CE

PC-90 Professional Stopwatch

FEATURES:-
CHRONOGRAPH
- Display of Lap, split and running chronograph.
- Measure up to 9 hours 59 minutes and 59.99 seconds.
- 60 recallable lap and split memories.
- display of fastest (FS), slowest (SL) and average (AV) lap times for the laps traversed.
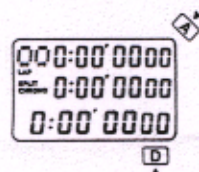- lap counter (00-99).

TIMER
- Presettable countdown timer, maximum 10 hours.
- Automatically recycles upon completion of countdown and cycle counter to keep track of cycles counted.
- 30 seconds shuttle-countdown for timeout period timekeeping.

PACER
- Presettable from 10 beeps/minute to 320 beeps/minute.
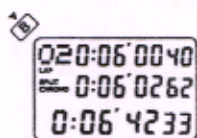- Display of pacer frequency, beep counter and total time elapsed simultaneously.

CLOCK
- Hour, minutes, seconds, month, date, day and year, auto calendar.
- Alarm hour and minutes.
- 12/24 hour and European calendar user option.
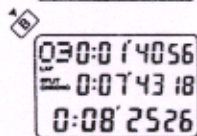
CHRONOGRAPH OPERATION

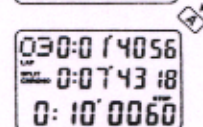Depress D to select the operating mode. The chrono indicator is shown. Depress A to start.

Depress B to read the 1st Lap time. LAP is shown at the upper row, SPLIT is shown at the middle row and the RUNNING CHRONO is shown at the bottom row.
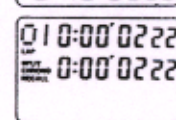
Depress B to display the 2nd Lap time. The 2 digit in dot matrix format at the top left corner is the Lap counter.

Depress B to display the 3rd Lap time.

Depress A to stop counting.

Depress C to recall 1st Lap data (memory can be recalled anytime when the chronograph is either running or stopped)

1

```
|020:06'0040|
|0:06'0262|
```

Depress C again to recall the 2nd Lap data.

[C]

```
|030:0 [4056|
|0:0743 i8|
```

Depress C again to recall the 3rd Lap data.

[C]

```
|0: 10'0060|
```

Depress C again to recall the stoppped time.

[C]   [A]

At any time during the RECALL mode ....

```
|AV0:02'3439|
RECALL
```

Depress A will display the average (AV) Lap time of the Laps traversed.

[B]

```
|SL0:06'0040|
RECALL
```

Depress B will display the slowest (SL) Lap time of the Laps traversed.

[B]

```
|FS0:00'0222|
RECALL
```

Depress B again will display the fastest (FS) Lap time of the laps traversed. Repeated depression of B will display the fastest and slowest Lap times alternately.
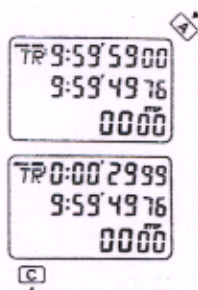
```
|AV - - - - -|
RECALL
```

Remarks: (1) if lap counter is $>$ 99 or either Lap or split is greater than 9 hours 59 min 59.99 sec, the power of the computer has been exceeded and the AV information will be disabled as shown-
(2) if either lap or split is greater than 9 hours 59 min 59.99 sec, the power of the computer has been exceeded and the SL and FS information will be disabled.

```
|030:0 [4056|
|0:0743 i8|
|0: 10'0060|
```

Another depression of the C button will return the chrono to the stopped status. (Depression of D at any time during recall mode serves the same purpose.) Depress A to restart counting or B to reset all memories.

[C]

Remark: Since there are only 60 memories the chronograph will recall only the 1st 59 and the last lap data.

TIMER OPERATION

```
|TR0:00'0000|
|0:00'0000|
|0000|
```

Depress D to select the TIMER mode. Depress B to select digits and A to set digit. Digits will be advanced by +1 for every depress of A. When the seconds digits are set, depress B to complete the setting process. The upper and middle row will show the same preset time. The 4 digit counter at the lower row will remain at 0000

[D]

[A]
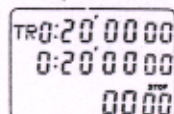
```
|TR9:59'5900|
|9:59'5832|
|0000|
```

Depress A to start countdown. The timer can be started or stopped by depressing A. When the timer approaches zero, an output of 2 short beeps/seconds will sound for 15 seconds. (push of B, C or D buttons will stop the sound) The counter will advance by 1 and timer starts again immediately.

2

TR 9:59'59 00
9:59'49 76
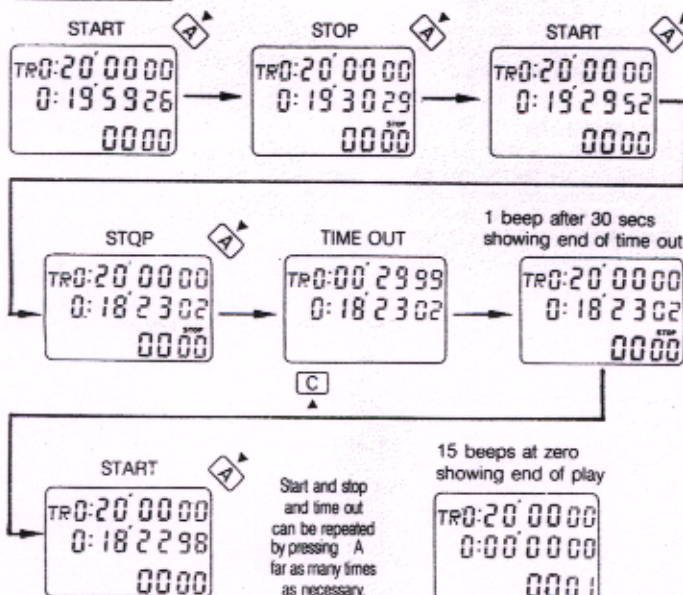00 00

TR 0:00'29 99
9:59'49 76
00 00

When the timer is at the stopped condition, depress C will immediately start a 30 seconds shuttle countdown (for timeout timekeeping). Which is displayed at the top row. At the end of the 30 seconds a beep will be generated and the displays will return to the original status. Depress C while this countdown is in progress will terminate it immediately and the display return to its original status. Countdown will resume when A is depressed.

Remarks: (1) if the preset time is 29 seconds, only 2 beeps will sound on approach of zero. (2) When timer reaches zero when the stopwatch is in other modes, only 2 beeps will sound.
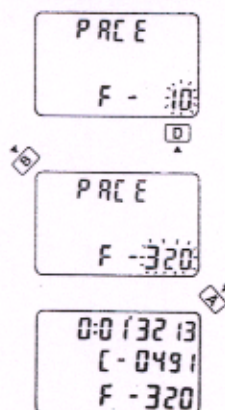
Example: Basketball game

TR 0:20'00 00
0:20'00 00
00 00

If the game has a 20 minutes period, select the timer mode and set the countdown time to 20 minutes.

START
TR 0:20'00 00
0:19'59 26
00 00

→

STOP
TR 0:20'00 00
0:19'30 29
00 00

→

START
TR 0:20'00 00
0:19'29 52
00 00

STOP
TR 0:20'00 00
0:18'23 02
00 00

→

TIME OUT
TR 0:00'29 99
0:18'23 02

1 beep after 30 secs showing end of time out
START
TR 0:20'00 00
0:18'23 02
00 00

START
TR 0:20'00 00
0:18'22 98
00 00

Start and stop and time out can be repeated by pressing A far as many times as necessary.

15 beeps at zero showing end of play
TR 0:20'00 00
0:00'00 00
00 01

PACER OPERATION

P RC E

F - 10
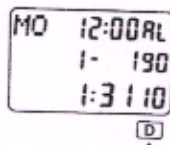
Depress D to select the PACER mode. The display will be as shown with the last 2 digits at the lower row blinking. At this status depress B will sequence the PACER frequency as follows: 10, 20, 30, 40, 60, 80, 120, 160, 240, 320.

P RC E

F - 320

0:01'32 13
C - 049 1
F - 320

Depress A to start PACER. A beeping sound of 320 beeps/minute will sound. The total time elapsed will be shown on the top row, the beep counter at the center and PACER frequency at the lower row. The beep counter has a range of 9999. Depress A to stop PACER.

Remarks: Pacer will be reset if stopwatch is switched to another mode.

```
MO  12:00AL
 1-  190
 1:31 10
      [D]
       ▲
```

Depress D to select CLOCK mode. The alarm hour, alarm minutes, month, date, day, year, hour, minute and seconds are displayed as shown. Time setting can be done by means of depressing B to select digits and A to advance digits.

Remarks: alarm is automatically armed if alarm hour or minute has been set. Alarm can also be armed or disarmed by depressing C at normal time mode. When alarm is armed 'AL' is flashing and when not armed 'AL' is not flashing. When the alarm time is reached and the alarm is armed, an output of 3 short beeps/second will sound for 15 seconds. Remarks: if the alarm time is reached when the stopwatch is in other modes, the alarm will only sound 3 short beeps.

CARE OF YOUR STOPWATCH
* WATER RESISTANCE

The stopwatch is designed to withstand accidental contact with water such as splashes or rain, but it is not designed for use in water. Do not operate the buttons when the stopwatch is wet.

* TEMPERATURE

Do not leave your stopwatch under direct sunlight or in very high temperatures for a long time, the display may become black. Do not leave your stopwatch in very low temperature as this may cause a slight time loss or gain and the change of digits becomes slow. In both cases the above conditions will be corrected when the stopwatch returns to normal temperature.

* SHOCKS

Be careful not to drop your stopwatch or hit it against hard surfaces as it may cause a mechanical damage.

* STATIC ELECTRICITY

The integrated circuit in your stopwatch can be affected by static electricity. If the static electricity is very strong a permanent damage can occur. Be careful of the screen of the TV set and the wearing of clothing made of synthetic material in dry weather; in such cases a very strong static electricity can be generated.

* MAGNETISM
Not affected

* CHEMICALS

Do not expose your stopwatch to solvents such as gasoline and alcohol; spray of cosmetics, cleaners, paints etc as they may cause damage to the stopwatch.

BATTERY CHANGE

When the display becomes dim or faded out, battery replacement is necessary.
1. Unscrew and remove back cover.
2. Unscrew the battery contact.
3. Replace with fresh lithium battery CR2032 or equivalent.
4. Before putting in the fresh battery make sure that the triangular contact is in the triangular slot under the battery.
5. Use a small metal tool (such as a tweezer or screw driver) to momentarily short circuit the AC pad at the lower side of the battery.
6. Rescrew the back cover.

AC
SHORT

BK-004