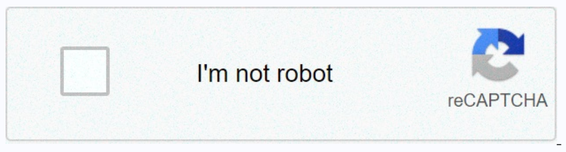

I'm not robot!

Seiko solar chronograph v172-0af0 manual

Seiko v172 solar chronograph. Seiko solar chronograph v172-0af0.

Manufacturer Seiko Caliber Number V175, V175A Movement Type Solar Powered (quartz) Diameter 27.6mm Casing Diameter 27mm Height 4.4mm Jewels 0 Frequency 32,768 Hz Integrated Circuit C-MOSIC for oscillator, frequency divider, and driving circuit Capacitor Number 302324T Low battery Indicator? Yes Stem Number 351892 (tap 11) Motor System 3 part step motor Hacking Seconds? Yes Hands Count? 6 Hand Sizes 1.10mm / 0.65mm / 0.20mm / 0.20 x 3 Functions Central hours; central minutes; central chronograph seconds; small running seconds subdial at 9:00; 60 minutes chronograph counter at 6:00; 24 hour indicator at 3:00; date at 4:30 Hacking Seconds?

Yes Country of Manufacture Japan Known Models Seiko Prospex Air Diver’s Chronograph SSC613P1, SSC615P1, SSC617P1, SSC618P1 (Add your watch in the comments below…) The Seiko caliber V175 (actually marked V175A) is a solar powered chronograph movement. It is a repairable movement with exposed testing pads for checking the electrical components when troubleshooting is necessary. This caliber is made in Japan and is found in Seiko branded timepieces.

This caliber is part of the Seiko Watch Corporation V (VXXX) family/series of solar powered movements. Accuracy: Seiko claims that the caliber V175 will maintain accuracy of +/- 15 seconds per month at normal operating temperatures of about 5C to 35C (41F – 140F). Charging Times: The V175 is a solar powered movement, meaning the watch is powered by light which reaches the dial and gets converted into electrical energy which is stored in the battery/capacitor. The chart below shows how long different lights sources can take to fully charge the cell in the V175. This ranges from 150 hours to 5 hours of constant light source. The following excerpt is from the official Seiko manual, it is just a general guideline. Can you overcharge the V175? No, this caliber is equipped with an overcharge prevention function. Words of caution from Seiko: “When charging the watch, do not place it too close to a photo flash light, spotlight, incandescent light or other light sources as the watch temperature will become extremely high, causing damage to the parts inside the watch. When exposing the watch to sunlight to charge it, do not leave it on the dashboard of a car, etc. for a long time, as the watch temperature becomes extremely high. While charging the watch, make sure the watch temperature does not exceed 60 °C.” Power Reserve: The Seiko V175 has a power reserve of about 6 months when fully charged. Seiko states that this can include using the chronograph for up to an hour per day. There is a low power indicator on the V175. When the power is low, the small seconds hand at 9:00 will skip, ticking at 2 second intervals. During this low power mode, the chronograph will not function until the watch is recharged. Battery Change: The caliber V175 is a solar powered watch with a manganese titanium-lithium rechargeable capacitor.

It is not a normal battery. The number is MT920, or more specifically (because not all MT920 are the same, the MT stands for manganese titanium): part number 302324T (3023-24T) this appears to be updated part for 3023 24H which used to be listed as the part number. Interesting Note: Although there is an instruction manual for dive watches with calibre V175, there is also another instruction manual that combines the following calibers: V172, V174, and V176. Replacement Prices: At the time of this post, replacement prices for the cal. V175 were found online in the range of $89.00 USD to $99.00 USD V175 Instruction Video: Additional Resources: Seiko official instruction manual (pdf) Page Page 1Page 2Page 3Page 4Page 5Page 6Page 7Page 8Page 9Page 10Page 11Page 12Page 13Page 14Page 15Page 16Page 17Page 18 Page 231EnglishEnglish30TROUBLESHOOTINGTrouble s Possible causes The watch stops operating. The energy has been depleted.The small second hand moves at two-second intervals. The energy is running short.The stopped watch has been charged for longer than the time required for full charge, but the second hand does not resume one-second interval movement. The light the watch has been exposed to was too weak.The built-in IC has fallen into an unstable condition.The watch temporarily gains or loses time.The watch has been left or worn in extremely high or low temperatures.The watch has been left close to an object with a strong magnetic field.You have dropped the watch, hit it against a hard surface or worn it while playing active sports. The watch was exposed to strong vibrations.SolutionsIf you often encounter this problem even though you wear the watch everyday, the watch may not be exposed to sufficient light while you wear it. For example, the watch may be covered by the cuff of clothing. Recharge the watch sufficiently by exposing it to light.The time required for charging will vary depending on the intensity of light.

Recharge the watch referring to "GUIDELINE OF CHARGING TIME/ACCURACY."Reset the watch by following the instructions in “IMPROPER FUNCTION."Return the watch to a normal temperature so that it works accurately as usual, and then reset the time. The watch has been adjusted so that it works accurately when it is worn on your wrist under a normal temperature range between 5 ºC and 35 ºC.Correct this condition by moving and keeping the watch away from the magnetic source. If this action does not correct the condition, contact the retailer from whom the watch was purchased.Reset the time. If the watch does not return to its normal accuracy after resetting the time, contact the retailer from whom the watch was purchased.Page 3 Page Page 1Page 2Page 3Page 4Page 5Page 6Page 7Page 8Page 9Page 10Page 11Page 12Page 13Page 14Page 15Page 16Page 17Page 18 Page 423EnglishEnglish22ENERGY DEPLETION FOREWARNING FUNCTIONl When the energy stored in the rechargeable battery is reduced to an extremely low level, the second hand starts moving at 2-second intervals instead of the normal 1-second intervals. The watch remains accurate even while the second hand is moving at 2-second intervals.l When this occurs, recharge the watch as soon as possible by exposing it to light. Otherwise, the watch may stop operating in a few days. (For recharging the watch, see “HOW TO CHARGE AND START THE WATCH”)• Whilethesecondhandismovingat2-secondintervals,thestopwatchcannotbeactivated.Thisisnotamalfunction.• Ifthesecondhandstartstomoveat2-secondintervalswhilethestopwatchisoperating,thestopwatchwillbeautomaticallystoppedandthestopwatchhandswillreturntothe“0”position.• Whilethesecondhandismovingat2-secondintervals,thealarmtimecannotbeset.• Ifthetimereachesthealarmtimewhilethesecondhandismovingat2-secondintervals,thealarmwillnotsound,andthealarmwillbeautomaticallycancelled.NOTE ON POWER SUPPLYl The battery used in this watch is a rechargeable battery, which is different from ordinary silver oxide batteries. Unlike other disposable batteries such as dry-cell batteries or button cells, this rechargeable battery can be used over and over again by repeating the cycles of discharging and recharging.l The cap a cit y or recharging ef ficiency of the re chargeable bat ter y may gradually deteriorate for various reasons such as long-term use or usage conditions. Worn or contaminated mechanical parts or degraded oils may also shorten recharging cycles. If the efficiency of the rechargeable battery decreases, it will be necessary to have the watch repaired.l Do not remove the rechargeable battery yourself. Replacement of the rechargeable battery requires professional knowledge and skill. Please ask a watch retailer for replacement of the rechargeable battery. l Installation of an ordinary silver oxide battery can generate heat that can cause bursting and ignition. CAUTIONv TO PREVENT THE ENERGY DEPLETION• When wearing the watch, make sure that the watch is not covered by clothing.• When the watch is not in use, leave it in a bright place as long as possible.Page 519EnglishEnglish18ALARM396125505101550453025203540 60HOW TO CHARGE AND START THE WATCHu When you start the watch or when the energy in the rechargeable battery is reduced to an extremely low level, charge it sufficiently by exposing the watch to light.1 E xpose the watch to sunlight or strong artificial light.Whenthewatchhasstoppedoperating,thesecondhandwillstartmovingat2-secondintervals.See“GUIDELINEOFCHARGINGTIME/ACCURACY.”2 Keep the watch exposed to the light until the second hand moves at 1-second intervals.3 W h e n t h e w a tch is charged af ter it has completely stopped, set the date and time before wearing the watch.l HOW TO CANCEL THE ALARM TIME YOU HAVE SETPull out to the first click.ttPress and hold until the ALARM hands stop and indicate the current time.Push back into the normal position.• Tocorrectthealarmtimeyouhaveset,followtheproceduredescribedin“ALARMTIMESETTING.”CROWNBCROWNBPage 621EnglishEnglish20Caution for chargingl When charging the watch, do not place it too close to a photoflash light, spotlight, incandescent light or other light sources as the watch temperature will become extremely high, causing damage to the parts inside the watch.l When exposing the watch to sunlight to charge it, do not leave it on the dashboard of a car, etc., for a long time, as the watch temperature will become extremely high.l While charging the watch, make sure the watch temperature does not exceed 60 °C.CAUTIONOVERCHARGING PREVENTION FUNCTIONNo matter how long the secondary battery is charged, the performance of the watch will not be degraded.

When the secondary battery becomes fully charged, the overcharging prevention function will be automatically activated to prevent it from being charged further.v The above table provides only a general guideline.GUIDELINE OF CHARGING TIME/ACCURACYEnvironment/Lightsource (lux)V172A(minutes)B (hours)C (hours)General offices/ Fluorescent light (700)150 60 -30W20cm/ Fluorescent light (3000) 33 13 110Cloudy weather/Sunlight (10000) 93.5 30Fair weather/Sunlight (100000) 20.6 5Expected life per charge from full charge to stoppage 6 monthsLoss/gain (monthly rate)Less than 15 seconds when the watch is worn on your wrist at a normal temperature range (5 ºC to 35 ºC)Operational temperature range -10 ºC to 60 ºCA: Time to charge 1 day of power B: Time required for steady operationC: Time required for full chargeuThe watch operates while charging electricity by converting light received on the dial to electrical energy. It cannot properly operate unless the remaining energy is sufficient. Place or store the watch in a location receiving light etc., to sufficiently charge electricity.• Whenthewatchisstopped or the second hand starts moving at 2-second intervals, charge the watch by exposing it to light.• Thetimerequiredforcharging the watch varies depending on the calibres. Check the calibre of your watch engraved on the back cover. • It is recommended thatthe watch be charged for as long as the charging time "B" to assure the stable movement of the watch. Page 725EnglishEnglish24IMPROPER FUNCTIONWhen an abnormal display appears, follow the procedures below to reset the built-in IC. The watch will resume its normal operation.ALARMMIN.1545303060396126055051015504530252035406 01. Pull out the crown to the second click. 2. Keep pressing down Button A and B for 3 seconds or longer. 3. Push the crow n b a ck into the normal position and check if the small second hand moves as normal.ROTATING BEZEL (for models with rotating bezel)l The rotating bezel can show up to 60 minutes of elapsed time.1 Turn the rotating bezel to align its " " mark with the minute hand.Note:Forsomemodels,therotatingbezelrotatesonlycounterclockwise.StartElapsedtime2 Read the number on the rotating bezel that the minute hand points to.30minuteshaveelapsed.BACROWN• ResettingtheICwillinitializethewatch.Beforestartingtousethewatch,itwillbenecessarytosetthetimeandadjusttheSTOPWATCHhandstothe“0”position.Referto“SETTINGTHETIMEANDADJUSTINGTHESTOPWATCHHANDPOSITION”sectionofthismanual.Page 829EnglishEnglish28TELEMETER (for models with telemeter scale on the dial)l The telemeter can provide a rough indication of the distance to the source of light and sound.lThe telemeter indicates the distance from your location to an object that emits both light and sound. For example, it can indicate the distance to the place where lightning struck by measuring the time elapsed after you see a flash of lightning until you hear the sound.lA flash of lightning reaches you almost immediately while the sound travels to you at a speed of 0.33 km/second. The distance to the source of the light and sound can be calculated on the basis of this difference.lThe telemeter scale is graduated so that the sound travels at a speed of 1 km in 3 seconds.**Undertheconditionoftemperatureof20° C(68° F)The telemeter provides only a rough indication of the distance to the place where lightning struck, and therefore, the indication cannot be used as the guideline to avoid the danger of lightning. It should also be noted that the speed of the sound differs depending on the temperature of the atmosphere where it travels.HOW TO USE THE TELEMETERBefore beginning, check that the stopwatch has been reset.START(Flash of light)STOP (Crash of thunder)Press Button A to start the stopwatch as soon as you see light.When you hear the sound, press Button A to stop the stopwatch.Read the telemeter scale that the STOPWATCH 1/5- second hand points to.Approx. 3 km• PleasenotethattheSTOPWATCH1/5-secondhandmovesin1/5-secondincrementsanddoesnotalways pointexactlytothegraduationsofthetelemeterscale.Thetelemeterscalecanbeusedonlywhenthemeasuredtimeislessthan60seconds.321CAUTIONPage 933EnglishEnglish32Trouble s Possible causes The STOPWATCH hands do not return to the "0" position when the stopwatch is reset. Affected by external sources, or because the internal IC had been reset, the stopwatch hand positions have moved out of correct alignments. Although the alarm time has not been set, the time on the alarm sub dial and the time on the main dial are not the same.The watch has been left close to an object with a strong magnetic field.

The watch has been exposed to strong vibrations.The inner surface of the glass is clouded.Moisture has entered the watch because the gasket has deteriorated.The date changes during the day. The time is set 12 hours ahead of or behind the correct time.SolutionsAdjust the STOPWATCH hands to the "0" position by following the instructions in “SETTING THE TIME AND ADJUSTING STOPWATCH HAND POSITION”Reset the time for main dial and alarm sub dial.Contact the retailer from whom the watch was purchased.Reset the time correctly, referring to “SETTING THE TIME AND ADJUSTING STOPWATCH HAND POSITION”• Intheeventofanyotherproblem,pleasecontactheretailerfromwhomthewatchwaspurchased.Page 10English34SPECIFICATIONS1 Frequency of crystal oscillator ..... 32,768 Hz (Hz = Hertz ... Cycles per second)2 Loss/gain (monthly rate) ..... ±15 seconds at normal temperature range (5 °C to 35 °C/ 41 °F to 95 °F)3 Operational temperature range..... –10 °C to 60 °C/ 14 °F to 140 °F4 Driving system ..... Step motor 4 pieces5 Display system Time/calendar ..... Hour, minute and small second hands Date is displayed in numerals. Stopwatch ..... STOPWATCH 1/5-second and STOPWATCH minute hands Alarm ..... Alarm hour and minute hands 6 Power supply ..... Manganese titanium-lithium rechargeable battery7 Continuous operating time from full charge ..... Approximately 6 months if the stopwatch is used for shorter than 1 hour per day and the alarm sounds for shorter than 20 seconds per day 8 Additional function ..... Energy depletion forewarning function, overcharging prevention function9 IC (Integrated Circuit) ..... C-MOS-IC, 1 piece• The specications are subject to change without prior notice due to productimprovements. Stopwatch 1/5-second hand Hour hand Seconds hand Small alarm display How to use the alarm (V172, V174) Tachymeter How to use the tachymeter Stopwatch minute hand Minute hand Button A Crown Normal position (not locked): Stopwatch First click position: Date setting, alarm time setting Second click position: Setting the time, setting the stopwatch hands to preliminary position, and performing a system reset Button B Date