarm tone (which normally sounds for 10 seconds) sounds for only one second.
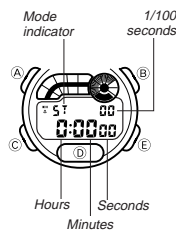
## To turn the progress beeper on and off

Press Ⓑ while in the Countdown Alarm Mode to toggle the progress beeper on and off.
- When the progress beeper is turned on, the watch beeps as the countdown time passes the 10, 5, 4, 3, 2, and 1-minute marks, and the 50, 40, 30, 20, 10, 5, 4, 3, 2, and 1-second marks.
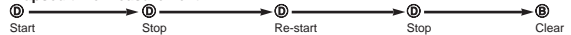
OFF ← Press Ⓑ → ON

## STOPWATCH MODE

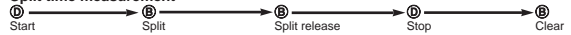Mode indicator / 1/100 seconds

Hours / Seconds
Minutes

The stopwatch Mode lets you measure elapsed time, split times, and two finishes. The range of the stopwatch is 23 hours, 59 minutes, 59.99 seconds. You can use the EL backlight at any time while the stopwatch is operating.
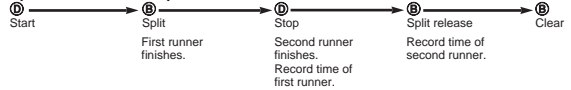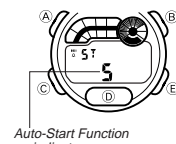
### Elapsed time measurement

Ⓓ → Ⓓ → Ⓓ → Ⓓ → Ⓑ
Start    Stop    Re-start    Stop    Clear

### Split time measurement

Ⓓ → Ⓑ → Ⓑ → Ⓓ → Ⓑ
Start    Split    Split release    Stop    Clear

### Split time and 1st-2nd place times

Ⓓ → Ⓑ → Ⓓ → Ⓑ → Ⓑ
Start    Split    Stop    Split release    Clear
         First runner    Second runner    Record time of
         finishes.    finishes.    second runner.
                  Record time of
                  first runner.

### About the Auto-Start function

Auto-Start Function on indicator

With the Auto-Start function, the watch performs a 5-second countdown. When the countdown reaches zero, stopwatch operation starts automatically. During the final three seconds of the countdown, a beeper sounds with each second.

### To turn the Auto-Start function on and off

While the display is showing all zeros in the Stopwatch Mode, press Ⓐ to toggle it on and off.
- 5 is shown in the display while Auto-Start is turned on. 5 is not shown and the display shows all zeros when Auto-Start is turned off.
- To stop the Auto-Start countdown and return to the all-zeros display, press Ⓑ.
- Pressing Ⓓ while the Auto-Start countdown is in progress immediately start the stopwatch.

## TEMPERATURE DATA RECALL MODE

Memory number / Mode indicator
Temperature

Hours / Minutes
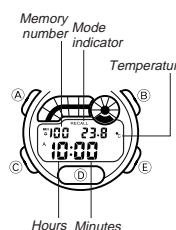
Use this mode to recall temperature data that was stored in memory. Memory can hold up to 100 temperature data entries, which are managed on a first-in, first-out basis.
- When memory is full, the next measurement causes the oldest entry to be deleted automatically.
- Press Ⓔ to scroll forward through data, and Ⓑ to scroll back. Recalling data starts with data item 100. You can then scroll back through the data (99, 98, 97, and so on.)
- To delete all data in memory, hold down Ⓐ. You cannot delete individual data items.

## ALARM MODE

*Alarm on indicator*  *Mode indicator*

Ⓐ Ⓑ
Ⓒ Ⓓ Ⓔ

*Hours  Minutes*
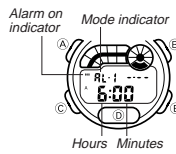
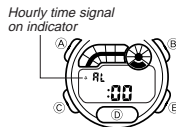You can set five independent alarms with the hour, minutes, month and day. Use the Alarm Mode to turn the alarm and the Hourly Time Signal on and off.
• When an alarm is turned on, an alarm tone sounds for 20 seconds when the preset time reached.
• When the Hourly Time Signal is turned on, the watch beeps every hour on the hour.

*Hourly time signal on indicator*

Ⓐ Ⓑ
Ⓒ Ⓓ Ⓔ

**Alarm types**
The types of alarm you get depends on the information you set.

**• To set a daily alarm**
Set the hour and minutes for the alarm time. Set "-" for the month and "--" for the day. This type of setting causes the alarm to sound everyday at the time you set.

**• To set a date alarm**
Set the month, day, hour and minutes for the alarm time. This type of setting causes the alarm to sound at the specific time, on the specific date you set.

**• To set a 1-month alarm**
Set the month, hour and minutes for the alarm time. Set "--" for the day. This type of setting causes the alarm to sound every day at the time you set, only during the month you set.

**• To set a monthly alarm**
Set the day, hour and minutes for the alarm time. Set "-" for the month. This type of setting causes the alarm to sound every month at the time you set, on the day you set.
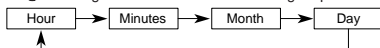
**To set the alarm time**
1. Press Ⓔ while in the Alarm Mode to select Alarm 1 through Alarm 5.

Alarm 1 → Alarm 2 → Alarm 3 → Alarm 4
Hourly Time Signal ← Alarm 5
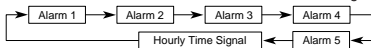
2. After you select an alarm, hold down Ⓐ until the hour digits start to flash on the display. The hour digits flash because they are selected. At this time the Alarm is automatically switched on.
3. Press Ⓒ to change the selection in the following sequence.

Hour → Minutes → Month → Day

4. Press Ⓔ to increase the number or Ⓑ to decrease it. Holding down either button changes the current number at high speed.
• The format (12-hour and 24-hour) of the alarm time matches the format you select for normal timekeeping.
• When setting the alarm time using the 12-hour format, take care to set the time correctly as morning or afternoon.
5. After you set the alarm time, press Ⓐ to return to the Alarm Mode.
• If you do not operate any button for a few minutes while a selection is flashing, the flashing stops and the watch goes back to the Alarm Mode automatically.

**To stop the alarm**
• Press any button to stop the alarm after it starts to sound.

**To switch an alarm and Hourly Time Signal on and off**
1. In the Alarm Mode, press Ⓔ to select an alarm or the Hourly Time Signal.
2. When the alarm or Hourly Time Signal you want to is selected, press Ⓑ to switch it on and off.
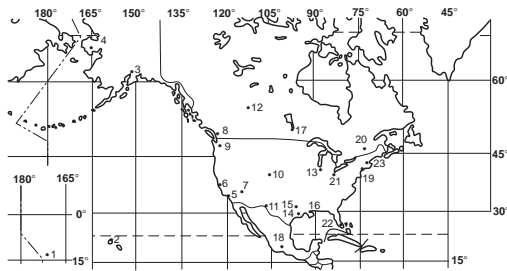• If any alarm is on, the Alarm On indicator is shown on the display when you change to another mode.

*Alarm on indicator*                    *Hourly time signal on indicator*

**To test the alarm**
Hold down Ⓔ while in the Alarm Mode to sound the alarm.

**TIME ZONE CHART**

**North America**

| NO. | CITY | THE DIFFERENCE FROM GMT FOR STANDARD TIME | LONGITUDE | LATITUDE |
|---|---|---|---|---|
| 1. | PAGO PAGO | −11 | 171°W | 14°N |
| 2. | HONOLULU | −10 | 158°W | 21°N |
| 3. | ANCHORAGE | −9 | 150°W | 61°N |
| 4. | NOME | −9 | 165°W | 65°N |
| 5. | LOS ANGELES | −8 | 118°W | 34°N |
| 6. | SAN FRANCISCO | −8 | 122°W | 38°N |
| 7. | LAS VEGAS | −8 | 115°W | 36°N |
| 8. | VANCOUVER | −8 | 123°W | 49°N |
| 9. | SEATTLE | −8 | 122°W | 48°N |
| 10. | DENVER | −7 | 105°W | 40°N |
| 11. | EL PASO | −7 | 106°W | 32°N |
| 12. | EDMONTON | −7 | 114°W | 54°N |
| 13. | CHICAGO | −6 | 88°W | 42°N |
| 14. | HOUSTON | −6 | 95°W | 30°N |

| NO. | CITY | THE DIFFERENCE FROM GMT FOR STANDARD TIME | LONGITUDE | LATITUDE |
|---|---|---|---|---|
| 15. | DALLAS | −6 | 97°W | 33°N |
| 16. | NEW ORLEANS | −6 | 90°W | 30°N |
| 17. | WINNIPEG | −6 | 97°W | 50°N |
| 18. | MEXICO CITY | −6 | 99°W | 19°N |
| 19. | NEW YORK | −5 | 74°W | 41°N |
| 20. | MONTREAL | −5 | 74°W | 45°N |
| 21. | DETROIT | −5 | 83°W | 42°N |
| 22. | MIAMI | −5 | 80°W | 26°N |
| 23. | BOSTON | −5 | 71°W | 42°N |

Add 1 hour to the difference time if DST (Daylight Saving Time) is used. (EX. if difference of standard time is +2, that of DST is +3.)
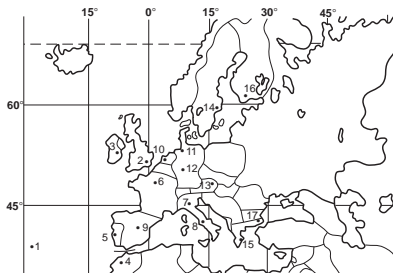
**Central and South America**

| NO. | CITY | THE DIFFERENCE FROM GMT FOR STANDARD TIME | LONGITUDE | LATITUDE |
|---|---|---|---|---|
| 1. | PANAMA CITY | −5 | 80°W | 9°N |
| 2. | LIMA | −5 | 77°W | 12°S |
| 3. | BOGOTA | −5 | 74°W | 5°N |
| 4. | CARACAS | −4 | 67°W | 10°N |
| 5. | LA PAZ | −4 | 68°W | 17°S |
| 6. | SANTIAGO | −4 | 71°W | 33°S |
| 7. | PORT OF SPAIN | −4 | 61°W | 11°N |
| 8. | RIO DE JANEIRO | −3 | 43°W | 23°S |
| 9. | SAO PAULO | −3 | 47°W | 24°S |
| 10. | BRASILIA | −3 | 48°W | 16°S |
| 11. | BUENOS AIRES | −3 | 58°W | 35°S |
| 12. | MONTEVIDEO | −3 | 56°W | 35°S |

Add 1 hour to the difference time if DST (Daylight Saving Time) is used. (EX. if difference of standard time is +2, that of DST is +3.)

**Europe**

| NO. | CITY | THE DIFFERENCE FROM GMT FOR STANDARD TIME | LONGITUDE | LATITUDE |
|---|---|---|---|---|
| 1. | AZORES | −1 | 25°W | 38°N |
| 2. | LONDON | +0 | 0°E | 51°N |
| 3. | DUBLIN | +0 | 6°W | 53°N |
| 4. | CASABLANCA | +0 | 8°W | 34°N |
| 5. | LISBON | +0 | 9°W | 39°N |
| 6. | PARIS | +1 | 2°E | 49°N |
| 7. | MILAN | +1 | 9°E | 45°N |
| 8. | ROME | +1 | 12°E | 42°N |
| 9. | MADRID | +1 | 4°W | 40°N |
| 10. | AMSTERDAM | +1 | 5°E | 52°N |
| 11. | HAMBURG | +1 | 10°E | 54°N |
| 12. | FRANKFURT | +1 | 9°E | 50°N |
| 13. | VIENNA | +1 | 16°E | 48°N |
| 14. | STOCKHOLM | +1 | 18°E | 59°N |

| NO. | CITY | THE DIFFERENCE FROM GMT FOR STANDARD TIME | LONGITUDE | LATITUDE |
|---|---|---|---|---|
| 15. | ATHENS | +2 | 24°E | 38°N |
| 16. | HELSINKI | +2 | 25°E | 60°N |
| 17. | ISTANBUL | +2 | 29°E | 41°N |

Add 1 hour to the difference time if DST (Daylight Saving Time) is used. (EX. if difference of standard time is +2, that of DST is +3.)
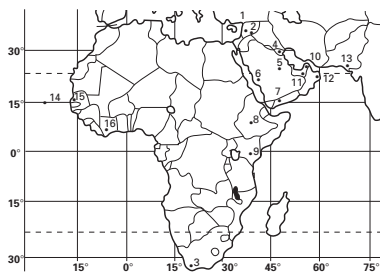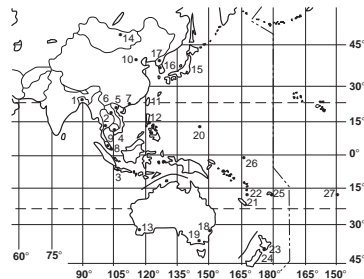
**Africa and Middle East**

| NO. | CITY | THE DIFFERENCE FROM GMT FOR STANDARD TIME | LONGITUDE | LATITUDE |
|---|---|---|---|---|
| 1. | BEIRUT | +2 | 35°E | 34°N |
| 2. | DAMASCUS | +2 | 36°E | 33°N |
| 3. | CAPE TOWN | +2 | 18°E | 34°S |
| 4. | KUWAIT | +3 | 48°E | 29°N |
| 5. | RIYADH | +3 | 47°E | 25°N |
| 6. | JEDDAH | +3 | 39°E | 21°N |
| 7. | ADEN | +3 | 45°E | 13°N |
| 8. | ADDIS ABABA | +3 | 39°E | 9°N |
| 9. | NAIROBI | +3 | 37°E | 1°S |
| 10. | DUBAI | +4 | 55°E | 25°N |
| 11. | ABU DHABI | +4 | 54°E | 24°N |
| 12. | MUSCAT | +4 | 58°E | 23°N |
| 13. | KARACHI | +5 | 67°E | 25°N |
| 14. | PRAIA | −1 | 23°W | 15°N |

| NO. | CITY | THE DIFFERENCE FROM GMT FOR STANDARD TIME | LONGITUDE | LATITUDE |
|---|---|---|---|---|
| 15. | DAKAR | +0 | 17°W | 15°N |
| 16. | ABIDJAN | +0 | 4°W | 5°N |

Add 1 hour to the difference time if DST (Daylight Saving Time) is used. (EX. if difference of standard time is +2, that of DST is +3.)

**Asia and South pacific**

| NO. | CITY | THE DIFFERENCE FROM GMT FOR STANDARD TIME | LONGITUDE | LATITUDE |
|---|---|---|---|---|
| 1. | DHAKA | +6 | 90°E | 24°N |
| 2. | BANGKOK | +7 | 100°E | 14°N |
| 3. | JAKARTA | +7 | 107°E | 6°S |
| 4. | PHNOM-PENH | +7 | 105°E | 12°N |
| 5. | HANOI | +7 | 106°E | 21°N |
| 6. | VIENTIANE | +7 | 103°E | 18°N |
| 7. | HONG KONG | +8 | 114°E | 22°N |
| 8. | SINGAPORE | +8 | 104°E | 1°N |
| 9. | KUALA LUMPUR | +8 | 102°E | 3°N |
| 10. | BEIJING | +8 | 116°E | 40°N |
| 11. | TAIPEI | +8 | 122°E | 25°N |
| 12. | MANILA | +8 | 121°E | 15°N |
| 13. | PERTH | +8 | 116°E | 32°N |
| 14. | ULAN BATOR | +8 | 107°E | 48°N |
| 15. | TOKYO | +9 | 140°E | 36°N |

| NO. | CITY | THE DIFFERENCE FROM GMT FOR STANDARD TIME | LONGITUDE | LATITUDE |
|---|---|---|---|---|
| 16. | SEOUL | +9 | 127°E | 38°N |
| 17. | PYONGYANG | +9 | 126°E | 39°N |
| 18. | SYDNEY | +10 | 151°E | 34°S |
| 19. | MELBOURNE | +10 | 145°E | 38°S |
| 20. | GUAM | +10 | 145°E | 13°N |
| 21. | NOUMEA | +11 | 166°E | 22°S |
| 22. | PORT VILA | +11 | 168°E | 18°S |
| 23. | WELLINGTON | +12 | 175°E | 41°S |
| 24. | CHRISTCHURCH | +12 | 173°E | 43°S |
| 25. | SUVA | +12 | 178°E | 18°S |
| 26. | NAURU ISLAND | +12 | 166°E | 1°S |
| 27. | PAPEETE | −10 | 150°W | 18°S |

Add 1 hour to the difference time if DST (Daylight Saving Time) is used. (EX. if difference of standard time is +2, that of DST is +3.)