

# RealTimeController(DS1337)

20131108

This use i2c\_rd and i2c\_wr.

Reference;

DS1337\_1.3.f

Connection

```
RTC DS1337   Propeller
  scl  ---- P28
  sda  ---- P29
  INTA ---- n LED p --- 220ohm -- 3.3V
  SQW/INTB ---- n LED p --- 220ohm -- 3.3V
```

--- Display register value

Prop0 Cog6 ok

disp\_reg

Address(hex) value(hex)

00	33
01	03
02	00
03	01
04	01
05	01
06	00
07	00
08	00
09	00
0A	00
0B	00
0C	00
0D	00
0E	18
0F	80

Prop0 Cog6 ok

Set 24Hour-mode/Date on current/alarm1/alarm2 by set\_current

--- Set current-time to 2013/11/5 TUE 20:28:00

2013 11 5 2 20 28 set\_current

CurrentTime

Year: 2013

Date: NOV 5 TUE

Time: 20:28:00

Prop0 Cog6 ok

Week is defined by 'rtc\_week'.

--- Set alarm1 to [Date]5 20:30:00

5 20 30 set\_alm1

Alarm1 setting

Date: 5

Time: 20:30:00

Alarm1 Interrupt:Enabled

Alarm2 Interrupt:Disabled

Prop0 Cog6 ok

--- Set alarm2 to [Date]2 20:33

2 20 33 set\_alm2

Alarm2 setting

Date: 2

Time: 20:33

Alarm1 Interrupt:Enabled

Alarm2 Interrupt:Enabled

Prop0 Cog6 ok

--- Check alarm1/alarm2 flag

chk\_INT

Alarm1 Flag:0

Alarm2 Flag:0

Prop0 Cog6 ok

--- Display all setting

all

CurrentTime

Year: 2013

Date: NOV 5 TUE

Time: 20:29:01

Alarm1 setting

Date: 5

Time: 20:30:00

Alarm2 setting

Date: 2

Time: 20:33

Prop0 Cog6 ok

--- Change alarm2 to week of day

1 alarm2 alm\_Day

Prop0 Cog6 ok

--- Display all setting

all

CurrentTime

Year: 2013

Date: NOV 5 TUE

Time: 20:29:14

Alarm1 setting

Date: 5

Time: 20:30:00

Alarm2 setting

Week: TUE

Time: 20:33

Prop0 Cog6 ok

INTA-pin goes to Low at 20:30 11/5 TUE

--- Check alarm1/alarm2 flag

chk\_INT

Alarm1 Flag:1

Alarm2 Flag:0

Prop0 Cog6 ok

INTA-pin goes to Hi

--- Clear INT-flag for alarm1

alarm1 clr\_INT

Alarm1 Flag:0

Alarm2 Flag:0

Prop0 Cog6 ok

INTA-pin goes to Low at 20:33 11/5 TUE

--- Check alarm1/alarm2 flag

chk\_INT

Alarm1 Flag:0

Alarm2 Flag:1

Prop0 Cog6 ok

INTA-pin goes to Hi

--- Clear INT-flag for alarm2

alarm2 clr\_INT

Alarm1 Flag:0

Alarm2 Flag:0

Prop0 Cog6 ok

--- Set INTCN because of using SQW/INTB-pin

1 set\_INTCN

Prop0 Cog6 ok

--- Set alarm2 to Tue 20:36

2 20 36 set\_alm2

Alarm2 setting

Week: TUE

Time: 20:36

Alarm1 Interupt:Enabled

Alarm2 Interupt:Enabled

Prop0 Cog6 ok

--- Set alarm2 to [No Day/Date]

1 alarm2 no\_DY/DT

Prop0 Cog6 ok

--- Display all setting

all

CurrentTime

Year: 2013

Date: NOV 5 TUE

Time: 20:34:26

Alarm1 setting

Date: 5

Time: 20:30:00

Alarm2 setting

Time: 20:36

Prop0 Cog6 ok

SQW/INTB-pin goes to Low at 21:10

--- Check alarm1/alarm2 flag

chk\_INT

Alarm1 Flag:0

Alarm2 Flag:1

Prop0 Cog6 ok

--- Clear INT-flag for alarm1

alarm2 clr\_INT

Alarm1 Flag:0

Alarm2 Flag:0

Prop0 Cog6 ok

--- Back alarm2 to [Date]

0 alarm2 no\_DY/DT

Prop0 Cog6 ok

all

CurrentTime

Year: 2013

Date: NOV 5 TUE

Time: 20:36:50

Alarm1 setting

Date: 5

Time: 20:30:00

Alarm2 setting

Week: TUE

Time: 20:36

Prop0 Cog6 ok

Set current/alarm1/alarm2 to 12Hour-mode

1 set\_12H

CurrentTime

Year: 2013

Date: NOV 5 TUE

Time: PM 08:37:05

Alarm1 setting

Date: 5

Time: PM 08:30:00

Alarm2 setting

Week: TUE

Time: PM 08:36

Prop0 Cog6 ok

--- Set alarm1 to [Date]5 20:40:00

5 20 40 set\_alm1

Alarm1 setting

Date: 5

Time: PM 08:40:00

Alarm1 Interrupt:Enabled

Alarm2 Interrupt:Enabled

Prop0 Cog6 ok

--- Display all setting

all

CurrentTime

Year: 2013

Date: NOV 5 TUE

Time: PM 08:38:06

Alarm1 setting

Date: 5

Time: PM 08:40:00

Alarm2 setting

Week: TUE

Time: PM 08:36

Prop0 Cog6 ok

INTA-pin goes to Low at 20:40

--- Check alarm1/alarm2 flag

chk\_INT

Alarm1 Flag:1

Alarm2 Flag:0

Prop0 Cog6 ok

INTA-pin goes to Hi

--- Clear INT-flag for alarm1

alarm1 clr\_INT

Alarm1 Flag:0

Alarm2 Flag:0

Prop0 Cog6 ok

--- Check INTCN

control DS1337 i2c\_rd hex st? sc

ST: 0000\_001F 0000\_0000

2 items cleared

Prop0 Cog6 ok

--- Clear INTCN

0 set\_INTCN

Prop0 Cog6 ok

control DS1337 i2c\_rd st? sc

control DS1337 i2c\_rd st? sc

ST: 0000\_001B 0000\_0000

2 items cleared

Prop0 Cog6 ok

--- output 8.192kHz from SQW/INTB-pin (default is 32.768kHz) ---

8kHz set\_SQW

Prop0 Cog6 ok

--- output 4.096kHz from SQW/INTB-pin ---

4kHz set\_SQW

Prop0 Cog6 ok

--- output 32.768kHz from SQW/INTB-pin ---

32kHz set\_SQW

32kHz set\_SQW

Prop0 Cog6 ok

--- output 1Hz from SQW/INTB-pin ---

1Hz set\_SQW

Prop0 Cog6 ok

--- When osc stop, DS1337's clock stop ---

-- 1Hz blinking stop

0 osc\_on/off

Prop0 Cog6 ok

--- Re-start DS1337's clock ---

-- 1Hz blinking re-start

1 osc\_on/off

Prop0 Cog6 ok