SERVICE MANUAL
& PARTS LIST

REF. NO. S/M-967
AUG. 2006

MODULE NO.

QW-3042

PRW-1200J

CASIO®

(WITHOUT PRICE)

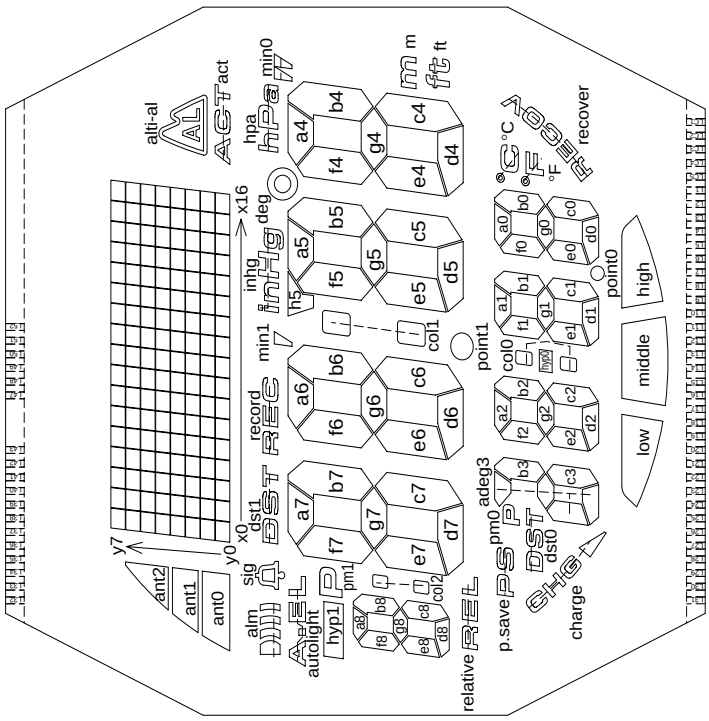
CONTENTS

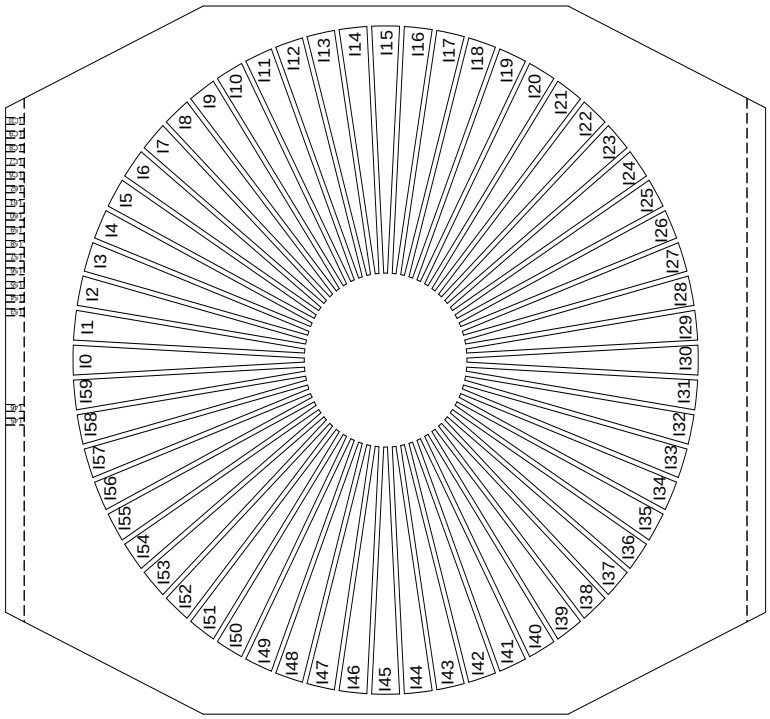
1. SPECIFICATIONS: MODULE QW-3042

Item	Detail
Battery	CTL1616 (Storage battery) Note: Use CTL1616 only. Other storage battery or CR1616 can cause damage to the watch.
Battery life	Approx. 5 months (from full charged condition)
Current consumption	1.764 μA maximum
Alarm system	Piezo plate on Cover/Back
Accuracy	±15 sec./month
Accuracy setting system	Trimmer capacitor
Accuracy checking	See page 8
Functions:	• Electro-luminescent backlight Full auto EL light, afterglow • Solar powered • Low-temperature resistant (–10°C) • Digital compass Measures and displays direction as one of 16 points Measuring range: 0 to 359° Measuring unit: 1° 20 seconds continuous measurement Graphic direction pointer Bidirectional calibration and northerly calibration function • Altimeter Measuring range: –700 to 10,000 m Measuring unit: 5 m Auto memory measurements (up to 40 records, each including altitude, month, data, time) High Altitude / Low Altitude Memory Cumulative Ascent / Descent Memory Relative Altitude Display Altitude Tendency Graph Altitude Differential Graphic Altitude alarm • Barometer Display range: 260 to 1,100 hPa Display unit: 1 hPa Atmospheric pressure tendency graph Atmospheric pressure differential graphic • Thermometer Display range: –10 to 60°C Display unit: 0.1°C • Duplex LC display • World time 29 time zones (30 cities), city code display, daylight saving on/off • 1/100-second stopwatch Measuring capacity: 9:59'59.99" Measuring modes: Elapsed time, split time, 1st-2nd place times • Countdown timer Measuring unit: 1 second Countdown range: 60 minutes Countdown start time setting range: 1 to 60 minutes (1-minute increments) Others: Auto-repeat, progress beeper • Daily alarms 5 independent daily alarms • Hourly time signal • Battery power indicator • Power save function (automatically disables LCD if the watch is left in the dark for approximately 60 to 70 minutes, and sensor measurements if the watch is left in the dark for six or seven days) • Auto-calendar (to year 2099) • 12/24-hour format • Regular timekeeping: Hour, minutes, seconds, pm, month, date, day • Time calibration signal reception Auto receive Manual receive Last date/time received display • Receivable Time Calibration Signals Mainflingen, Germany (Call Sign: DCF77, Frequency: 77.5kHz) Rugby, England (Call Sign: MSF, Frequency: 60kHz) Fort Collins, Colorado (Call Sign: WWVB, Frequency: 60kHz) Fukushima, Japan (Call Sign: JJY, Frequency: 40kHz) Fukuoka/Saga, Japan (Call Sign: JJY, Frequency: 60kHz)

2. DRAWINGS: MODULE QW-3042

2-1. LCD DIAGRAM





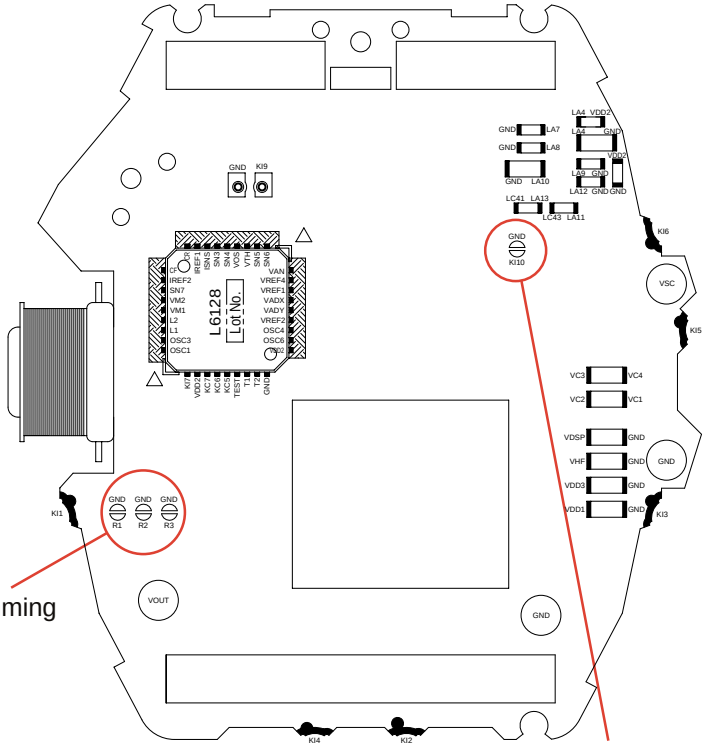
SEG \ COM	LC1	LC2	LC3	LC4	LC5
L 1	x15y3	x15y4	x15y5	x15y7	x15y6
L 2	x16y3	x16y4	x16y5	x16y7	x16y6
L 3	x16y2	x16y1	x16y0	act	alti-al
L 4	x15y2	x15y1	x15y0	m	hpa
L 5	x14y2	x14y1	x14y0	min0	col1
L 6	x13y2	x13y1	x13y0	c4	b4
L 7	recover	ft	d4	g4	a4
L 8	x12y2	x12y1	x12y0	e4	f4
L 9	x11y2	x11y1	x11y0	deg	inhg
L10	x10y2	x10y1	x10y0	c5	b5
L11	°F	°C	d5	g5	a5
L12	c0	b0	e5	f5	h5
L13	d0	g0	a0	point1	min1
L14	point0	e0	f0	c6	b6
L15	c1	b1	d6	g6	a6
L16	d1	g1	a1	e6	f6
L17	high	e1	f1	c7	b7
L18	col0	hyp0	d7	g7	a7
L19	middle	c2	b2	e7	f7
L20	d2	g2	a2	c8	b8
L21	e2	f2	d8	g8	a8
L22	x9y2	x9y1	x9y0	e8	f8
L23	x8y2	x8y1	x8y0	pm1	col2

SEG \ COM	LC1	LC2	LC3	LC4	LC5
L24	x7y2	x7y1	x7y0	relative	hyp1
L25	x6y2	x6y1	x6y0	dst1	record
L26	x5y2	x5y1	x5y0	b3	low
L27	x4y2	x4y1	x4y0	adeg3	c3
L28	x3y2	x3y1	x3y0	pm0	dst0
L32	x2y2	x2y1	x2y0	autolight	sig
L33	x1y2	x1y1	x1y0	alm	ant0
L34	x0y2	x0y1	x0y0	ant1	ant2
L35	x0y3	x0y4	x0y5	x0y7	x0y6
L36	x1y3	x1y4	x1y5	x1y7	x1y6
L37	x2y3	x2y4	x2y5	x2y7	x2y6
L38	x3y3	x3y4	x3y5	x3y7	x3y6
L39	x4y3	x4y4	x4y5	x4y7	x4y6
L40	x5y3	x5y4	x5y5	x5y7	x5y6
L41	x6y3	x6y4	x6y5	x6y7	x6y6
L42	x7y3	x7y4	x7y5	x7y7	x7y6
L43	x8y3	x8y4	x8y5	x8y7	x8y6
L47	x9y3	x9y4	x9y5	x9y7	x9y6
L48	x10y3	x10y4	x10y5	x10y7	x10y6
L49	x11y3	x11y4	x11y5	x11y7	x11y6
L50	x12y3	x12y4	x12y5	x12y7	x12y6
L51	x13y3	x13y4	x13y5	x13y7	x13y6
L52	x14y3	x14y4	x14y5	x14y7	x14y6

SEG \ COM	LC6	LC7	LC8	LC9	LC10
L45	I30	I31	I32	I33	I34
L46	I39	I38	I37	I36	I35
L53	I40	I41	I42	I43	I44
L54	I49	I48	I47	I46	I45
L55	I50	I51	I52	I53	I54
L56	I59	I58	I57	I56	I55
L57	I0	I1	I2	I3	I4
L58	I9	I8	I7	I6	I5
L59	I10	I11	I12	I13	I14
L60	I19	I18	I17	I16	I15
L61	I20	I21	I22	I23	I24
L62	I29	I28	I27	I26	I25

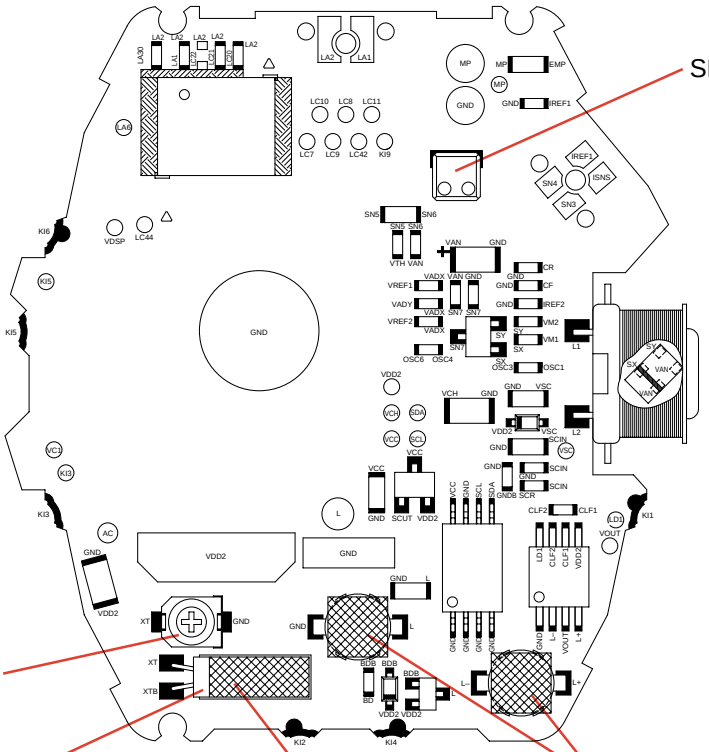
SEG \ COM	L31
L29	charge
L30	p.save

2-2. CHECKING TERMINALS AND COMPONENTS

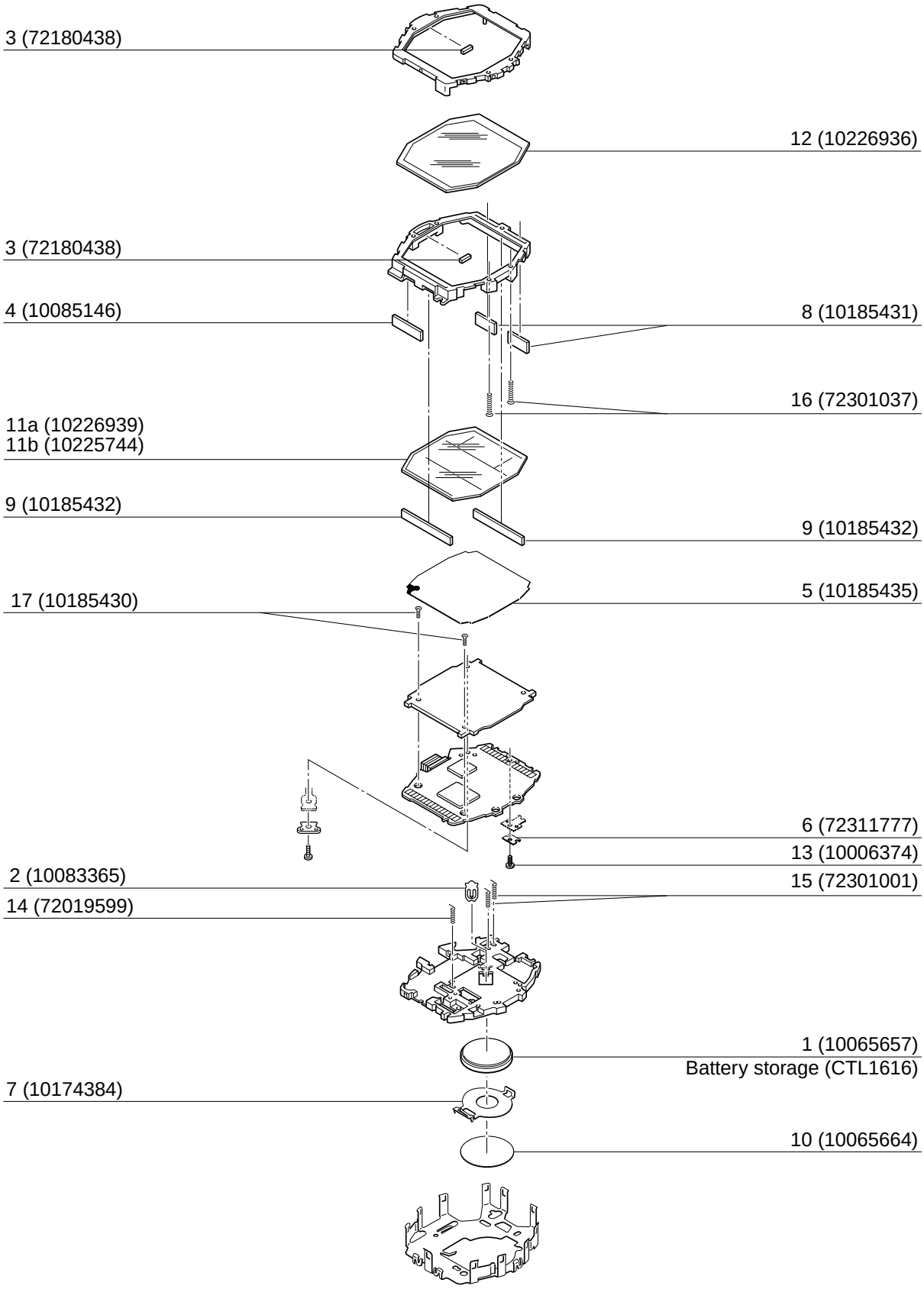


Short pad for R trimming

Short pad for switching modules
KI10-GND: Open (No Soldering)



3. EXPLODED VIEW: MODULE QW-3042



4. PARTS LIST: MODULE QW-3042

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 "GUIDE BOOK for spare parts supply".

Item	Code No.	Parts Name	Specification	Applicable	Q	R
	10229911	MODULE/WITHOUT MOVEMENT	QW-3042YCSA-01	PRW-1100BJ PRW-1100YTJ	1	A
	10229914	MODULE/WITHOUT MOVEMENT	QW-3042YCSA-02	PRW-1200J-1 PRW-1200TJ-7	1	A
1	10065657	BATTERY/STORAGE	CTL1616	QW-3042YCSA Common	1	B
2	10083365	CONTACT/BATTERY(-) 1673	Q358740A-2	QW-3042YCSA Common	1	C
3	72180438	CUSHION 524	Q411459-1	QW-3042YCSA Common	2	C
4	10085146	CUSHION 2472-1	Q470055-1	QW-3042YCSA Common	1	C
5	10185435	EL	YEL-2893-A-00	QW-3042YCSA Common	1	C
6	72311777	HOLDER 1381	Q456843-1	QW-3042YCSA Common	1	C
7	10174384	HOLDER/BATTERY 2154	Q254197-4V04	QW-3042YCSA Common	1	C
8	10185431	INTERCONNECTOR 2983-1	RJQ522026-001V01	QW-3042YCSA Common	2	A
9	10185432	INTERCONNECTOR 2983-2	RJQ522027-001V01	QW-3042YCSA Common	2	C
10	10065664	LABEL/ 2368	Q468543-1	QW-3042YCSA Common	1	C
11a	10226939	LCD (LOWER)	K2893W-01EHP	QW-3042YCSA-01	1	C
11b	10225744	LCD (LOWER)	K2893W-02EHP	QW-3042YCSA-02	1	C
12	10226936	LCD (UPPER)	K2893S-01BTP	QW-3042YCSA Common	1	A
13	10006374	SCREW 2306	Q464966-1	QW-3042YCSA Common	1	A
14	72019599	SPRING/COIL 967-1	Q430081-1	QW-3042YCSA Common	1	B
15	72301001	SPRING/COIL 967-1	Q430081A-2	QW-3042YCSA Common	2	B
16	72301037	SPRING/COIL 1583-1	Q462636-1	QW-3042YCSA Common	2	B
17	10185430	SPRING/COIL 2983-1	RJQ521949-001V01	QW-3042YCSA Common	2	B

For the prices and minimum order/supply quantities of the above parts, refer to the Parts Price List P.P.L.-633.

Notes: Q - Used quantity
R - Rank

5. PRECAUTIONS FOR REPAIR: MODULE QW-3042

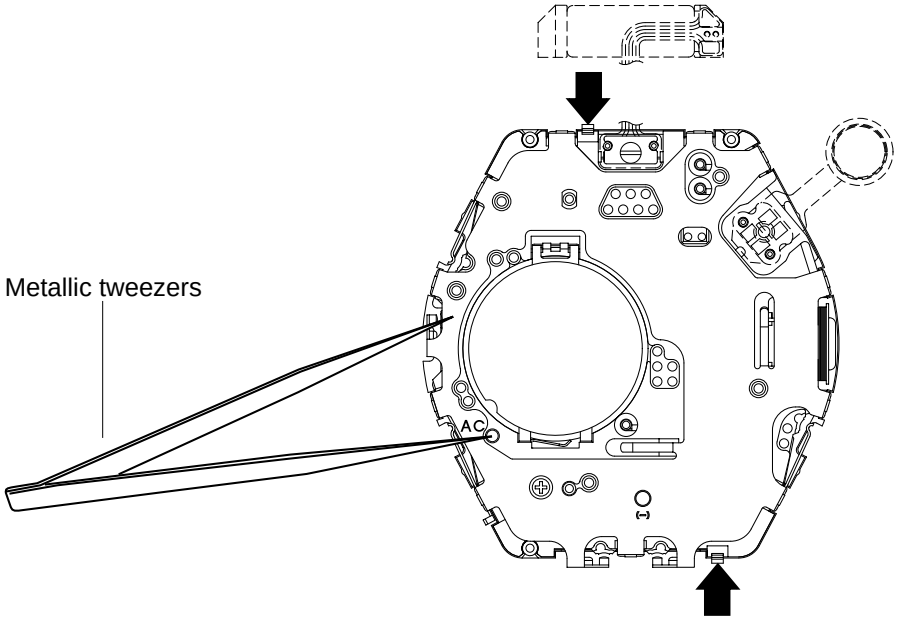
5-1. AC (ALL CLEAR) AND REMOVING OF MODULE

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 main plate with the metallic tweezers.

   The contact should be made for about two seconds.

   For 2 seconds after the AC operation, do not make any button operations on these modules.



2. Removing of the module from the case

   A. Remove the screw of the censor cable holder and the screw of the antenna cable holder.

   B. Remove the sensor cable and the antenna cable.

   *screw of the antenna cable holder=Long
   screw of the censor cable holder=Short

   C. Insert a precision screwdriver between the module and the case when you remove the module from the case.

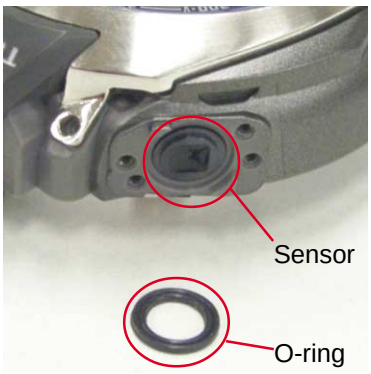
3. Removing of the sensor

A. Remove the screw and the holder.

B. Remove the 2 screws and decorative piece.

C. Remove the 3 screws and sensor plate/protection.

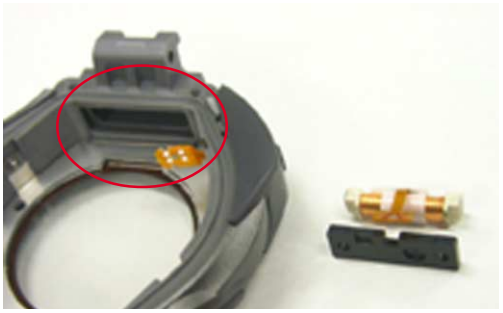
D. Remove the O-ring and sensor.



4. Removing of the antenna

A. Follow the instruction “Removing of the module from the case” and remove the module.

B. Remove the Reinforcement Plate that is fit in the center. (Obtain a Cushion to place around the antenna in a separated order.)



Never replace the sensor, the antenna or the PCB ass'y alone.
Because the matching of the sensor and antenna has been adjusted in the factory production line.

5-2. 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”

While pressing the Ⓔ button, press Ⓒ and Ⓓ buttons at the normal timekeeping mode.

B) CANCELLATION OF THE “ACCURACY CHECKING MODE”

Press any button except for Ⓒ.

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

QW-3042

5-3. SOLAR CELL-PCB ASS'Y CONTACT CHECKING

Check a Solar cell and PCB ass'y are contacted correctly by contact spring, when a module is disassembled.

1. To enter TEST mode.
   1) While pressing Ⓔ button, press Ⓐ and Ⓒ buttons at the normal timekeeping mode.

2. Check a Solar cell and PCB ass'y contact in the following order.
   1) Display side up and place the watch on the desk.
   2) Check the display indicates as figure 2.
   3) Display side down and place the watch on the desk more than five seconds.
      Or go to a dark room and place the watch more than five seconds.
   4) Check the display indicates as figure 3.
      If "SLR" is not appeared on the display, disassemble again the module and check the contact spring between the Solar cell and PCB.

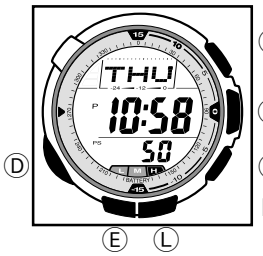


Figure 1

Press Ⓔ, Ⓐ and Ⓒ buttons

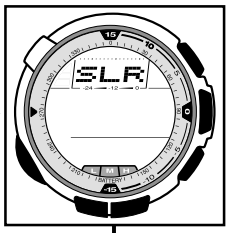


Figure 2

Place the watch in a dark room more than five seconds.

Appear “8888” on display.

Figure 3

3. To exit from TEST mode

   Press any button.

5-4. HOW TO CHECK TILT SENSOR

1) Press Ⓔ, Ⓐ and Ⓓ buttons simultaneously in the timekeeping mode.
2) Check the display indicates as figure 4.
3) Tilt the watch towards you for 45 degrees so that the six o'clock side comes downward.
   Tilt the watch in the following order for three times;
   0 degree (for one second) -> 45 degrees (for one second) -> 0 degree.
4) Check the display indicates as figure 5 (for more than five times).

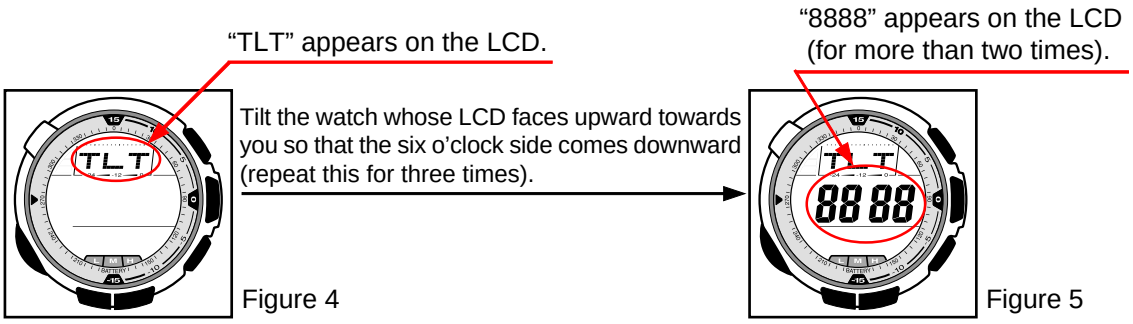


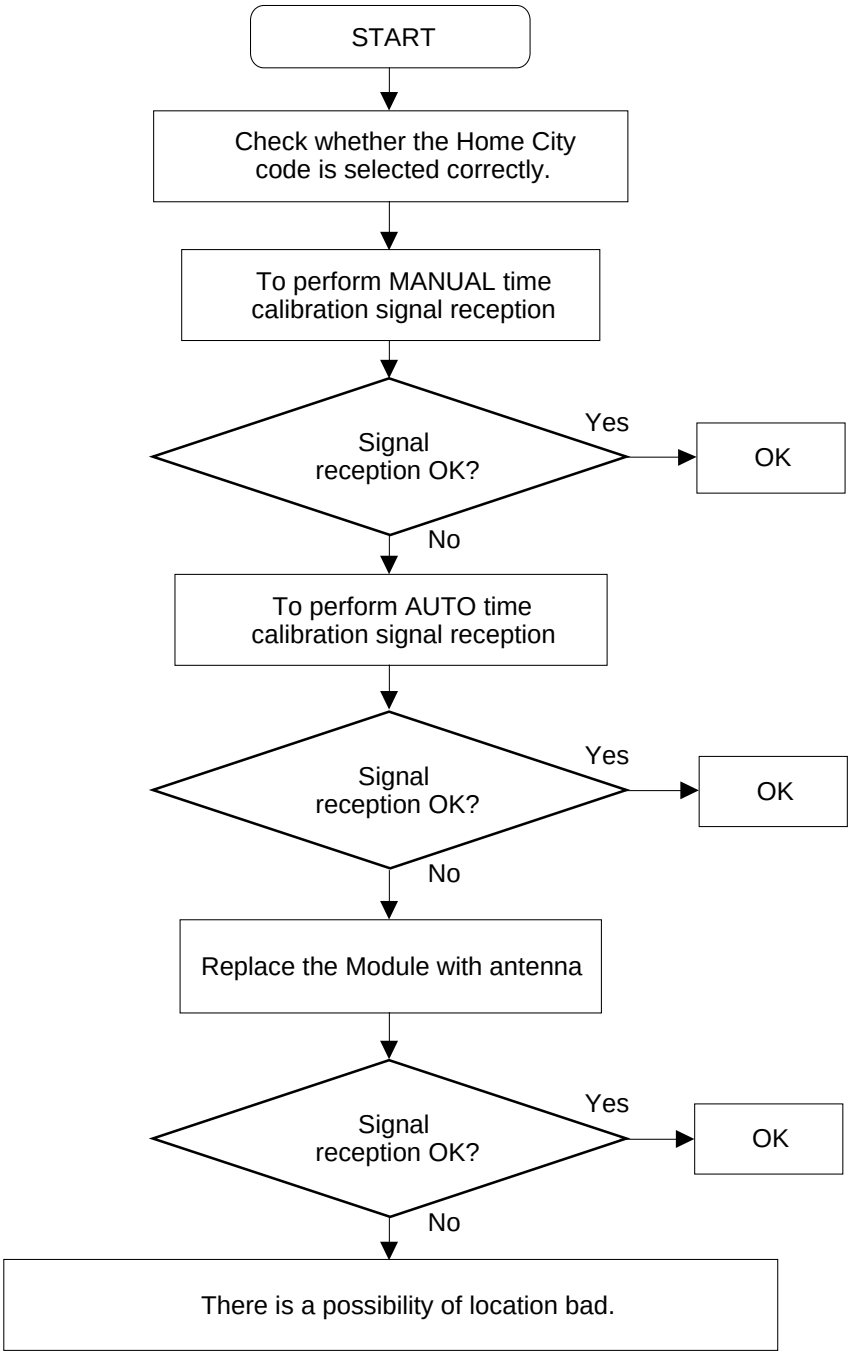
Figure 4 Figure 5

5-5. TIME CALIBRATION SIGNAL TEST MODE

1) Press Ⓔ, Ⓑ and Ⓒ button at the same time to enter the test mode.
2) Press Ⓑ button to switch from one signal source to another.
   J40 : Fukushima, Japan (Call Sign: JJY, Frequency: 40kHz)
   J60 : Fukuoka/Saga, Japan (Call Sign: JJY, Frequency: 60kHz)
   U60: Fort Collins, Colorado (Call Sign: WWVB, Frequency: 60kHz)
   L60 : Rugby, England (Call Sign: MSF, Frequency: 60kHz)
   G77: Mainflingen, Germany (Call Sign: DCF77, Frequency: 77.5kHz)
3) Press Ⓒ button to start signal reception.

6. TROUBLESHOOTING: MODULE QW-3042

This is a flow chart about signal reception.



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