

TECHNICAL INFORMATION

CITIZEN QUARTZ

Cal. No. D05✕

■1. OUTLINE

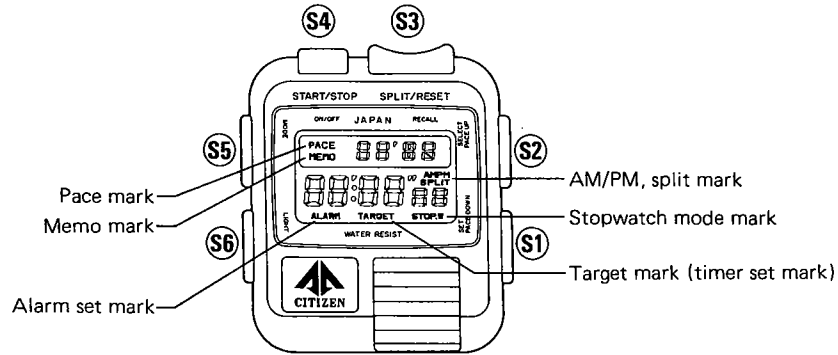
D050, part of the sports series, is a multifunctional gentlemen's digital watch which is used for sports which require functions such as a stopwatch, pace maker and split count.

■2. SPECIFICATIONS

CAL. No.	D050	
Type	Digital Quartz Watch	
Module size (mm)	Dimensions 28 x 28 mm Thickness 4.74 ^t (measured when the power cell section is included)	
Accuracy	±20 sec./month at normal temperature	
Oscillation	32,768Hz	
Display method	2-split multiplex drive by FE nematic LC	
Integrated circuit	C/MOS-LSI (1 unit)	
Effective temp. range	0°C ~ 55°C (32°F ~ 131°F)	
Adjustment time rate	Trimmer condenser	
Measurement of time rate	2 seconds	
Display functions	Normal time	Hour, minute, second, AM/PM (12/24 hour switching function)
	Calendar	Date, day, (Year, Month display is only in the corrected mode)
	Alarm	Hour, minute, ON/OFF, AM/PM (12H/24H displays are coupled to the normal time mechanism)
	Pace maker	Pace count, ON/OFF (60 ~ 215/min.)
	Timer 1, Timer 2	Minute, second, (max. 60 min. 59 sec.)
	Stopwatch	Minute, second, 1/100 sec., split (with a 99 unit split counter which includes an 8 unit split time memory)
Additional functions	12H and 24H changeover display (The alarm is interlocked with the normal time mechanism). Fully automatic calendar Alarm monitor Illumination lamp	
Power cell	Part No.	280-204
	Cell code	CR2016
	Size	20.0φ x 1.6 ^t
	Voltage	3.0V
	Capacity	65mAH
	Lifetime	Approx. 3 years (on condition that the alarm is used 20 sec./day, lamp 3 sec./day, pace maker 60 min./week at pace count 150/min.)
Current value	Under 1.8μA	
Remarks		

■3. HANDLING INSTRUCTIONS

1. Nomenclature

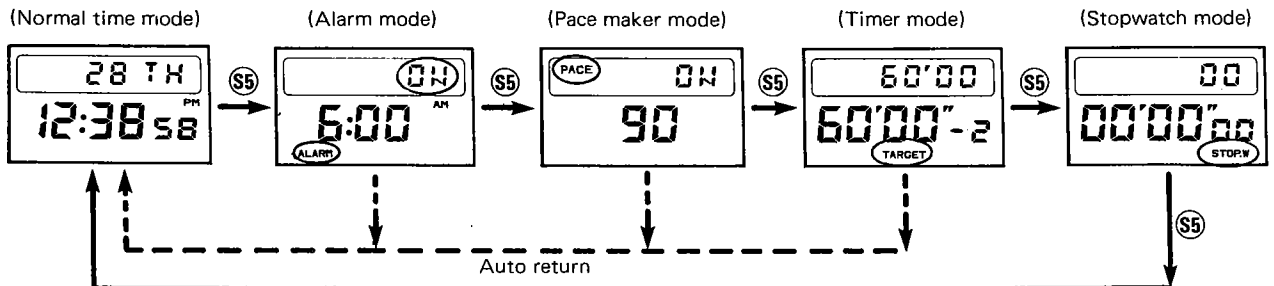


2. Functions of operation buttons

- Ⓢ1 Correction, pace down, switch timer 1/timer 2
- Ⓢ2 Select digits to be correct, pace up
- Ⓢ3 Stopwatch start/stop, summon split
- Ⓢ4 Stopwatch start/stop, alarm ON/OFF, pace maker ON/OFF
- Ⓢ5 Summon mode
- Ⓢ6 Illumination lamp

	Normal time mode		Alarm mode		Pace maker mode	Timer mode		Stopwatch mode
	Normal	Correction	Normal	Correction		Normal	Correction	
Ⓢ1		Correction		Correction	Pace count is decreased	Changeover to timer 1/2	Correction	Pace count is decreased (Pace mode is ON)
Ⓢ2	Changeover to correction mode	Select digits to be corrected	Changeover to correction mode	Select digits to be corrected	Pace count is increased	Changeover to correction mode	Select digits to be corrected	Pace is increased (Pace mode is ON)
Ⓢ3						Flyback		Split, Reset, Split recall
Ⓢ4			Alarm ON/OFF	←	Pace sound ON/OFF	Start/Stop		Start/Stop
Ⓢ5	Changeover to alarm mode	Instant manual return	Changeover to pace maker mode	Instant manual return	Changeover to timer mode	Changeover to stopwatch mode	Instant manual return	Changeover to normal time mode
Ⓢ6	Lamp	←	←	←	←	←	←	←

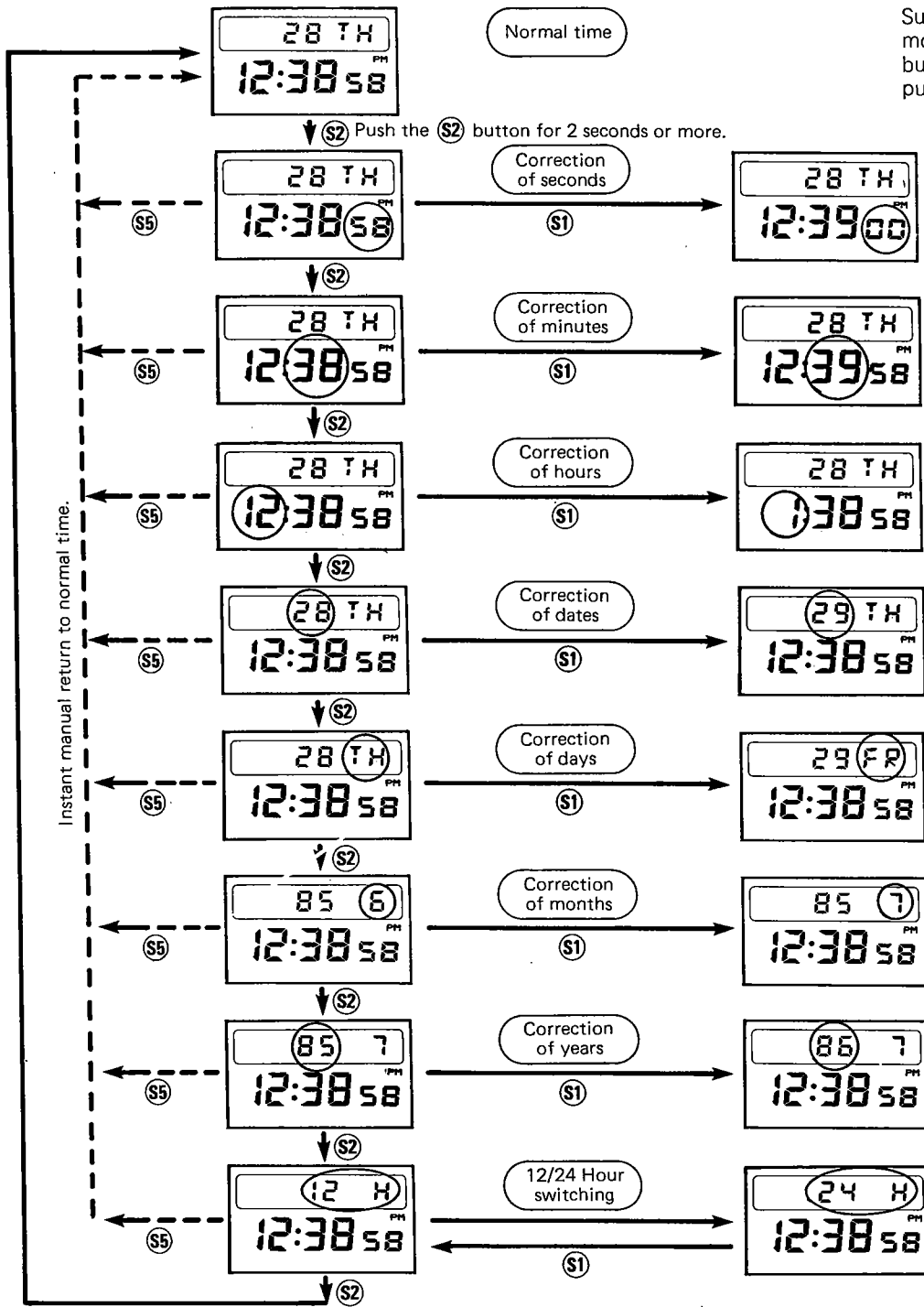
3. Display switching procedure



Note: The normal time will automatically return to the display if the alarm, pace maker and timer modes are left as they are without being corrected for longer than 2 minutes (1 min. 30 sec. - 2 min. 30 sec.). In the timer mode, the run mode and the stopwatch mode do not automatically return.

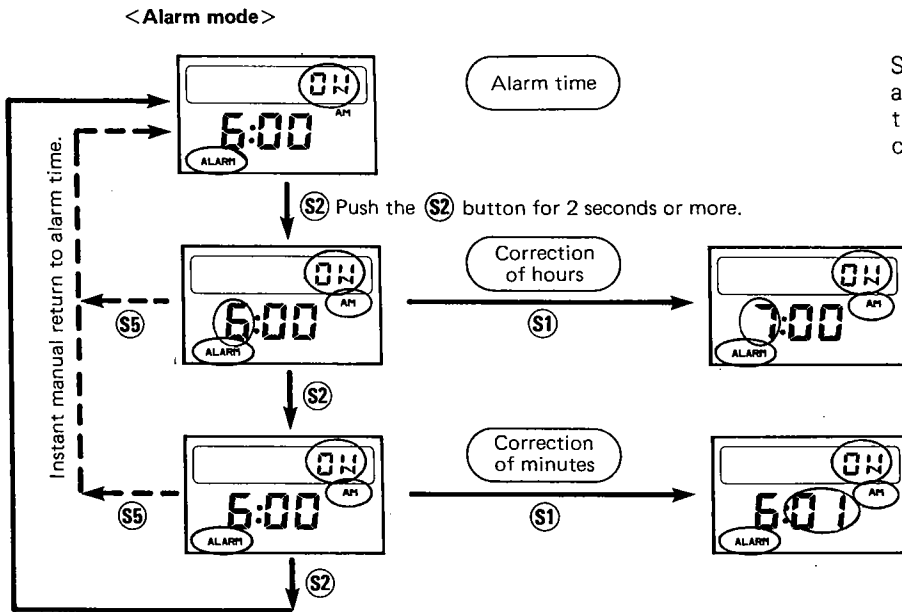
Flashing parts are circled.

4. Time correction



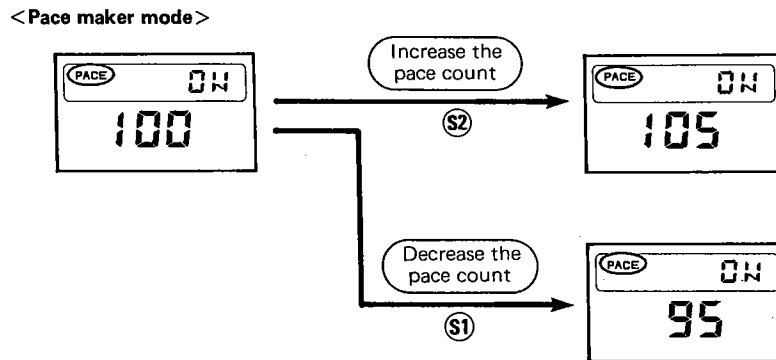
- Note:**
- 1) If the correction of seconds is done between 30 and 59 seconds, the minute display will increase by one minute.
 - 2) The normal time display will automatically return to the display if a correction mode is left as it is without being corrected for longer than 2 minutes.
 - 3) The switching of the 12/24 Hour display is obtained by pushing the (S1) button in the 12/24 hour display switching mode.
 - 4) Instantaneous return to the normal time display from the correction mode is obtained by pushing the (S5) button.
 - 5) If a non-existing date is set in the correction of the calendar, it will automatically be corrected and change to the first day of the following month upon returning to the normal time display, (example: If the correction of calendar is set on September 31th, it will be corrected to October 1st.)
 - 6) Quick correction is possible by continuously pushing the (S1) button in the correction mode (excluding correction of seconds and 12/24 Hour switching).
 - 7) Fully automatic calendar, including leap year, from 1985 to 2035.

5. Alarm time correction



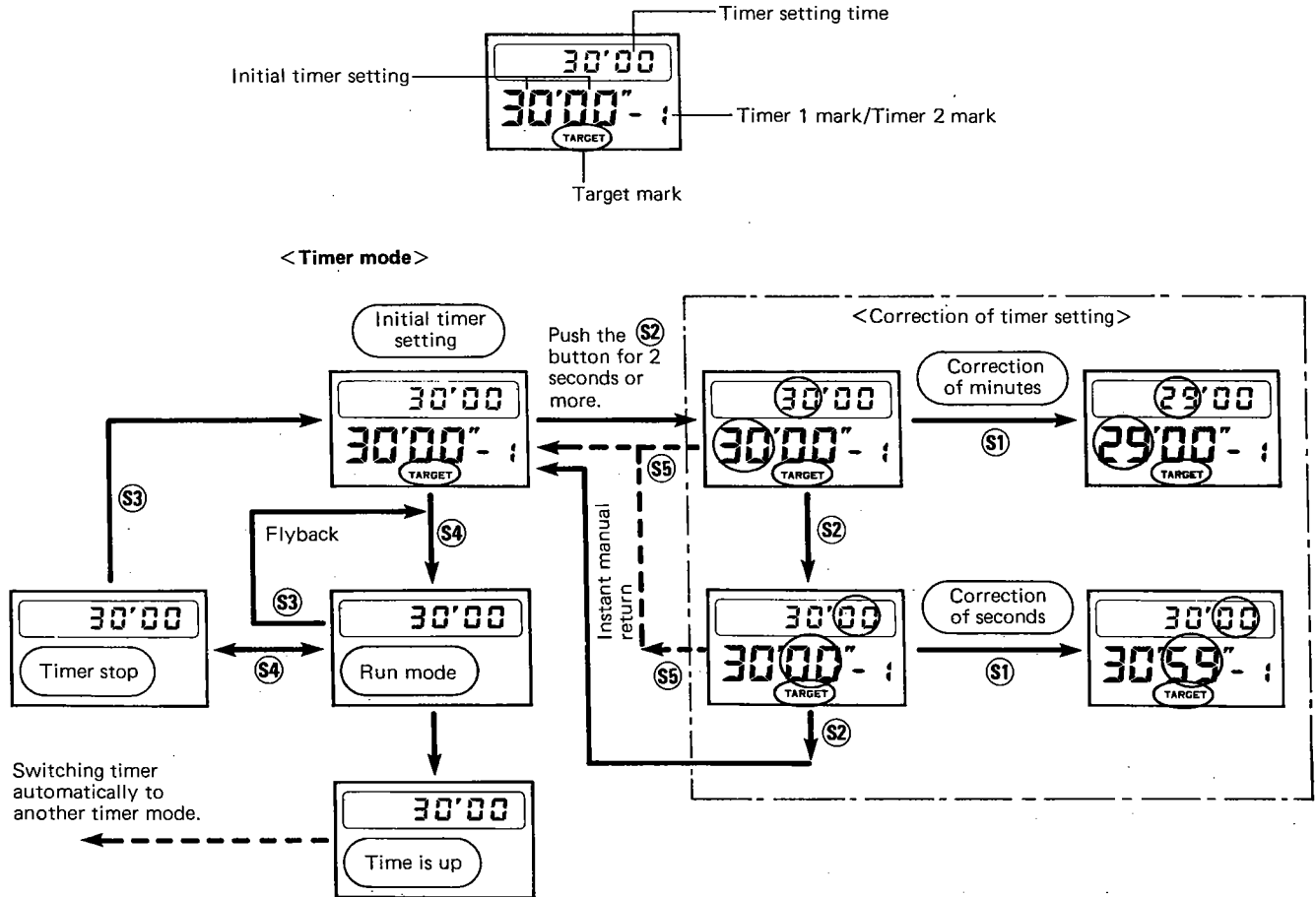
- Note:**
- 1) Quick correction is obtained by continuously pushing the (S1) button during correction of hour/minute.
 - 2) Alarm time is set instantly by the pushing the (S5) button in the correction mode (Instant manual return).
 - 3) ON/OFF switching is obtained by pushing the (S4) button.
 - 4) The alarm set time is interlocked with the 12/24 Hours normal time switching display.
 - 5) The alarm time will be automatically set if correction of the alarm time is left as it is without being corrected for longer than 2 minutes. Furthermore, after 2 minutes the normal time will automatically return to the display.
 - 6) The alarm sounds for about 20 seconds. Push any button to stop the alarm.

6. Pace maker operation procedures



- Note:**
- 1) ON/OFF switching is obtained by pushing the (S4) button.
 - 2) The lamp does not illuminate when the pace mode is ON.
 - 3) Pace alarm will sound only when the pace mode is ON.
 - 4) The number indicated on the display is the pace count sounds per 1 minute.
 - 5) Pace count can be set from 60 to 215 at intervals of 5.
 - 6) If you push the (S5) button 2 times when the pace mode is ON, the pacemaker mode will switch into the stopwatch mode. Then, when the run mode is obtained by pushing the (S4) button, the pace alarm will sound. You can change the pace count by pushing the (S1) and (S2) buttons in this mode, so the pace count will be indicated in the upper right corner for 5 seconds.

7. Timer operation procedure



Note: 1) Timer set/correction

- The Max. setting time of both timers 1 and 2 are 60 min. 59 sec.
- Summon the correction mode by pushing the (S2) button in the timer stop mode, and the initial setting mode and correct by pushing the (S1) button.
- Quick correction is obtained by continuously pushing the (S1) button while correcting.

2) Fly back/restart

- The initial setting mode will return to the display by pushing the (S3) button in the run mode, the timer will run from the initial setting mode.

3) Automatic timer switching

- If either timer 1 or timer 2 time is up, the other timer will automatically switch into the run mode.
- Automatic timer switching continues until the timer is stopped. When the timer switches the other timer, the timer setting indication will also change.
- When one timer indicates 00 min. 00 sec., automatic timer switching does not work because this timer is not in the operation mode. Therefore, the original timer will continue in the run mode.

4) Switching timer 1 and timer 2

- Timer 1 and timer 2 are changed by pushing the (S1) button in the initial setting mode, run mode and stop mode.
- When you switch into the other timer by pushing the (S1) button in the run mode, the first timer is automatically stopped and the other timer goes into the run mode. (When you switch again, the first timer begins to work from the remaining time.)
- When the one timer indicates 00 min. 00 sec., automatic timer switching is not obtained by pushing the (S1) button. Therefore, the same timer will repeat operation.

5) Timer alarm

- The alarm will sound every second for 9 seconds before the timer is up.
- The alarm will not sound when initial set time is within 9 seconds.
- The alarm does not stop if you push the button. (The alarm stops while lighting.)

6) Auto return

- The normal time will automatically return to the display if the timer stops and the initial setting mode is left as it is without being operated for longer than 2 minutes.
- The initial setting timer mode will automatically return to the display if the correction mode is left as it is without being corrected for longer than 2 minutes. Furthermore, if the correction mode is left as it is without being corrected for longer than 2 minutes, the normal time will automatically return to the display.

7) The timer correction procedure is the same for both timer 1 and timer 2. After switching, the timer, correct following the same procedure as 1).

8) If, while the timer is running, you change modes, the timer mode continues operation. The alarm completion sound and automatic switching are done as usual procedure. If the start/stop operation is done in the stopwatch mode, the timer is interlocked with the stopwatch and becomes the start/stop mode.

(Stopwatch mode)

If you do start/stop operation in the stopwatch mode, the timer will also start/stop operation. In this case, only one timer (either timer 1 or 2) is repeated. When the setting timer is 00 min. 00 sec., the timer is not interlocked with the stopwatch.

(Pace maker mode)

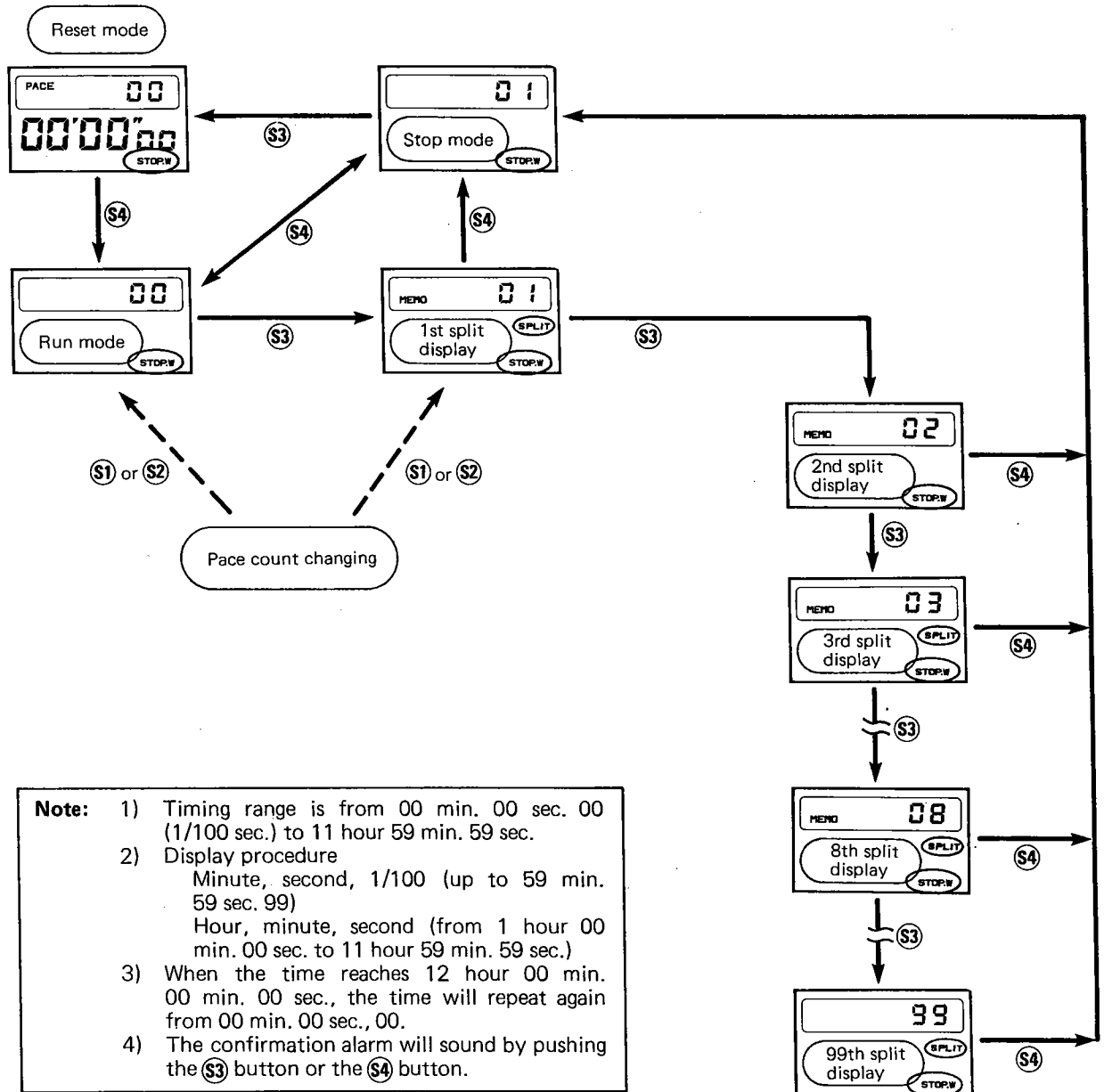
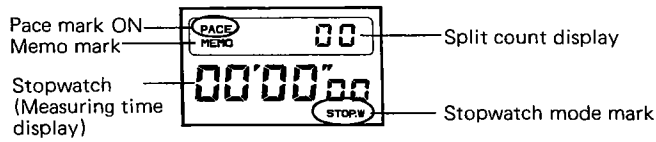
When the pace maker is ON, the alarm does not sound even in the timer running mode, excluding the completion sound.

9) When the stopwatch is interlocked with start and the timer is running, you cannot correct the setting time in the timer mode. If you do this, correct the setting time in the timer mode after stopping or resetting the stopwatch.

10) A confirmation sound is heard when pushing the **S3** or the **S4** button.

8. Stopwatch operation procedure

<Stopwatch mode>



Note: 1) Split function

- Split time can count up to 99. Up to the 8th count is automatically memorized and a "MEMO" mark and count No. are indicated on the display. (When the count reaches 99 it returns to 00 and repeats.)
- The 9th to 99th count are only displayed for 5 seconds and are not memorized. When the split counter finishes one round, the old memory of the 1st to 8th count change to a new memory.
- Split time measuring is obtained by pushing the **(S3)** button in the run mode, the stop mode is obtained by pushing the **(S4)** button. After this operation, the reset mode is obtained by pushing the **(S3)** button.
- After memorizing the split times they are summoned on the display every time the **(S3)** button is pushed. When the final time is displayed, "FIN" is shown on the display. (This function is the "split recall function.")
- The run mode will automatically return to the display after the memorized split time/final time is displayed for 5 seconds.
- Switch the run mode into the split mode by pushing the **(S3)** button. The run mode will automatically return if the split mode is left for longer than 5 seconds.
- The previous split memory disappears at the new start operation after the reset operation.
- If you push the **(S4)** button upon summoning the split memory, the mode runs and the old memory disappears.

2) The relation between the stopwatch and the pace maker

- A pace count can be changed by pushing the **(S1) / (S2)** button when the stopwatch is running and the split is indicated on the display. While doing this operation, "PACE" flashes and the pace count is displayed for 5 seconds. This operation is the pace maker mode and the pace alarm will sound.

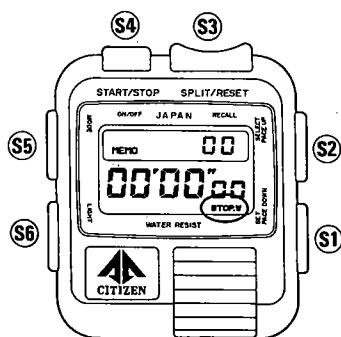
3) The relation between the stopwatch and the timer

- Refer to the timer operation procedure of NOTE 8 (Stopwatch mode).
 - When the timer starts in the stopwatch mode, the timer will begin from its set time.
 - Previous alarm and completion of the timer sounds.
 - The timer will repeat without being affected by the split operation in the stopwatch mode. The same timer mode will repeat without automatic switching of the other timer.
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■4. CONCRETE EXAMPLES

Example 1

When you want to record part-way times every 5km in a marathon race.
The times of the competing runners as they complete the race.

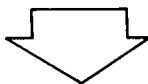


(Stopwatch mode)

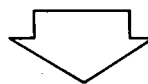
Note:

- a) A confirmation alarm will sound at every push of the (S3) and (S4) buttons.
- b) The reset mode will return to the display if the split time is left as it is for longer than 5 seconds.

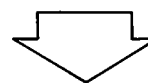
1 Summon the stopwatch mode



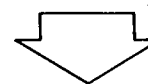
2 Reset operation



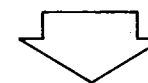
3 Start operation



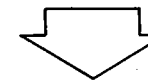
4 Split operation



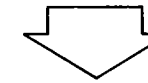
5 Continuous split operation



6 Stop operation



7 Reset operation



8 Summon the memory

- The stopwatch mode is obtained by pushing the (S5) button 4 times. Then "STOP" flashes.

- The stop mode is obtained by pushing the (S4) button in the run mode. After stopping reset 00 min. 00 sec. 00 by pushing the (S3) button.

- The reset mode is obtained by pushing the (S3) button in the stop mode.

- When "MEMO" flashes, the split time is being memorized.

- The start operation is initiated by pushing the (S4) button at the same time as the starting signal, the old memory will then disappear.

- When you came to the 5 km point, push the (S3) button. In this split operation, the split counter display is 01.

- After displaying the split count for 5 seconds, the display will automatically return to the run mode. While the split count is displayed, "SPLIT" flashes and "MEMO" is displayed. This means that the split counts were memorized.

- The part-way times are displayed with every pushing of the (S3) button.

- Split counts, from 01 to 08, are memorized in the split memory. Split counts, from 09 to 99, are only displayed for 5 seconds without memorizing.

- When you reach the goal, stop the operation by pushing the (S4) button. This final time is written into the memory mode.

- "MEMO" is displayed by pushing the (S3) button after resetting 00 min. 00 sec. 00.

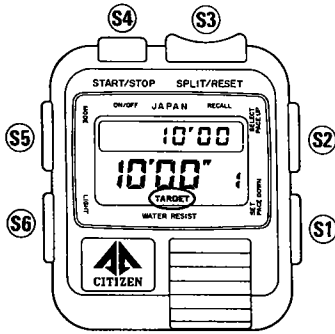
- Memorized split times are summoned by pushing the (S3) button in order from 01.

- When the final time is displayed, "FIN" is indicated.

In this way, you can record the split time of every 5 km and final time.
You can also record from 1st to 8th and final time in order.

Example 2

When you repeat alternate 10 minutes jogging and 5 minutes walking.



(Timer mode)

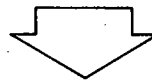
1 Summon the timer mode



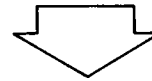
2 Stop/return to the initial setting operation



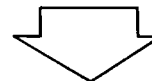
3 Switching timer 1 and timer 2



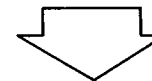
4 Correction of minutes



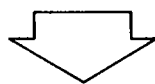
5 Correction of seconds



6 Completion of timer 1 setting/return



7 Timer 2 setting



Note:

- The confirmation alarm will sound every time the **S3** button and the **S4** button are pushed.
- The normal time will return to the display if the mode is left as it is for longer than 2 minutes (excluding in the run mode).
- Quick return is obtained by continuously pushing the **S1** button while the minute/second digits are flashing.

- From normal time display, change into the timer mode by pushing the **S5** button three times. Then, "TARGET" flashes.
- The upper box displays the timer setting time. the lower part is the part-way time.
- The stop mode is obtained by pushing the **S4** button when the timer is running. After this operation, return to the initial setting mode by pushing the **S3** button.
- You cannot complete this operation while the "STOP.W" is displayed in the lower corner. Therefore, stop the stopwatch by pushing the **S4** button after switching into the stopwatch mode by pushing the **S5** button. Or after stopping the stop watch, change into the reset mode by pushing the **S3** button. After this operation, summon the timer mode by pushing the **S4** button 4 times.
- The "-1" or "-2" displayed in the lower right corner of the face indicate timer 1 or timer 2. Timer 1 to timer 2 switches at every push of the **S1** button. First, set timer 1.
- The minute digits flash when pushing the **S2** button for longer than 2 seconds in the timer stop mode or in the initial setting mode. While flashing, correct by pushing the **S1** button. Set 10 minutes.
- Count down from max. 60 minutes.
- The second digits flash when the **S2** button is pushed again. While flashing, correct by pushing the **S1** button. Set 00 seconds.
- The timer is now set at 10 min. 00 sec. Now, stop the flashing and return to the initial setting mode by pushing the **S2** or **S5** button.
- Summon timer 2 by pushing the **S1** button and follow the above directions, 4 through 6, to set 5 min. 00 sec.

8 Timer start



9 Stop operation

●Timer 1 and timer 2 are now set at 10 minutes and 5 minutes. Now switch to timer 1 and start the timer by pushing the **(S4)** button. Begin jogging.

If you want to start walking, switch to timer 2 and start the timer by pushing the **(S4)** button.

●The alarm will sound every second for 9 seconds just before the time is up. The completion alarm will sound when the set time is up (00 sec. 00 min.) and timer 1 will automatically switch to timer 2. In this way jog and walk exactly as long as you had planned.

●After completing timer 2, timer 1 will return to the display. Therefore, you can repeat the exercise.

●Stop the timer by pushing the **(S4)** button. When you repeat the same exercise, push the **(S3)** button and return to the initial setting mode. With this you can repeat section 8 exercise again and again.

Example 3

When you aim at 25 seconds to complete a lap, and want to run 10 laps.

1 Setting the time with a timer



2 Stopwatch mode operation



3 Split operation



4 Stop operation

●Summon timer 1 and set 00 min 25 sec. following the procedure in Example 2.

●After setting the timer in the timer mode, switch into the stopwatch mode by pushing the **(S5)** button.

●Reset 00 min. 00sec. 00 and begin the exercise following the procedure in Example 1. Start the stopwatch by pushing the **(S4)** button at the same time as starting your exercise.

●The timer starts at the same time as the stopwatch. The alarm will begin to sound 9 seconds before completion of the set time. Therefore, you can judge whether you will reach your target time (25 seconds) or not.

●The timer, which is set for 25 seconds, repeats when the time is completed. This timer does not switch to the other timer.

●When you pass to your starting point, push the **(S3)** button for the split counter indication. "SPLIT 01" will be indicated on the display for 5 seconds and the time will be memorized.

●Each time pass your starting point you can judge whether your pace is fast or slow by listening to the confirmation/completion sounds. With this you can control your speed.

●The count is displayed in the upper corner by pushing the **(S3)** button every lap, therefore, you will be able to keep track of how many laps you ran.

●The stop mode is obtained by pushing the **(S4)** button upon finishing your last lap.

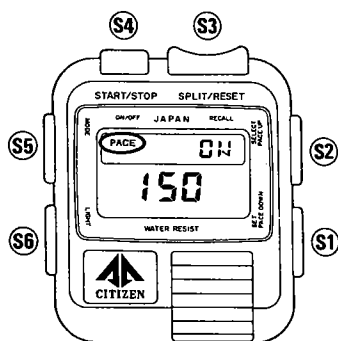
●The upper part of the display indicates the final count, and the lower part displays the time taken to complete your laps.

●The first 8 lap times are memorized in this watch, therefore, you can summon the times from the 1st to know the times for every lap. (Refer to Examples 1, Sections 7 and 8.)

Note: A confirmation alarm sounds every time the **(S3)** and **(S4)** buttons are pushed.

Example 4

When you jog for 30 minutes with a pace of 150 steps per one minute.



(Pace maker mode)

Note:

- The alarm does not sound while the pace alarm is sounding.
- If the stop operation is not completed, the pace sound/timer is repeated and the stopwatch continues.

1 Summon the pace maker mode



2 Set the pace



3 Timer setting



4 Summon the stopwatch/start



5 Stop

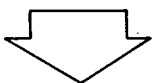
- Switch from the normal time display into the pace maker mode by pushing the **S5** button 2 times. "PACE" flashes in the upper corner.
- Push the **S4** button so that "ON" reads in the upper right corner, and confirm the pace alarm sound.
(Switching from ON to OFF is obtained by pushing the **S4** button.)
- Correct the pace by pushing the **S1** or **S2** buttons; set 150.
Pace down, in increments of 5 from 150, 145, 140..., is obtained by pushing the **S1** button.
Pace up operation, from 150, 155, 160... to 215 is obtained by pushing the **S2** button.
- Switching from the pace make mode into the timer mode by pushing the **S5** button. Set 30 min. 00 sec. in timer 1 or 2. (Refer to Example 2.) Make sure the pace maker mode is "ON".
- Switch from the timer mode into the stopwatch mode by pushing the **S5** button one time.
- Start the stopwatch by pushing the **S4** button at the same time as starting your exercise.
- The pace alarm (150/min.) begins to sound when the **S4** button is pushed.
- When 30 minutes have passed the completion alarm sounds. Stop your jogging.
- Switch to the stop mode by pushing the **S4** button and do 0-resetting by pushing the **S3** button.

- To start the stopwatch again at the same pace, steps 1 through 3 need not be repeated.
- If the pace sound is too fast or slow, pace down or pace up by pushing the **S1** button or **S2** button. After the pace count flashes for 5 seconds on the upper part of the display, the split count will return to the display.

Example 5

When you run at a pace of 150 steps per minute.
(When you do not have a target time.)

1 Pace maker set



2 Timer mode



3 Start the stopwatch

- Set the pace at 150. (Refer to Example 4, Sections 1 and 2.)
- Switch from the pace maker mode into the timer mode by pushing the **(S5)** button. Set the time at 00 min. 00 sec. (Refer to Example 2, Sections 4 and 5.)
- Switch from the timer mode into the stopwatch mode by pushing the **(S5)** button. After 0-resetting, start the stopwatch at the same time as starting out running. (Refer to Example 1, Sections 1 and 3.)

- While the stopwatch is running, the pace alarm will sound with the setting pace.
- To change the pace while running push the **(S1)** and **(S2)** buttons, as in Example 4.

Example 6

When you stretch before/after exercising.

(Example: when you stretch 60 times in 1 minute.)

1 Set the pace maker



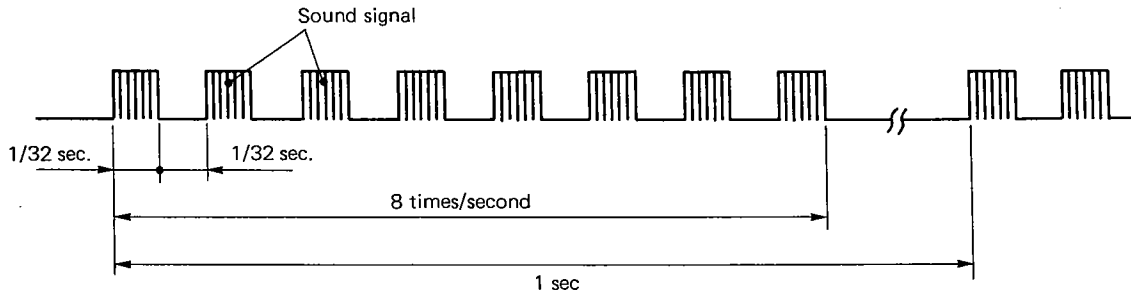
2 Pace maker ON

- Summon the pace maker mode and set the pace at 60.
- Push the **(S4)** button to turn the pace maker ON, the pace alarm will sound at one second intervals.
- Do the stretching exercise to the pace sound.
(To change the pace, refer to Example 4, Sections 1 and 2.)

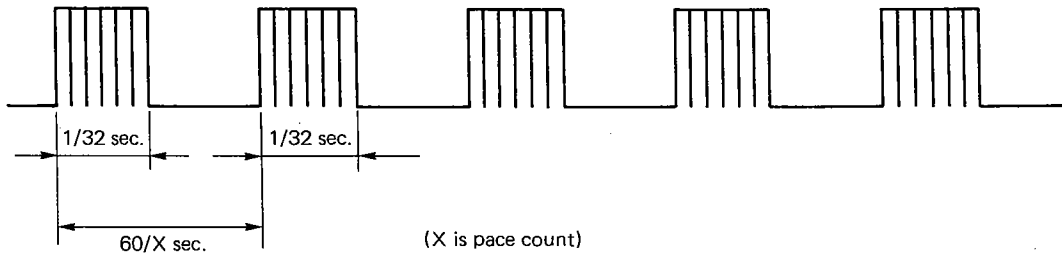
5. SOUND

Alarm

When the alarm is ON and the mode is not in the correction mode, and if the time coincides with the alarm setting time, the alarm will sound in the following way. The sounding time is 20 seconds.



Pace sound



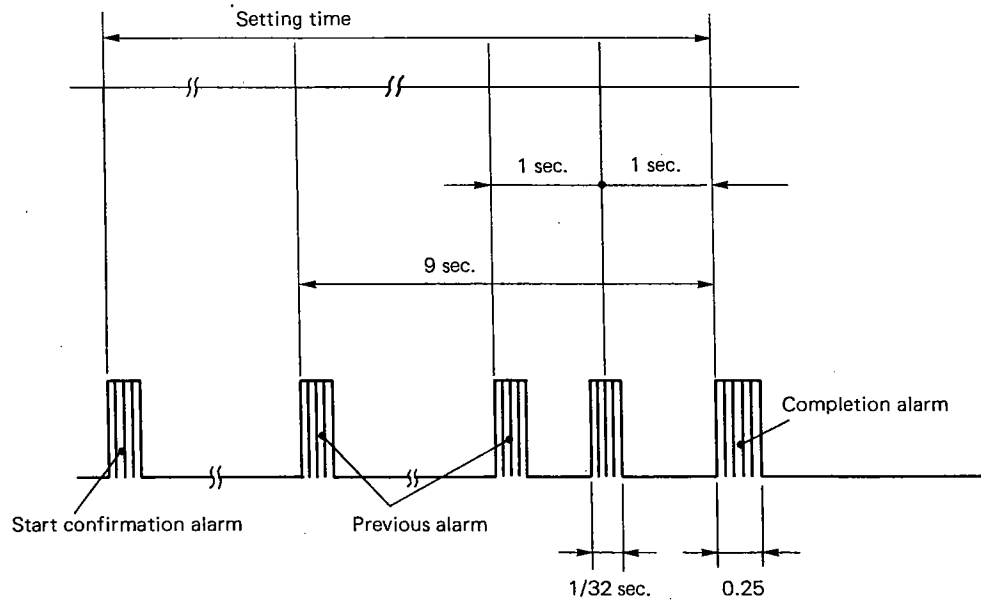
Confirmation sound when operating the switching of from the STOPWATCH MODE and the TIMER MODE.

- Start operation by inputting the S4 button in the STOPWATCH MODE and the TIMER MODE. SPLIT operation. RESET operation and SPLIT MEMORY SUMMONING OPERATION can be done by inputting the S3 button in the STOPWATCH MODE. Furthermore, a confirmation alarm will sound for 1/32 sec. when synchronizing the FLYBACK operation in the timer mode.
- A confirmation alarm will sound for 0.25 sec. when synchronizing the stop operation by inputting the S4 button in the STOPWATCH mode.

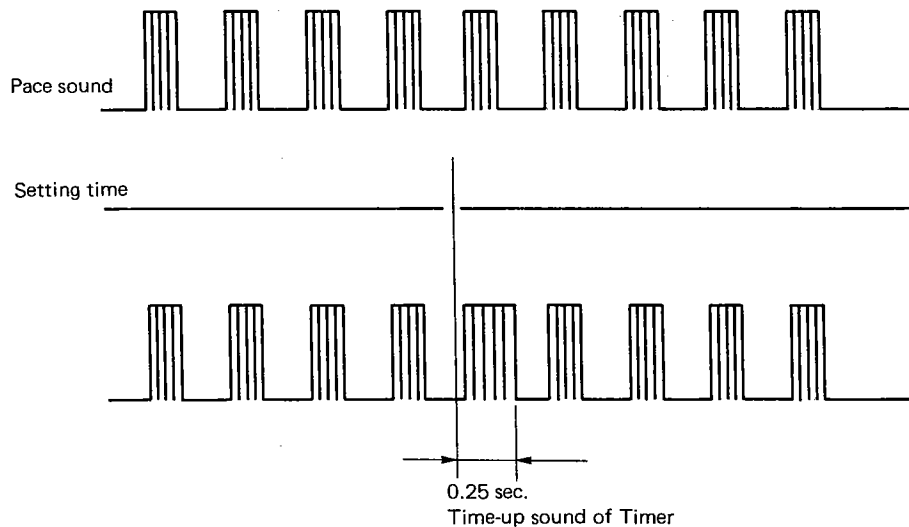
Alarm and confirmation alarm in the timer mode (Pace sound is OFF).

When the timer setting time comes, an alarm and confirmation alarm will sound. Both alarm and confirmation alarm stop by pushing (S4) button.

If the setting time is under 9 seconds, the alarm will not sound.



Timer sound in the STOPWATCH mode. (Pace sound is ON.)



Alarm monitor

In the normal time mode, if the (S6) and (S1) buttons are pushed simultaneously an alarm sound will ring.

List of sounds in compound operation

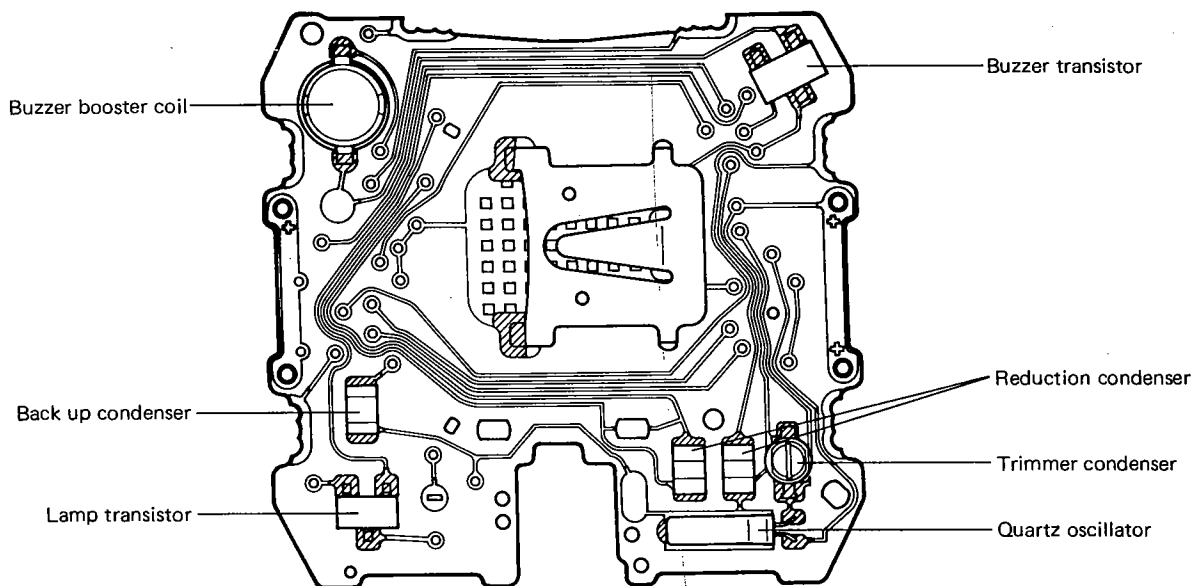
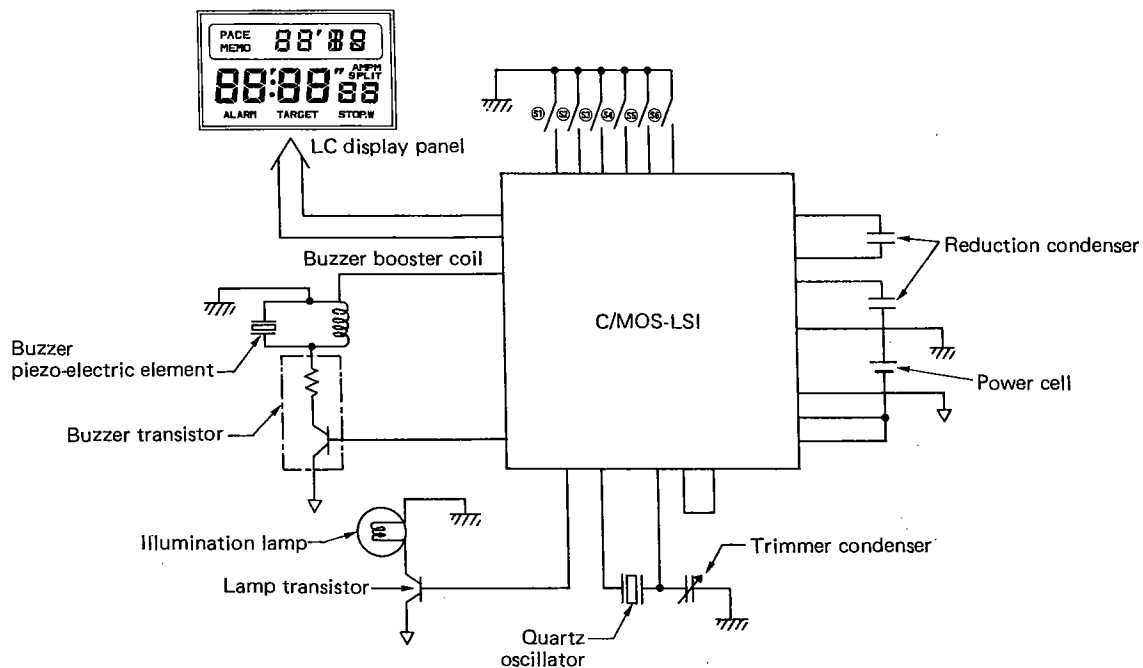
Setting condition		
Pace maker	Timer	Stopwatch
ON	RUN	RUN
ON	STOP	STOP
ON	RUN	STOP
OFF	RUN	RUN
OFF	RUN	STOP



Sound of each mode		
Normal time mode	Alarm mode	Stopwatch mode
○ Timer alarm/completion sound	←	○ Pace sound ○ Timer completion sound
○ No sound	←	←
Timer alarm/completion sound	←	←
Timer alarm/completion sound	←	←
Timer alarm/completion sound	←	←

- The correction of the timer is not obtained in the time mode while the stopwatch is running.
- When the timer is set, the timer is accompanied by start/stop operation in the stopwatch mode.

■6. CONSTITUTIONS OF MOVEMENT/PLATE COMPLETE



■7. CHECKING ITEMS

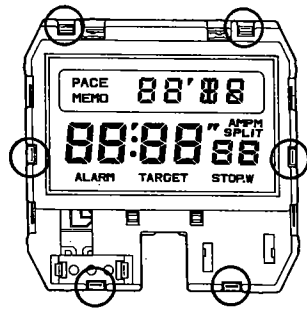
Correction of time after exchanging the power cells (all-reset)

Do the all-reset operation by simultaneously pushing the (S1), (S2), (S3), and (S4) buttons after exchanging the power cell. Set the correct time in accordance with Section 3-4 Time Correction. If you do not do this the operation will not be correct.

Checking items in assembly and disassembly

Do not do form the hooks (6 parts) of the supporter for the plate complete.

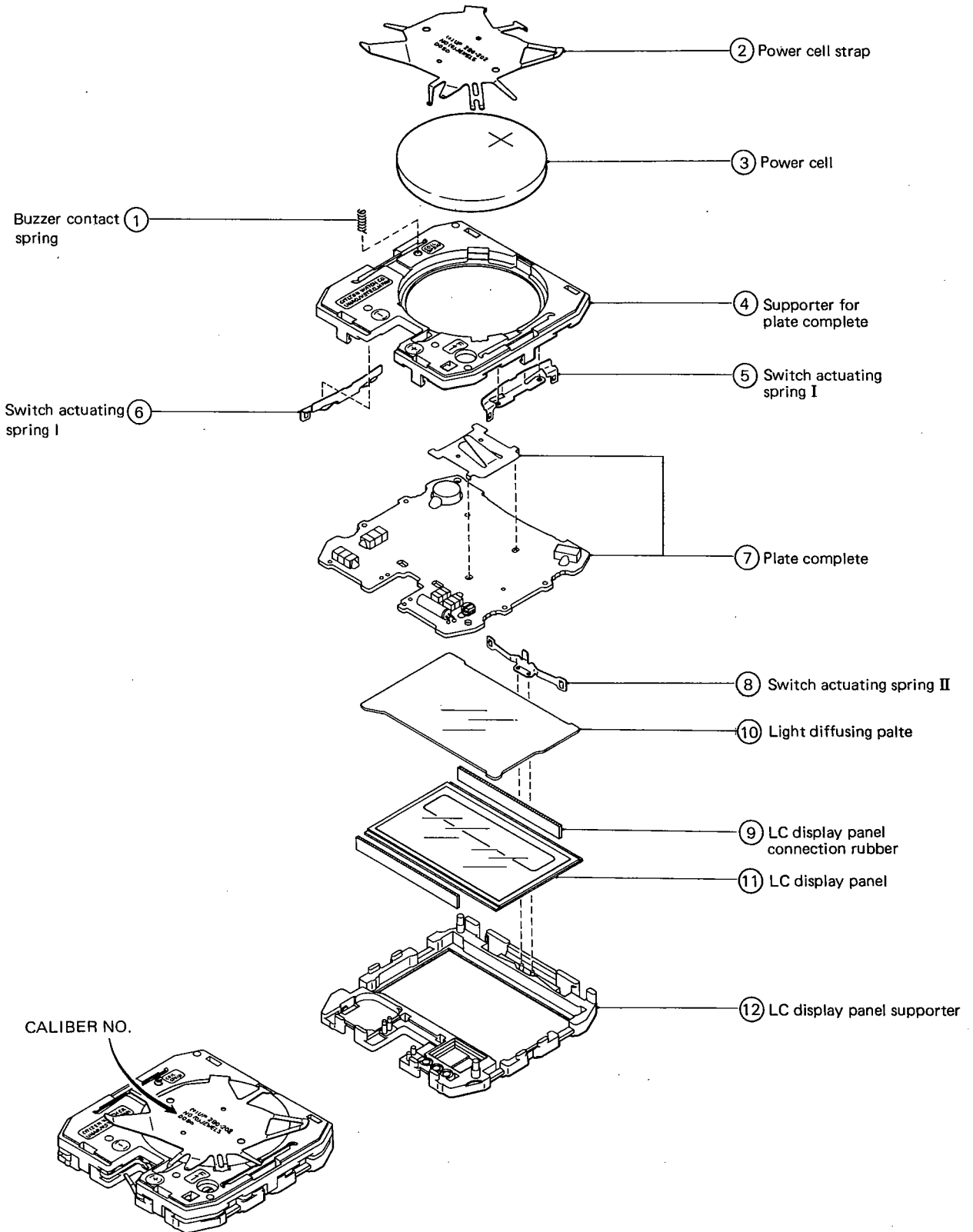
- a) When you open the outside claws with a screwdriver upon assembly, if you use too much force the claws may deform or break.
- b) Confirm that the claws are fastened with the LC display panel supporter upon assembly.

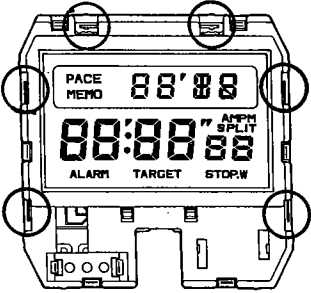
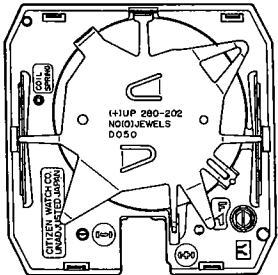


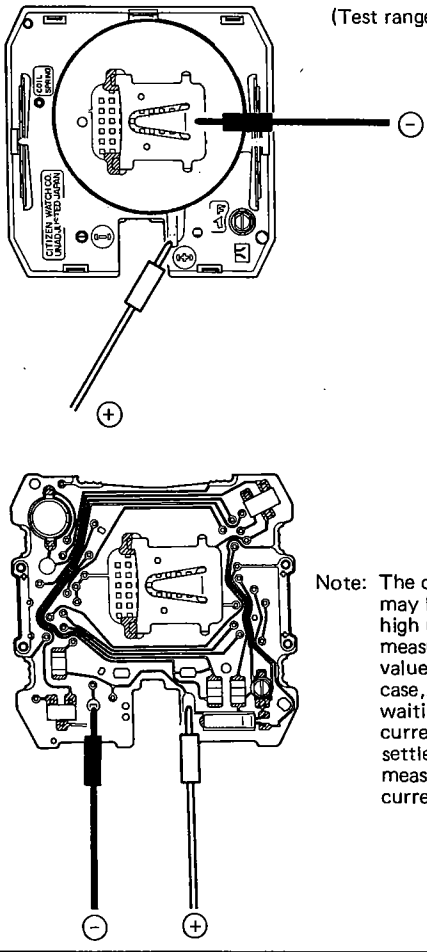
(Hook position)

8. DISASSEMBLY/ASSEMBLY OF THE MODULE

Disassembly module: ① → ⑫
Assembly module: ⑫ → ①



Check points	How to check	Results & treatment
<p>(5) Check of the switch mechanism</p>	<ul style="list-style-type: none"> ● Check whether the pattern of the plate firmly contacts the switch actuating spring. ● Check whether the push buttons are deformed/soiled or not. <div style="text-align: center;">  </div> <p>*To maintain the waterproof of the watch and smooth operation of the buttons, make sure to put silicon oil on the packing part of the push buttons.</p>	
<p>(6) Check of lamp</p>	<p>[Refer to Technical Manual Basic course II-1-e]</p>	<p>Flashing → Nondefective Not flashing → Replace the plate complete</p>
<p>(7) Check of alarm mechanism</p>	<p>[Refer to the Technical Manual Basic course II-1-d.]</p> <ol style="list-style-type: none"> a. Checking the piezo-electric element. If the white color piezo-electric element attached directly to the case back with adhesive, especially the part touching by the buzzer-contact spring, has a defect or a crack, the alarm may not sound. b. Checking the buzzer contact spring. Check whether the buzzer contact spring is bent/deformed or not. c. Checking the alarm output signal of the plate complete. (You can check without removing the module from the case.) <div style="display: flex; align-items: flex-start;"> <div style="flex: 1;">  </div> <div style="flex: 1; padding-left: 20px;"> <p>(Tester range DC 0.3V)</p> <ul style="list-style-type: none"> ● (+) to the power cell surface ● (-) to the buzzer contact spring </div> </div>	<p>Tester point swings → Nondefective No alarm output → Replace the plate complete</p>

Check points	How to check	Results & treatment
<p>(8) Measurement of the current value</p>	<p>[Refer to Technical Manual Basic Course II-1-f.]</p>  <p>(Test range: DC 12V)</p> <p>Note: The current value may be temporarily high upon initial measuring of the value. In this case, after waiting until the current value has settled down, measure the current value again.</p>	<ul style="list-style-type: none"> ● Current value of the complete module <ul style="list-style-type: none"> Under $1.8 \mu\text{A}$ → Nondefective Over $1.8 \mu\text{A}$ → Measure the plate complete singularly ● Current value of the plate complete singularly <ul style="list-style-type: none"> Under $1.0 \mu\text{A}$ → Nondefective Over $1.0 \mu\text{A}$ → Replace the plate complete
<p>(9) Check of appearance conditions and functions</p>	<p>[Refer to the Technical Manual Basic Course II-2-f.]</p> <p>Check whether the displays and buttons operate correctly or not in the complete product.</p>	

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