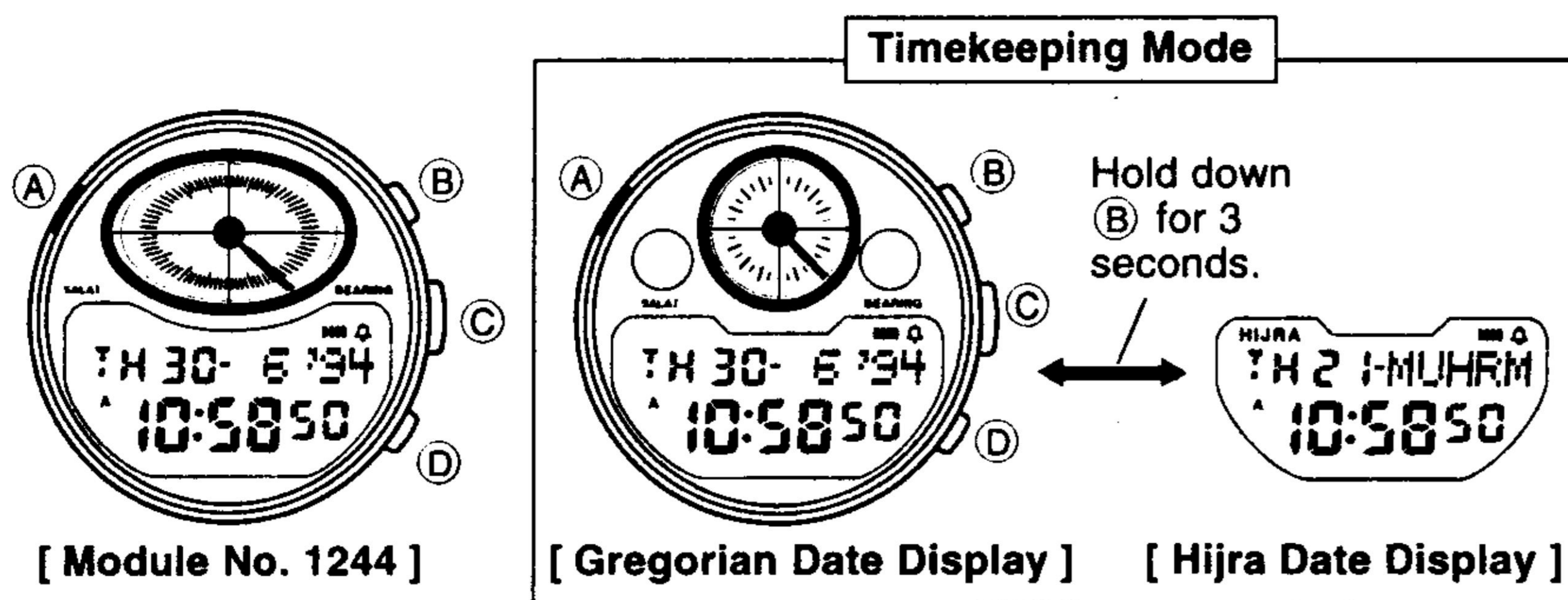
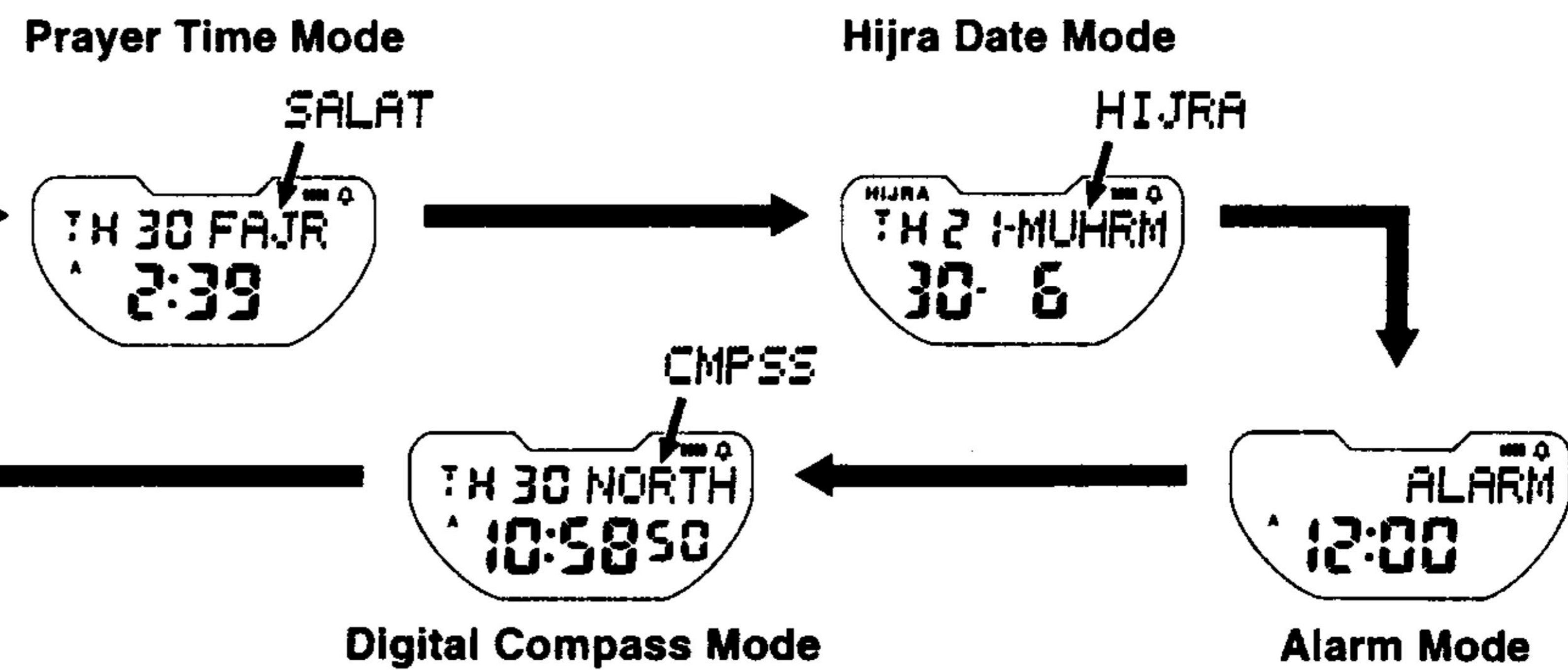


PART 1 GENERAL GUIDE

The operational procedures for Modules 1044 and 1244 are identical. All of the illustrations in this manual show Module 1044.



- To switch from the Timekeeping Mode to the Prayer Time Mode, hold down (C) for about one second. For other modes, simply press (C) to change from mode to mode.
- After you perform an operation in any mode, pressing (C) returns to the Timekeeping Mode.



PART 2 TIMEKEEPING MODE

This part of the manual tells you how to set the city data (to tell the watch where you are), the prayer time calculation method,* and the current time and date. Note that the settings you make in the Timekeeping Mode are used by the Digital Compass and Prayer Time function. Make sure you make these settings correctly.

* There are number of different prayer time calculation methods in use, depending on geographic region. This watch is pre-programmed to calculate prayer times in accordance with the method you select. For details, see "2-2 About prayer time calculation methods."

- In the Timekeeping Mode, you can switch the date display between Hijra style and Gregorian style. For details, see "2-4 About the Timekeeping Mode display."
- In the Timekeeping Mode, hold down (B) to illuminate the display.

2-1 About city data...

With the city data, you tell the watch your current location so that it can calculate other data. Be sure to change the city data setting whenever you move from one city to another. City data consist of time differential from Greenwich Mean Time (GMT), latitude, longitude, and directional variation (variation between true north and magnetic north) for the city where you are currently located. You can use either of the two following methods to set city data.

• Standard Data Input

With this method, you simply specify one of 30 pre-programmed city codes, and all other data (based on data for 1990) is input automatically. With this method, however, you must remember to change the time differential from GMT whenever you switch between summer time and standard time. A complete list of the available city codes can be found at the end of this manual.

• Original Data Input

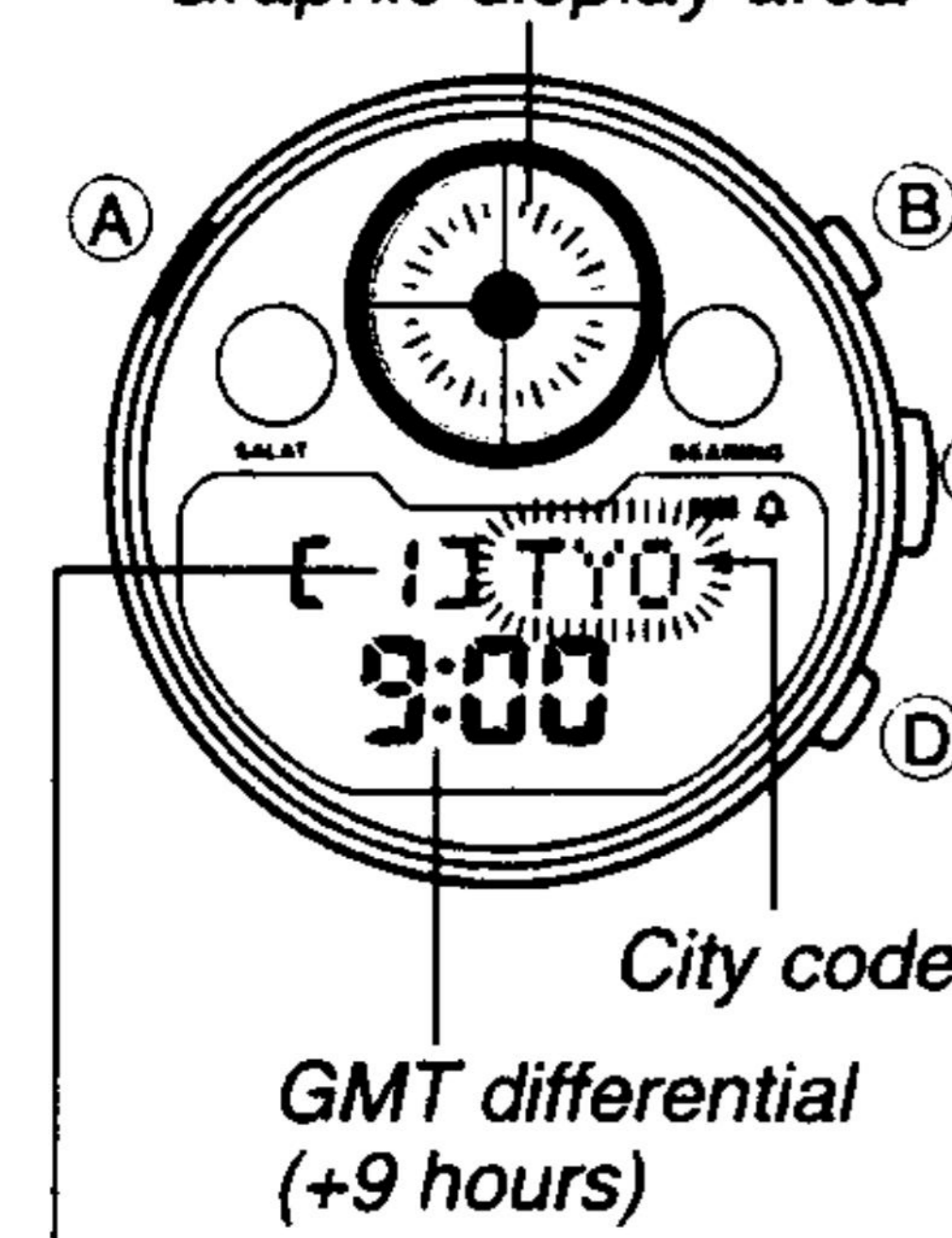
With this method, you make each of the settings by yourself. There are two methods you can use to preset original data: editing pre-programmed city data or inputting new data.

To edit pre-programmed city data, you select one of the pre-programmed city codes and make changes in its data to suit your current location.

To input new data, you must make each setting one-by-one.

To set city data using city codes

Graphic display area



Prayer time calculation method number

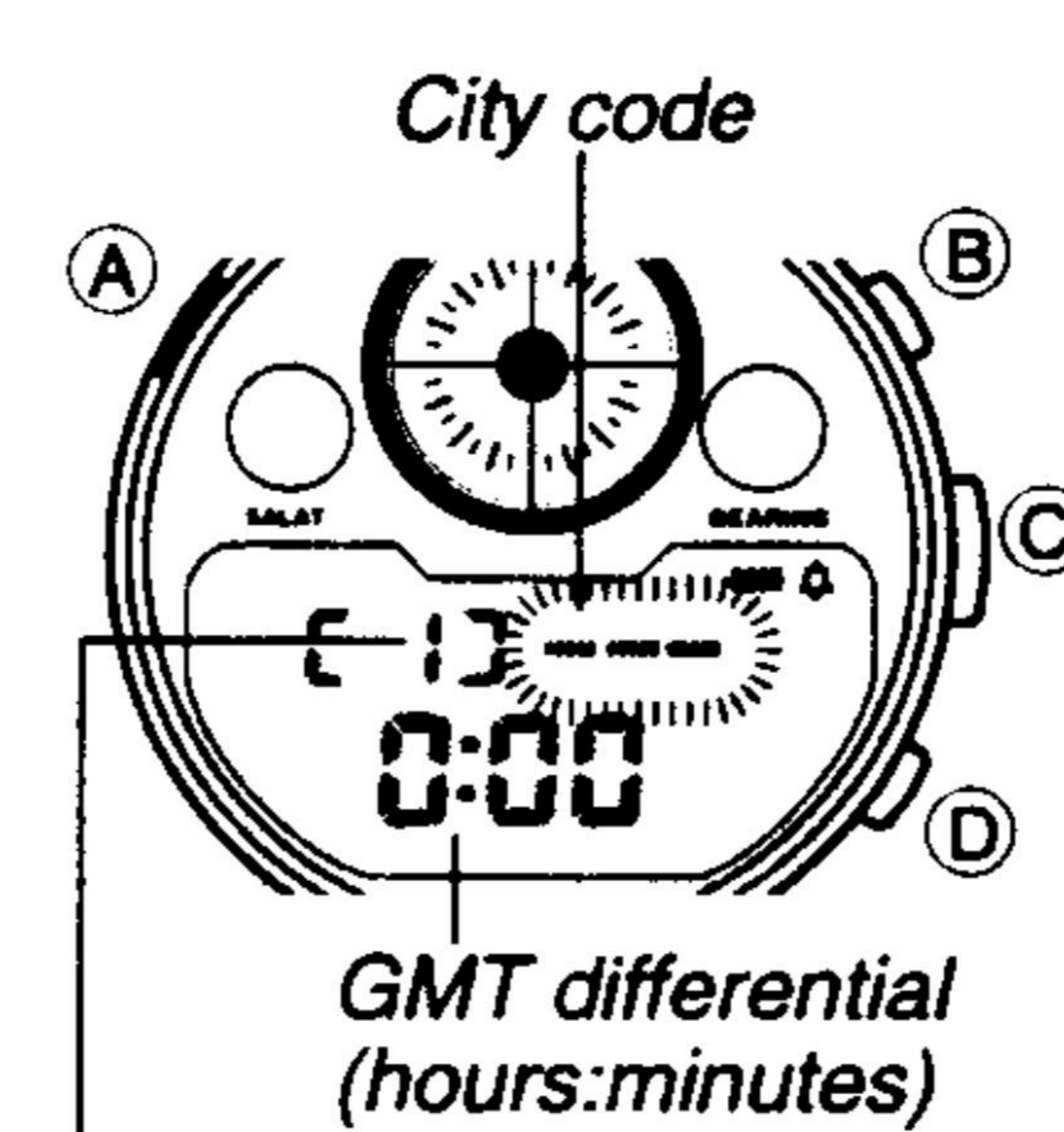
1. Press (A) while in the Timekeeping Mode. At this time, the currently set city code starts to flash on the display because it is selected.
2. While the city code is selected (flashing), press (D) or (B) to scroll through the 3-letter city codes until the one you want is displayed.
 - See the City Code List at the end of this manual for a full list of available city codes.
3. After you select your city code, press (C) to advance to the GMT differential setting.
 - Pressing (C) causes the GMT differential to start flashing.
4. If you want to change the GMT differential setting (to adjust for the 1-hour change for summer time), press (D) to increase the time differential or (B) to decrease it.

- If you do not want to change the GMT differential setting, skip this step and proceed to step 5.
- Pressing (D) and (B) changes the time differential in 15-minute increments.
- The hours setting changes automatically whenever a change in the minutes settings increases or decreases past 00.
- You can set the GMT differential within the range of -11 hours to +13 hours 45 minutes.

5. After you finish making your setting, press (A) twice to return to the Timekeeping Mode.
- After you change the setting in the above procedure, the watch needs a bit of time to calculate certain information. During this calculation, the pattern in the graphic display moves. Wait until this display stops moving before you try to set any further data.
- If you do not operate any button for a few minutes while a selection is flashing, the flashing stops and the watch automatically goes back to the Timekeeping Mode.
- After you change the GMT differential for summer time, the city code (which is displayed with the city data when setting the prayer time calculation method) is marked with a "♣" to indicate that its data has been changed.

To set original city data

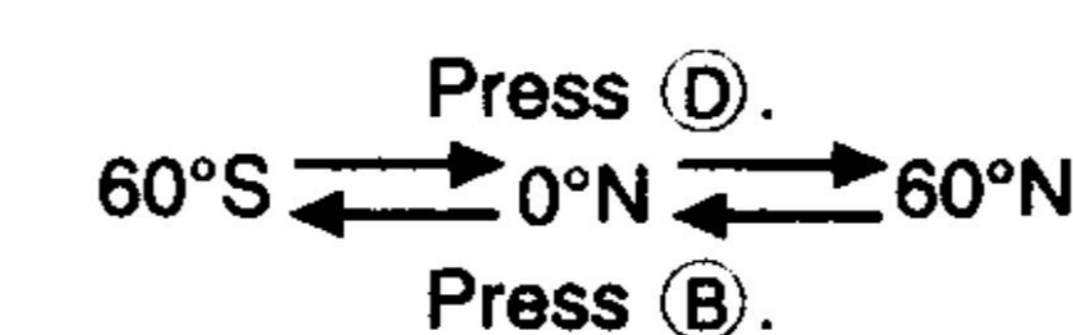
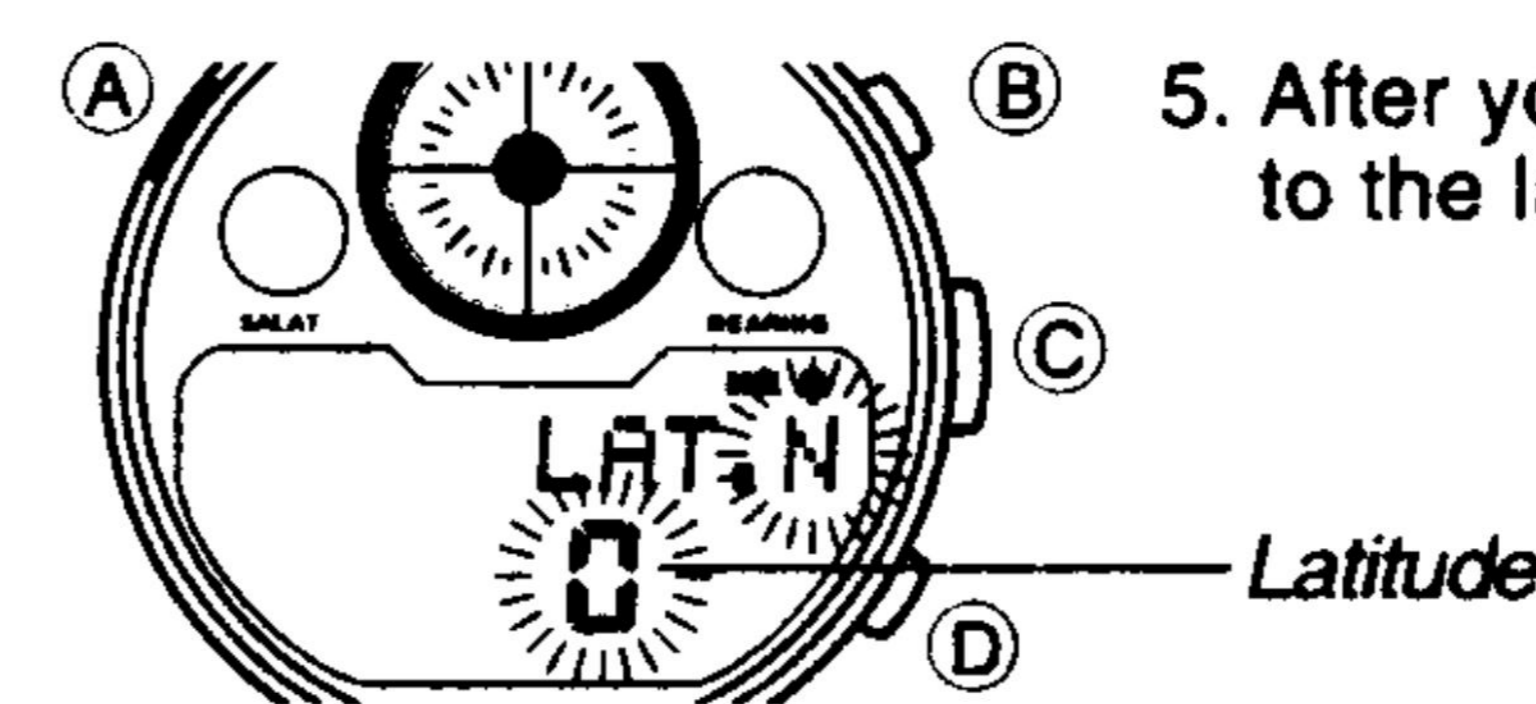
When setting original city data, you can use the City Data List at the back of this manual and the Directional Variation Map (included separately with this watch).



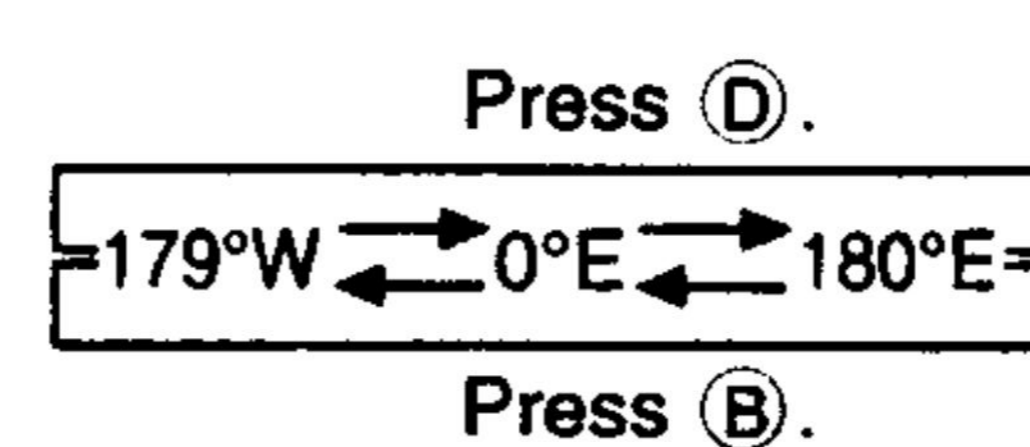
Prayer time calculation method number

1. Press (A) while in the Timekeeping Mode. At this time, the currently set city code starts to flash on the display because it is selected.
2. While the city code is selected (flashing), press (B) or (D) to scroll through the 3-letter city codes until the one you want is displayed.
 - If you are going to use pre-programmed city data, you should select a city code for a location that is close to the one whose data you want to set.
 - If you are going to input new data, select "--" as the city code.

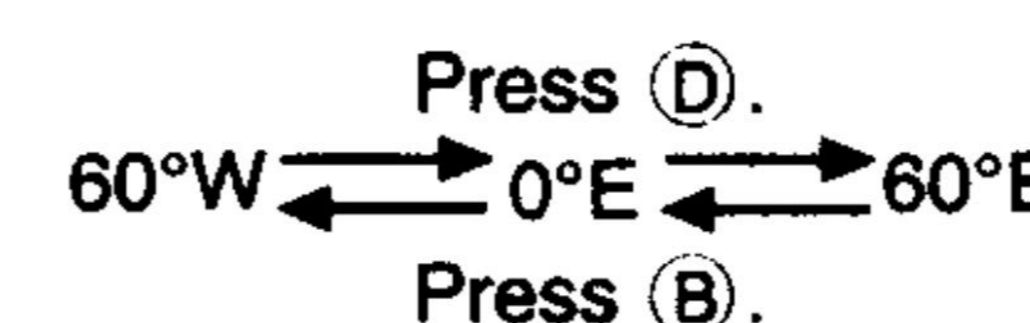
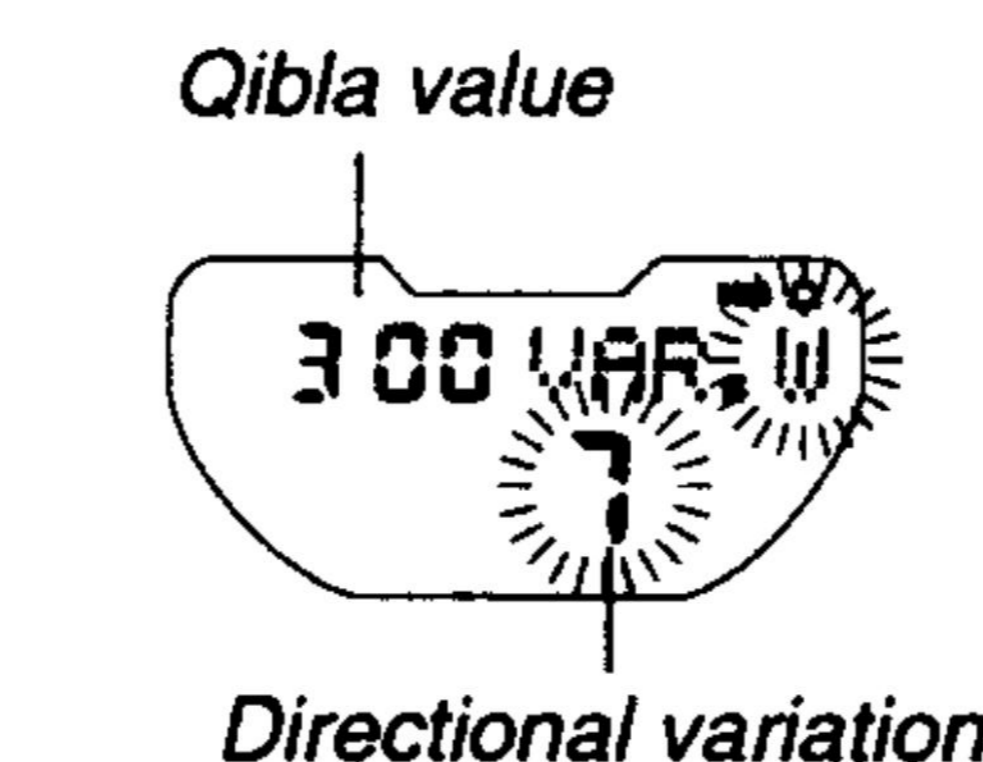
3. After you select the city code (3-letter city code or "--"), press (C) to advance to the GMT differential setting.
 - Pressing (C) causes the GMT differential to start flashing.
4. Press (D) to increase the time differential or (B) to decrease it.
 - Pressing (D) and (B) changes the time differential in 15-minute increments.
 - The hours setting changes automatically whenever a change in the minutes settings increases or decreases past 00.
 - Holding down (D) or (B) changes the time differential at high speed.
 - You can set the GMT differential within the range of -11 hours (-11:00) to +13 hours 45 minutes (13:45).



5. After you set the GMT differential, press (C) to advance to the latitude setting.
6. Use (D) and (B) to change the latitude within the range shown in the illustration. Holding down either button changes the setting at high speed.



7. After you set the latitude, press (C) to advance to the longitude setting.
8. Use (D) and (B) to change the longitude within the range shown in the illustration. Holding down either button changes the setting at high speed.



9. After you set the longitude, press (C) to advance to the directional variation setting.
 - The sample display illustrated here shows a directional variation of 7 degrees west.
 - For details on the Qibla value, see "3-2 About Qibla values..."
10. Use (D) and (B) to change the directional variation setting the range shown in the illustration. Holding down either button changes the setting at high speed.
11. After finish setting your city data, press (A) twice to return to the Timekeeping Mode.

Notes

- Anytime you change pre-programmed city data, the city code (which is displayed with the city data when setting the prayer time calculation method) is marked with a "♣" to indicate that its data has been changed.

- Note here that the prayer time calculation method (see "2-2 About prayer time calculation methods") is also considered to be part of the pre-programmed data. Because of this, "♣" is shown with the city code if the prayer time calculation method has been changed, also.

- Whenever you change to another city code from a city code whose pre-programmed data has been changed, the changed data is automatically reset to their initial (unchanged) settings. You have to make the changes again if you wish to return to the original city code.
- New settings that you make (using “---” as the city code) are stored in memory until you change them. If you change from “---” to another city code, the settings for “---” are retained.

2-2 About prayer time calculation methods

Methods that are used to determine prayer times (especially Fajr, Asr, and Isha) differ somewhat between countries and regions. This watch comes with a total of seven built-in prayer time calculation methods that conform with various geographical areas around the world. In addition, you can also set your own calculation method for calculation of Fajr, Asr, and Isha.

Prayer Time Calculation Methods

No.	Type of Calculation Methods			Applicable Areas
	FAJR	ASR	ISHA	
1	18.0°	--1	17.0°	Europe, Turkey, Far East, etc.
2	18.0°	--1	18.0°	Kuwait, Iran, etc.
3	18.0°	--2	18.0°	Afghanistan, Pakistan, India, Bangladesh, etc.
4	19.0°	--1	--2	Saudi Arabia
5	19.5°	--1	--1	Bahrain, Qatar, Oman, UAE, etc.
6	20.0°	--1	18.0°	Africa, Lebanon, Jordan, Syria, Iraq, Yemen, continental United States, Indonesia, Malaysia, Singapore, etc.
7	--1	--1	--1	England
0	15.0°	--1	15.0°	(User programmable)

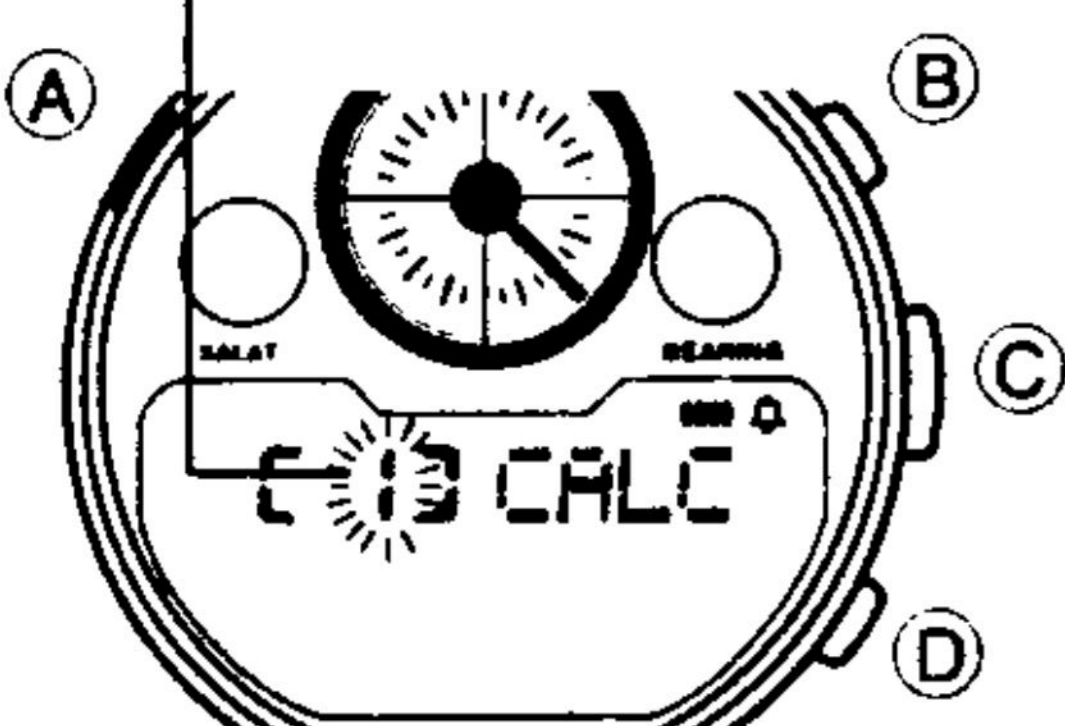
- Numbers 1 through 7 are pre-programmed calculation methods, while 0 is reserved for input of a user calculation method. These numbers are used to specify the calculation method that you want.
- The degree values in the above table (such as: 18.0°) indicate the angle of sun below the horizon. The values -- 1 and -- 2 have the following meanings.
FAJR -- 1 : 90 minutes before sunrise
 -- 2 : 120 minutes before sunrise
ASR -- 1 : Shadow length equal that produced by objects
 -- 2 : Shadow length double that produced by objects
ISHA -- 1 : 90 minutes after sunset
 -- 2 : 90 minutes after sunset, and 120 minutes after sunset during Ramadan
 The -- 1 or -- 2 setting of No. 0 can be changed when making its angle of sun below the horizon settings.
- For the angle of sun below horizon values, one degree of angular differential is equivalent to a time differential of approximately four minutes.
- At latitudes greater than 45° (north or south), this watch extrapolates Fajr and Isha prayer times based on the proportion of night time, and predawn light/twilight at 45° (north or south).
- This watch's pre-programmed prayer calculation methods were carefully selected to provide the widest possible applicability. Note, however, that there are still other calculation methods and variations.

To set a prayer calculation method

Important!

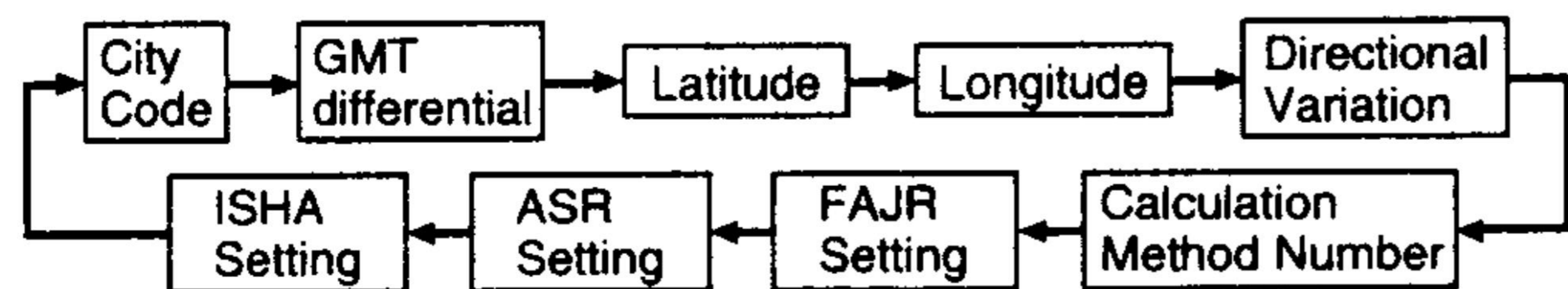
See “Prayer Time Calculation Methods” before making the following setting.

Prayer time calculation method number



1. Press (A) while in the Timekeeping Mode. At this time, the currently set city code starts to flash on the display because it is selected.
2. Press (C) five times to advance to the prayer time calculation setting screen. In this display, the prayer time calculation method number is flashing.

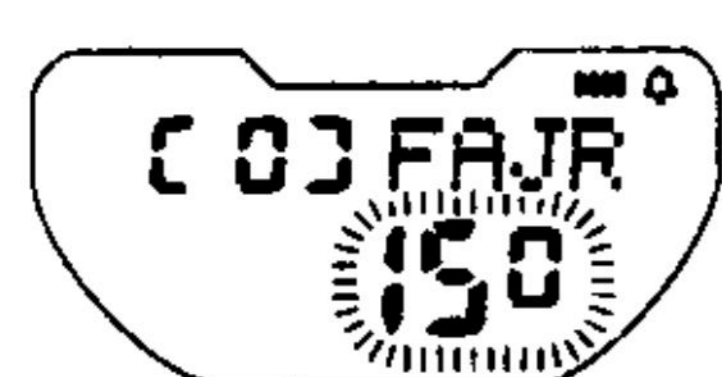
- Each time you press (C), the display changes in the sequence noted below. If you accidentally go past the prayer time calculation method setting screen, use (C) to go back through the sequence until it appears again.



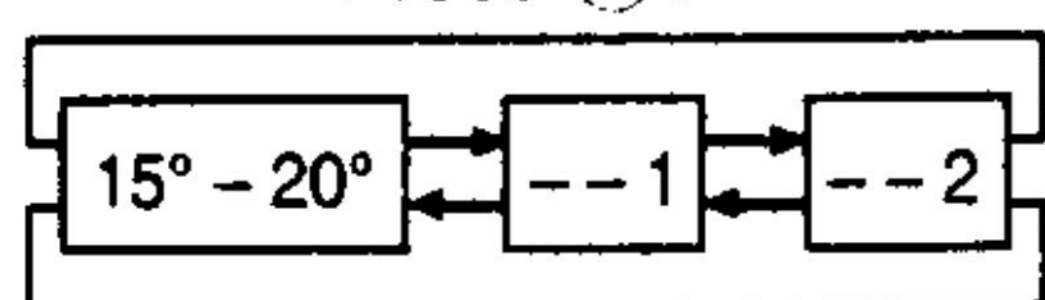
- If you have already set a pre-programmed city code, the corresponding prayer time calculation method number appears flashing on the display. Press (C) to check the settings for FAJR, ASR, and ISHA. If they are correct, proceed with step 10 below. If the settings are not correct, proceed with step 3 to change them.

3. Press (B) to decrease the prayer time method number and (D) to increase it.

- If you want to use one of the pre-programmed prayer time calculation methods, select its number and proceed with step 10 below. If you want to make your own settings, select number 0 and proceed with step 4.



Press (D).



Press (B).

4. If you selected number 0 in step 3, press (C) to display the FAJR setting screen.

5. Use (D) and (B) to change the FAJR setting within the range shown in the illustration. Holding down either button changes the setting at high speed.
 - With the “15° - 20°” setting, you can make the setting in units of 0.5 degrees.



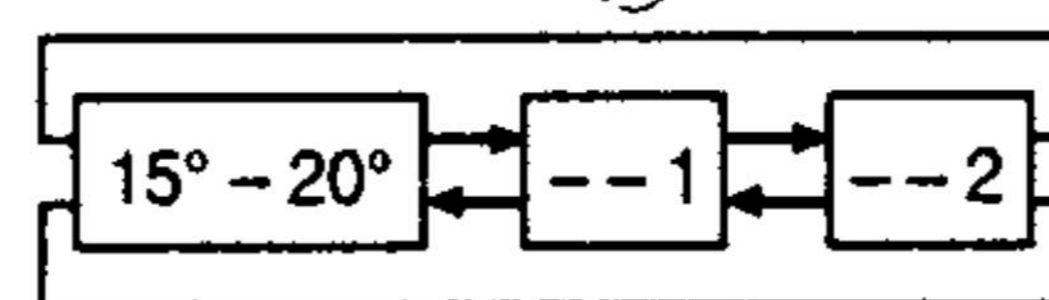
6. After you set the FAJR, press (C) to advance to the ASR setting.

7. Press (D) or (B) to switch the ASR setting between “-- 1” and “-- 2”.



8. After you set the ASR, press (C) to advance to the ISHA setting.

Press (D).



Press (B).

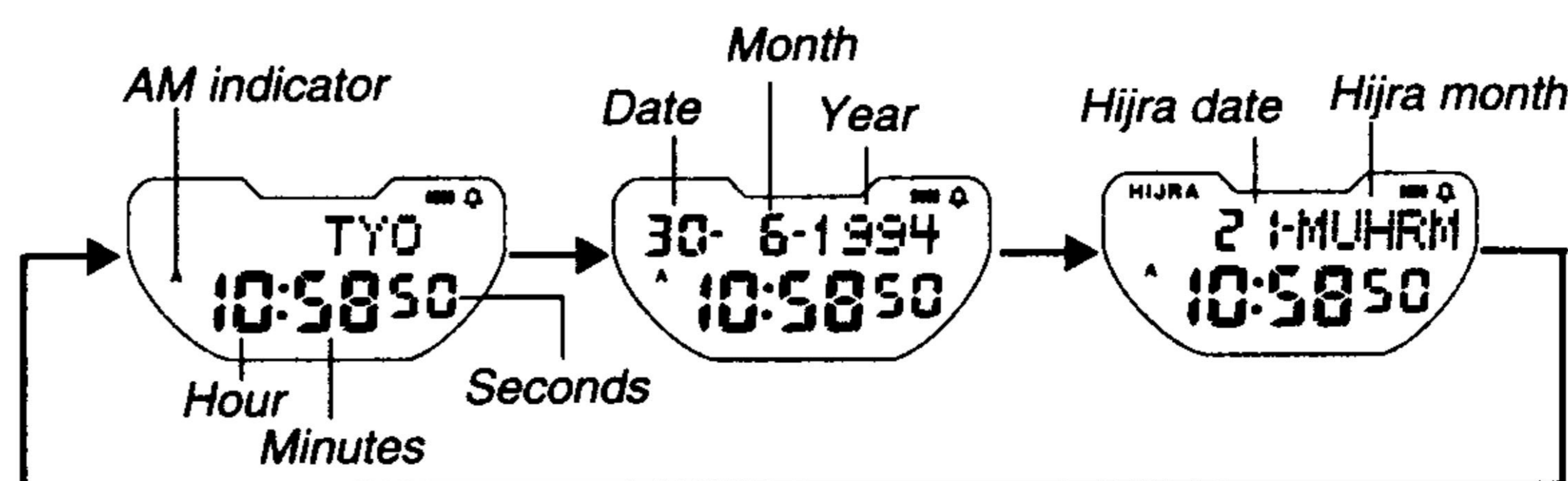
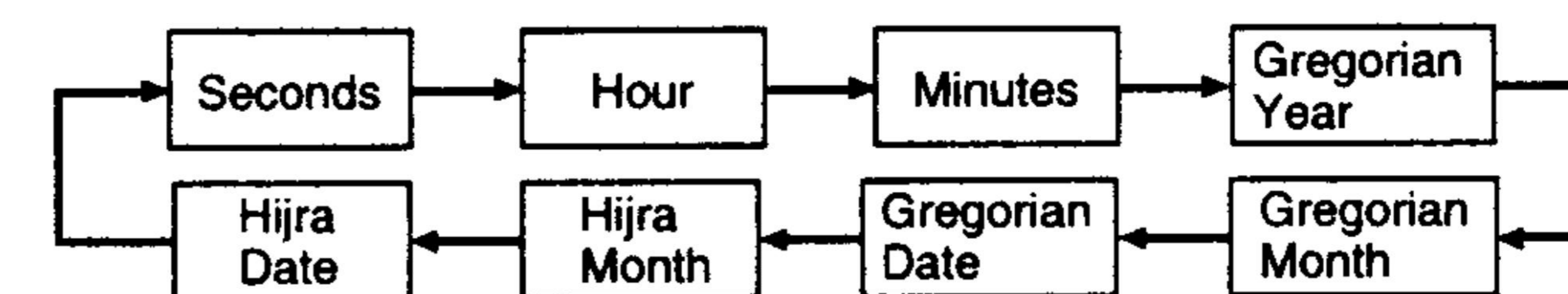
9. Use (D) and (B) to change the ISHA setting within the range shown in the illustration. Holding down either button changes the setting at high speed.

- With the “15° - 20°” setting, you can make the setting in units of 0.5 degrees.

10. After you finish setting the prayer time calculation method, press (A) twice to return to the Timekeeping Mode.

2-3 To set the time and date

1. Press (A) twice while in the Timekeeping Mode. The seconds digits start to flash on the display because they are selected.
2. Press (C) to change the selection in the following sequence.



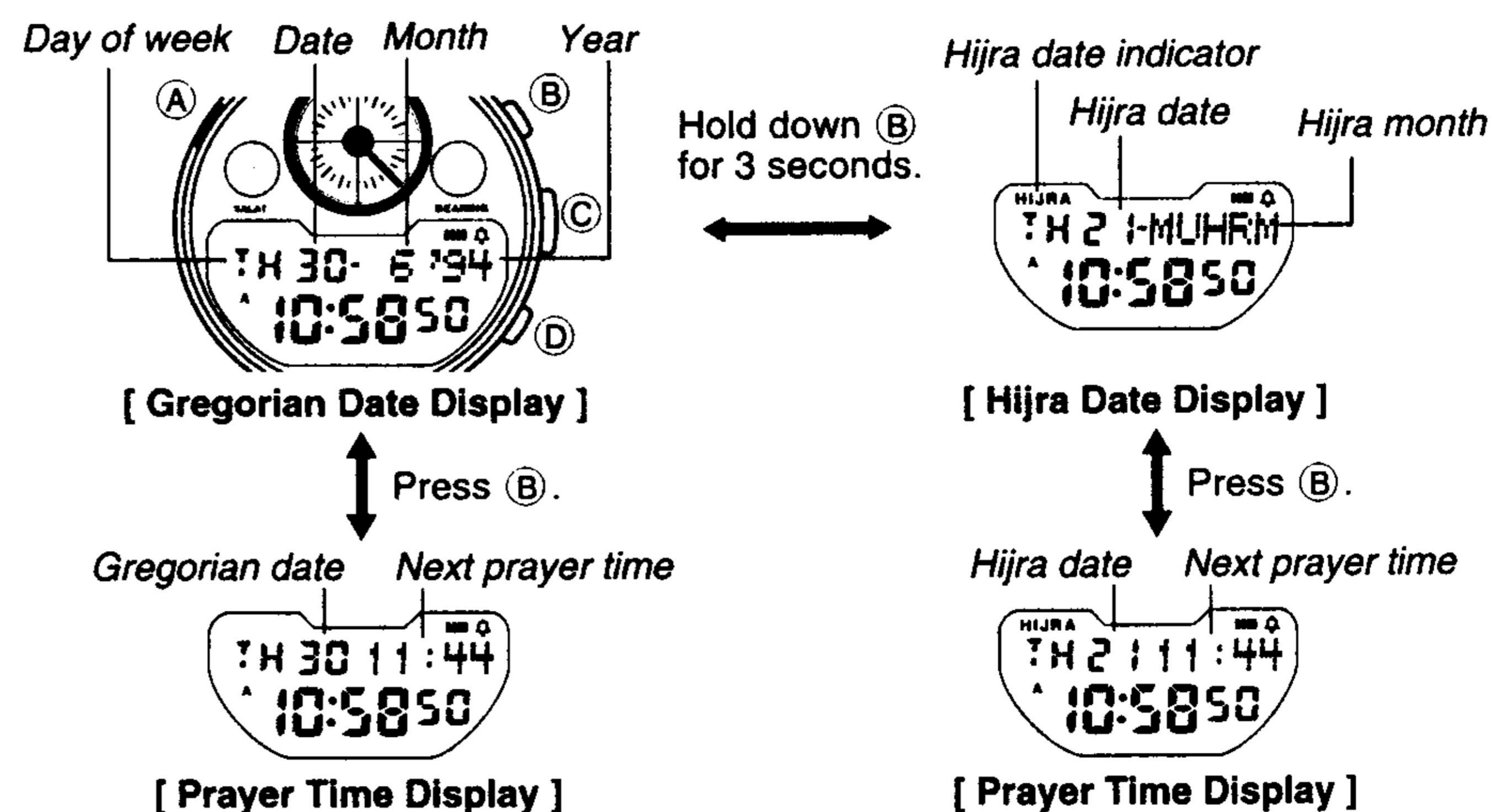
3. While the seconds digits are selected (flashing), press (D) to reset them to “00”. If you press (D) while the seconds count is in the range of 30 to 59, the seconds are reset to “00” and 1 is added to the minutes. If the seconds count is in the range of 00 to 29, the minutes count is unchanged.
4. While any other setting (besides seconds) is selected (flashing), press (D) to increase the setting or (B) to decrease it. Holding down either button changes the setting at high speed.
 - The digital time is always displayed in 12-hour format.
5. After you set the time and date, press (A) to return to the Timekeeping Mode.
 - The day of the week is automatically set in accordance with the Gregorian Date setting.
 - The Gregorian Date can be set within the range of January 1, 1990 to December 31, 2029.

Important!

This watch uses a 30-day cycle to calculate the Hijra months. Because of this, the Hijra date shown by this watch may differ from the actual date. When this happens, use time/date setting procedure described above to change the date to its correct setting. Also note that the watch uses midnight as the point for the change of date.

2-4 About the Timekeeping Mode display

You can switch the Timekeeping Mode display to show the Hijra date, Gregorian date, or prayer times as illustrated below.



Important!

- The date display (Hijra or Gregorian) you select here determines the format for the date that appears in other modes. If you select the Hijra date display, for example, the Hijra date format is used in the Prayer Time Mode as well. Note also that a Hijra date indicator appears on the display while the Hijra date display is selected.
- Whenever the Prayer Time Display is selected, the next sequential prayer time (Fajr, Zohr, Asr, Mgrib, Isha) is indicated on the display.
- AM and PM is not indicated on the Prayer Time Display.
- The next prayer time indicated on the Prayer Time Display changes one minute after the indicated prayer time is reached.
- The next prayer time is indicated for the current date only. Because of this, the Isha prayer time remains on the display even after Isha is passed. The next prayer time will change to Fajr after midnight.

PART 3 DETERMINING THE DIRECTION TO QIBLA

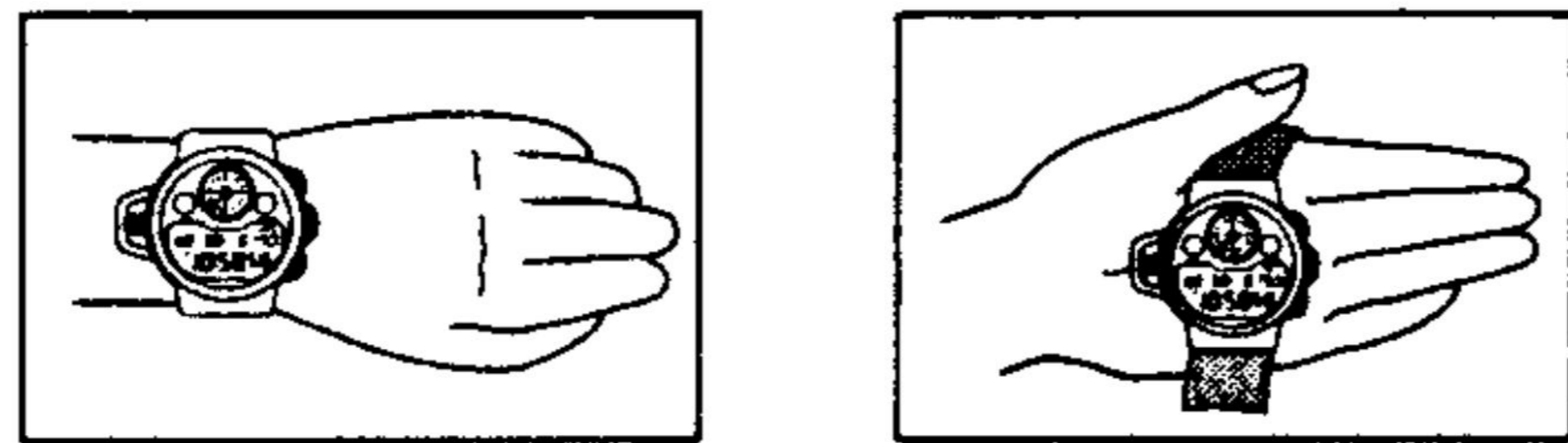
This part of the manual tells you how to determine Qibla. It also contains information about the Qibla value.

Important!

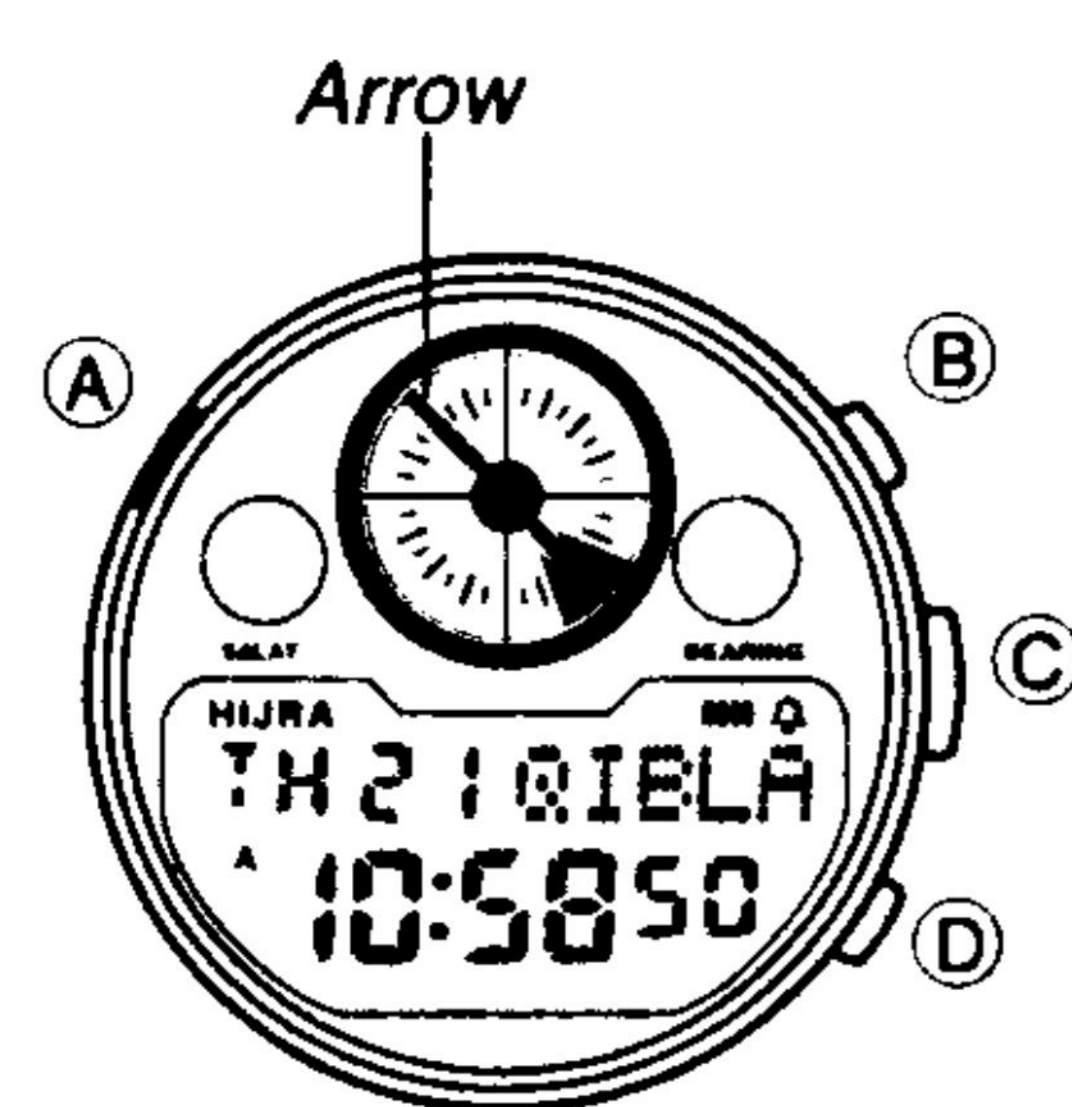
Be sure to keep this watch away from any sources of strong magnetism whenever using the digital compass to determining directions or Qibla. Also note that proper digital compass operation is impossible while inside a motor vehicle. For details, see "7-2 Digital Compass Precautions" of this manual.

3-1 Determining Qibla

1. Set your city data.
2. Place the watch on a flat surface or (if you wearing the watch), make sure that your wrist horizontal (in relation to the horizon).



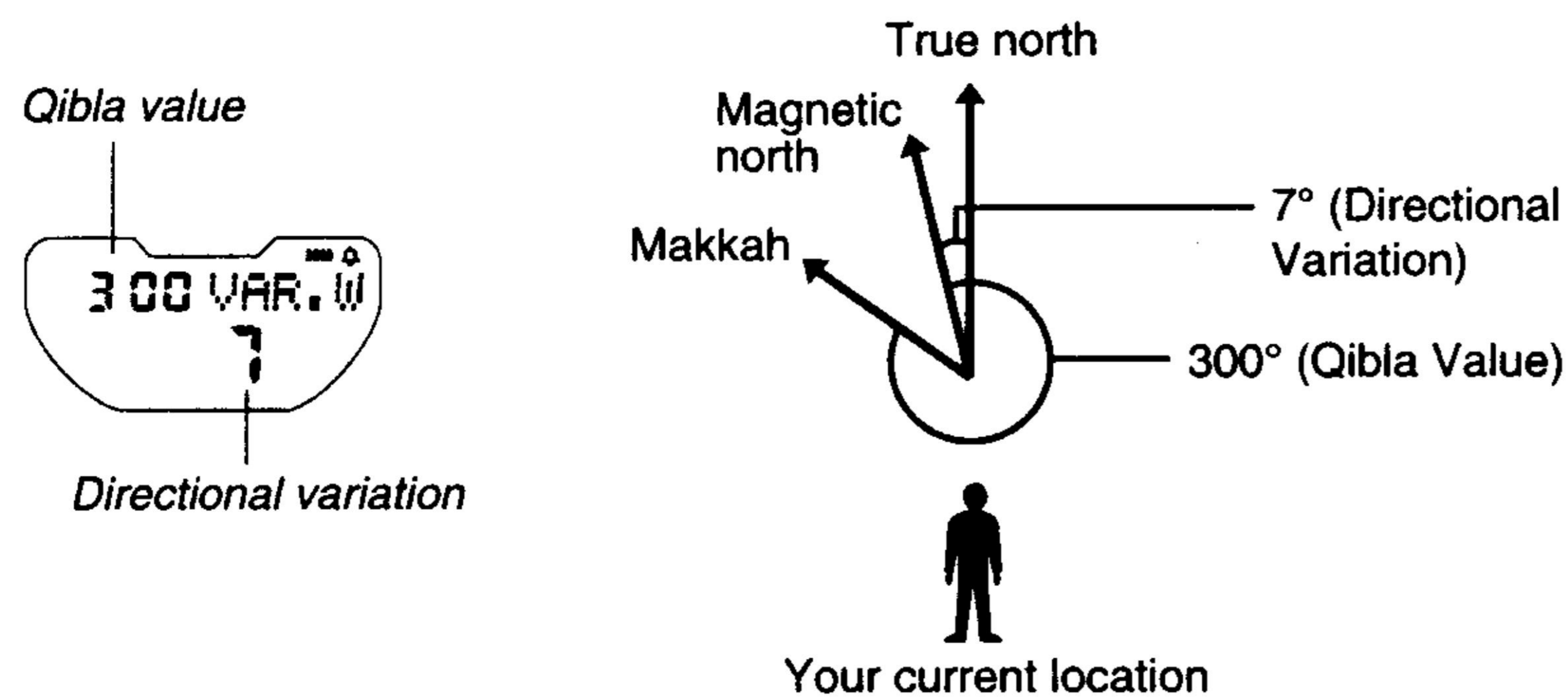
- Digital compass operation while the watch is not horizontal can produce erroneous results.



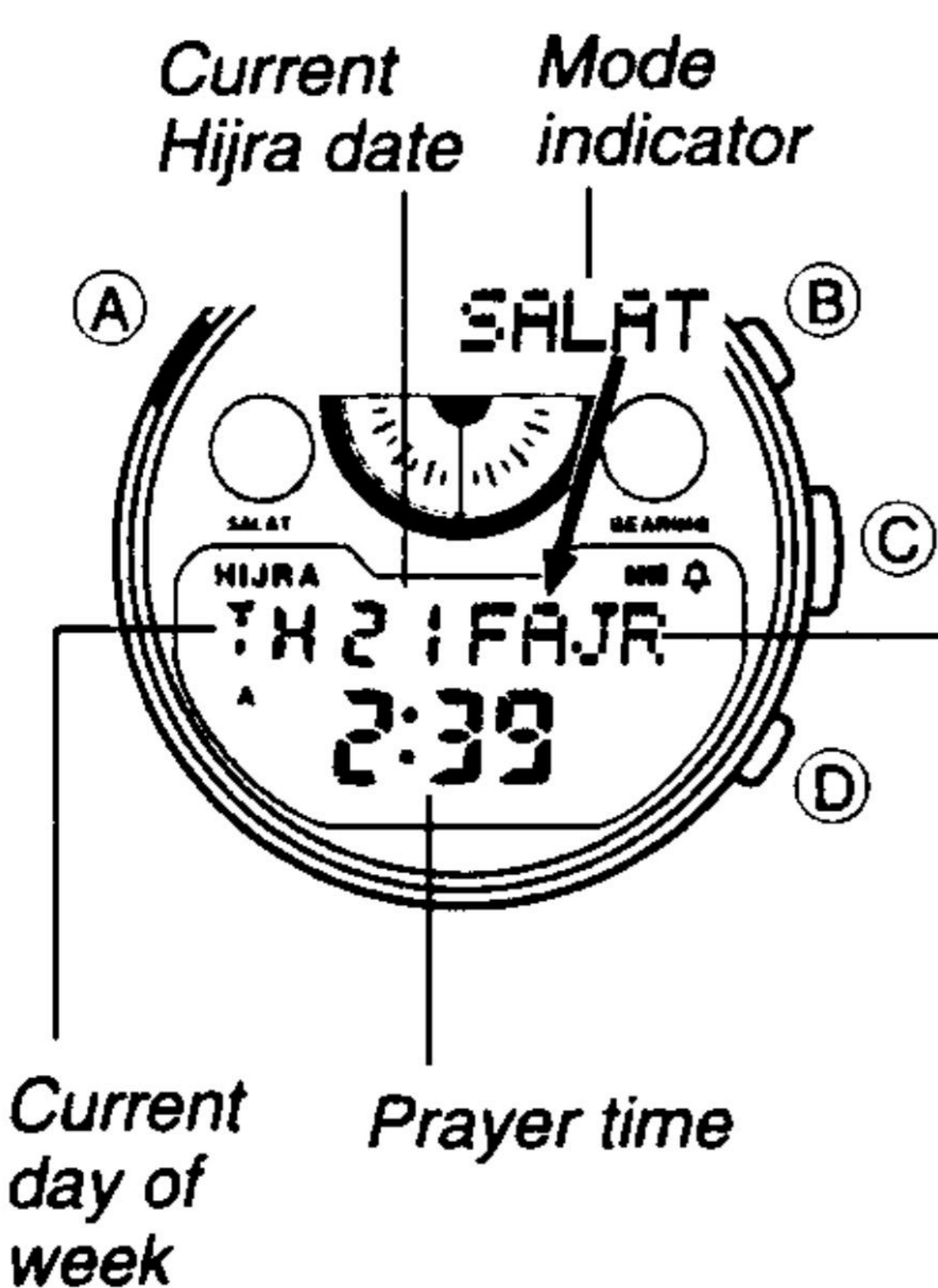
3. While in the Timekeeping Mode, press (D) to start the Qibla operation.
 - If the watch is not in the Timekeeping Mode, press (C) to enter the Timekeeping Mode before starting the Qibla operation.
 - "QIBLA" appears on the display, and soon an arrow pointing in the direction of QIBLA appears in the graphic display area.
 - The arrow remains on the display for about two minutes after you perform the above operation.

3-2 About Qibla values...

The Qibla value represents the clockwise angle formed between a line starting from your current location extending to magnetic north, and a line starting from your current location reaching Makkah.



PART 4 PRAYER TIME MODE



The Prayer Time Mode lets you recall the prayer times throughout the day. A Prayer Time Alarm (which can be switched on and off) sounds for 10 seconds when each prayer time arrives. Press any button to stop the alarm after it starts to sound.

4-1 About prayer times....

Prayer Indicator	Prayer Time
FAJR (Fajr)	Fajr start time
RISE*	Sunrise time
ZOHR (Zohr)	Zohr start time
ASR (Asr)	Asr start time
MGRB (Mgrib)	Mgrib start time
ISHA (Isha)	Isha start time

* RISE (sunrise time) does not indicate a prayer time.

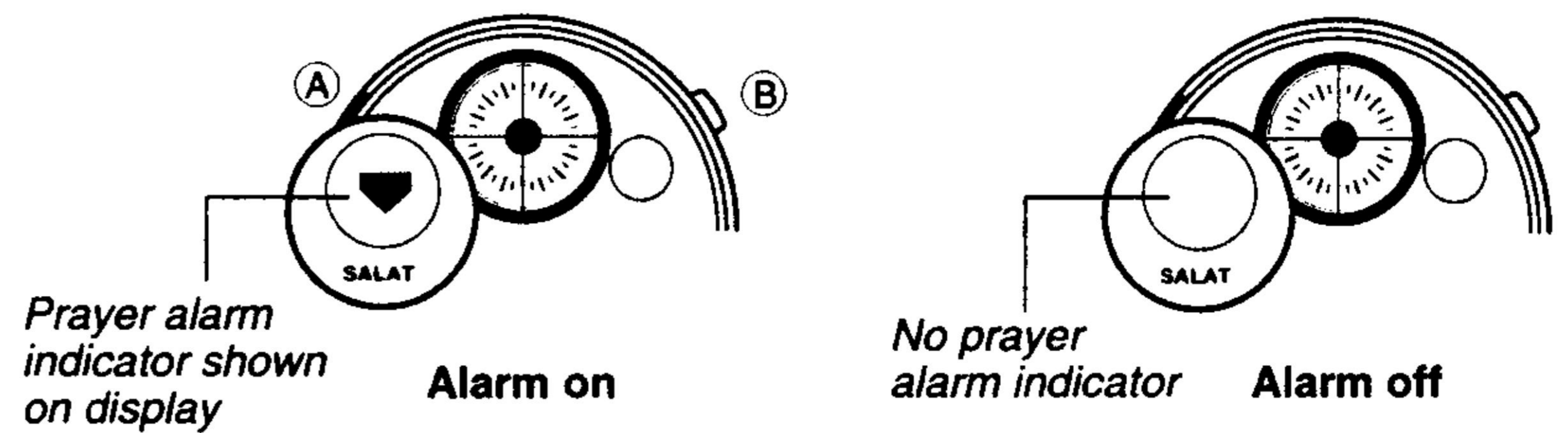
To view Prayer Time Mode data

While in the Prayer Time Mode, use (D) and (B) to scroll through the different prayer times. Each prayer time is accompanied by a prayer indicator that tells you what prayer time is displayed.

Prayer times are calculated automatically in accordance with the time, date, city data, and prayer time calculation method you set in the Timekeeping Mode. This, of course, means that you should always make sure that your Timekeeping Mode data is set correctly.

4-2 To switch the prayer alarm on and off

1. Enter the Prayer Time Mode and use (D) and (B) to display the prayer time whose alarm you want to switch on or off.
2. While the prayer time you want is displayed, press (A) to switch its prayer alarm on and off.



- You can individually switch the alarms on and off.
- If any prayer time indicator is on, the prayer alarm indicator is shown on the display when you change to another mode.

4-3 Prayer Time Precautions

- Compared to astronomical calculations, the accuracy of the prayer time values produced by this watch is within ±5 minutes.
- When you move from one region to another, be sure that you correctly set the Timekeeping Mode data (city data, prayer time calculation method, and current time) for the region you are moving into.
- In Europe, the United States, and other areas that use daylight saving time (summer time), be sure to make the proper adjustment in the current time and the GMT differential to allow for standard time or daylight saving time (standard time +1 hour).

Example:

Paris: GMT +1 (standard time) or GMT +2 (daylight saving time)
 New York: GMT -5 (standard time) or GMT -4 (daylight saving time)

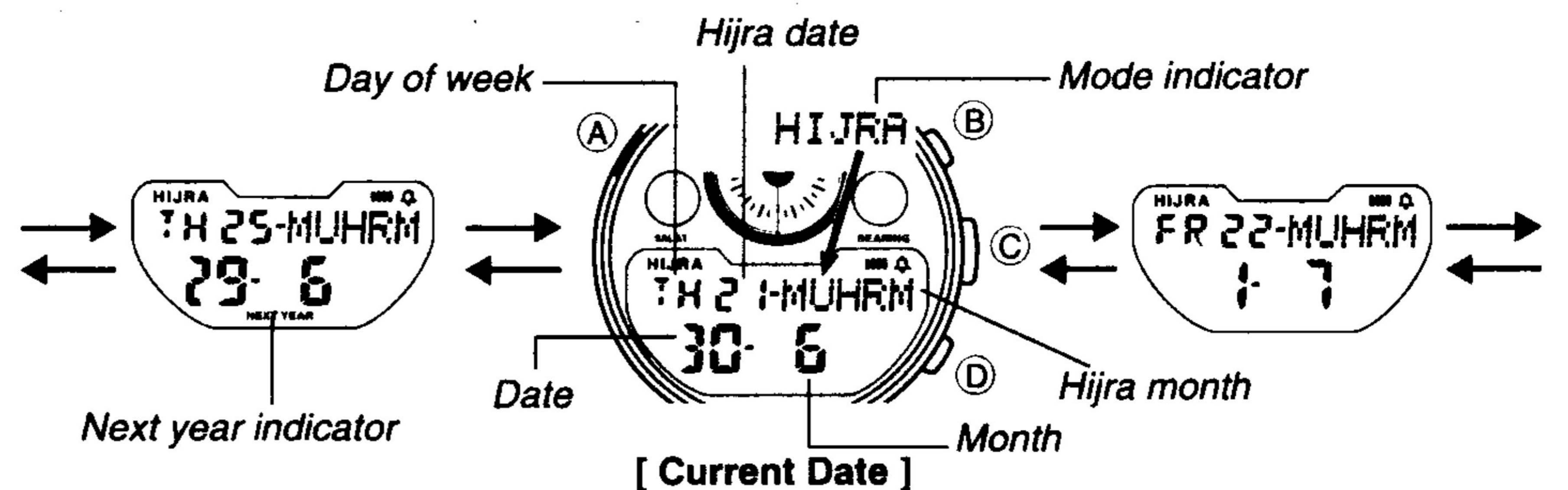
Remember that if you fail to make the above settings correctly, the prayer times cannot be calculated and displayed properly.

PART 5 HIJRA DATE MODE

In the Hijra Date Mode, you can scroll through dates to display both the Hijra date and the Gregorian date.

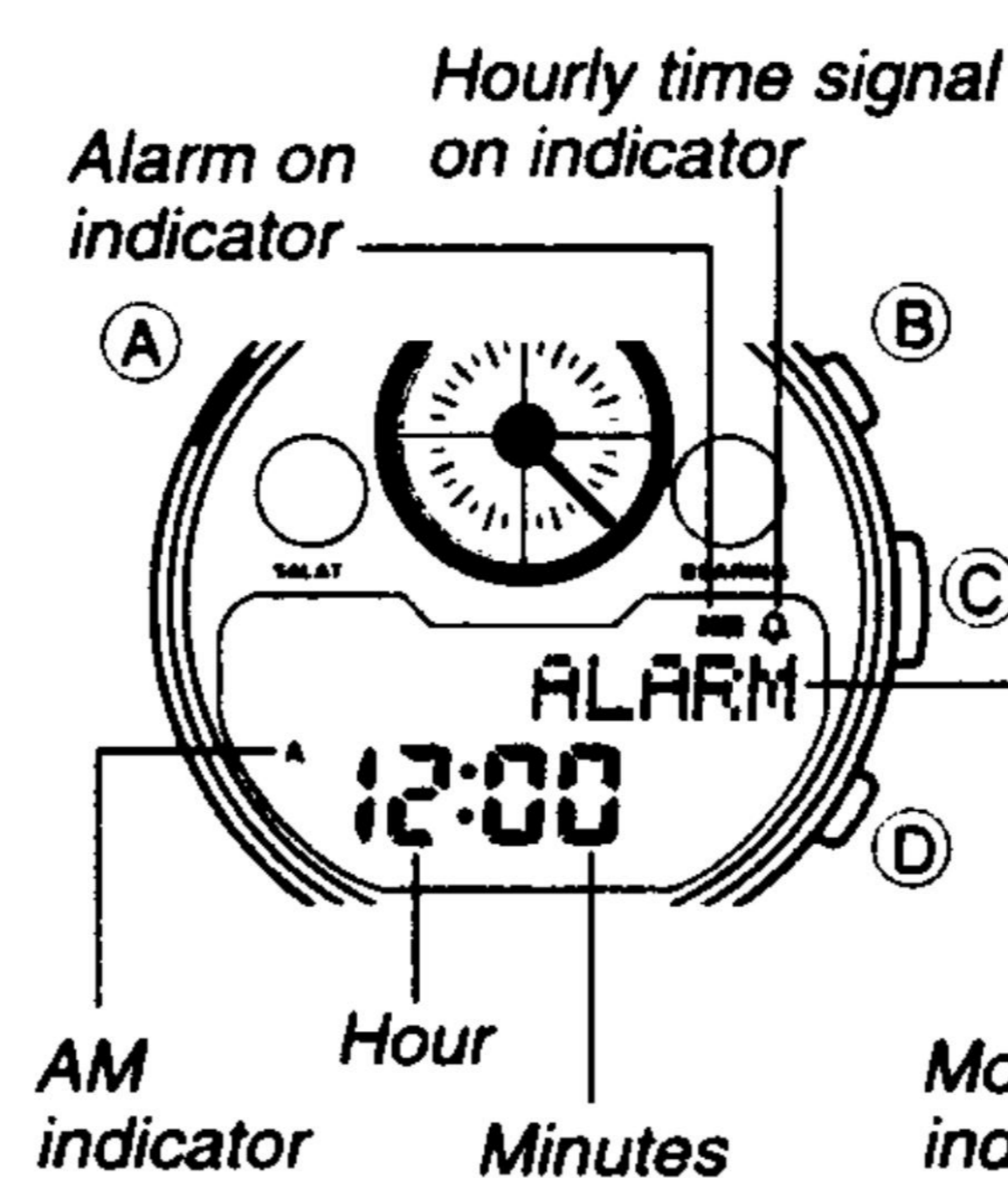
To display a specific date

While in the Hijra Date Mode, use (D) to advance the date (Timekeeping Mode date) and (B) to move back. Holding down either button changes the date at high speed.



- When you enter the Hijra Date Mode from another mode, the display automatically changes to the current Hijra and Gregorian dates, in accordance with the Timekeeping Mode setting.
- This watch uses a 30-day cycle to calculate the Hijra months. Because of this, the Hijra date shown by this watch may differ from the actual date.
- With the above operation, you can advance the date up to one year. If the current Timekeeping Mode Gregorian date is June 30, 1994 for example, you can advance up to June 29, 1995.
- Note that the message "NEXT YEAR" appears on the display when you advance the date into the next year.

PART 6 ALARM MODE



When the Daily Alarm is switched on, the alarm sounds for 20 seconds at the preset time each day. Press any button to stop the alarm after it starts to sound. When the Hourly Time Signal is switched on, the watch beeps every hour on the hour.

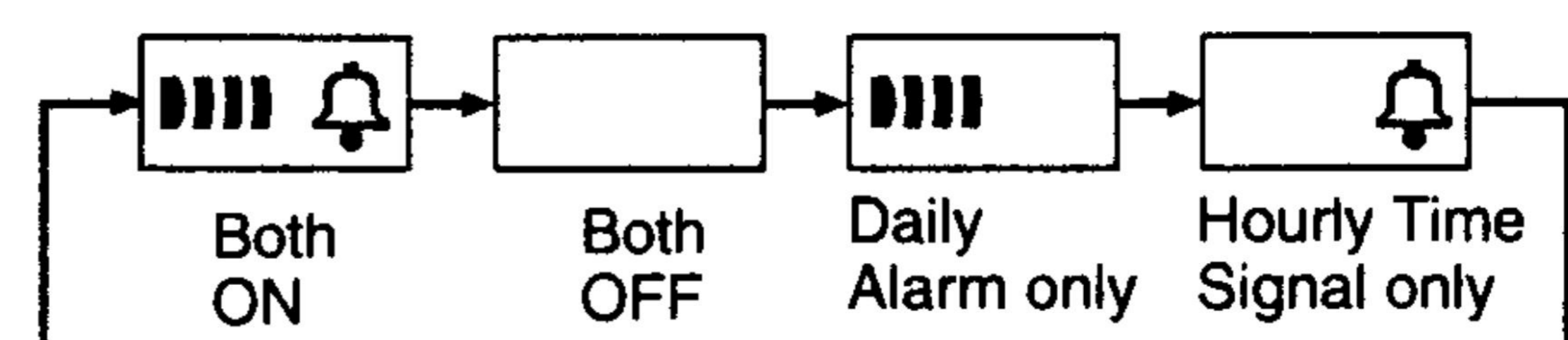
To set the alarm time

1. Press (A) while in the Alarm Mode. The hour digits flash on the display because they are selected.
 - At this time the Daily Alarm is switched on automatically.
 2. Press (C) to change the selection in the following sequence.
3. Press (D) to increase the selected digits and (B) to decrease them. Holding down either button changes the selection at high speed.
- The digital time is always displayed in 12-hour format. Take care to set the alarm time correctly as morning (A) or afternoon (P).
4. After you set the alarm time, press (A) to return to the Alarm Mode.

To switch the Daily Alarm and Hourly Time Signal on and off

Press (B) while in the Alarm Mode to change the status of the Daily Alarm and Hourly Time Signal in the following sequence.

[Alarm ON indicator/Hourly Time Signal ON indicator]



To test the alarm

Hold down (D) while in the Alarm Mode to sound the alarm.

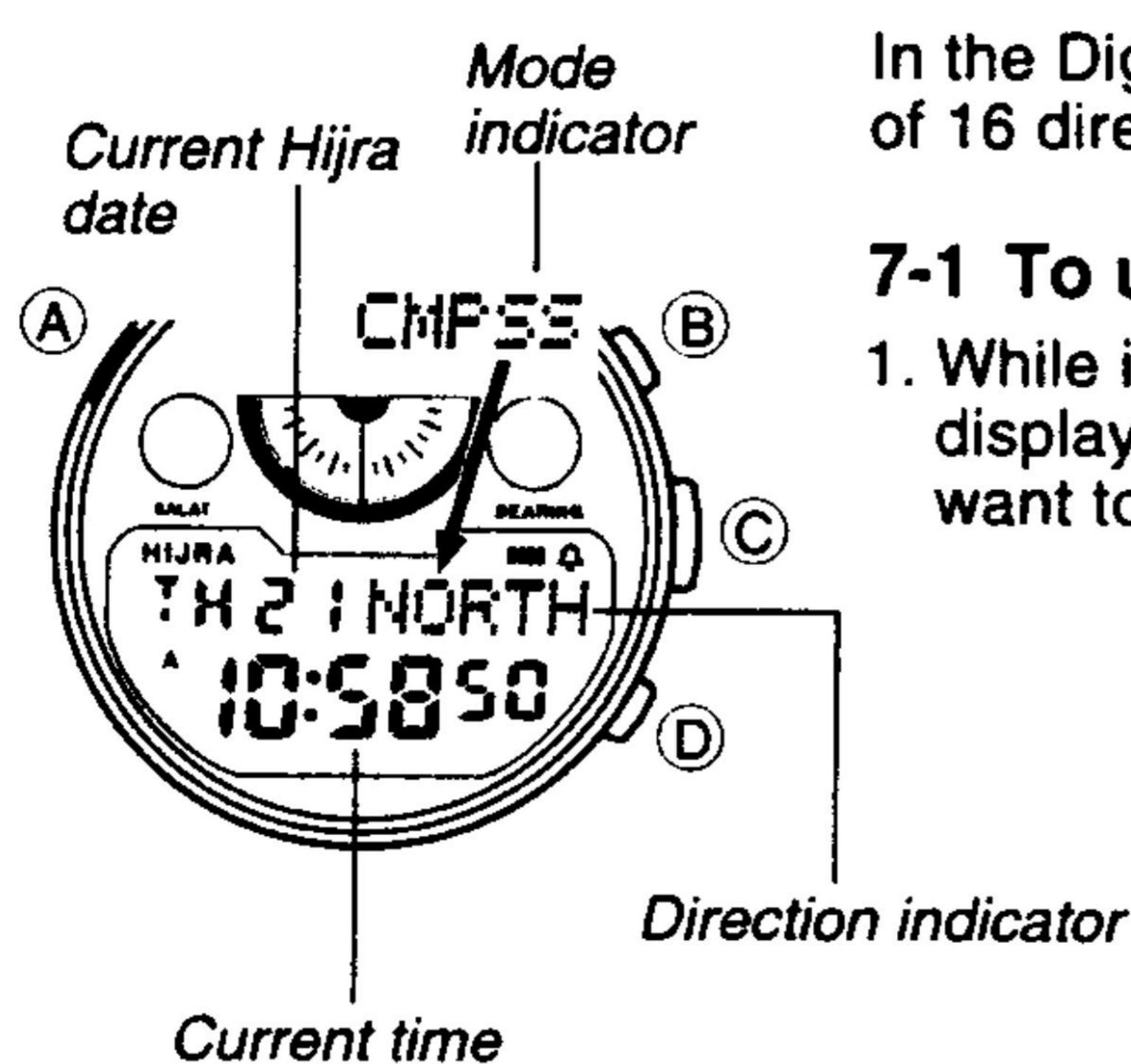
About the alarm sounds

This watch has three types of alarms: Prayer Time Alarm, Daily Alarm, and Hourly Time Signal. Each alarm has a different type of sound so you can tell them apart. Note that the alarms have the following priority sequence whenever they are set to sound at the same time.

1. Prayer Time Alarm
2. Daily Alarm
3. Hourly Time Signal

- This means that if the Daily Alarm and Prayer Time Alarm are set to sound at the same time, only the Prayer Time Alarm sounds.

PART 7 DIGITAL COMPASS MODE



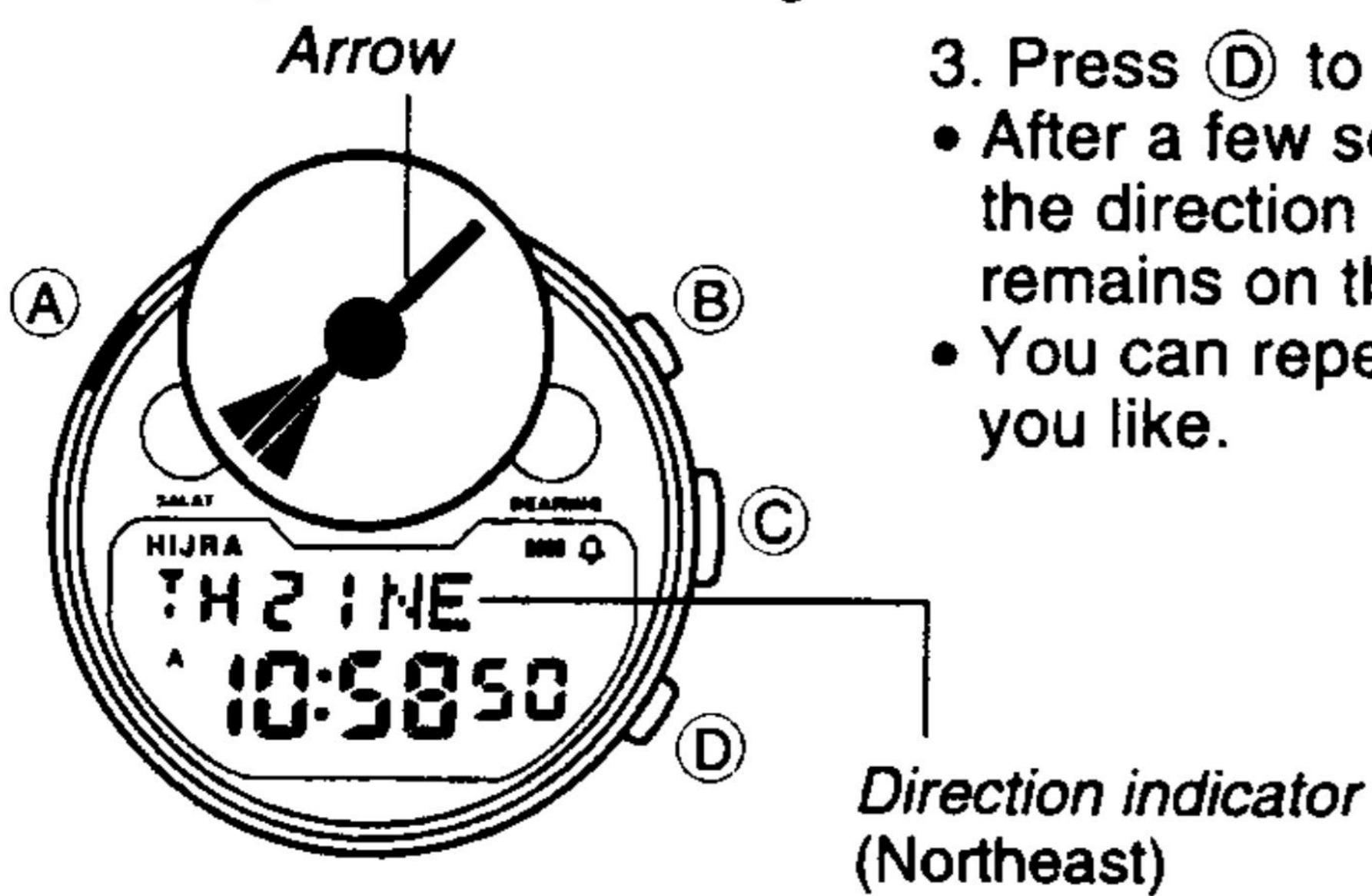
In the Digital Compass Mode, the watch points to one of 16 directions selected by you.

7-1 To use the digital compass

1. While in the Digital Compass Mode, use (B) to display the indicator that specifies the direction you want to point to.

Indicator	Direction	Indicator	Direction	Indicator	Direction	Indicator	Direction
NORTH	North	NNE	North-northeast	NE	Northeast	ENE	East-northeast
EAST	East	ESE	East-southeast	SE	Southeast	SSE	South-southeast
SOUTH	South	SSW	South-southwest	SW	Southwest	WSW	West-southwest
WEST	West	WNW	West-northwest	NW	Northwest	NNW	North-northwest

2. Place the watch on a flat surface or (if you wearing the watch), make sure that your wrist horizontal (in relation to the horizon).
- Note that taking a measurement while the watch is not horizontal (in relation to the horizon) can result in large measurement error.

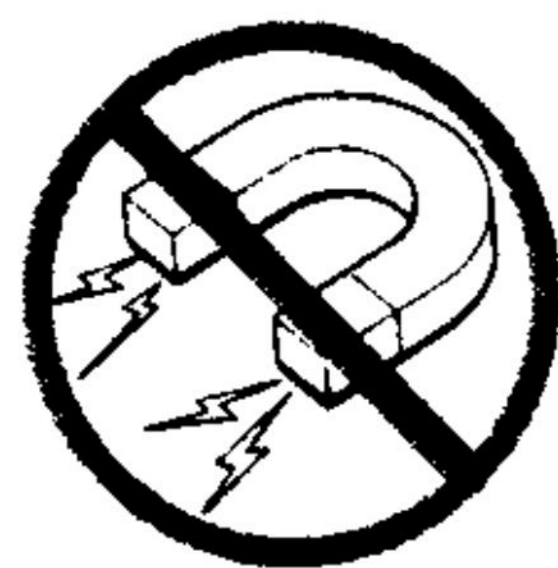


3. Press (D) to start the compass operation.
 - After a few seconds the arrow on the display points in the direction you selected in step 1. This arrow remains on the display for about two minutes
 - You can repeat steps 1 through 3 as many times as you like.

7-2 Digital Compass Precautions

The following describes precautions you should observe when performing a digital compass operation. Note that the term digital compass operation in this manual refers to Digital Compass Mode operations and to the Qibla operation. This watch features a built-in magnetic bearing sensor that detects terrestrial magnetism. This means that the northern direction indicated by this watch is magnetic north, which is somewhat different from true polar north. The magnetic north pole is located in northern Canada, while the magnetic south pole is in southern Australia. The difference between true north and magnetic north is expressed in degrees, and it is called the *directional variance*. The map that is included separately with this watch shows the directional variance for points around the globe. Note that the directional variance as measured with magnetic compasses tends to be greater as one gets closer to either of the magnetic poles. You should also remember that some maps indicate true north (instead of magnetic north), and so you should make allowance when using such maps with this watch.

Location



- Using a digital compass operation when you are near a source of strong magnetism can cause large errors in readings. Because of this you should avoid using a digital compass operation while in the vicinity of the following types of objects: permanent magnets (magnetic necklaces, etc.), concentrations of metal (metal doors, lockers, etc.), high tension wires, aerial wires, household appliances (TVs, personal computers, washing machines, freezers, etc.).

- Accurate direction measurements are impossible while in a train, boat, air plane, etc.
- Accurate measurements are also impossible indoors, especially inside ferroconcrete structures. This is because the metal framework of such structures picks up magnetism from appliances, etc.

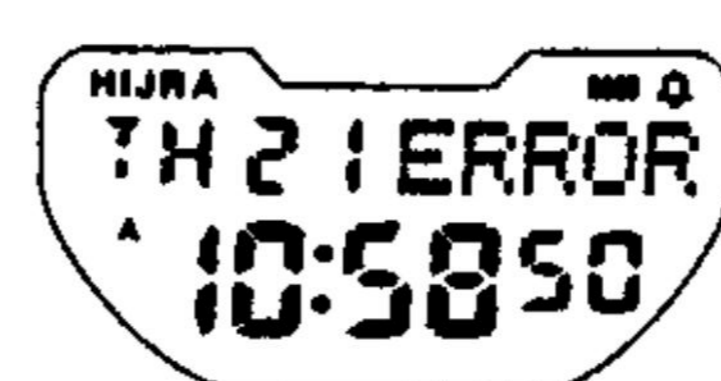
Storage

- The precision of the digital compass may deteriorate if the watch becomes magnetized. Because of this, you should be sure to store the watch away from magnets or any other sources of strong magnetism, including: permanent magnets (magnetic necklaces, etc.) and household appliances (TVs, personal computers, washing machines, freezers, etc.)
- Whenever you suspect that the watch may have become magnetized, perform either one of two calibration procedures: *bidirectional calibration* or *northerly calibration* (see "7-4 Calibrating the magnetic sensor").

7-3 Warning Indicators

Warning indicators (message) appear whenever any of the conditions described below occurs.

Abnormal Magnetic Field Indicator



This indicator appears on the display whenever the digital compass has a problem obtaining a correct reading. This condition could indicate that the watch is within a very high magnetic field, and so you should try moving to another location. Also see "7-2 Digital Compass Precautions" for further information on conditions that cause errors.

Low Battery Indicator



This message indicates battery power is too low to perform a digital compass operation. It appears whenever battery power drops below a certain level, or when you try to perform a digital compass operation under cold conditions.

If the BATT message appears because of use under cold conditions, it should clear (and normal operation should return) after the watch is brought back to normal temperature.

If battery power is low (indicated when BATT appears under normal temperatures), you should have the battery replaced as soon as possible.

7-4 Calibrating the magnetic sensor

Whenever you suspect that the readings produced by a digital compass operation are wrong, you should calibrate it. You can use either one of two calibration procedures: *bidirectional calibration* or *northerly calibration*.

You should use bidirectional calibration when you want to calibrate the digital compass to operate within an area exposed to magnetic force. This type of calibration should be employed if the watch becomes magnetized for any reason.

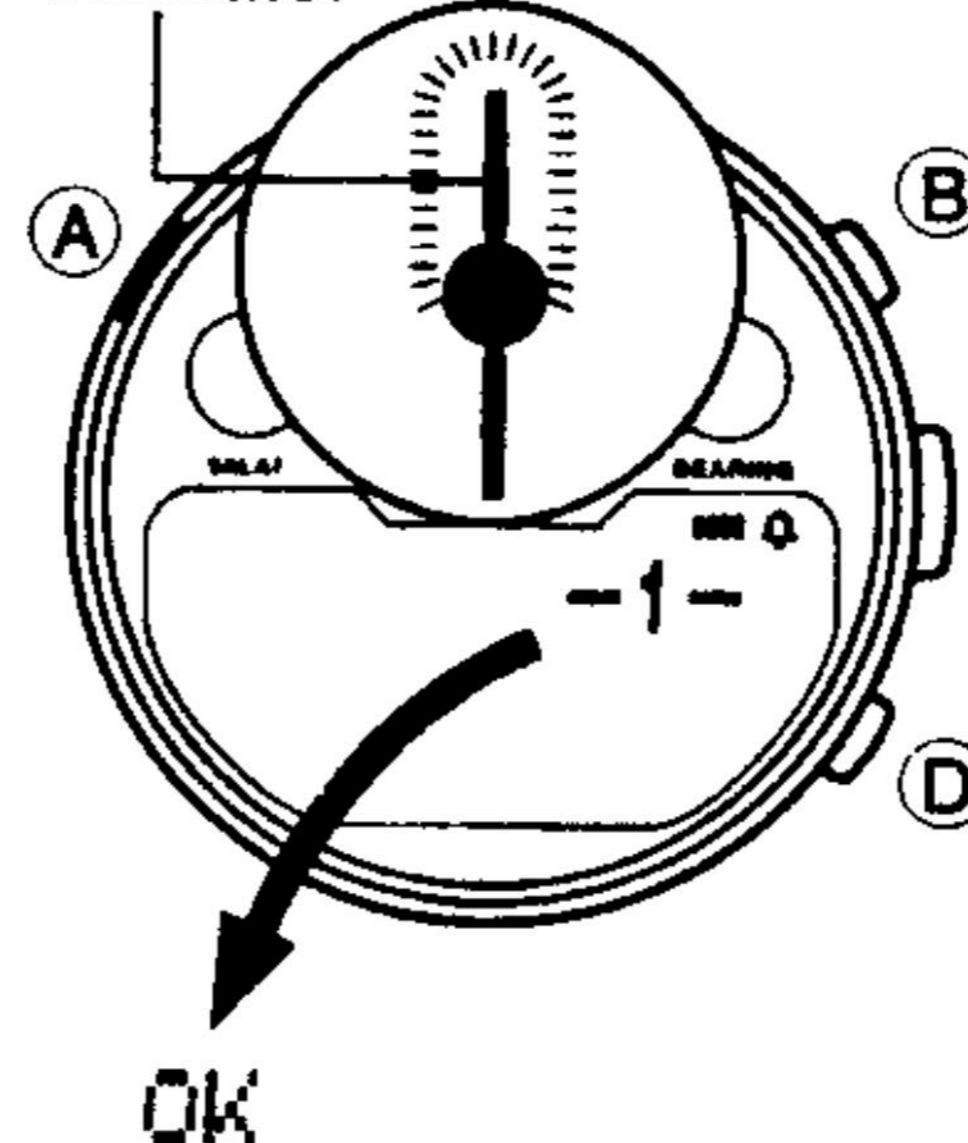
With northerly calibration, you "teach" the watch which way is magnetic north (which you have to determine with another compass or some other means).

Important!

- If you want to perform both bidirectional and northerly calibration, be sure to perform bidirectional calibration first, and then perform northerly calibration. This is necessary because bidirectional calibration cancels any previously set northerly calibration setting.
- If you do not perform any button operation for two or three minutes while either calibration procedure is in progress (while the calibration direction indicator is flashing at the 12 or 6 o'clock position), the watch automatically returns to the Digital Compass Mode.
- The more correctly you perform bidirectional calibration, the better the accuracy of your digital compass readouts. You should perform bidirectional calibration whenever you change environments where you perform digital compass operations and whenever you feel that digital compass operations are producing incorrect readings.

To perform bidirectional calibration

Calibration direction indicator



1. While in the Digital Compass Mode, press (A) to start the bidirectional calibration procedure.
 - At this time, the display changes to show "- 1 -" and the calibration direction indicator flashes at the 12 o'clock position to indicate that the watch is ready to calibrate the first direction.
2. Place the watch on a level surface, and press (D) to calibrate the first direction.
 - When the calibration procedure is complete, the message "OK" appears in the display. This shortly changes to "- 2 -" and the calibration direction indicator flashes at the 6 o'clock position to indicate that the watch is ready for the second direction.
3. Rotate the watch 180 degrees.

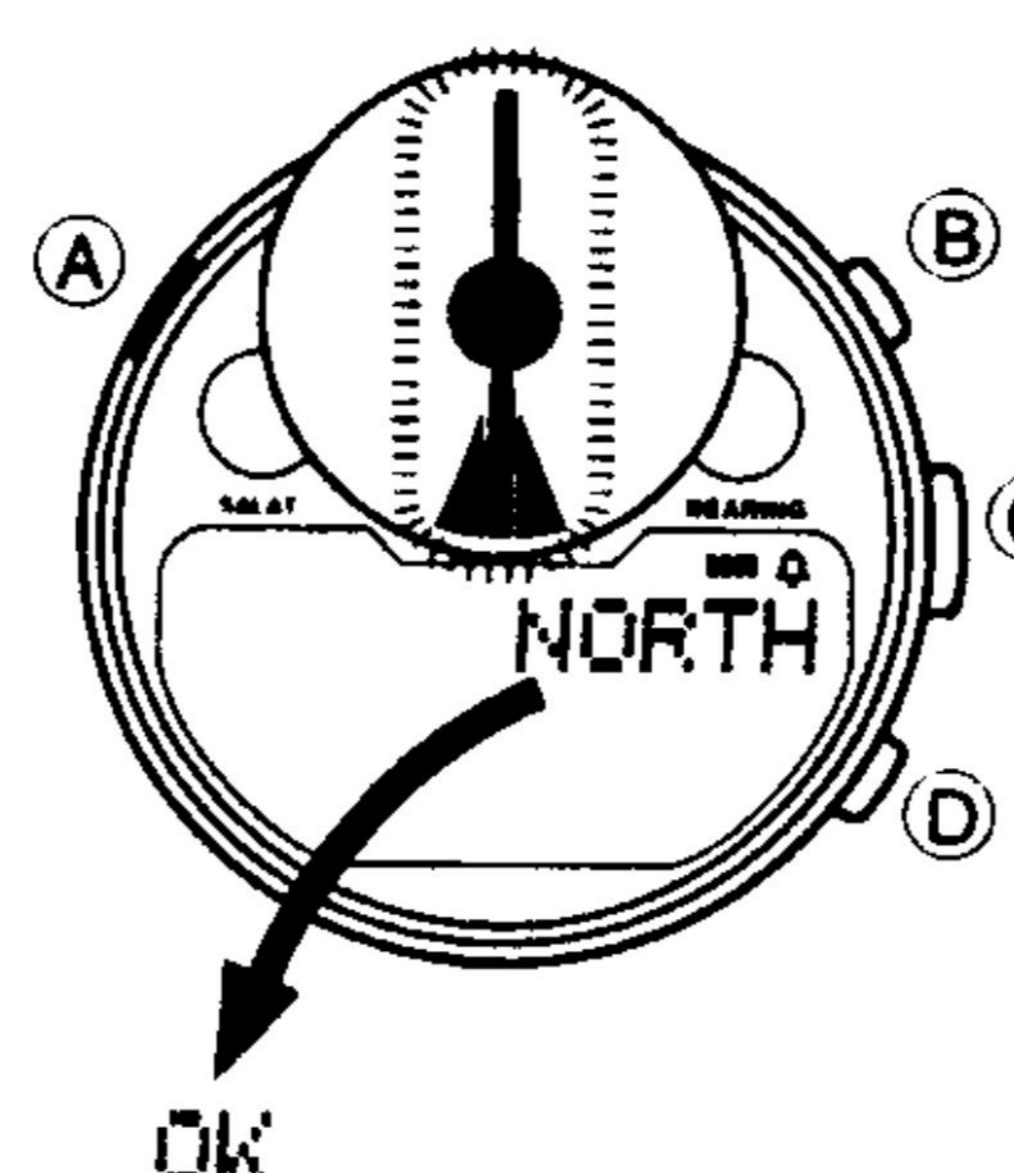
4. Press (D) again to calibrate the second direction.
 - When the calibration procedure is complete, the message "OK" appears in the display. After a short while, the watch automatically returns to the Digital Compass Mode.

Precautions about bidirectional calibration

- You can use any two opposing directions for bidirectional calibration. You must, however, make sure that they are 180 degrees opposite each other. Remember that if you perform the procedure incorrectly, you will get wrong readings from digital compass operations.
- Do not move the watch during one to two seconds (from the point you press (D), up to the point that "OK" appears on the display) that the calibration of each direction is in progress. If you do, the Abnormal Magnetic Field Indicator "ERROR" appears on the display. When this happens, restart the bidirectional calibration procedure from the beginning.
- The appearance of "ERROR" during bidirectional calibration can also be caused by local interference. Move to another location and try the bidirectional calibration procedure again.
- You should perform bidirectional calibration in an environment that is the same as that where you plan to be performing digital compass operations. If you plan to use it in an open field, for example, calibrate in an open field.

To perform northerly calibration

1. While in the Digital Compass Mode, press (A) to start the bidirectional calibration procedure.
2. Press (C) to start the northerly calibration procedure.
 - At this time, the indicator "NORTH" appears on the display.



3. Place the watch on a level surface, and position it so that its 12 o'clock position points magnetic north (as measured with another compass).
4. Press (D) to start the calibration operation.
 - When the calibration procedure is complete, the message "OK" appears on the display. After a short while, the watch automatically returns to the Digital Compass Mode.

City Data List

*1 City Code List

*2 City Code

*3 City

*4 Based on data for December, 1993

*5 Based on data for 1990

*6 Original City Data List

City Code List *1

City Code *2	City *3	TZONE *4	LAT.	LON.	VAR *5	CALC
NYC	New York	-5	40.8N	73.9W	13W	6
---		0	0N	0E	0E	1
LON	London	0	51.5N	0.2W	5W	7
CAS	Casablanca	0	33.7N	7.6W	5W	6
ALG	Algiers	1	36.8N	3.0E	2W	6
TUN	Tunis	1	36.8N	10.2E	0E	6
IST	Istanbul	2	41.0N	29.0E	3E	1
CAI	Cairo	2	30.1N	31.3E	2E	6
KRT	Khartoum	2	15.6N	32.5E	1E	6
BEY	Beirut	2	33.9N	35.5E	3E	6
AMM	Amman	2	32.0N	35.9E	3E	6
DAM	Damascus	2	33.5N	36.3E	3E	6
JED	Jeddah	3	21.5N	39.2E	2E	4
RUH	Riyadh	3	24.7N	46.8E	3E	4
BGW	Baghdad	3	33.3N	44.4E	3E	6
SAH	Sanaa	3	15.4N	44.2E	1E	6
KWI	Kuwait	3	29.3N	48.0E	3E	2
BAH	Bahrain (Al Manamah)	3	26.2N	50.6E	2E	5
DOH	Doha	3	25.3N	51.6E	2E	5
THR	Tehran	3.5	35.7N	51.4E	4E	2
DXB	Dubai	4	25.2N	55.3E	1E	5
MCT	Muscat	4	23.6N	58.6E	1E	5
KBL	Kabul	4.5	34.5N	69.2E	2E	3
KHI	Karachi	5	24.9N	67.0E	0E	3
DEL	Delhi	5.5	28.7N	77.2E	0E	3
DAC	Dhaka	6	23.7N	90.4E	1W	3
JKT	Jakarta	7	6.1S	106.8E	0E	6
KUL	Kuala Lumpur	8	3.1N	101.7E	0E	6
SIN	Singapore	8	1.3N	103.8E	0E	6
HKG	Hong Kong	8	22.3N	114.2E	2W	1
TYO	Tokyo	9	35.7N	139.8E	7W	1

Original City Data List *6

City	TZONE	LAT.	LON.	VAR.	City	TZONE	LAT.	LON.	VAR.
Middle East									
ABADAN	3.5	30N	48E	3E	HAMADAN	3.5	35N	49E	4E
ABHA	3	18N	43E	2E	HERAT	4.5	34N	62E	3E
ABU DHABI	4	25N	54E	1E	HODEIDA	3	13N	43E	1E
ADANA	2	37N	35E	4E	HOMS	2	35N	37E	3E
ADEN	3	13N	45E	1E	IRBID	2	33N	36E	3E
AL JAWF	3	30N	40E	3E	ISTANBUL	2	41N	29E	3E
AL KHALUF	4	21N	58E	1E	IZMIR	2	38N	27E	3E
AL MANAMAH	3	26N	51E	2E	JEDDAH	3	22N	39E	2E
AL MUKALLA	3	13N	49E	1E	JERUSALEM	2	32N	35E	3E
ALEPPO	2	36N	37E	4E	JIZAN	3	17N	43E	2E
AMMAN	2	32N	36E	3E	KABUL	4.5	35N	69E	2E
AN NAJAF	3	32N	44E	3E	KANDAHAR	4.5	32N	66E	2E
ANKARA	2	40N	33E	4E	KUWAIT	3	29N	48E	3E
AQABA	2	30N	35E	3E	LATAKIA	2	36N	36E	3E
ARAR	3	31N	41E	3E	MASHHAD	3.5	36N	60E	3E
BAGHDAD	3	33N	44E	3E	MEDINA	3	25N	40E	2E
BAGHLAN	4.5	36N	69E	3E	MOSUL	3	36N	43E	4E
BASRA	3	31N	48E	3E	MUSCAT	4	24N	59E	1E
BEIRUT	2	34N	36E	3E	NICOSIA	2	35N	33E	3E
BURAYDAH	3	26N	44E	2E	RAS AL KHAIMAH	4	26N	56E	2E
DAMASCUS	2	34N	36E	3E	RIYADH	3	25N	47E	3E
DAMMAM	3	26N	50E	2E	SALALAH	4	17N	54E	1E
DOHA	3	25N	52E	2E	SANAA	3	15N	44E	1E
DUBAI	4	25N	55E	1E	SHIRAZ	3.5	30N	53E	2E
ESFAHAN	3.5	33N	52E	3E	TABRIZ	3.5	38N	46E	4E
FUJAIRAH	4	25N	56E	1E	TABUK	3	28N	37E	3E
HAIFA	2	33N	35E	3E	TEHRAN	3.5	36N	51E	4E
HAMA	2	35N	37E	3E	TELABIB	2	32N	35E	3E
					TRIPOLI	2	34N	36E	3E

City	TZONE	LAT.	LON.	VAR.	City	TZONE	LAT.	LON.	VAR.
Africa									
ABIDJAN	0	5N	4W	8W	HAMBURG	1	54N	10E	1W
ACCRA	0	6N	0E	6W	HELSINKI	2	60N	25E	6E
ADDIS ABABA	3	9N	39E	1E	KIEV	2	50N	31E	5E
ALEXANDRIA	2	31N	30E	3E	LISBON	1	39N	9W	6W
ALGIERS	1	37N	3E	2W	LONDON	0	52N	0E	5W
ANTANANARIVO	3	19S	48E	14W	MADRID	1	40N	4W	4W
BAMAKO	0	13N	8W	7W	MILANO	1	45N	9E	1W
BISSAU	0	12N	16W	11W	MINSK	2	54N	28E	5E
CAIRO	2	30N	31E	2E	MOSCOW	3	56N	38E	9E
CAPE TOWN	2	34S	18E	23W	MUNCHEN	1	48N	12E	0E
CASABLANCA	0	34N	8W	5W	NICE	1	44N	7E	1W
DAKAR	0	15N	17W	11W	PARIS	1	49N	2E	3W
DAR ES SALAAM	3	7S	39E	2W	PRAHA	1	50N	14E	1E
DJIBOUTI	3	12N	43E	1E	ROME	1	42N	13E	0E
FREETOWN	0	9N	13W	11W	SANKT-PETERSBURG	3	60N	30E	8E
JOHANNESBURG	2	26S	28E	16W	SOFIYA	2	43N	23E	3E
KAMPALA	3	0N	33E	0E	STOCKHOLM	1	59N	18E	2E
KHARTOUM	2	16N	33E	1E	TASHKENT	5	41N	69E	5E
KINSHASA	1	4S	15E	5W	TIRANA	1	41N	20E	2E
LAGOS	1	6N	3E	5W	VIENNA	1	48N	16E	1E
LAS PALMAS	0	28N	15W	8W	WARSAWA	1	52N	21E	3E
MOGADISHU	3	2N	45E	0E	ZURICH	1	47N	9E	1W
NAIROBI	3	1S	37E	0E	Asia and Pacific				
NIAMEY	1	14N	2E	4W	ADELAIDE	9.5	35S	139E	8E
NOUAKCHOTT	0	18N	16W	10W	AHMADBAD	5.5	23N	73E	1W
PRAIA	-1	15N	23W	13W	BANDAR SERI BEGAWAN	8	5N	115E	0E
RABAT	0	34N	7W	5W	BANGALORE	5.5	13N	78E	2W
TRIPOLI	2	33N	13E	0E	BANGKOK	7	14N	101E	2W
TUNIS	1	37N	10E	0E	BEIJING	8	40N	116E	6W
YAOUNDE	1	4N	12E	4W	BOMBAY	5.5	19N	73E	1W
North America and Central and South America									
BOGOTA	-5	5N	74W	3W	CALCUTTA	5.5	23N	88E	1W
BOSTON	-5	42N	71W	16W	CHITTAGONG	6	22N	92E	1W
BRASILIA	-3	16S	48W	19W	CHONGQING	8	30N	107E	2W
BUENOS AIRES	-3	35S	59W	4W	CHRAIST CHURCH	12	44S	173E	24E
CARACAS	-4	11N	67W	9W	COLOMBO	5.5	7N	80E	3W
CHICAGO	-6	42N	88W	1W	DELHI	5.5	29N	77E	0E
DALLAS	-6	33N	97W	6E	DHAKA	6	24N	90E	1W
DENVER	-7	40N	105W	11E	GUAM	10	13N	145E	2E
DETROIT	-5	42N	83W	6W	GUANGZHOU	8	23N	113E	2W
EDMONTON	-7	54N	113W	21E	HANOI	7	21N	106E	1W
EL PASO	-7	32N	107W	11E	HONG KONG	8	22N	114E	2W
HONOLULU	-10	21N	158W	11E	HYDERABAD (Pakistan)	5	25N	68E	0E
HOUSTON	-6	30N	95W	5E	HYDERABAD (India)	5.5	17N	78E	2W
LA PAZ	-4	17S	68W	3W	ISLAMABAD	5	34N	73E	2E
LIMA	-5	12W	77W	2E	JAKARTA	7	6S	107E	0E
LOS ANGELES	-8	34N	118W	14E	KANPUR	5.5	26N	80E	0E
MEXICO CITY	-6	19N	99W	7E	KARACHI	5	25N	67E	0E
MIAMI	-5	26N	80W	4W	KATMANDU	5.75	28N	85E	0E
MONTEVIDEO	-3	35S	56W	7W	KUALA LUMPUR	8	3N	102E	0E
MONTREAL	-5	46N	74W	16W	LAHORE	5	32N	74E	1E
NEW ORLEANS	-6	30N	90W	2E	LANZHOU	8	36N	104E	2W
NEW YORK	-5	41N	74W	13W	MADRAS	5.5	13N	80E	2W
PAGO PAGO	-11	14S	171W	12E	MANILA	8	15N	121E	1W
PANAMA CITY	-5	9N	80W	0E	MEDAN	7	4N	99E	1W
PORT OF SPAIN	-4	11N	61W	13W	MELBOURNE	10	38S	145E	12E
RIO DE JANEIRO	-3	23S	43W	20W	MULTAN	5	30N	72E	1E
SAN FRANCISCO	-8	38N	122W	16E	NAURU	12	1S	166E	10E
SANTIAGO	-4	34S	71W	6E	NOUMEA	11	22S	166E	13E
SAO PAULO	-3	24S	47W	18W	PAPEETE	-10	18S	150W	13E
SEATTLE	-8	48N	122W	20E	PERTH	8	32S	116E	3W
VANCOUVER	-8	49N	123W	21E	PHNOM PENH	7	12N	105E	0E
WASHINGTON	-5	39N	77W	10W	PORT VILA	11	18S	168E	12E
WINNIPEG	-6	50N	97W	6E	PYONG YANG	9	39N	126E	8W
Europe									
ALMA-ATA	6	43N	77E	5E	RAWALPINDI	5	34N	73E	2E
AMSTERDAM	1	52N	5E	3W	SANANA	9	2S	126E	2E
ASHKHABAD	5	38N	58E	4E	SEOUL	9	38N	127E	8W
ATHENS	2	38N	24E	2E	SHANGHAI	8	31N	121E	5W
AZORES	-1	39N	28W	14W	SINGAPORE	8	1N	104E	0E
BAKU	4	40N	50E	5E	SRINAGAR	5.5	34N	75E	2E
BEOGRAD	2	45N	21E	3E	SURABAYA	7	7S	113E	1E
BERLIN	1	53N	13E	1E	SUVA	12	18S	178E	13E
BISHKEK	5	43N	75E	5E	SYDNEY	10	34S	151E	13E
BONN	1	51N	7E	2W	TAIPEI	8	25N	122E	3W
BRUXELLES	1	51N	4E	3W	TOKYO	9	36N	140E	7W
BUCURESTI	2	44N	26E	3E	UJUNG PANDANG	8	5S	119E	2E
BUDAPEST	1	48N	19E	2E	ULAN BATOR	8	48N	107E	4W
CANNES	1	44N	7E	1W	VIENTIANE	7	18N	103E	1W
COPENHAGEN	1	56N	13E	0E	WELLINGTON	12	41S	175E	22E
DUBLIN	0	53N	6W	8W	XI'AN	8	34N	109E	3W
DUSHANBE	5	39N	69E	4E	YANGON	6.5	17N	96E	1W
FRANKFURT	1	50N	9E	1W	YINCHUAN	8	39N	106E	3W
GENEVE	1	46N	6E	2W					

TZONE: Based on data for December, 1993

VAR.: Based on data for 1990

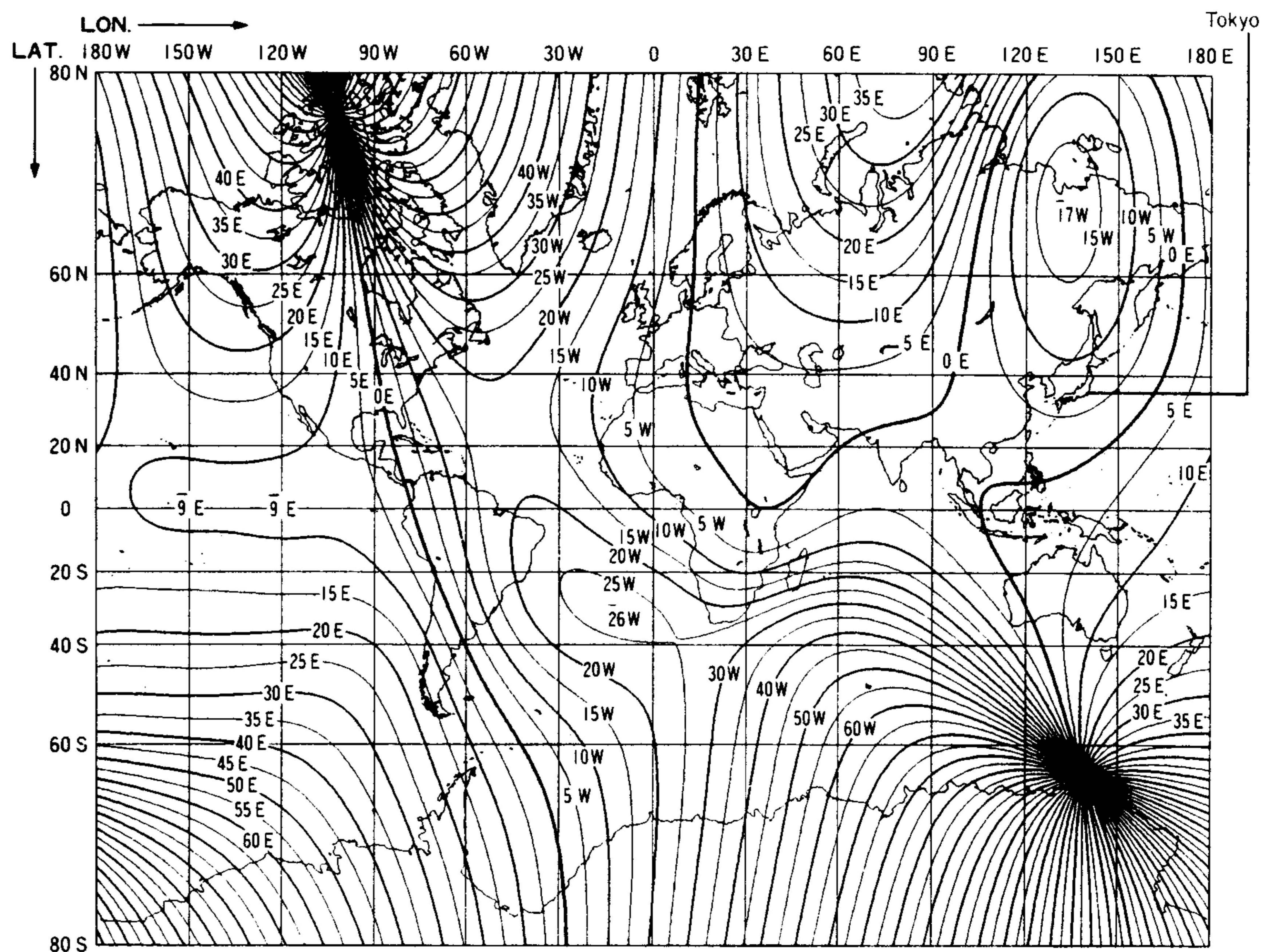
VAR. (Directional Variations) Source: World Data Center C2 for Geomagnetism, Kyoto

Directional Variations

The map on the other side of this paper shows you directional variations for various points around the world. The directional variation for Tokyo, which falls between the lines marked 10W and 5W would be 7W.

Important!

The information contained in the map is current as of 1990. Note that directional variations are subject to change in accordance with movements of the earth's axis.



Source :World Data Center C2 for Geomagnetism, Kyoto.