

A - AT-372 ULTRA TIMER



Time period 1 second to 64 weeks, accurate DIL switch time settings
4 modes of operation, wide operating voltage

- Working voltage 9.5 - 30V DC
 - auto selected by timer (no need to set input)
- “Pulse” activation after time out
 - option on two of the modes
- Selectable trigger and reset input polarity
- 1 second to 64 week time period. Selectable by DIL switch - crystal controlled for accurate time
- Double pole relay will switch mains - contacts rated at 8 Amps

SETTING TIME PERIOD - seconds, minutes, hours, days and weeks - could not be simpler - just look up the time required in the “time table” and set the DIL switch accordingly

OPERATING MODE A - trigger applied - times out and activates the relay - if auto link is fitted relay drops out after 20 seconds and is then “waiting for next trigger”

OPERATING MODE B - trigger applied – relay activates for time period then drops out. It is then ready for the next trigger.

OPERATING MODE C - once applied the trigger must remain for the duration of the time setting to activate the relay. An example of this would be monitoring a fire door. If the door is opened the timer starts (say it has been set for 3 minutes) if the door closes before the three minutes nothing happens,

OPERATING MODE D - same as mode C, but the relay does not require a reset and will remain energised until the trigger is removed. (Door closed)



however if the door is open after the 3 minutes the relay will activate - if auto link is fitted relay drops out after 20 seconds and is then “waiting for next trigger”

ACTIVATION – trigger and reset input polarity is set by jumper links.

SPECIFICATION

INPUT LEVELS FOR TRIGGER OR RESET

LOW:

Less than 220 ohms to ground OR
an input of less than 0.8 volts

HIGH:

Greater than 4700 ohms to ground
OR an input of greater than 4 volts

Maximum input voltage 30V

Minimum input voltage -4V

Peak current available from either
pin, 5mA

OUTPUT LEVELS

Double pole contacts

AC: Maximum switching voltage 250
volts, maximum current 8 Amps
(non inductive load)

DC: Maximum switching voltage 30
volts, maximum current 5 Amps
(non inductive load)

Minimum switching level 5V @ 10mA

ENVIRONMENTAL OPERATING CONDITIONS

Temperature range -10°C to +60°C

Maximum humidity 80% non
condensing

SUPPLY VOLTAGE

Between 9.5 to 30V, automatically
selected by the timer, no need to set
jumpers or cut links.

UNIT SUPPLIED

In strong cardboard carton with 4
sticky fixers

DIMENSIONS

77.9 X 47mm

PACKING WEIGHT

80 grams



AT-372 ULTRATIMER



INSTALLATION INSTRUCTIONS

Overview

The timer operates on 12v or 24v DC – just connect, and the unit automatically adjusts internally.

Four modes of operation which are selected by jumper link:

- a) Relay energised after delayed / expired time period
- b) Relay energised for time period
- c) Trigger must still be present AFTER time period for relay to activate and latch until reset (ideal for door monitoring)
- d) The same as mode C, but the relay does not require a reset. After activation will stay energised until the trigger has been removed. (e.g. the door is closed)

When the power is connected, the LED will display a flash pattern to confirm the selected operating mode.

1 flash mode A – 2 flashes mode B – 3 flashes mode C - 4 flashes mode D.

Modes A, C and D have an additional feature – if the **AUTO** jumper link is fitted, the relay will drop out 20 seconds after activation ready for next trigger.

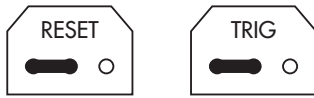
Inputs to both **TRIG** and **RESET** can be HIGH or LOW selected by jumper (in simple terms this means that it can be triggered or reset by either connecting the input to 12v or 0v).

Specification

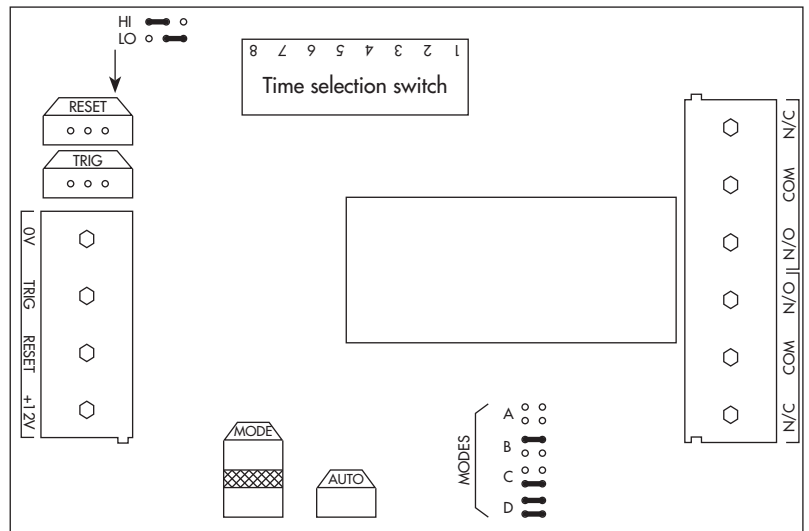
Operating Voltage	10.5-28v DC
Relay contacts rated at	8amps 250AC – or 5amps at 28v DC
Current when energised	34 mA
Quiescent current	3mA
Size	78L x 47W x 22H

1. Set the type of TRIG and RESET

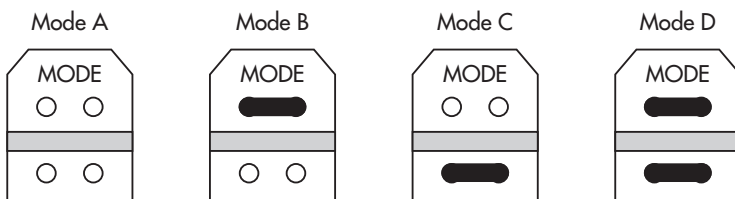
a) For Positive (HI)



b) For Negative (LO)



2. Select the mode required



Mode A - Relay energised after delayed / expired time period – Reset required unless AUTO link is fitted - with AUTO link fitted relay de-energises after approx 20 seconds

Set time switch using the time table

Please leave the RESET jumper in Positive - even if RESET is not used

Mode B - Relay energised for time period – then ready for next trigger

Set time switch using the time table

Please leave the RESET jumper in Positive - even if RESET is not used

Mode C - Trigger must still be present AFTER the time period for relay to activate, this mode will require a reset unless AUTO link is fitted - with AUTO link fitted relay de-energises after approx 20 seconds - (ideal for door monitoring)

Set time switch using the time table

Please leave the RESET jumper in Positive - even if RESET is not used

Mode D - The same as mode C, however the relay does not require a reset. The relay will stay energised until the trigger has been removed (the door is closed)

Set time switch using the time table

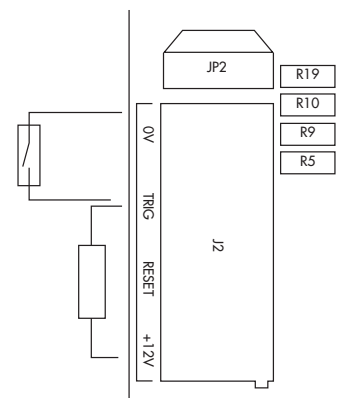
Please leave the RESET jumper in Positive - even if RESET is not used

For a door monitor select mode C or D and the trigger +ve (HI)

Connect a 1k8 resistor (supplied) between TRIG input and 12V (+ve).

Connect a door contact between TRIG input and 0V (-ve).

This works as follows:- The resistor is known as a 'pull up', when connected from +ve to the trigger input it drives the trigger 'high' at the same time if the door contact is closed the trigger input is 'pulled' to 0v (LO) so the timer cannot trigger until the door switch is opened - the resistor limits the current flowing to an acceptable low level when the door is closed.



AT-372 ULTRATIMER



**Time period 1 second to 64 weeks - accurate DIL switch time settings
- 4 modes of operation - wide operating voltage.**

- Working voltage 10.5 - 28V DC - auto selected by timer (no need to set input)
- "Pulse" activation after time out - option on three of the modes
- Selectable trigger and reset input polarity
- 1 second to 64 week time period. Selectable by DIL switch - crystal controlled for accurate time
- Double pole relay will switch mains - contacts rated at 8 Amps
- Four modes of operation

Setting time period - seconds, minutes, hours, days and weeks - could not be simpler - just look up the time required in the "time table" and set the DIL switch accordingly.

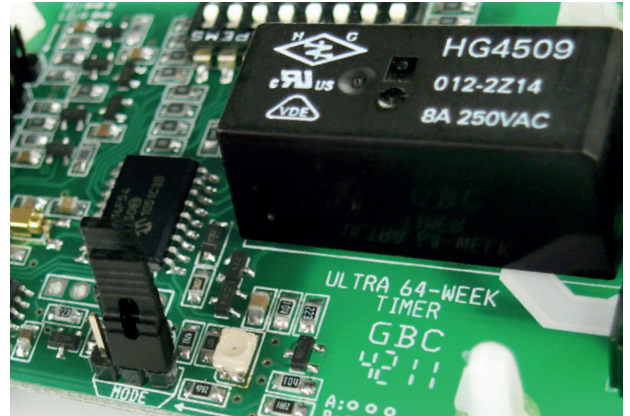
Mode A - trigger applied - times out and activates the relay - if auto link is fitted relay drops out after 20 seconds and is then "waiting for next trigger".

Mode B - trigger applied - relay activates for time period then drops out. It is then ready for the next trigger.

Mode C - once applied the trigger must remain for the duration of the time setting to activate the relay. An example of this would be monitoring a fire door. If the door is opened the timer starts (say it has been set for 3 minutes) if the door closes before the three minutes nothing happens. However if the door is open after the 3 minutes the relay will activate - if auto link is fitted relay drops out after 20 seconds and is then "waiting for next trigger".

Mode D - the same as mode C, but the relay does not require a reset, and will stay energised until the trigger has been removed (door closed).

Activation - trigger and reset input polarity is set by jumper links.



SPECIFICATION

Input Levels for Trigger or Reset

LOW: Less than 220 ohms to ground
OR an input of less than 0.8 volts

HIGH: Greater than 4700 ohms to ground
OR an input of greater than 4 volts

Maximum input voltage 28V

Minimum input voltage 4V

Peak current available from either pin, 5mA

Output Levels - Double pole contacts

AC: Maximum switching voltage 250 volts, maximum current 8 Amps (non inductive load)

DC: Maximum switching voltage 28 volts, maximum current 5 Amps (non inductive load)

Minimum switching level 5V @ 10mA

Environmental Operating Conditions -

Temperature range -10°C to +60°C

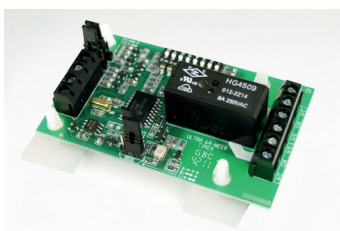
Maximum humidity 80% non condensing

Supply Voltage - Between 10.5 to 28V, automatically selected by the timer, no need to set jumpers or cut links.

Unit Supplied - In strong cardboard carton with 4 sticky fixers

Dimensions - 78 X 47mm

Packing Weight - 80 grams



Week mode (1 to 64 weeks)



Ultra Timer

	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8
1 week	on	off	off	off	off	off	on	on
2 weeks	off	on	off	off	off	off	on	on
3 weeks	on	on	off	off	off	off	on	on
4 weeks	off	off	on	off	off	off	on	on
5 weeks	on	off	on	off	off	off	on	on
6 weeks	off	on	on	off	off	off	on	on
7 weeks	on	on	on	off	off	off	on	on
8 weeks	off	off	off	on	off	off	on	on
9 weeks	on	off	off	on	off	off	on	on
10 weeks	off	on	off	on	off	off	on	on
11 weeks	on	on	off	on	off	off	on	on
12 weeks	off	off	on	on	off	off	on	on
13 weeks	on	off	on	on	off	off	on	on
14 weeks	off	on	on	on	off	off	on	on
15 weeks	on	on	on	on	off	off	on	on
16 weeks	off	off	off	off	on	off	on	on
17 weeks	on	off	off	off	on	off	on	on
18 weeks	off	on	off	off	on	off	on	on
19 weeks	on	on	off	off	on	off	on	on
20 weeks	off	off	on	off	on	off	on	on
21 weeks	on	off	on	off	on	off	on	on
22 weeks	off	on	on	off	on	off	on	on
23 weeks	on	on	on	off	on	off	on	on
24 weeks	off	off	off	on	on	off	on	on
25 weeks	on	off	off	on	on	off	on	on
26 weeks	off	on	off	on	on	off	on	on
27 weeks	on	on	off	on	on	off	on	on
28 weeks	off	off	on	on	on	off	on	on
29 weeks	on	off	on	on	on	off	on	on
30 weeks	off	on	on	on	on	off	on	on
31 weeks	on	on	on	on	on	off	on	on
32 weeks	off	off	off	off	off	on	on	on
33 weeks	on	off	off	off	off	on	on	on
34 weeks	off	on	off	off	off	on	on	on
35 weeks	on	on	off	off	off	on	on	on
36 weeks	off	off	on	off	off	on	on	on
37 weeks	on	off	on	off	off	on	on	on
38 weeks	off	on	on	off	off	on	on	on
39 weeks	on	on	on	off	off	on	on	on
40 weeks	off	off	off	on	off	on	on	on
41 weeks	on	off	off	on	off	on	on	on
42 weeks	off	on	off	on	off	on	on	on
43 weeks	on	on	off	on	off	on	on	on
44 weeks	off	off	on	on	off	on	on	on
45 weeks	on	off	on	on	off	on	on	on
46 weeks	off	on	on	on	off	on	on	on
47 weeks	on	on	on	on	off	on	on	on
48 weeks	off	off	off	off	on	on	on	on
49 weeks	on	off	off	off	on	on	on	on
50 weeks	off	on	off	off	on	on	on	on
51 weeks	on	on	off	off	on	on	on	on
52 weeks	off	off	on	off	on	on	on	on
53 weeks	on	off	on	off	on	on	on	on
54 weeks	off	on	on	off	on	on	on	on
55 weeks	on	on	on	off	on	on	on	on
56 weeks	off	off	off	on	on	on	on	on
57 weeks	on	off	off	on	on	on	on	on
58 weeks	off	on	off	on	on	on	on	on
59 weeks	on	on	off	on	on	on	on	on
60 weeks	off	off	on	on	on	on	on	on
61 weeks	on	off	on	on	on	on	on	on
62 week	off	on	on	on	on	on	on	on
63 weeks	on	on	on	on	on	on	on	on
64 weeks	off	off	off	off	off	off	on	on

Second mode (1 to 64 seconds)

	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8
1 second	on	off	off	off	off	off	off	off
2 seconds	off	on	off	off	off	off	off	off
3 seconds	on	on	off	off	off	off	off	off
4 seconds	off	off	on	off	off	off	off	off
5 seconds	on	off	on	off	off	off	off	off
6 seconds	off	on	on	off	off	off	off	off
7 seconds	on	on	on	off	off	off	off	off
8 seconds	off	off	off	on	off	off	off	off
9 seconds	on	off	off	on	off	off	off	off
10 seconds	off	on	off	on	off	off	off	off
11 seconds	on	on	off	on	off	off	off	off
12 seconds	off	off	on	on	off	off	off	off
13 seconds	on	off	on	on	off	off	off	off
14 seconds	off	on	on	on	off	off	off	off
15 seconds	on	on	on	on	off	off	off	off
16 seconds	off	off	off	off	on	off	off	off
17 seconds	on	off	off	off	on	off	off	off
18 seconds	off	on	off	off	on	off	off	off
19 seconds	on	on	off	off	on	off	off	off
20 seconds	off	off	on	off	on	off	off	off
21 seconds	on	off	on	off	on	off	off	off
22 seconds	off	on	on	on	off	on	off	off
23 seconds	on	on	on	off	on	off	off	off
24 seconds	off	off	off	on	on	off	off	off
25 seconds	on	off	off	on	on	off	off	off
26 seconds	off	on	off	on	on	off	off	off
27 seconds	on	on	off	on	on	off	off	off
28 seconds	off	off	on	on	on	off	off	off
29 seconds	on	off	on	on	on	off	off	off
30 seconds	off	on	on	on	on	off	off	off
31 seconds	on	on	on	on	on	off	off	off
32 seconds	off	off	off	on	on	off	off	off
33 seconds	on	off	off	on	on	off	off	off
34 seconds	off	on	off	on	on	off	off	off
35 seconds	on	on	off	on	on	off	off	off
36 seconds	off	off	on	on	on	off	off	off
37 seconds	on	off	on	on	on	off	off	off
38 seconds	off	on	on	on	on	off	off	off
39 seconds	on	on	on	on	on	off	off	off
40 seconds	off	off	off	on	on	off	off	off
41 seconds	on	off	off	on	off	on	off	off
42 seconds	off	on	off	on	off	on	off	off
43 seconds	on	on	off	on	off	on	off	off
44 seconds	off	off	on	on	off	on	off	off
45 seconds	on	off	on	on	off	on	off	off
46 seconds	off	on	on	on	off	on	off	off
47 seconds	on	on	on	on	off	on	off	off
48 seconds	off	off	off	off	on	on	off	off
49 seconds	on	off	off	off	on	on	off	off
50 seconds	off	on	off	off	on	on	off	off
51 seconds	on	on	off	off	on	on	off	off
52 seconds	off	off	on	off	on	on	off	off
53 seconds	on	off	on	on	off	on	off	off
54 seconds	off	on	on	off	on	on	off	off
55 seconds	on	on	on	off	on	on	off	off
56 seconds	off	off	off	on	on	on	off	off
57 seconds	on	off	off	on	on	on	off	off
58 seconds	off	on	off	on	on	on	off	off
59 seconds	on	on	off	on	on	on	off	off
60 seconds	off	off	on	on	on	on	off	off
61 seconds	on	off	on	on	on	on	off	off
62 second	off	on	on	on	on	on	off	off
63 seconds	on	on	on	on	on	on	off	off
64 seconds	off	off	off	off	off	off	off	off



Minute mode (1 to 64 minutes)

	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8
1 minute	on	off	off	off	off	off	on	off
2 minutes	off	on	off	off	off	off	on	off
3 minutes	on	on	off	off	off	off	on	off
4 minutes	off	off	on	off	off	off	on	off
5 minutes	on	off	on	off	off	off	on	off
6 minutes	off	on	on	off	off	off	on	off
7 minutes	on	on	on	off	off	off	on	off
8 minutes	off	off	off	on	off	off	on	off
9 minutes	on	off	off	on	off	off	on	off
10 minutes	off	on	off	on	off	off	on	off
11 minutes	on	on	off	on	off	off	on	off
12 minutes	off	off	on	on	off	off	on	off
13 minutes	on	off	on	on	off	off	on	off
14 minutes	off	on	on	on	off	off	on	off
15 minutes	on	on	on	on	off	off	on	off
16 minutes	off	off	off	off	on	off	on	off
17 minutes	on	off	off	off	on	off	on	off
18 minutes	off	on	off	off	on	off	on	off
19 minutes	on	on	off	off	on	off	on	off
20 minutes	off	off	on	off	on	off	on	off
21 minutes	on	off	on	off	on	off	on	off
22 minutes	off	on	on	off	on	off	on	off
23 minutes	on	on	on	off	on	off	on	off
24 minutes	off	off	off	on	on	off	on	off
25 minutes	on	off	off	on	on	off	on	off
26 minutes	off	on	off	on	on	off	on	off
27 minutes	on	on	off	on	on	off	on	off
28 minutes	off	off	on	on	on	off	on	off
29 minutes	on	off	on	on	on	off	on	off
30 minutes	off	on	on	on	on	off	on	off
31 minutes	on	on	on	on	on	off	on	off
32 minutes	off	off	off	off	off	on	on	off
33 minutes	on	off	off	off	off	on	on	off
34 minutes	off	on	off	off	off	on	on	off
35 minutes	on	on	off	off	off	on	on	off
36 minutes	off	off	on	off	off	on	on	off
37 minutes	on	off	on	off	off	on	on	off
38 minutes	off	on	on	off	off	on	on	off
39 minutes	on	on	on	off	off	on	on	off
40 minutes	off	off	off	on	off	on	on	off
41 minutes	on	off	off	on	off	on	on	off
42 minutes	off	on	off	on	off	on	on	off
43 minutes	on	on	off	on	off	on	on	off
44 minutes	off	off	on	on	off	on	on	off
45 minutes	on	off	on	on	off	on	on	off
46 minutes	off	on	on	on	off	on	on	off
47 minutes	on	on	on	on	off	on	on	off
48 minutes	off	off	off	off	on	on	on	off
49 minutes	on	off	off	off	on	on	on	off
50 minutes	off	on	off	off	on	on	on	off
51 minutes	on	on	off	off	on	on	on	off
52 minutes	off	off	on	off	on	on	on	off
53 minutes	on	off	on	off	on	on	on	off
54 minutes	off	on	on	off	on	on	on	off
55 minutes	on	on	on	off	on	on	on	off
56 minutes	off	off	off	on	on	on	on	off
57 minutes	on	off	off	on	on	on	on	off
58 minutes	off	on	off	on	on	on	on	off
59 minutes	on	on	off	on	on	on	on	off
60 minutes	off	off	on	on	on	on	on	off
61 minutes	on	off	on	on	on	on	on	off
62 minutes	off	on	on	on	on	on	on	off
63 minutes	on	on	on	on	on	on	on	off
64 minutes	off	off	off	off	off	off	on	off

Hour mode (1 to 32 hours)

	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8
1 hour	on	off	off	off	off	off	off	on
2 hours	off	on	off	off	off	off	off	on
3 hours	on	on	off	off	off	off	off	on
4 hours	off	off	on	off	off	off	off	on
5 hours	on	off	on	off	off	off	off	on
6 hours	off	on	on	off	off	off	off	on
7 hours	on	on	on	off	off	off	off	on
8 hours	off	off	off	on	off	off	off	on
9 hours	on	off	off	on	off	off	off	on
10 hours	off	on	off	on	off	off	off	on
11 hours	on	on	off	on	off	off	off	on
12 hours	off	off	on	on	off	off	off	on
13 hours	on	off	on	on	off	off	off	on
14 hours	off	on	on	on	off	off	off	on
15 hours	on	on	on	on	off	off	off	on
16 hours	off	off	off	off	on	off	off	on
17 hours	on	off	off	off	on	off	off	on
18 hours	off	on	off	off	on	off	off	on
19 hours	on	on	off	off	on	off	off	on
20 hours	off	off	on	off	on	off	off	on
21 hours	on	off	on	off	on	off	off	on
22 hours	off	on	on	off	on	off	off	on
23 hours	on	on	on	off	on	off	off	on
24 hours	off	off	off	on	on	off	off	on
25 hours	on	off	off	on	on	off	off	on
26 hours	off	on	off	on	on	off	off	on
27 hours	on	on	off	on	on	off	off	on
28 hours	off	off	on	on	on	off	off	on
29 hours	on	off	on	on	on	off	off	on
30 hours	off	on	on	on	on	off	off	on
31 hours	on	on	on	on	on	off	off	on
32 hours	off	off	off	off	off	off	off	on

Day mode (1 to 32 days)

	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8
1 day	on	off	off	off	off	on	off	on
2 days	off	on	off	off	off	on	off	on
3 days	on	on	off	off	off	on	off	on
4 days	off	off	on	off	off	on	off	on
5 days	on	off	on	off	off	on	off	on
6 days	off	on	on	off	off	on	off	on
7 days	on	on	on	off	off	on	off	on
8 days	off	off	off	on	off	on	off	on
9 days	on	off	off	on	off	on	off	on
10 days	off	on	off	on	off	on	off	on
11 days	on	on	off	on	off	on	off	on
12 days	off	off	on	on	off	on	off	on
13 days	on	off	on	on	off	on	off	on
14 days	off	on	on	on	off	on	off	on
15 days	on	on	on	on	off	on	off	on
16 days	off	off	off	off	on	on	off	on
17 days	on	off	off	off	on	on	off	on
18 days	off	on	off	off	on	on	off	on
19 days	on	on	off	off	on	on	off	on
20 days	off	off	on	off	on	on	off	on
21 days	on	off	on	off	on	on	off	on
22 days	off	on	on	off	on	on	off	on
23 days	on	on	on	off	on	on	off	on
24 days	off	off	off	on	on	on	off	on
25 days	on	off	off	on	on	on	off	on
26 days	off	on	off	on	on	on	off	on
27 days	on	on	off	on	on	on	off	on
28 days	off	off	on	on	on	on	off	on
29 days	on	off	on	on	on	on	off	on
30 days	off	on	on	on	on	on	off	on
31 days	on	on	on	on	on	on	off	on
32 days	off	off	off	off	off	on	off	on