

# SERVICE MANUAL & PARTS LIST

REF. NO. S/M-539  
AUGUST 1996

MODULE NO.

QW-1758



ABX-67

INDEX

**CASIO**®

(WITHOUT PRICE)

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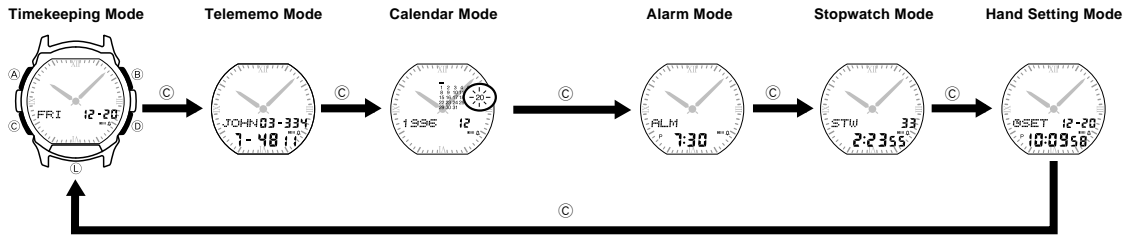
## 1. SPECIFICATIONS

Item	Detail
Battery	SR927W × 2
Battery life	Approx. 2 years
Current consumption	2.00 μA maximum
Alarm system	Piezo plate on Back cover
Accuracy	±20sec./month
Accuracy setting system	Pattern cutting method (P1-P5)
Accuracy checking	See page 8
Accuracy setting	Unadjustable
Functions	<ul style="list-style-type: none"> <li>• Electro-luminescent backlight</li> <li>• 50 pages of Telememo               <ul style="list-style-type: none"> <li>8 letters and 12 numerals per page</li> <li>Auto sort function</li> </ul> </li> <li>• Calendar               <ul style="list-style-type: none"> <li>Full month calendars from January 1996 to December 2020.</li> </ul> </li> <li>• 1/100 sec. stopwatch               <ul style="list-style-type: none"> <li>Measuring capacity: 23:59'59.99"</li> <li>Measuring mode: Net time, split time, 1st-2nd place times</li> </ul> </li> <li>• Daily alarm</li> <li>• Hourly time signals</li> <li>• Regular timekeeping:               <ul style="list-style-type: none"> <li>(Analog) Hour and minute hands</li> <li>(Digital) Hr, min, sec, am/pm, yr, mo, date, day</li> </ul> </li> <li>• Auto-calendar (pre-programmed until the year 2020)</li> <li>• 12/24-hour formats</li> <li>• Auto display function</li> </ul>

## 2. OPERATION CHART: MODULE QW-1758

### GENERAL GUIDE

- Press **C** to change from mode to mode.
- If the digital display of your watch is continually changing, see "Auto Display function" for information on how to stop it.



### ABOUT THE BACKLIGHT

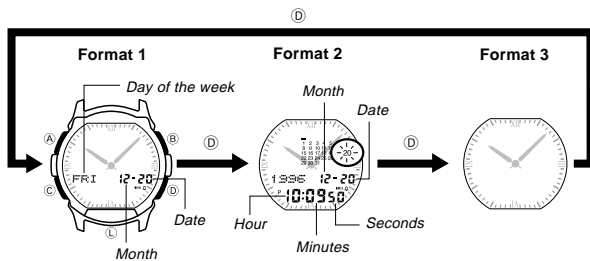
Pressing **L** illuminates the display for about two seconds. If you hold down **L**, the light automatically disappears after five seconds.



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

### TIMEKEEPING MODE

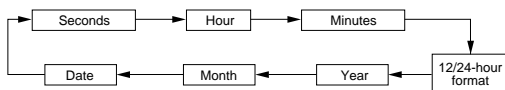
Press **D** to change the display format in the Timekeeping Mode as shown below.



- Format 1 shows the day of the week, month, and day.
- Format 2 shows a full-month calendar for the current month, with the current date flashing inside it.
- Format 3 clears the entire display.
- Holding down **B** while using either Format 1 or Format 3 displays the full-month calendar for the current month.
- Holding down **B** while using Format 2 displays the full-month calendar for the following month.

### To set the time and date

1. Make sure that your watch is in the Timekeeping Mode. If not, use **C** to enter the Timekeeping Mode.
2. Hold down **A** while in the Timekeeping Mode. The seconds digits flash on the display because they are selected.
3. Press **C** to change the selection in the following sequence.



4. While the seconds digits are selected (flashing), press **D** to reset the seconds 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.
5. While any other digits (besides seconds) are selected (flashing), press **D** to increase the number or **B** to decrease it. Holding down either button changes the current number at high speed. While the 12/24-hour setting is selected, press **D** to switch between the two formats.
6. After you set the time and date, press **A** to return to the normal Timekeeping Mode (the flashing stops).
  - The day of the week is automatically set in accordance with the date.
  - The date can be set within the range of January 1, 1996 to December 31, 2020.
  - 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 normal Timekeeping Mode automatically.

### Day of the week abbreviations

Day of the week is displayed as follows.

SUN : Sunday    MON : Monday    TUE : Tuesday  
 WED : Wednesday    THU : Thursday    FRI : Friday  
 SAT : Saturday

### TELEMEMO MODE

#### Caution

The following causes all data stored in memory to be deleted. Be sure to always keep separate written copies of all important data.

- Malfunction or repairs
- Dead battery
- Battery replacement

In no event will CASIO be liable for loss of data or any damages arising out of such loss.

The Telememo Mode lets you store up to 50 pairs of name and telephone number data. The name can be up to 8 characters long and the numbers 12 digits each. Data is automatically sorted into alphabetical order based on the name data. You can recall data by scrolling through a sorted list.

### To input Telememo data

Figure a.

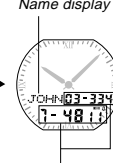
Number of items in memory



Mode indicator

Figure b.

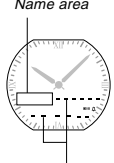
Name display



Telephone number

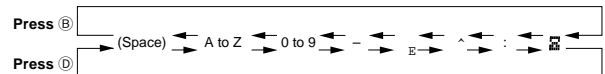
Figure c.

Name area

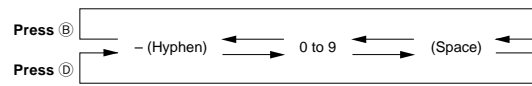


Number area

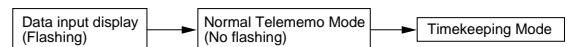
1. Make sure that your watch is in the Telememo Mode. If not, use **C** to enter the Telememo Mode.
2. Whenever you enter the Telememo Mode, the display shows how many items are already stored in memory and how many items you can input before memory becomes full (Figure a.). After a few seconds, the display changes to show the item that was selected when you last exited the Telememo Mode (Figure b.).
3. Press **B** and **D** in the Telememo Mode. The new data display (Figure c.) appears.
4. If the message "FULL" appears on the display, it means that memory is full. To store more data, you first have to delete some of the data. Use the procedure to delete data.
5. Hold down **A** until the flashing cursor appears on the name area.
6. Use **B** or **D** to input letters at the cursor position. The character changes in the following sequence. Holding down either button changes the selection at high speed.



7. After you select the character you want, press **C** to advance the cursor to the right.
8. Repeat steps 4 and 5 until you complete name input.
9. You can input up to 8 characters in the name area. The display shows only 4 characters, but automatically scrolls from right to left to show all of the characters that make up the text.
10. After the name input is through, use **C** to move the cursor to the number area (Figure c.).
11. While the cursor is in the number area, use **B** or **D** to input numbers you want. The character changes in the following sequence. Holding down either button changes the selection at high speed.



12. After you select the character you want, press **C** to advance the cursor to the right.
13. Repeat steps 7 and 8 until you complete name input.
14. After inputting the data you want, press **A** to store it into memory.
15. The message "SORT" appears on the display and stays there while data is being stored into alphabetical order. At this time the cursor appears on the display ready for input. At this point you could return to step 4 to input more data. If you do not want to input more data, press **A** again to return to the normal Telememo Mode display (without flashing).
16. The following shows how the display automatically changes if you do not operate any button for a few minutes while in the Telememo Mode.



### To scroll through Telememo data

In the normal Telememo Mode (when the display is not flashing), press **D** to scroll forward or **B** to scroll backward through stored data.

- The data item that is displayed when you exit the Telememo Mode will be the first data to appear when you enter the Telememo Mode again.

### To edit Telememo data

- In the Telememo Mode, use **(B)** or **(D)** to scroll through the data items and display the one you want to edit.
  - Hold down **(A)** until the flashing cursor appears on the display.
  - Use **(C)** to move the cursor to the character you want to change.
  - Use **(B)** or **(D)** to select the character you want.
- For details, see "To input Telememo data" (steps 4 through 5 for name input, or 7 through 8 for number).
- After editing the data, press **(A)** to store it.
  - The message "SORT" appears on the display and stays there while data is being stored into alphabetical order. After the sort operation is complete, the display returns to the normal Telememo Mode display (the flashing stops).

### To delete a Telememo item

- In the Telememo Mode, use **(B)** or **(D)** to scroll through the name data and display the one you want to delete.
  - Hold down **(A)** until the cursor appears on the display.
  - Hold down **(B)** and **(D)** until the message "CLR" appears on the display indicating the data is deleted. At this time the cursor appears on the display ready for input. Press **(A)** again to return to the normal Telememo Mode (without a cursor).
- If you want to input more data, start from step 3 under "To input Telememo data".

## CALENDAR MODE

The Calendar Mode lets you view full month calendars for any month from January 1996 to December 2020. The short bar in the upper left of the calendar indicates that the first day of the week in the calendar is Sunday.



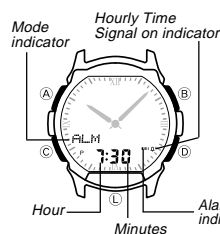
- Make sure that your watch is in the Calendar Mode. If not, use **(C)** to enter the Calendar Mode.
  - The calendar of the current month appears on the display, with the current date flashing, whenever you enter the Calendar Mode.
- Pressing **(D)** scrolls forward to the next month's calendar, and pressing **(B)** scrolls back to the previous month.
  - Holding down either button scrolls the calendars at high speed. After two years scroll, the watch starts to scroll year-by-year on the January calendar (forward scroll) or the December calendar (back scroll).

## ALARM MODE

When the Daily Alarm is switched on, the alarm sounds for 20 seconds at the preset time each day.

When the Hourly Time Signal is switched on, the watch beeps every hour on the hour. Note that the Daily Alarm and the Hourly Time Signal operate based on the digital time setting.

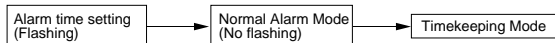
### To set the alarm time



- Make sure that the watch is in the Alarm Mode. If not, use **(C)** to enter the Alarm Mode.
- Hold down **(A)** while in the Alarm Mode until the hour digits start to flash on the display. The hour digits flash because they are selected. At this time the Daily Alarm is switched on automatically.
- Press **(C)** to change the selection in the following sequence.

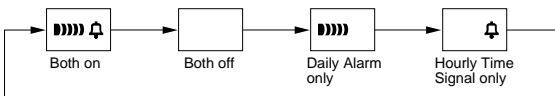


- Press **(D)** to increase the selected digits and **(B)** to decrease them. Holding down either button changes the number at high speed.
- The format (12-hour and 24-hour) of the alarm time matches the format you select for normal timekeeping.
- When setting the alarm time using the 12-hour format, take care to set the time correctly as morning or afternoon (indicated as "P" on the display).
- After you set the alarm time, press **(A)** to return to the normal Alarm Mode (the flashing stops).
- The following shows how the display automatically changes if you do not operate any button for a few minutes while in the Alarm Mode.



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

Press **(D)** while in the normal Alarm Mode (when no digit is flashing) to change the status of the Daily Alarm and Hourly Time Signal in the following sequence.



### To stop the alarm

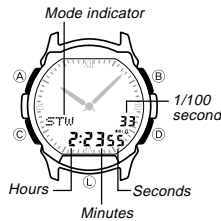
Press any button to stop the alarm after it starts to sound.

### To test the alarm

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

## STOPWATCH MODE

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.



### To measure elapsed time

- In the Stopwatch Mode, press **(D)** to start the stopwatch.
- Press **(D)** to stop the stopwatch.
  - You can resume the measurement operation by pressing **(D)** again.
- Press **(B)** to clear the stopwatch to all zeros.

### To record split times

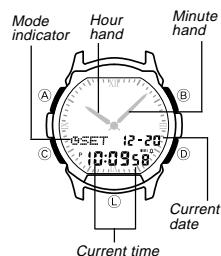
- Press **(D)** to start the stopwatch.
- Press **(B)** to display the timing up to that point. Stopwatch timing continues internally.
  - At this time, the mode indicator "STW" is replaced by "SPL" on the display, indicating that the split time is being recorded.
- Press **(B)** to clear the split time and to continue time measurement on the display.
  - You can repeat steps 2 and 3 as many times as you want.
- Press **(D)** to stop the time measurement.
- Press **(B)** to clear the stopwatch to all zeros.

### To time first and second place finishes

- Press **(D)** to start the stopwatch.
- Press **(B)** when the first finisher crosses the line, and record the time.
- Press **(D)** when the second finisher crosses the line.
- Press **(B)** to display the finishing time of the second finisher.
- Press **(B)** again to clear the stopwatch to all zeros.

## HAND SETTING MODE

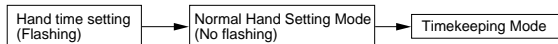
When the time shown on the display does not match the analog setting, use this mode to correct this situation by changing the analog setting.



### To set the analog time

- Make sure that your watch is in the Hand Setting Mode. If not, use **(C)** to enter the Hand Setting Mode.
- Hold down **(A)** while in the Hand Setting Mode until the mode indicator starts to flash on the display.
- Press **(D)** to advance the hands of the analog time-piece.
- After you set the analog time, press **(A)** to return to the normal Hand Setting Mode (the flashing stops).

- The following shows how the display automatically changes if you do not operate any button for a few minutes while in the Hand Setting Mode.



## AUTO DISPLAY FUNCTION

The Auto Display function of this watch continually changes the contents of the digital display. Note that you cannot use any of the watch's other functions while the Auto Display function is operating.



### To turn the Auto Display on

Hold down **(C)** for about two or three seconds in any mode until the watch beeps.

### To turn the Auto Display off

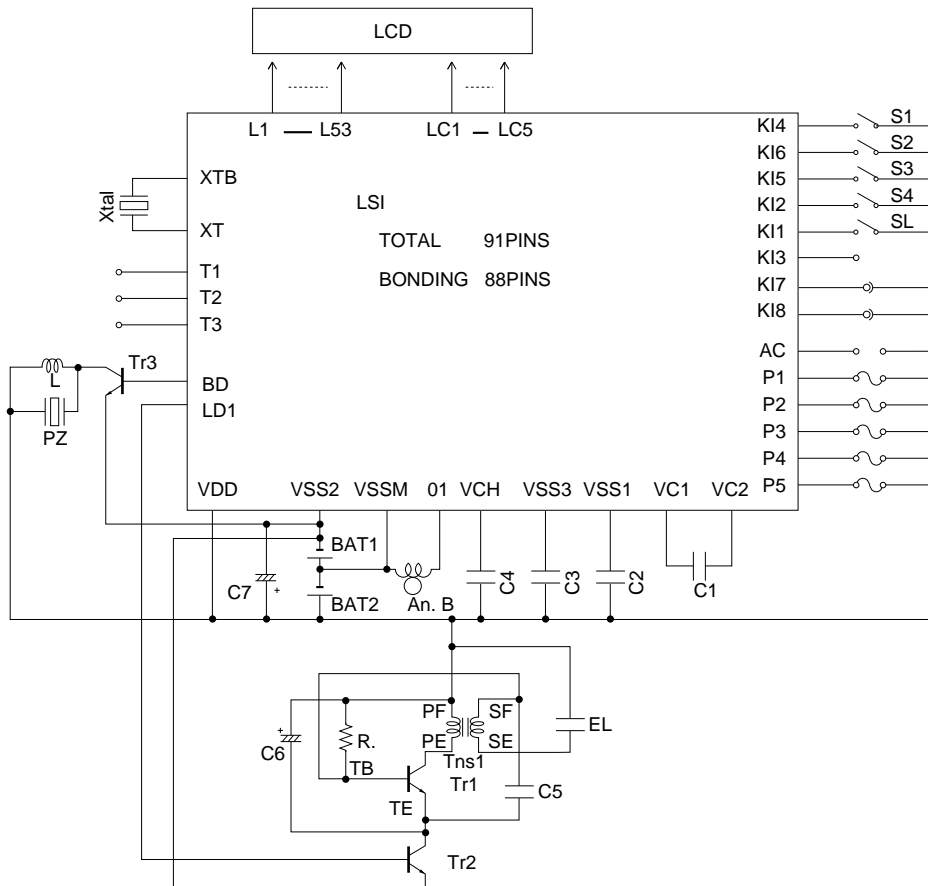
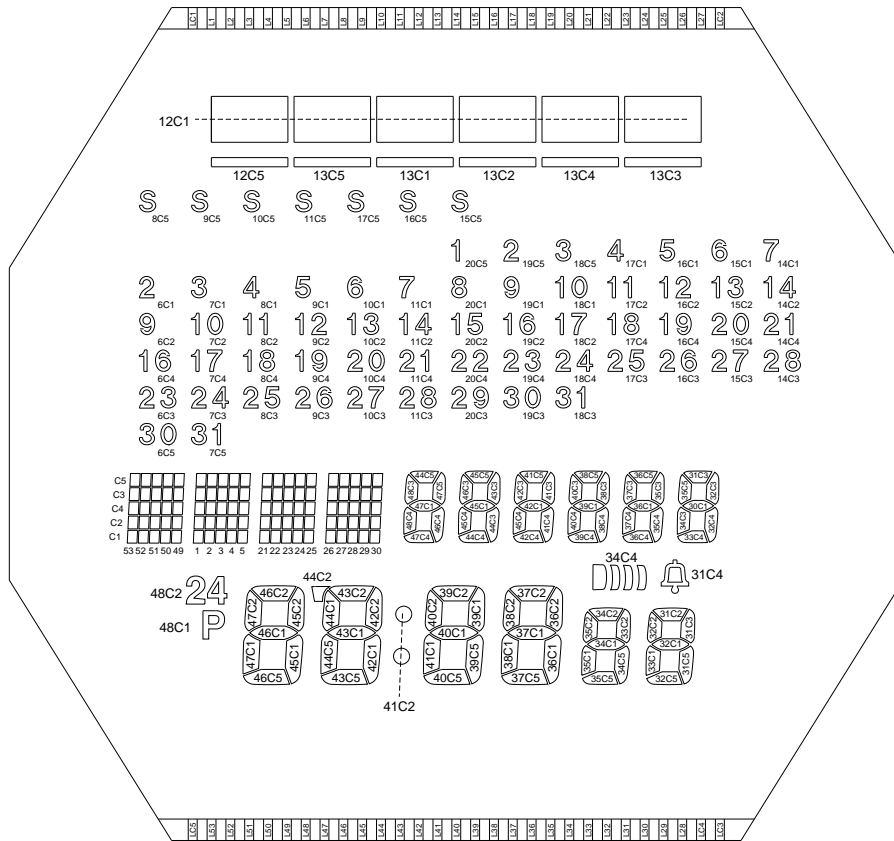
Hold down **(C)** for about two or three seconds until the watch beeps. At this time, the watch is in the Timekeeping Mode.

### Note

The Auto Display function cannot be performed while you are making settings (i.e. while digits or other settings are flashing on the display).

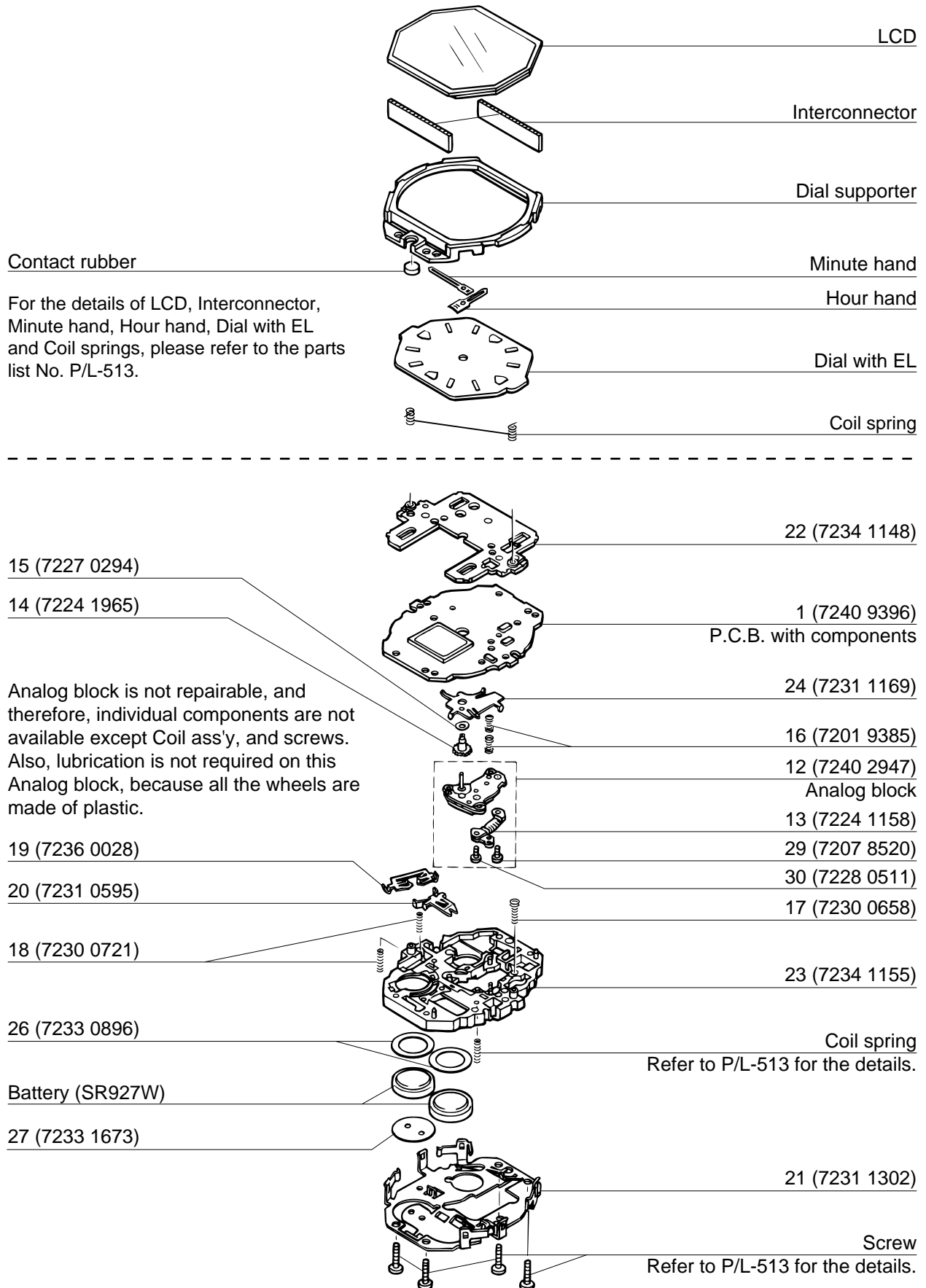
### 3. DRAWINGS: MODULE QW-1758

#### 3-1. BLOCK DIAGRAM





#### 4. EXPLODED VIEW: MODULE QW-1758



## 5. PARTS LIST : MODULE QW-1758

- Note: 1. Prices and specifications are subject to change without prior notice.  
 2. Spare parts are classified as follows according to their importance in after-sales service.  
     A Rank ----- Very Important  
     B Rank ----- Important  
     C Rank ----- Less important  
 3. Batteries in Bulk pack on the tray will be supplied from our Overseas Spare Parts Section under charge basis.  
     Batteries in Blister pack will be supplied from our Sales Department.  
 4. As for order/supply of spare parts, refer to the separate publication "GUIDEBOOK for spare parts supply".

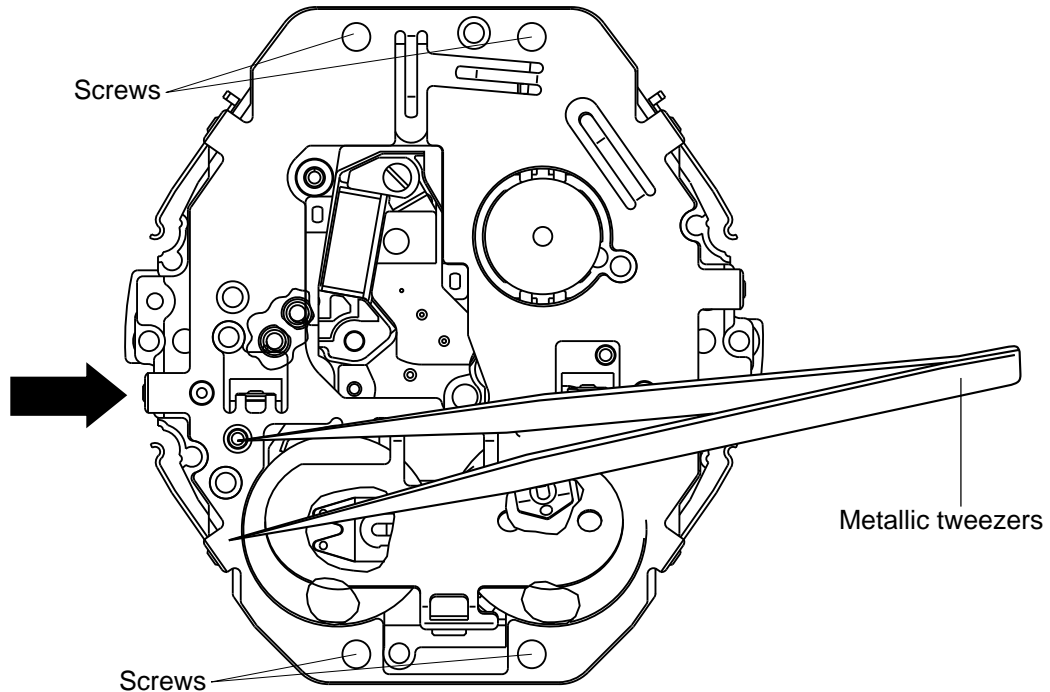
Item	Code No.	Parts Name	Specification	Applicable	Q	R
	7072 3965	Module	QW-1758DF-01	ABX-67		A
1	7240 9396	P.C.B. with components	Q251457*1	QW-1758DF-01	1	A
2	7101 5630	Transistor	2SC4181-T1	QW-1758DF-01	1	B
3	7101 5413	Transistor	2SD1823(TX)	QW-1758DF-01	1	B
4	7101 1151	Transistor	2SD1824(TX)	QW-1758DF-01	1	B
5	7020 0490	Coil	ELT-3K004B	QW-1758DF-01	1	B
6	7101 1417	Transformer	TRS5833	QW-1758DF-01	1	B
7	7911 1253	Tantalum capacitor	F930J156MAA	QW-1758DF-01	1	B
8	7911 1260	Tantalum capacitor	F930J106MAA	QW-1758DF-01	1	B
9	7103 4446	Chip capacitor	CM21Y5V104P25AT	QW-1758DF-01	4	B
10	7102 7646	Chip resistor	ERJ6GEYJ163V	QW-1758DF-01	1	B
11	7103 7163	Chip capacitor	CT21Y5V684P16AT	QW-1758DF-01	1	B
12	7240 2947	Analog block (C-7.1)	Q220396*3	QW-1758DF-01	1	A
13	7224 1158	Coil ass'y 384	Q322564B*1S	QW-1758DF-01	1	A
14	7224 1965	Hour wheel 384	Q422164A-1K	QW-1758DF-01	1	B
15	7227 0294	Washer 745	Q436294A-1	QW-1758DF-01	1	C
16	7201 9385	Coil spring 384-1	Q422656A-1	QW-1758DF-01	2	B
17	7230 0658	Coil spring 1327-1	Q450867-1	QW-1758DF-01	1	B
18	7230 0721	Coil spring 1341-2	Q453360-1	QW-1758DF-01	2	B
19	7236 0028	Battery contact (-) 747	Q334236B-1	QW-1758DF-01	1	C
20	7231 0595	Terminal plate 1087	Q340734-1	QW-1758DF-01	1	C
21	7231 1302	Main plate 1341	Q150131C-1	QW-1758DF-01	1	C
22	7234 1148	Housing 1341-1	Q150129B-1	QW-1758DF-01	1	C
23	7234 1155	Housing 1341-2	Q150130B-1	QW-1758DF-01	1	C
24	7231 1169	Hour wheel holder 1341	Q351344-1	QW-1758DF-01	1	C
25	7229 0623	Adhesive tape 1416	Q450991-1	QW-1758DF-01	1	C
26	7233 0896	Insulation sheet 747-2	Q432462-1	QW-1758DF-01	2	C
27	7233 1673	Insulation sheet 1341-2	Q451788-1	QW-1758DF-01	1	C
28	7233 1666	Insulation sheet 1341-1	Q351345-1	QW-1758DF-01	1	C
29	7207 8520	Screw 354-2	Q411616-1	QW-1758DF-01	1	C
30	7228 0511	Screw 388	Q422638-1	QW-1758DF-01	1	C
		Battery	SR927W		2	
For the prices and minimum order/supply quantities of the above parts, refer to the Parts Price List P.P.L.-513.						

Notes: Q – Used quantity  
 R – Rank

## 6. PRECAUTIONS FOR REPAIR: MODULE QW-1758

### 6-1. AC (ALL CLEAR) AND REMOVING OF MODULE

1. Perform AC (ALL CLEAR) when inserting a new battery, or else the memories and/ or counters may give erratic displays.  
Touch the AC contact and the positive (+) side of the battery or main plate with the metallic tweezers.  
The contact should be made for about two seconds.
2. On removing of the module from the case, please insert the precision screw driver between the module and the case pointed by an arrow after removing of four screws.



### 6-2. ACCURACY CHECKING

Check the accuracy of the module with the quartz timer after switching the module to "ACCURACY CHECKING MODE".

The operations are shown below:

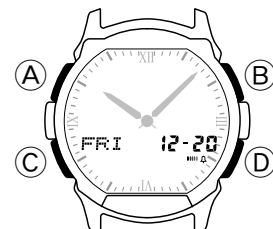
#### A) SWITCHING TO "ACCURACY CHECKING MODE"

Continuously push the (A), (C) and (D) buttons at the same time at the normal time keeping mode.  
Then all the segments are displayed and the LCD drive signals are changed to the static drive signal of "32 Hz" so that you can check the accuracy with the quartz timer.

#### B) CANCELLATION OF THE "ACCURACY CHECKING MODE"

Push any button.  
Then the display is returned to its original state.

**NOTE:** The "ACCURACY CHECKING MODE" will automatically return to the regular mode in 1 ~ 2 hour(s) without any operation.



### 6-3. REPLACEMENT OF MODULE AND DIAL WITH EL

On the model ABX-67 use the module QW-1758, Dial with EL is fixed to Module by 3 pcs of adhesive tapes. And please replace Module or Dial with EL according to the following procedure.

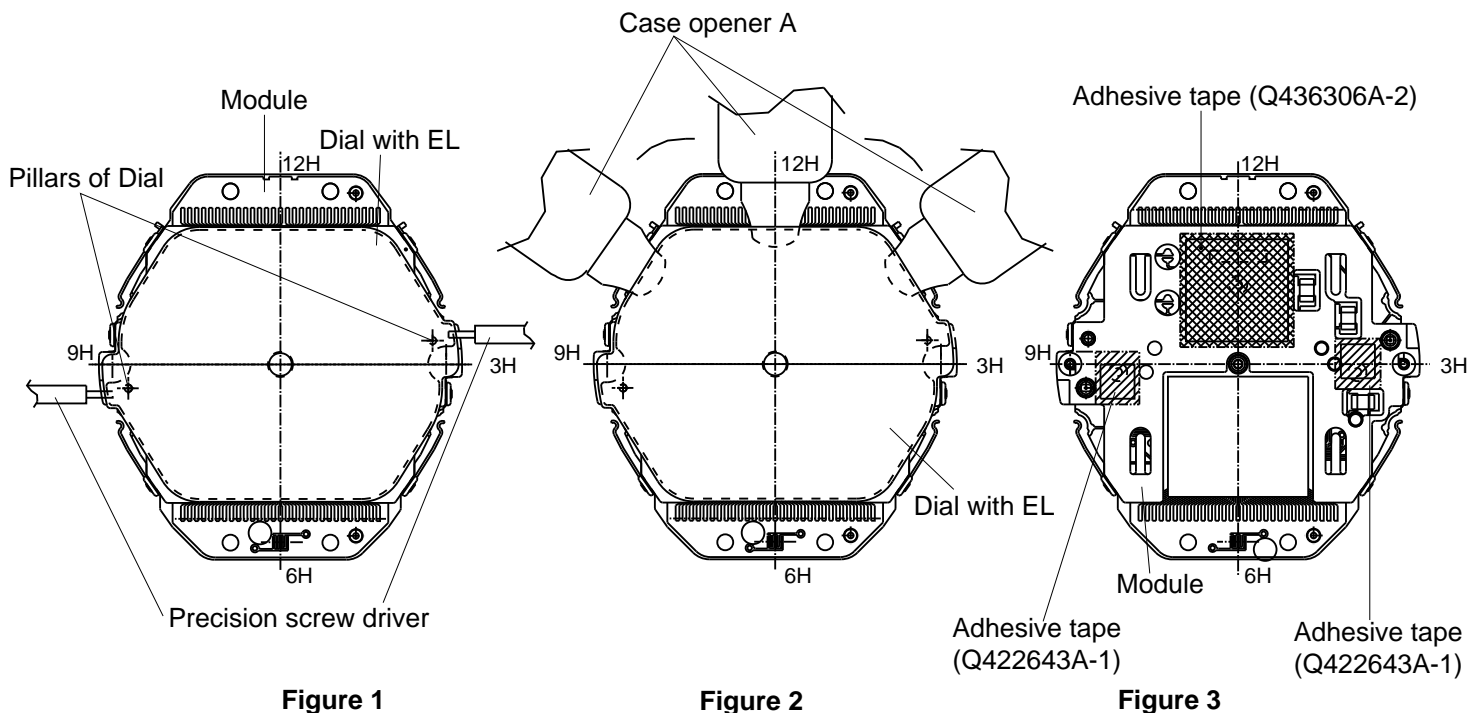
- 1) Remove the hands by using Hand removing spacer. (Refer to Service bulletin WAT-189)
- 2) Insert the precision screw driver between Module and Dial with EL on 3 and 9 o'clock side as shown in figure 1. And float up 2 pillars of the dial from holes of Module.
- 3) Insert Case opener A between Module and Dial with EL on 11,12 and 1 o'clock side as shown in figure 2. And separate Dial with EL from Module.
- 4) Replace Module or Dial with EL.
- 5) Put 3 pcs of new adhesive tapes on Module as shown in figure 3. Adhesive tapes should always be replaced with new ones. Especially when the adhesive tapes become plumped.

Note: If the adhesive tapes aren't used for fixing of Module and Dial with EL, 2 pillars of the Dial with EL are possible to be broken when a great shock is given to the watch.

- 6) Fix Dial with EL to Module. Be sure 2 terminals of EL are connected with the coil springs of the Module.

Necessary spare parts are as follows.

Code No.	Parts Name	Specification	Q
7072 3965	Module	QW-1758DF-01	1
7170 0567	Dial with EL (for ABX-67)	Q355609*4	1
7209 3733	Adhesive tape	Q436306A-2	1
7227 0098	Adhesive tape	Q422643A-1	2



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