TIME MODULE

TECHNICAL GUIDE
&
PARTS CATALOGUE

Cal.VD54B

ANALOGUE QUARTZ

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PARTS CATALOGUE / TECHNICAL GUIDE
Cal.VD54B

[SPECIFICATION]

Item \ Cal. No.		VD54B
Movement		
Movement size	Outside diameter	φ 29.50 mm (12H - 6H) ✕ 26.00 mm
	Casing diameter	φ 28.80 mm (12H - 6H)
	Total height	3.97 mm
Time indication		3 Hands (Hour , Minute , Second) Chronograph , 24H indicator
Driving System		Two pole stepping motor Step motor 2 pieces
Additional mechanism		Electronic circuit reset switch Second setting device [Time] Indicated by Hour , Minute , Second and 24-Hour hands [Stop watch] Up to 60 minute in 1 second split time
Antimagnetic		$\geqq$ 1600 A/m
Accuracy		Less than ± 20seconds : Monthly rate at normal temperature range
Battery		SR920SW (SEIZAIKEN) Silver oxide battery φ 9.5 ✕ t 2.0 mm Battery life is approximately 2 years
Measuring gate by quartz tester		Use 10-second gate *Set the winding stem with crown at the normal position
Jewels		0 Jewel
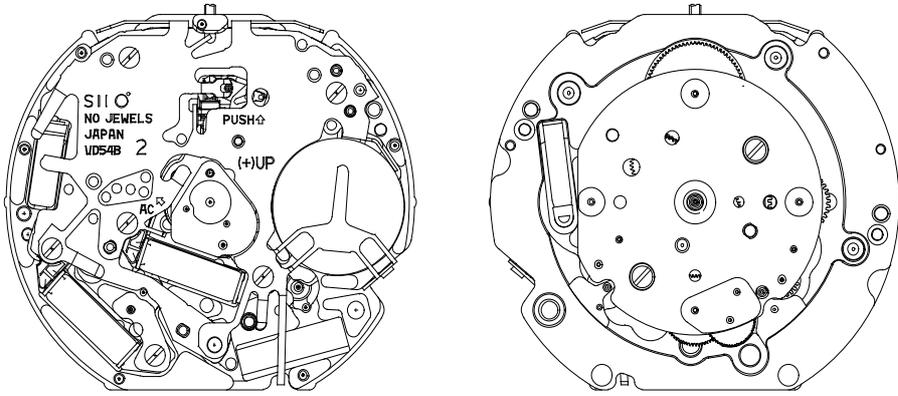
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TMI TIME MODULE

Disassembling procedures Figs.	① ⇒ ㊴	Lubricating : Types of oil	Oil quantity
Reassembling procedures Figs.	㊴ ⇒ ①	●━ Moebius A	∝► Normal quantity
		■► Moebius F	

① Hour, minute second hands

② Chronograph minute second hands 24-Hour indicator

③ Dial

④ 0012 079 Auxiliary Train wheel bridge screw

⑤ 0126 357 Auxiliary train wheel bridge

⑪ 0157 011 Small hour hand wheel

⑥ 0886 003 Intermediate chronograph minute wheel and pinion (B)

⑫ 0817 357 Intermediate small hour hand wheel

⑦ 0902 007 Chronograph minute wheel

⑧ 0886 001 Intermediate chronograph minute wheel and pinion (A)

⑨ 0885 002 Intermediate chronograph second wheel

⑩ 0888 008 Chronograph second wheel

⑬ 0271 406 Hour wheel

*All parts code are subject to change without notice.

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(14) Battery

(15) 0351 178
winding stem

(16) 0012 079
Switch spring screw

(16) 0012 079
Switch spring screw

(17) 4245 397
Switch spring

(18) 4004 258
Circuit block

(19) 4270 358
Battery connection (-)

(20) 0012 079
Train wheel bridge (B) screw

(21) 0125 331
Train wheel bridge (B)

(22) 4146 177
Step rotor (B)

(23) 4002 923
Coil block (B)

(25) 0701 014
Fifth wheel and pinion (B)

(24) 4239 357
Rotor stator (B)

*All parts code are subject to change without notice.

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㉖ 0125 248
Train wheel bridge (A)

㉙ 0701 904
Fifth wheel and pinion (A)

㉗ 0241 177
Fourth wheel and pinion

㉘ 0231 904
Third wheel and pinion

㉚ 4146 890
Step rotor (A)

㉜ 0221 156
Center wheel and pinion

㉛ 0261 034
Minute wheel and pinion

㉝ 0281 904
Setting wheel

㉞ 4002 904
Coil block (A)

㉟ 4239 357
Rotor stator (A)

㊱ 0391 357
Train wheel setting lever

㊲ 0383 470
Setting lever

㊳ 0384 470
Yoke

㊴ 0282 890
Clutch wheel

*All parts code are subject to change without notice.

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・The explanation here is only for the particular point of Cal.VD54B

Tweezers

1.REMARKS ON INSTALLING THE BATTERY

1) After the battery is replaced with a new one or after the
   battery is reinstalled following the repairing procedures,
   Be sure to touch the short-circuit the AC terminal of circuit
   block and the switch spring with conductive tweezers
   to reset the circuit as illustrated at right.
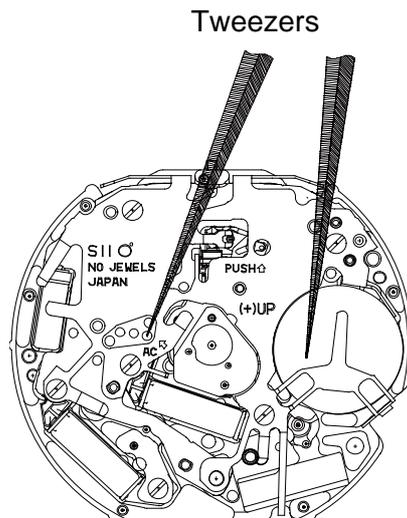
2) When the battery replaced with a new one, the time information stored in the built-in IC and
   the time   indicated by the stopwatch hands do not correspond with each other.
   Reset the stopwatch hands to "0" position following the procedure below.
   If the stopwatch hands should move improperly, also follow the same procedure.

ORDER

① Pull the crown.

② Keep the buttons "A" and "B" pressed at the same time
     for 2 seconds, and then, release the buttons.
     The stopwatch second hand move back and returned
     to where it was.

③ Press button "A" or "B" to reset the stopwatch second
     and minute hands to"0" position.
     * By pressing button "A" , the hands move counter clockwise.
     * By pressing button "B", the hands move clockwise.

④ Turn the crown to set the hour, minute and 24-hour
     hands to the desired time, and push the crown back
     to the normal position.

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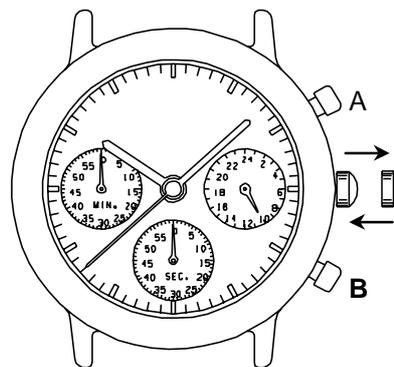
1.REMARKS ON INSTALLING THE BATTERY

(1) HAND

・How to install the hands

Place the movement directly on a flat metal plate or
the like and press in the hands.

* Install the hour , minute and second hands at the
"12"o'clock position.
* Install the chrono minute and second hands at the
"0"o'clock position.
*Install the 24-Hour indicator at the "24" position.

Metal plate
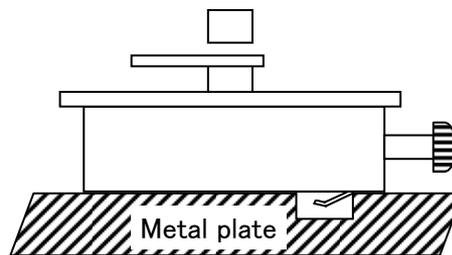
[Reference]   The power of press hands

Minute & Hour Hands	< 5kg
Second Hand	< 5kg
Chrono Minute & Second	< 3kg
24-Hour indicator	< 3kg

(2) Battery

・How to install the battery

① Remove the hook of the switch springs battery
clamp portion.

② Insert the battery sideways, and have the hook of
the switch springs battery clamp portion catch
the main plate.
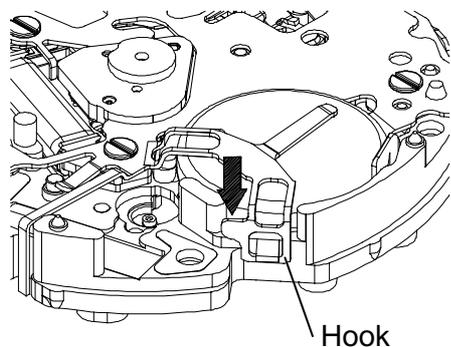
Battery clamp position

Hook

Hook

Main plate
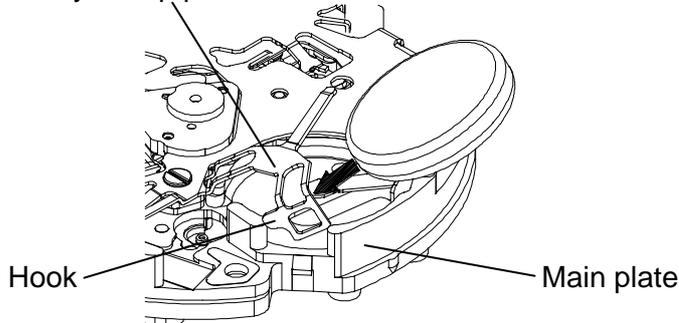
(3) Winding stem

・How to remove

While pushing the indented portion of the arrow pull out
the winding stem.

Push

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NO JEWELS
JAPAN
VD54B
PUSH
(+)UP

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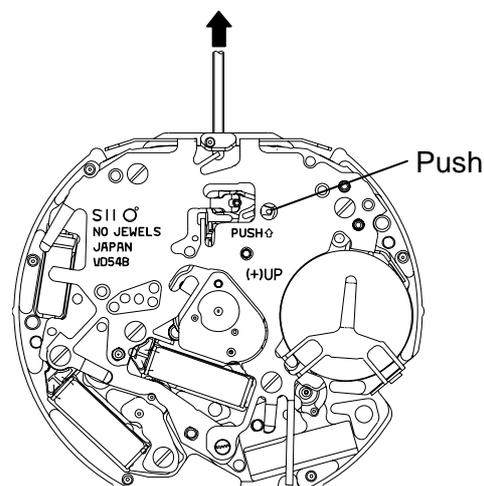
DISPLAY AND CROWN / BUTTON OPERATION

Hour hand

Minute hand

Button A
In stopwatch function
Start / Stop

Stopwatch minute hand
(Move in minute increments)

Crown at normal position

Second hand

First click (Date setting)

Button B
In stopwatch function
Split / Split release / Reset

Stopwatch second hand
(Move in second increments)

24-hour hand
(Indicates the time on a 24-Hour basis)
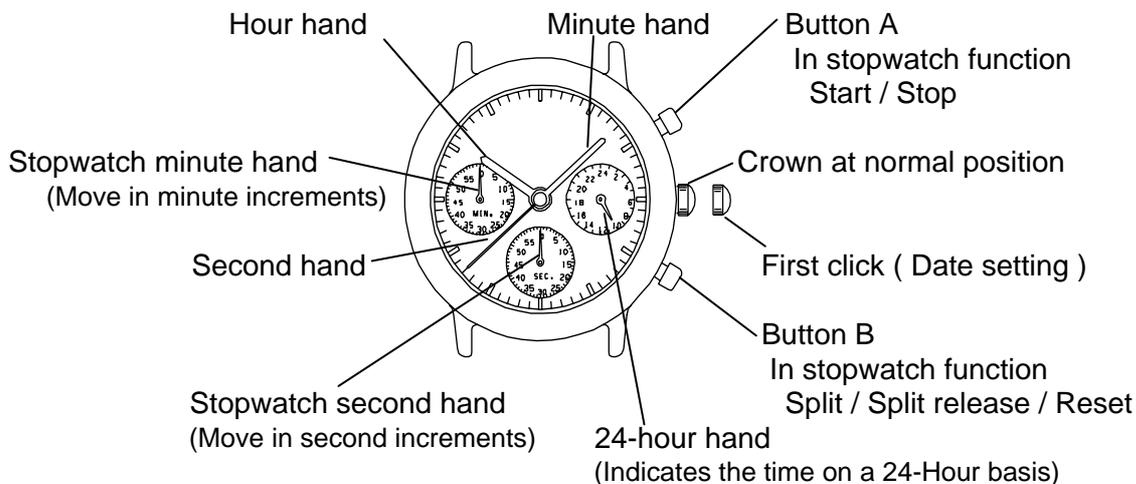
ADJUSTING THE STOPWATCH HAND POSITION

Before setting the time , check if the stopwatch second and minute hands are in the "0"(12 o'clock) position.
*if the stopwatch is in use , press the button in the following order to reset it , and then , check if the hands
 return to "0" position. (For details , see "HOW TO USE THE STOPWATCH")

* If the stopwatch is counting : A → B
* If the stopwatch is stopped : B
* If the split time is displayed : B → A → B

If either of the stopwatch hands are not in the "0" position , reset them following the procedure below.

Stopwatch minutes hand

A

B
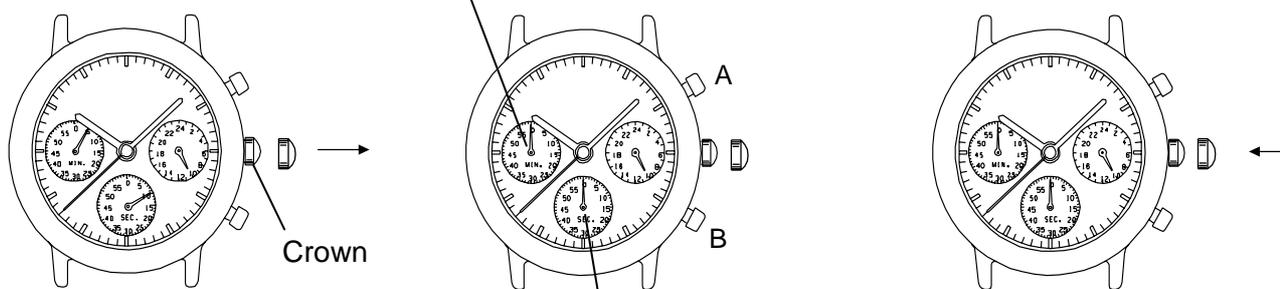
Crown

Stopwatch second hand

1.Pull out the crown

2.Press button A or B to reset the
 stopwatch second and minute
  hands to "0"position.
 *By pressing button A the hands
  move counter clockwise.
 *By pressing button B the hands
  move counter clockwise.

3.Push the crown back to
  the normal position.

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OPERATION

TIME SETTING
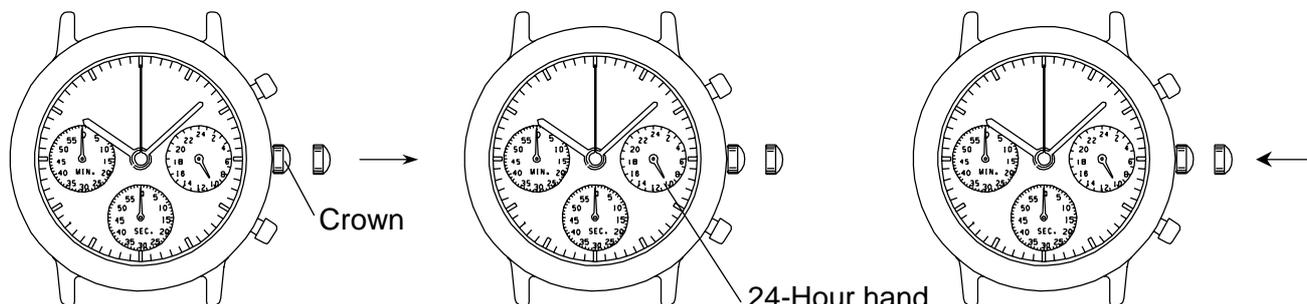
Crown

24-Hour hand

1. Pull out the crown to
   the second hand is at
   the 12 o'clock position.
   The second hand will
   stop on the spot.

   * Do not press any button.
     Otherwise, the chronograph
     hands will move.

2. Turn the crown to set the hour,
   minute and 24-hour hands to the
   desired time.
   As the hour hand moves, the
   24-hour hand also moves
   correspondingly.
   When setting the hour hand,
   check that the 24-hour hand
   is set property.

3. Push the crown back in to
   the normal position in accordance
   with a time signal.

HOW TO USE THE STOPWATCH

・The measured time is indicated by the stopwatch hands that move independently of the center and 24-hour hands.
・The stopwatch can measure up to 60 minutes in seconds.
  (The watch indicates the measured time in second increments by ignoring off the 1/10 seconds obtained.)

(Standard measurement)
Ex) 100m race (Press the buttons in the following order A → A → B)
       START ⟶ STOP (Finish) ⟶ RESET (Reset to "0'00")

Stopwatch minute hand

A

A

B

stopwatch second hand

10 second

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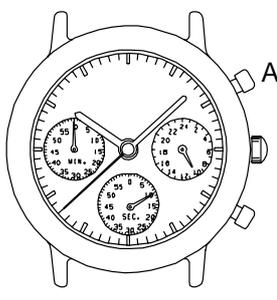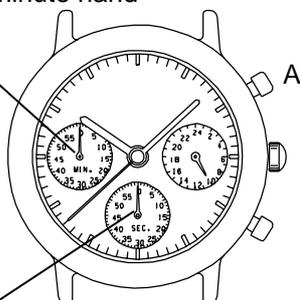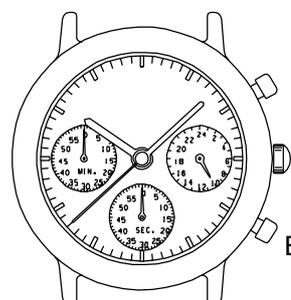
(Accumulated elapsed time measurement)
Ex) Basketball game (Press the buttons in the following order　A → A / A ⋯ → A → B)

START ⟶ STOP　　RESTART ⋯ ⟶　STOP　　⟶　RESET
(Start of game) (Time out)　(Restart of game)　(Game over)

5 minutes 10 seconds　　20 minutes 00 seconds
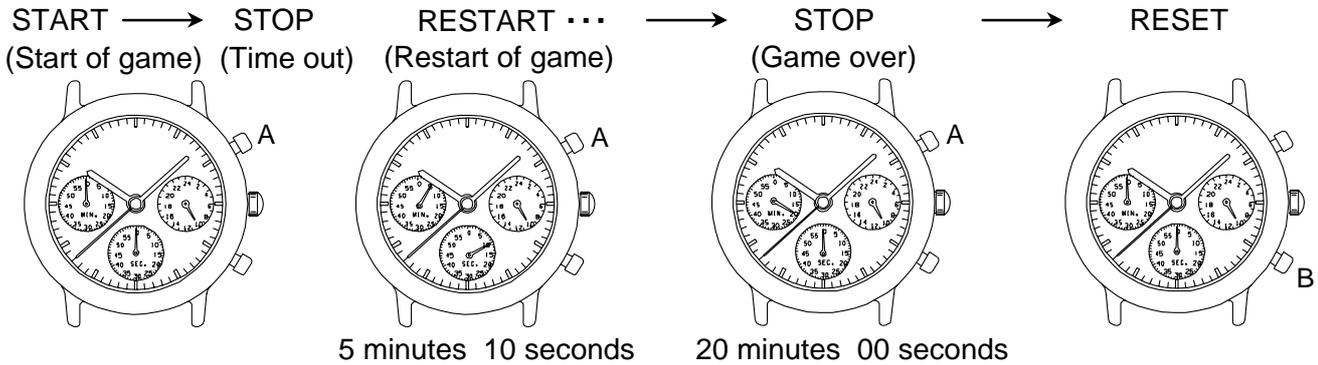
*Restart and stop of the stopwatch can be repeated as many times as necessary by pressing button A

(Split time measurement)
Ex) 5,000m race (Press the buttons in the following order　A → B / B ⋯ → A → B)

START ⟶ SPLIT / SPLIT RELEASE ⋯→ STOP ⟶ RESET

2 minutes 50 seconds　　15 minutes 10 seconds
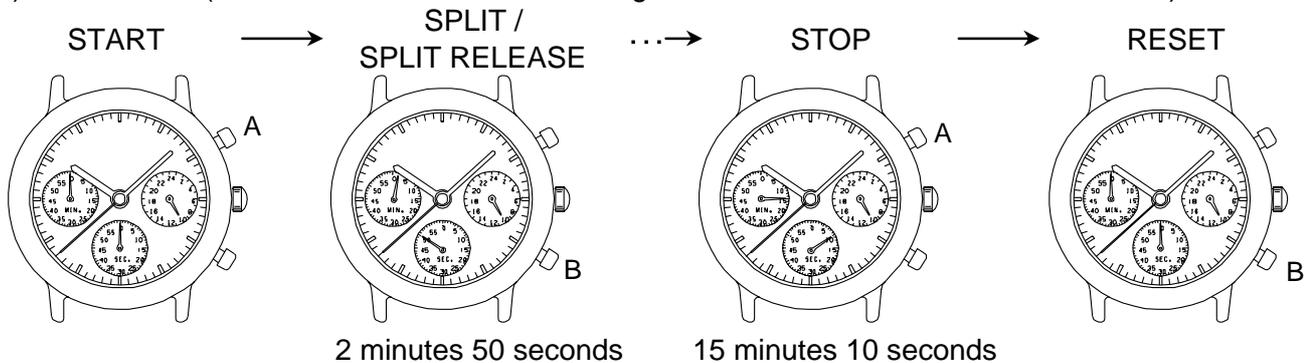
* Measurement and release of the split time can be repeated as many times as necessary by pressing button B.