

SEIKO

HIGH JUMP M DECA.

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Electronic Measurement  
& Display Equipment


**Seiko W073 Stopwatch - (S235891)**

- Measurable up to 100 hours in 1/100 seconds for the first hour and in seconds thereafter
- Split/ lap time measurement
- Store and recall of up to 10 split/ lap times
- Memory recall during operation
- Two separate displays for split and lap time measurement
- Time and full automatic calendar
- Water resistant

Recommended for:

Track events, Road races, Swimming and Motor sports


**Seiko S056 Stopwatch - (S23601P)**

- Measurable up to 100 hours in 1/100 seconds for the first hour and in seconds thereafter
- Split/ lap time measurement
- Store and recall of up to 10 split/ lap times
- Memory recall during operation
- Two separate displays for split and lap time measurement
- Time and full automatic calendar
- Water resistant

Recommended for:

Track events, Road races, Swimming and Motor sports


**Seiko S057 Stopwatch 100 Lap Memory**

- Two channel countdown timer
- Each channel can be preset for up to 100 hours
- Measurable up to 100 hours in 1/100 of a second
- Split/ lap time measurement
- Store and recall of up to 100 split/ lap times
- Memory recall and countdown timer can be used during stopwatch operation
- Two separate displays for split and lap time requirements
- On/ off confirmation sound
- Dot-matrix mode display
- Time and full automatic calendar
- Battery life indicator
- Automatic shut-off function
- Water resistant


**Seiko S141 - 300 Lap Memory**

- Measurable up to 10 hours in 1/100 of a second
- Split/ lap time measurement
- Store and recall of up to 300 split/ lap times
- Memory segregated by event
- Multiple event memory
- Memory recall during operation
- Memory overflow warning
- Measures strokes per minute for events such as swimming and rowing
- Large-sized three row display panel
- Time and automatic calendar
- Battery life indicator
- 10-bar water resistant

\*Subject to technical alterations


**Seiko S143 Stopwatch (S23569J)**

The SEIKO Cal.S143 stopwatch is a digital stopwatch featuring a print-out function when connected to a SP12 printer. The stopwatch is also equipped with a large-sized three-row display panel that can display the split time, lap time and total elapsed time or lap time in progress at the same time in separate rows, and a memory function that stores the measurements. In addition the stopwatch is a water resistant and can withstand up to 3 bar. Therefore, it is suitable for aquatic sports or use in rainy weather.

- 300 split/ lap memory with Printer Port
- Measurable up to 10 hours in 1/100 of a second
- Split/ lap time measurement
- Store and recall of up to 300 split/ lap times
- Memory segregated by block
- ID No.function useful for storing the data of individual users' Memory recall during operation
- Connectable with printer SFD001J [Cal.No.SP12]
- Large-sized three row display panel for split, lap and total time
- Time and automatic calendar
- Battery life indicator
- Water resistant
- The fastest lap time recall function

Recommended for:

Track events, Road races, Ski, Skate, Motor sports and Swimming


**SEIKO SP12 Printer**

- Prints 13 digits per line
- Printing speed of 1.5 lines per second
- Large clear print
- Connectable with S143 & S123 stopwatches to be used as a system
- Printout selection of split only or lap times
- Optional paper holder to install larger amount of paper
- Automatic printout of year, month, date and time


**SEIKO S149 - 300 Lap Printer Stopwatch (S23571J)**

- Measurable up to 10 hours in 1/100 of a second
- Split/ lap time measurement
- Store and recall of up to 300 split/ lap times memory segregated by block
- ID No.function useful for storing the data of individual users
- Memory recall during operation
- Large-sized three row display panel for split, lap and total time
- Time and automatic calendar
- Battery life indicator
- Prints 13 digits per line
- Printing speed of 1.5 lines per second
- Large and clear print
- Printout selection of split only or with lap times
- Optional paper holder S23549J to install larger amount of paper S951
- Automatic printout of year, month, date and time
- The fastest lap time recall function
- Compatible with SEIKO Gripswitch - Model S23547J
- Compatible with SEIKO paper Holder - Model S23549

Recommended for:

Track events, Road races, Swimming, Ski, Skate and Motor sports


**Seiko Large Paper Holder (S23549JA)**

Hold larger rolls of thermal paper (Seiko S951) and can be used with Seiko S149 and SP12 printer.



## Electronic Starter PS-110

### System Components

Start Pistol (PS-78): 1 unit  
Headset Microphone (PS-61): 1 unit

Speaker Box (PS-56): 1 unit  
Cable with a termination box (PS-81): 1 unit

### FEATURES

PS-110 is an electronic audio-visual start signal generator that can be used for various types of sports events. It generates a start signal with both sound and flashlight.

It does not use gunpowder, and is safe for handling and storage.

Problems involved in the use of gunpowder pistol such as misfire and powder smoke have been eliminated.

A synthesized firing signal or an electronic beep can be generated, as required.

The headset microphone can be used to amplify and communicate the starter's voice to the athletes.

PS-110 can be used alone, with other units of PS-110, or in combination with other devices, to suit your needs.

### Start Pistol (PS-78)

Strobe	Xenon lamp	
Power supply	LR06 "AA" alkaline dry cell x 2pcs (DC 3V)	
Battery life (alkaline battery)	Approx 1,2000 times (number of times light can be emitted continuously in 1 minute)	
Temperature	For Use	-10      50 (non condensing)
	For storage	-15      60 (non condensing)
Appearance	Dimensions	W210 x H40 x D145mm
	Material	Aluminium, black gray
Weight	Approx. 410g (excluding dry cells, cord)	

### Headset Microphone (PS-61)

Output	Impedance, 1.6k $\Omega$ , $\pm$ 30%	
Sensitivity	-68dB, $\pm$ 3dB	
Type	Condenser microphone	
Appearance	Dimensions	W160 x H68 x D170mm
	Material	ABS resin, black
Weight	Approx. 45g (including cord)	

### Speaker Box (PS-56)

Audio input	-20dB (100k $\Omega$ )	
Rated output	6W (max. 10W)	
Power supply	LR06 "AA" alkaline dry cell x 8pcs [DC 12V]	
Battery life (alkaline dry cells)	Pistol sound: Approx 8,000 operations until sound pressure falls below 91dB	
Operating sound pressure level	93dB (at a distance of 10m)	
Temperature	For use	-5      40 (non condensing)
	For storage	-15      50 (non condensing)
Appearance	Dimensions	W102 x H258 x D216mm
	Material	ABS resin, ivory
Weight	Approx. 1.6kg (excluding dry cells)	

\*Subject to technical alterations



## Sports Printer CT-2000

### System Components

Start Printer (CT-2000): 1 unit  
AC Adapter with 5m cable: 1 unit

Grip switch with 2.5m cable (GS-51): 2 units  
Roll Paper (RP-03): 1 roll    Ribbon Cassette (ERC-22): 1 unit

### FEATURES

Being equipped with various measurement modes, CT-2000 can be used for timing all types of sports events.

Timing down to 1/1000 of a second is possible.

The method of calculating the fraction of a second can be selected from 10 types including rounding up, rounding down and rounding off, thus making it possible to comply with various timing rules adopted in different sports events.

A large-sized LCD monitor is used to make it easier to check various types of information displayed on it. (20 characters x 4 lines)

The design of the grip switch is renewed so that it better fits into your palm and provides easier switch operation. \*

By using resin case, high durability has been achieved.

If the battery are installed when CT-2000 is powered by AC adapter, the source can be quickly switched over to the batteries in case of failure of AC power supply, to ensure constant operation. \*

Two sets of dry batteries (6 AA size cells per set) can be installed in the main body, and the power source is switched over automatically between them. By replacing the unused set of dry batteries with new ones, CT-2000 can be powered by the dry batteries continuously for a long time. \*

Rechargeable batteries can be used in place of alkaline dry batteries. \*

CT-2000 can also be powered by external battery.

*\* Dry batteries, rechargeable batteries and external battery are not included with CT-2000 and they should be purchased separately if required.*

\*Subject to technical alterations

### Main Functions

The Auto Measurement Mode enables the measurement during individual practices performed alone.

Reaction time (start reaction time: time after the start signal until swimmer's feet have left the starting block), lap time, and split time can be measured during swimming practices  
Lap time and split time can be measured during practices of speed skating, track, and other races.  
By outputting a signal to an external buzzer device, CT-2000 can control the device to generate a starting sound automatically.

Even if the actual start time has differed from the scheduled time, the Time Correction Mode (inputting time difference from start time) corrects the scheduled start time set in advance in the secondary CT-2000 units, enabling them to synchronize with the master CT-2000 unit.

The Speed Measurement Mode measures the average speed over a given section of the entire distance.

By connecting a Bib No. input device with CT-2000, the measured times can be printed out together with the Bib.No.

CT-2000 can be connected with a personal computer via USB interface.  
Two types of time signals (RS-422) are output to the scoreboard (with or without running time data)

A synchronization signal can be output to external devices.

As CT-2000 is compatible with CT-1000, the grip switches, extension unit, synchronization cables, and cables to connect with scoreboard used previously with CT-1000 can also be used.



### Options for CT-2000



Expansion unit  
EX-916

An input channel can be expanded up

Synchronization Cable / SY-456  
Roll Paper / RP-03  
Ribbon Cassette / ERC-22

Grip Switch  
GS-51 (with 2.5m cable)  
GS-52 (with 5.5m cable)  
GS-53 (with 10m cable)

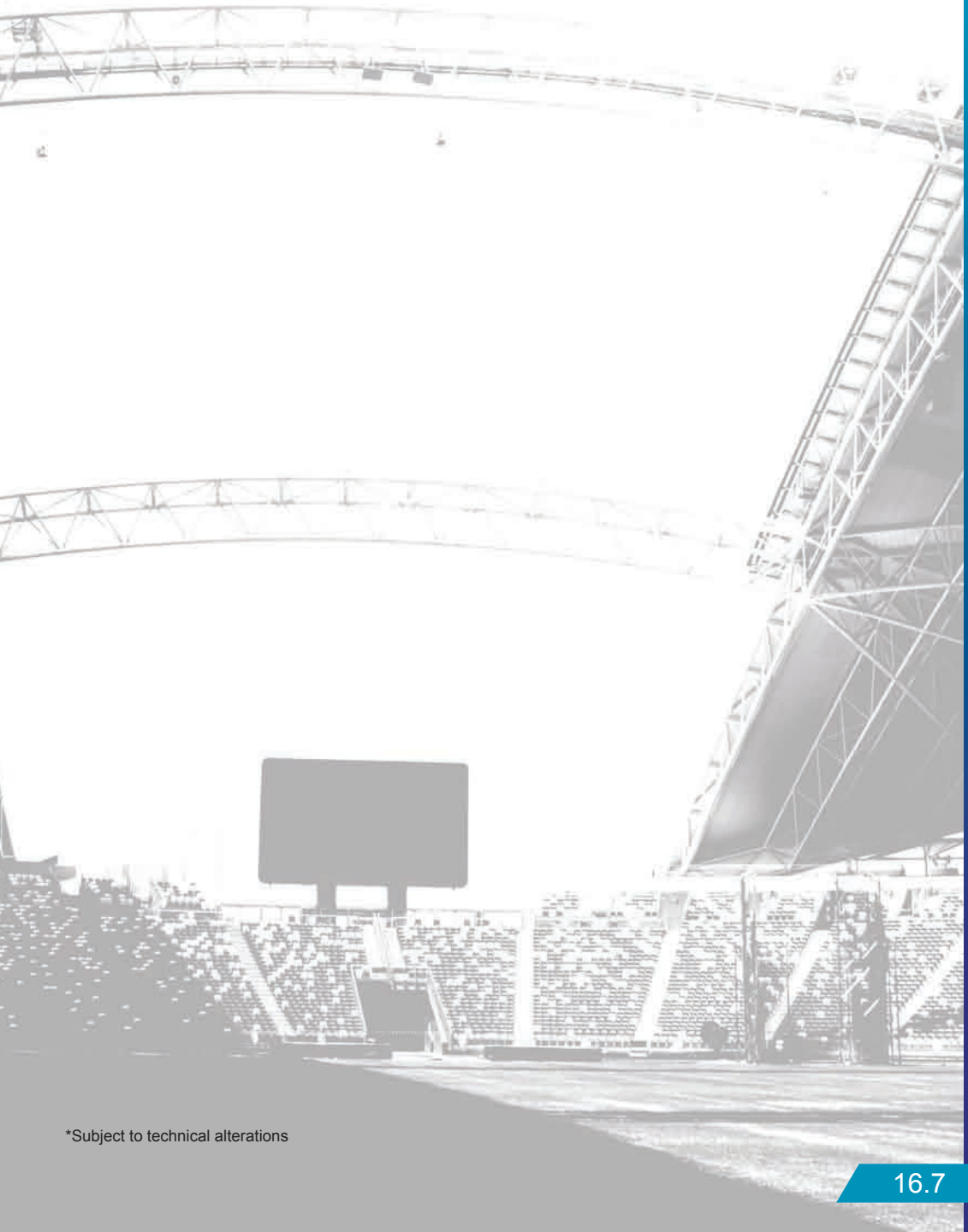


### Specifications

Time accuracy	Accuracy of crystal oscillator: ±1ppm (at a temperature of 25°C)																					
Maximum measurement duration	23 hours, 59 minutes, 59 seconds 999. Start time can also be set in hour, minutes and seconds up to the maximum duration.																					
Measurement unit	<table border="1"> <tr> <td>10 types of calculation methods are available</td> <td>Method of calculation</td> <td>Data &amp; Printout</td> </tr> <tr> <td></td> <td>1/1000 sec. digit is retained</td> <td>1/1000 sec. increments</td> </tr> <tr> <td></td> <td>1/1000 sec. digit is rounded down</td> <td>1/100 sec. increments</td> </tr> <tr> <td></td> <td>1/1000 sec. digit is rounded up</td> <td>1/100 sec. increments</td> </tr> <tr> <td></td> <td>1/1000 sec. digit is rounded off</td> <td>1/1000 sec. increments</td> </tr> <tr> <td></td> <td>1/100 sec. digit is rounded down</td> <td>1/10 sec. increments</td> </tr> <tr> <td></td> <td>1/100 sec. digit is rounded up</td> <td>1/10 sec. increments</td> </tr> </table>	10 types of calculation methods are available	Method of calculation	Data & Printout		1/1000 sec. digit is retained	1/1000 sec. increments		1/1000 sec. digit is rounded down	1/100 sec. increments		1/1000 sec. digit is rounded up	1/100 sec. increments		1/1000 sec. digit is rounded off	1/1000 sec. increments		1/100 sec. digit is rounded down	1/10 sec. increments		1/100 sec. digit is rounded up	1/10 sec. increments
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Number of input channel	From panel: 3 channels From connectors: 2 channels (up to 10 channels when extension unit is used)																					
Number of data storable	Up to 3,000 data contained in up to 100 blocks																					
Speed measurement	Distance of section: 1~100m in 0.1m increments Measurement unit: km/h, mph and m/s Measurement range: 1~1000km/h, 1~250mph, 1~600m/s Number of input channels: Up to 10 channels when extension unit is used																					

Monitor display	Display device: LCD Number of characters: 20 characters x 4 lines Character height: 9.2mm				
Printer section	Printer type: Dot impact printer (5x7 dot matrix, 24 characters/line) Printing speed: 2.5 lines/sec Roll paper: 57.5 ± 0.5mm (width) x 70mm (outer diameter) or a small size, plain paper type				
Power supply	1. AC 100V ~ AC 240V (used with AC adapter) 2. Built-in battery (2 sets of 6 AA size dry cells) * rechargeable type batteries can also be used 3. External battery (DC 12V) *Do not use AC power supply at the same time				
Battery life	Alkaline dry battery: Approximately 8hours (at +25°C) Nickel-metal hydride rechargeable battery: Approximately 14 hours (at +25°C) *the above battery lives may be shorter if measurement/ printing is performed more than once in 10 seconds)				
Temperature range	<table border="1"> <tr> <td>During operation</td> <td>-5°C ~ + 40°C (no-condensing) *0°C ~ +40°C for AC adapter</td> </tr> <tr> <td>During storage</td> <td>-15°C ~ 55°C (non-condensing)</td> </tr> </table>	During operation	-5°C ~ + 40°C (no-condensing) *0°C ~ +40°C for AC adapter	During storage	-15°C ~ 55°C (non-condensing)
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Appearance	<table border="1"> <tr> <td>Dimension</td> <td>W440 x H467 x D120mm</td> </tr> <tr> <td>Material</td> <td>Resin</td> </tr> </table>	Dimension	W440 x H467 x D120mm	Material	Resin
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Weight	Approximately 5.5kg (excluding batteries)				

\*Subject to technical alterations



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