

6 Digit LCD Alarm Watch With Black light Control 带 EL 控制的六位多功能表芯片 6691NA

FEATURES

- Hour,Minute,second,Month and Day normal display
- 6 digit chronogramh:Auto ranging after 30 minutes to hour, mintue,second,from minute,second,1/100second
- Split operative stopwatch(Accurate to 1/100 second)
- Use selectable 12/24 format & 4 year calendar
- Alarm function with 4 to 5 minutes snooze
- Chime on every hour
- One touch correction of time error within ± 30 seconds
- Alarm output driven by build-in transistor
- Dirdct drive of piezo buzzer
- Oscillating build-in transistor
- Backlight(EL)contro; output

特点

- 可显示时.分.秒.月.日及星期
- 6 位记时器:以分.秒.1/100 秒计时显示方式计满 30 分钟后,自动转换至时.分.秒.计时
- 跑表有分段计时功能(准确到 1/100 秒)
- 可选 12 或 24 小时制 4 年日历
- 具有间隔 4 至 5 分钟再闹的功能
- 整点发声报时
- 按键一次即可校正 ± 30 秒的时间误差
- 内置三极管驱动闹钟输出
- 可直接驱动压电蜂鸣片
- 震荡器内置电容
- 背光(EL)控制讯号输出

ELECTRICAL CHARACTERISTICS 电性参数(VDD=1.5V, VSS=0V, Ta=25°C)

paramter	symbol	Test condition	min	type	max	Unit
工作电压	Vdd		1.2	1.5	1.8	V
工作电流	Idd1	No load		1.0	1.6	uA
工作电流	Idd2	EL			9	mA
输入高电压	Vih		Vdd-0.3		Vdd	V
输入低电压	Vil		Vss		Vss+0.3	V
按键开关消耗电流	Isw	Vin=Vdd			3	uA
振荡起振电压	Voso	Within 2 seconds			1.3	V
闹铃驱动电流	Iala	Vala=0.5V	0.5	2		mA
闹铃驱动电流	Ialab	Vala=0.5V	10	20		uA
振荡频率	Fosc			32768		Hz
LCD 频率	Flcd			32		Hz
时间稳定度	Tstb	Vdd=3V		1		Ppm
输出电流	Io	Vo=0.5V	1			mA

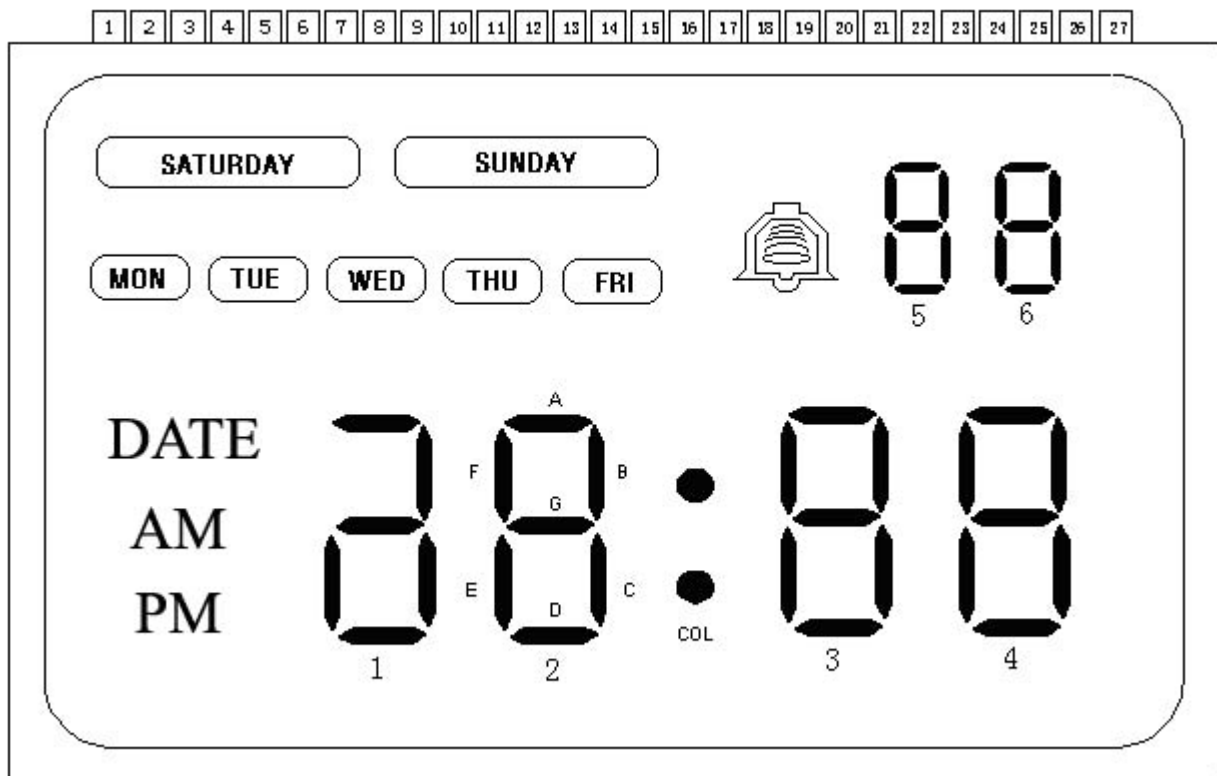
APPLICATION INFORMATION 应用资料

Pad	Name	Pad	Name	Pad	Name	Pad	Name
1	OSCI	12	A1/SU	23	S	34	G5/D5
2	OSCO	13	C1/B1	24	CAP	35	F5/E5
3	L	14	A2/MO	25	F1K	36	B4/C4
4	DIS	15	CL/TU	26	V _{EE}	37	G4/D4
5	IND	16	A3/WE	27	AC	38	F4/E4
6	GND	17	A4/TH	28	T1	39	B3/C3
7	ALA1	18	A5/fr	29	VDD	40	G3/D3
8	ALA2	19	A6/SA	30	B6/C6	41	F3/E3
9	M	20	DM/AL	31	G6/D6	42	B2/C2
10	COM2	21	COM1	32	F6/E6	43	G2/D2
11	PM/AM	22	D	33	B5/C5	44	F2/E2

贪睡功能：响闹时，按S键进入贪睡状态，再响后按D键停止

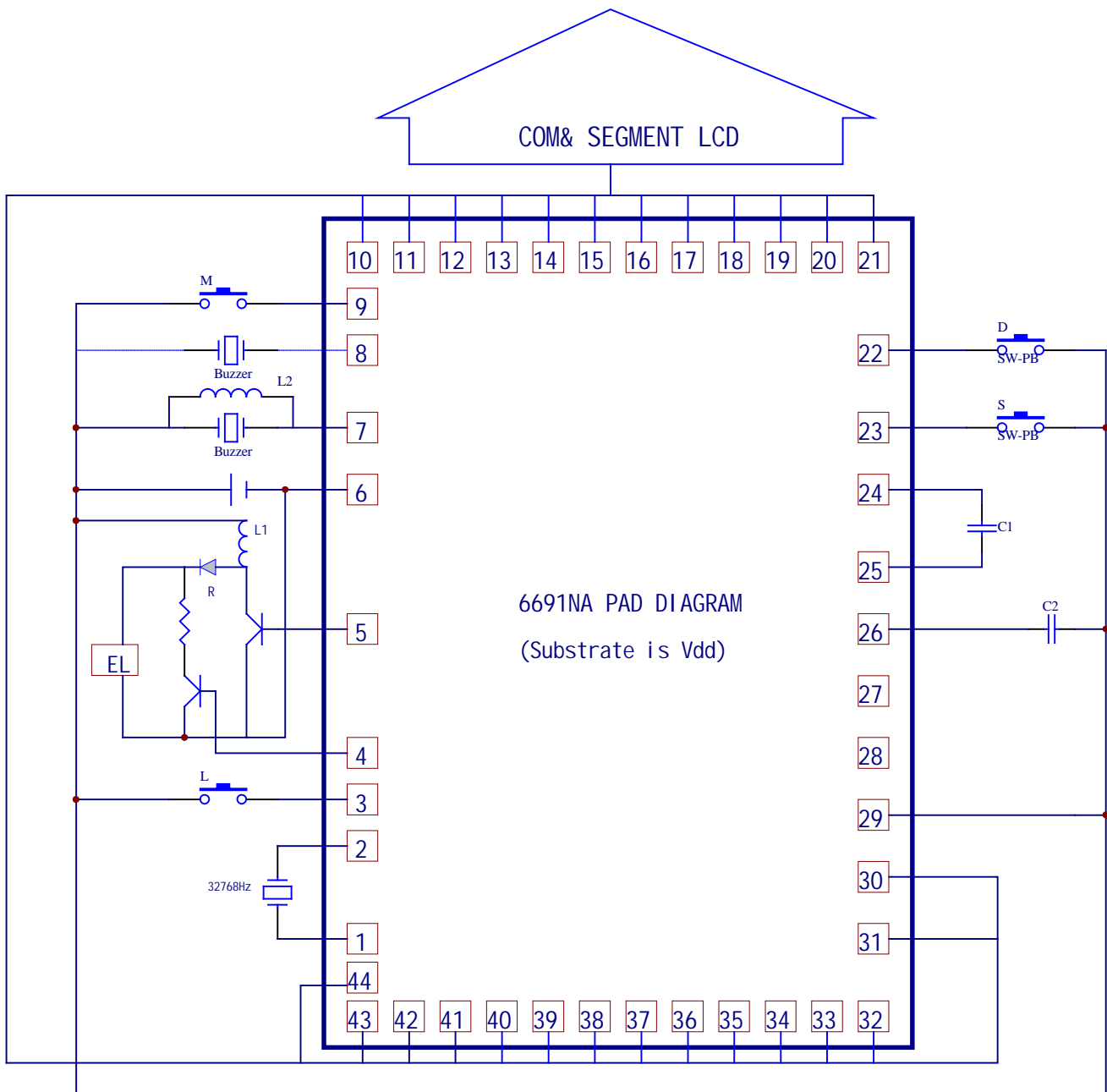
LCD 连接关系图表:

SEG	PM/AM	A1/SUN	C1/B1	A2/MO	CL/TU	A3/WE	A4/TH
COM1	PM	ADEGI	C1	A2	CL	A3	A4
COM2	AM	SUN	B1	MON	TUE	WED	THU
SEG	A5/FR	A6/SA	DM/AL	B6/C6	G6/D6	F6/E6	B5/C5
COM1	A5	A6	DATE	B6	G6	F6	B5
COM2	FRI	SAT	ALARM	C6	D6	E6	C5
SEG	G5/D5	F5/E5	B4/C4	G4/D4	F4/E4	B3/C3	G3/D3
COM1	G5	F5	B4	G4	F4	B3	G3
COM2	D5	E5	C4	D4	E4	C3	D3
SEG	F3/E3	B2/C2	G2/D2	F2/E2			
COM1	F3	B2	G2	F2			
COM2	E3	C2	D2	E2			



1/2DUTY; 1/2BIAS; 电压3V

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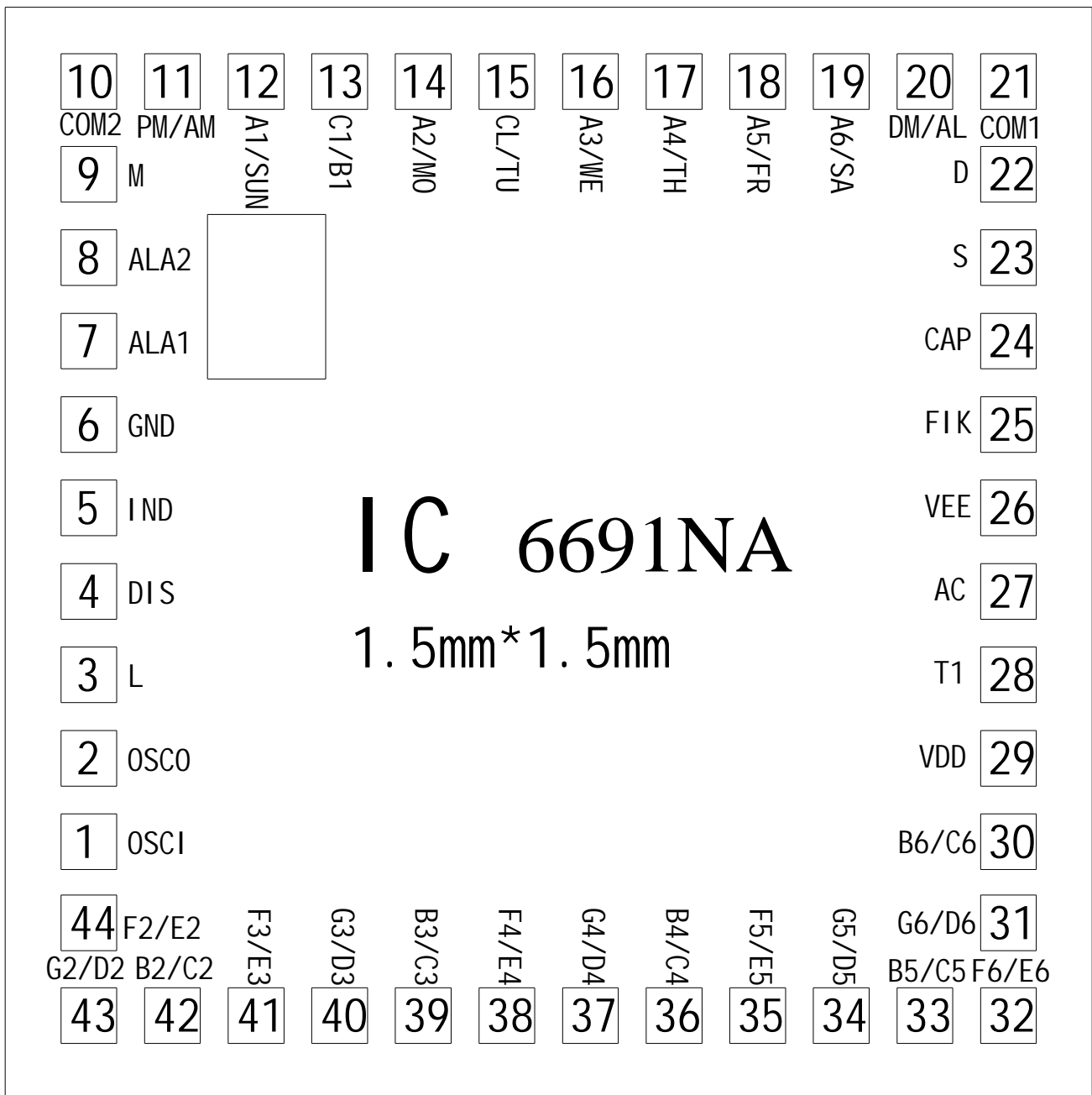
NOTE: 1. $L1=1.0\sim 2.5mH$, $10\sim 20\ \Omega$, 由发光片 EL 的面积决定, $C1=C2=0.1\mu f$, $R=10K$.

2. EL 驱动输出 IND 及 DIS 线路应尽可能远离各触发控制端(M.L.S.D)的连线,且走线粗短.

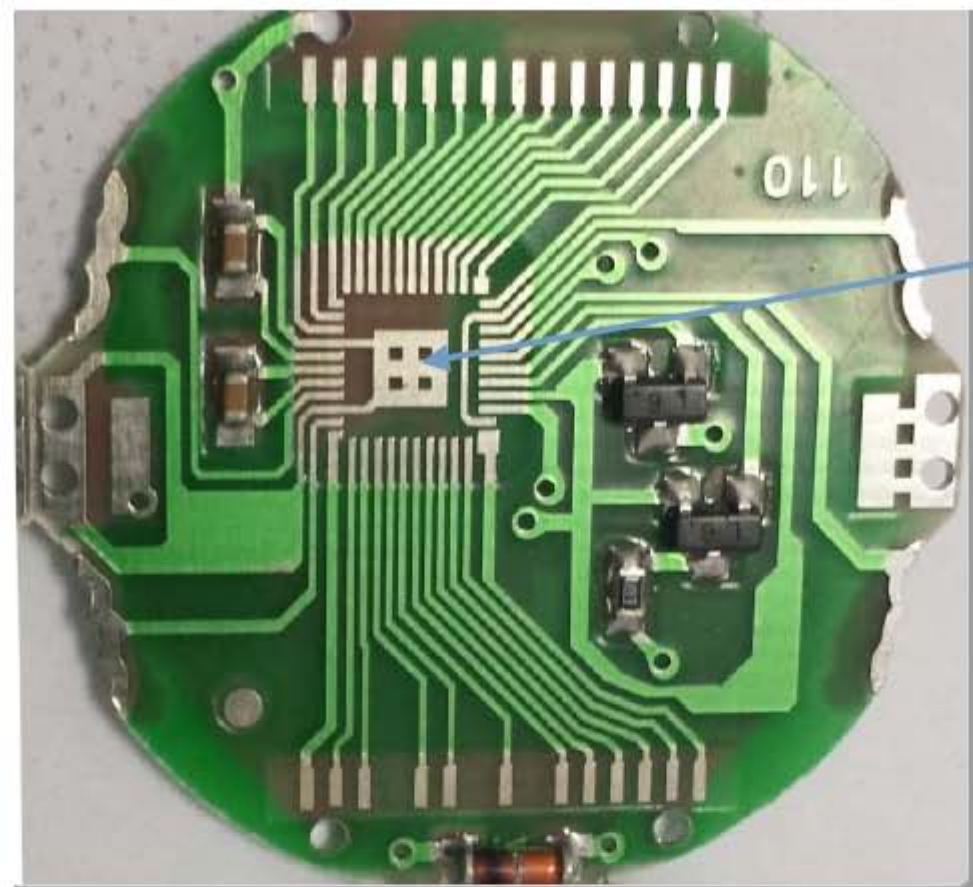
3. EL 高压部分线路用地线 VSS 或电源 VDD 线隔离,以降低对其他连线的干扰.

4. 7 8 脚可选择(应用时只能选择其中一脚),蜂鸣片声音大小可调整 $L2$ 电感值,建议 $L2=15\sim 25mH$.

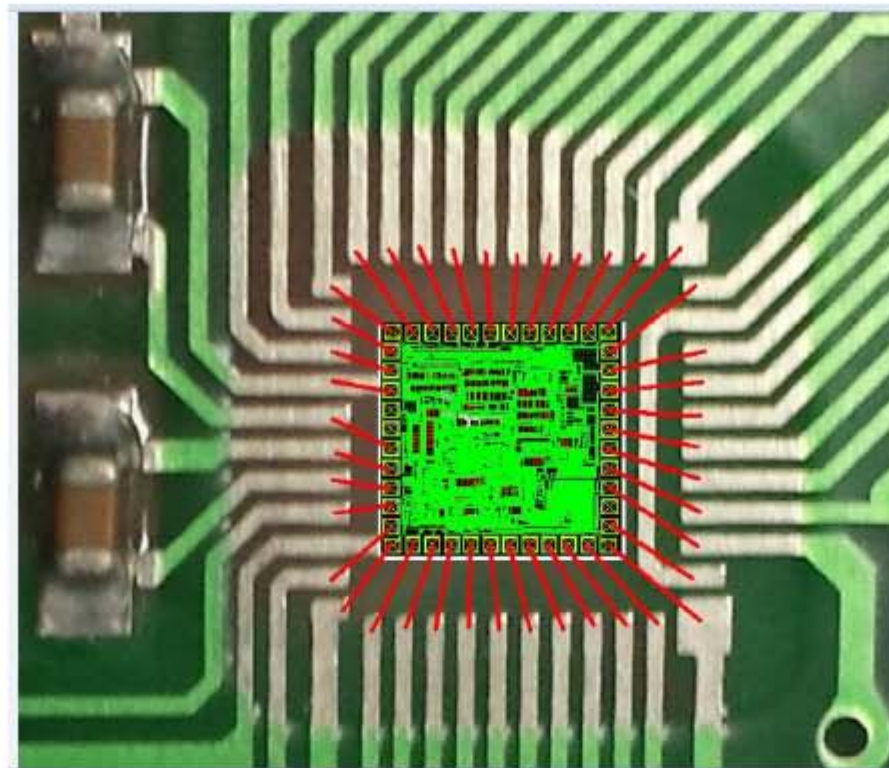
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整点报时功能设置:在正常走时间模式下,先一直压住S键,进入闹铃时间模式,同时按一下M键,所有星期点会同时显示,代表整点报时功能打开,再同时按一下M,所有星期点会同时消失,代表整点报时功能关闭。



Die bonding 位置



Pad size: 90um*80um. Top metal: Al 1u
注意芯片方向

多功能秒表使用说明书

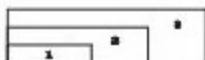
一、秒表计时器：

在正常走时状态下，按#3键使秒表进入计时状态，如果秒表显示不为零，按#1键停止计时，按#2键复位到零。

1、秒表计时：

按#1键开始时，再按#1键停止计时（重复按#1键，重复开始/停止），按#2键复位到零。

2、分段计时：



按#1键开始计时，按#2键显示第一段时间，再按#2键两次，显示第二段时间，...，按#1键停止计时，按#2键复位到零。

3、二段计时：



按#1键开始计时，按#2键显示第一段时间；按#1键停止计时，按#2键显示第二段时间，再按#2键复位到零。



二、时间、日历及响闹显示：

在正常走时状态下，按#1键显示月、日和星期；按#2键显示响闹时间。

三、设置时间和日历：

在正常走时状态下按#3键3次，进入时间设置状态，秒和星期显示同时闪动。按#2键选择分、时、日、月、星期、秒作为调校对象（A/P为12小时制，A为上午，P为下午，H为24小时制），按#1键置数（按位不放，快速置数），调校完毕，按#3回到正常走时状态。（注：秒只能被调校为00）。

四、设置响闹时间：

正常走时状态下按#3键2次，进入响闹时间设置状态，时和星期显示同时闪动。

按#2键选择分和小时，按#1键置数，调校完毕，按#3键回到正常走时状态。

正常走时状态下，在按住#2键的同时：

反复按动#1键，定闹符号  出现/消失，表示定闹开启/关闭。

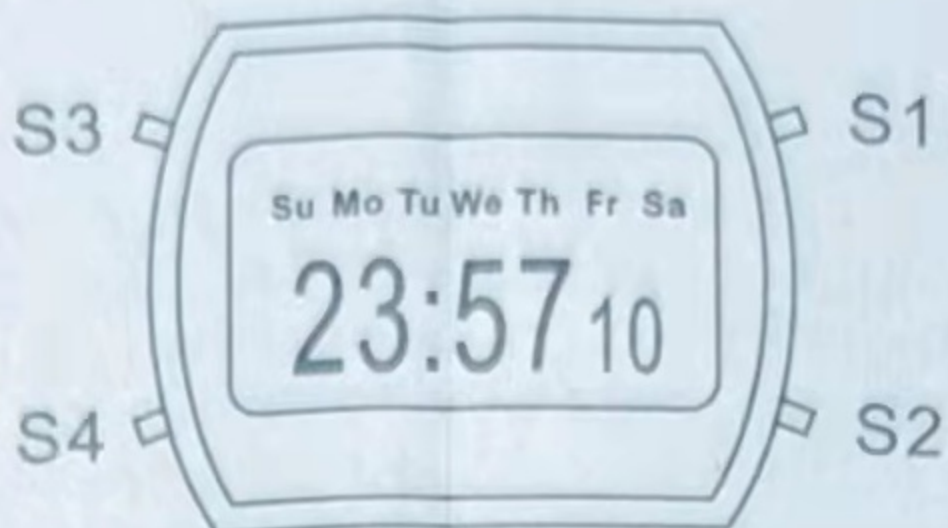
反复按动#3键，星期的七个字符出现消失，表示整点报闹开启关闭。

五、电池更换：

当显示变暗或无显示时，应更换电池。可用螺丝刀取下表后盖和表内的旧电池，然后换上相同规格的新电池，再将表后盖装好即可。

六、注意事项：

- 1、避免受潮。
- 2、不宜长时间在太阳下暴晒和置于强光下照射。
- 3、避免与腐蚀性物质接触。
- 4、避免在温度过高或过低的环境下使用。



OPERATION MANUAL
SPORT WATCH WITH ALARM CHRONO GRAPH
1/100 SEC. LAP AND SPLIT CONTROL.

FEATURES

- 1) HOUR MINUTE. SEC & DAY OF THE WEEK.
- 2) MONTH & DATE.
- 3) CHRONO GRAPH 1/100 SEC WITH LAP/SPLIT CONTROL.
- 4) 4 YEAR CALENDAR.
- 5) MELODY ALARM WITH CHIME AND SNOOZE.
- 6) 30SEC CORRECTION FOR SYNCHRONIZATION.
- 7) 12/24 HOUR DISPLAY FOR USER'S OPTION.
- 8) MAXIMUM COUNTING: 23 HRS 59 MINS 59 SECS.

SWITCH CONTROL

NORMAL READOUT:

- 1) DEPRESS S1 ONCE : MONTH, DATE AND DAY OF WEEK.
- 2) DEPRESS S2 ONCE : ALARM TIME.
- 3) DEPRESS S3 ONCE : CHRONOGRAPH FUNCTION.
- 4) BACK LIGHT.

SETTING SEQUENCE

A) NORMAL TIME SETTING

- 1) PRESS S3 3 TIMES TO GET NORMAL TIME SETTING MODE, "SEC" WILL START FLASHING PRESS S1 FOR SYNCHRONIZATION.
- 2) DEPRESS S2 ONCE : "MIN" FLASHING. PRESS S1 TO ADVANCE.
- 3) DEPRESS S2 ONCE: "HOUR" FLASHING, PRESS S1 TO ADVANCE. ("A" IS AM) ("P" IS PM) ("H" IS 24 HR FORMAT).
- 4) DEPRESS S2 ONCE: "DATE" FLASHING, PRESS S1 TO ADVANCE.
- 5) DEPRESS S2 ONCE: "MONTH" FLASHING, PRESS S1 TO ADVANCE.
- 6) DEPRESS S2 ONCE: "DAY OF WEEK" FLASHING, PRESS S1 TO ADVANCE.
- 7) DEPRESS S3 ONCE: SETTING COMPLETED, RETURN TO NORMAL TIME READOUT.

B) ALARM TIMES SETTING

- 1) DEPRESS S3 TWICE, ALARM TIME "HOUR" FLASHING, PRESS S1 TO ADVANCE.
- 2) DEPRESS S2 ONCE, ALARM TIME "MIN" FLASHING, PRESS S1 TO ADVANCE.
- 3) DEPRESS S3 ONCE, SETTING COMPLETED, RETURN TO NORMAL TIME READOUT.

C) ALARM FUNCTION

- 1) ALARM ARMED BY PRESS S1 AND S2 SIMULTANEOUSLY "🔔" FLAG WILL APPEARED.
- 2) DISARMED ALARM BY PRESS S1 AND S2 SIMULTANEOUSLY "🔔" FLAG WILL DISAPPEARED.

THE ALARM WILL STOP ITSELF AFTER 20SEC OR CAN BE SILENCED BY PRESSING S1. IN EITHER CASE. THE ALARM WILL SOUND AGAIN SAME TIME OF THE NEXT DAY.

D) CHIME

- 1) CHIME ACTIVATED BY PRESS S2 AND S3 SIMULTANEOUSLY, ALL DAY FLAG SHOWS UP.
- 2) DEACTIVATED CHIME BY, PRESS S2 AND S3 SIMULTANEOUSLY, ALL DAY FLAG DISAPPEARED.

E) CHRONOGRAPH

PRESS S3 ONCE TO GET INTO "CHRONO" MODE S1 CAN NOW BE OPEARTED TO START OR ANY COUNTING. EVENT. DURING A COUNTING. PRESS OF S2 WILL ENTER THE WATCH INTO LAP TIME MODE MEANING 1 PORTION OF THE COUNTING IS REGISTERED ON THE DISPLAY WHILE THE COUNTING CONTINUES UNTIL COMPLETED BY/PRESS OF S1 THEN PRESS OF S2 TWICE.

F) SNOOZE FUNCTION

WHEN ALARM 'BEEP BEEP' OR 'SONG' IS ON DEPRESS OF S1 ONCE WILL ENTER THE WATCH INTO SNOOZE FUNCTION IT MEANS THE ALARM WILL SOUND AGAIN AFTER 5 MINUTES UNLESS IT IS DISABLED BY PRESS S2 ONCE.

G) BATTERY

FOR REPLACEMENT USE LR1130, L1131, AG10 OR EQUIVALENT.