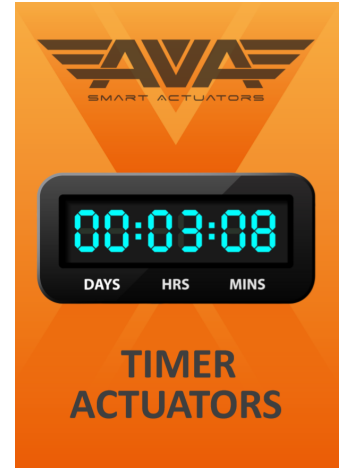


WHAT IS OUR TIMER SERIES?

For some of our customers, expensive PLCs and complex control systems are not needed. In many applications a simplified system would be sufficient or they have a very specific requirement to open and close the actuator to a certain timing schedule or simply just drive open then drive close and repeat. Our Timer series can handle all of these requirements. The Smart series of AVA actuators have onboard firmware which allows us to configure the functionality via the firmware. For the Timer series we are able to configure up to 50 actuations per day over a 7 day schedule. The actuators have proven to be very popular for agricultural applications where a 7 day timer can be used as part of an irrigation system or for pulse mode is used for a more simplistic on off application. The actuator saves the need of relays and control panels to tell the actuator to open and close, to trigger relays etc. The actuators are also available Failsafe. The two main modes are;



PULSE MODE -

Pulse mode allows the user to set the actuator to 'pulse' ON OFF ON OFF ON OFF repeat. The user can set the time they want to elapse whilst opening for example before it closes the actuator. This can be the time it takes to fully open, it could be fully open and then wait 1 hour or it could be run half the working time to achieve a half open status and then close. This mode is very popular with our customers.

TIMER MODE -

The Timer mode is used where the user requires the valve to open and close at certain times through the day or week. The actuator has a full 24-7 timer built in with date stamp and can be programmed to open and close up to 50 timers per day, that's 350 movements per week. This is very popular where a customer for example wants the actuator to open for 10 minutes at 9am, 12pm, 3pm and 6pm. The actuator will open at these times and can then stay open for however long is required. All programmable via the intuitive onboard software. **Now that's Smart!**



M Key: to switch menus

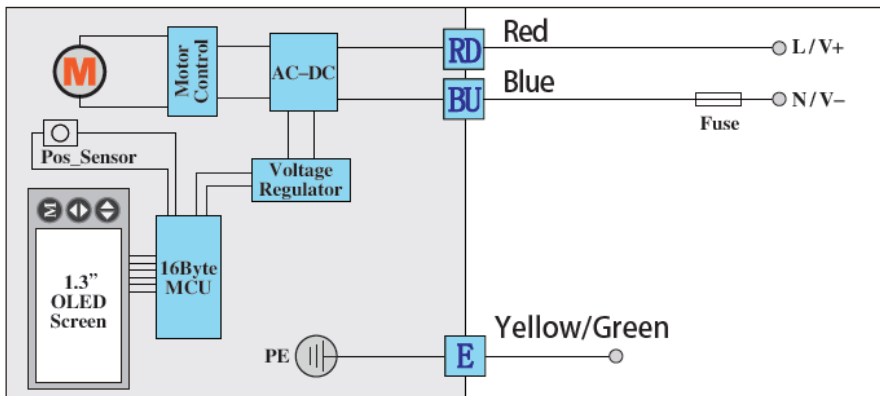
K2 Key: to switch Flash Item or adjust values

K3 Key: to modulate numerical value

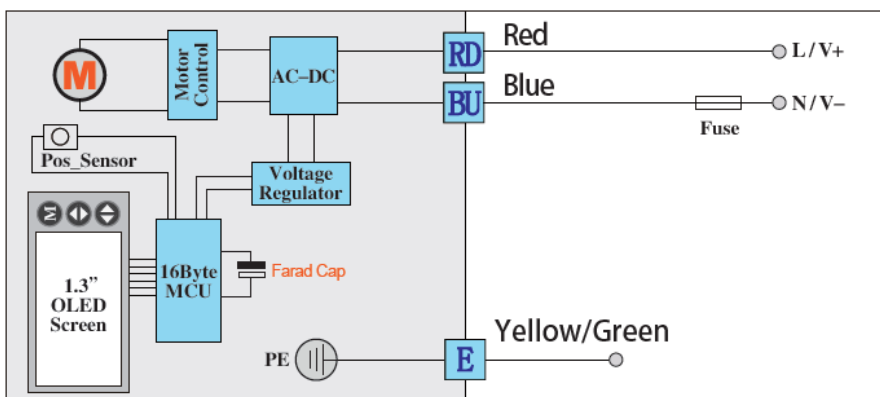
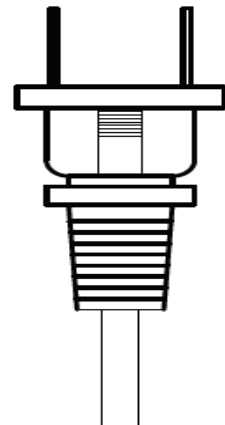
Screen 1.3"OLED, Blue word against black background, 128X64

Technical data

1. Time actuator clock precision : about 3‰s /day
2. Built-in clock keep battery of time actuator :disposable button battery (battery type CR2032/CR1220) or rechargeable NI-MH battery; When external power supplied ,battery will not consumption.The max maintain time at power of disposable button battery < 3 months,the max useful time: one year;
After disposable button battery power-off,once time valve power-cut ,the system clock will disappear ,it need to reset clock whenever power-on.
The max maintain time at power of rechargeable NI-MH battery: ≤ 3 months, unchangeable battery!
3. Please notice to keep screw of upper and lower cover fixed tightly ,after open cover to change battery,meanwhile torque of fixing screw should less than 1.5N.m,or screw will be slip off.
4. Timer mode: [Mode_Pulse] pulse mode , [Mode_Time] time mode.
5. Loop mode : [Loop_Day] loop by days ,[Loop_Week] loop by weeks.
6. Time range of Mode_Pulse : 1s–82800s (1s–23hour) .
- 7、 The maximum array of Mode_Time: 50
- 8、 Interval period of the Loop_Day : 0–99 days, 0 : it refers to a continuous execution.
- 9、 Loop_Week: set whether to activate the timer every day .

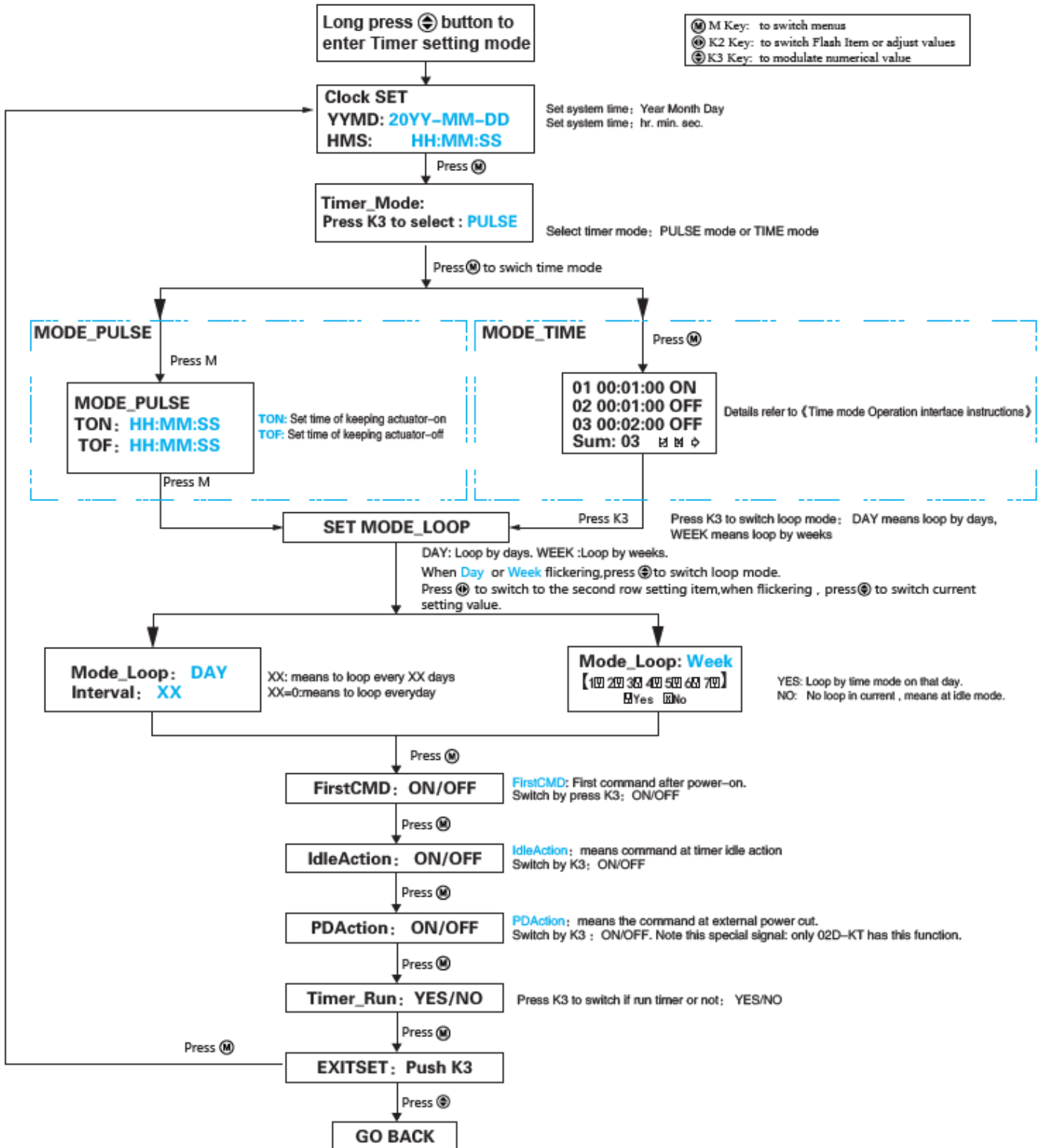


BK
RD
BU
YL/GR



Notice: With the power off,the actutor will automatically perform the OFF/ON valve control command)

Menus operations ---- User setting mode



《Time mode operation interface instructions》

```
01 00:01:00 ON
02 00:01:00 ON
03 00:02:00 OFF
Sum: 03
```

01 00:00:00 OFF
Serial number Time Act command
M Save current setting.
M Delete current setting.
M Quit current setting interface.

```
01 00:01:00 ON
02 00:01:00 OFF
03 00:02:00 ON
Sum: 03
```

If the first row exists : means the last item value before current setting item, which could only be browsed.
The second row setting item: could switch current setting item by K2.
If the third row exists : means the next item value after current setting item, which could only be browsed.
edition symbol M means existing current record,while editing current time.
+ means the current serial number record is new addition.
Default: blue means current flickering item.

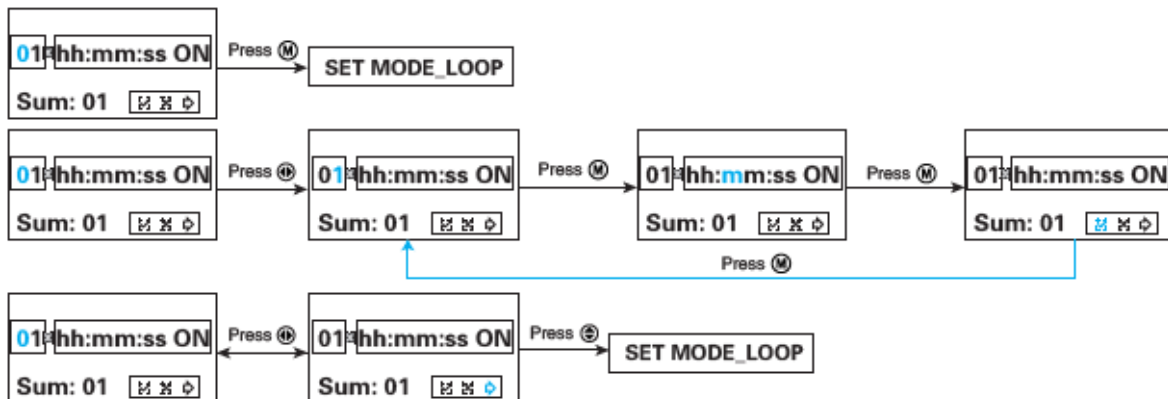
Function key operation instructions

Modify area definition

```
01 A area
hh:mm:ss ON B area
M M C area
```

- When the first item of A area flickering, press M to switch to "setting loop mode interface", press K2 to switch to second flickering item of A area.
- When the second item of A area flickering, press M to switch among A,B,C area rapidly.
- At B area, press M would switch to C area wherever item flickering.
- At C area, press M would switch to A area wherever item flickering.
- Press K2 to switch flickering position in turn, wherever at A,B,C area.
- When current position flickering, press K3 to modify,or act command of current flickering item.

Switching procedure



A area pressing operation function instructions

```
01 hh:mm:ss ON
Sum: 03
```

Press M → 1 ID=ID+10

```
01 hh:mm:ss ON
Sum: 03
```

Press M → 1 ID=ID+1

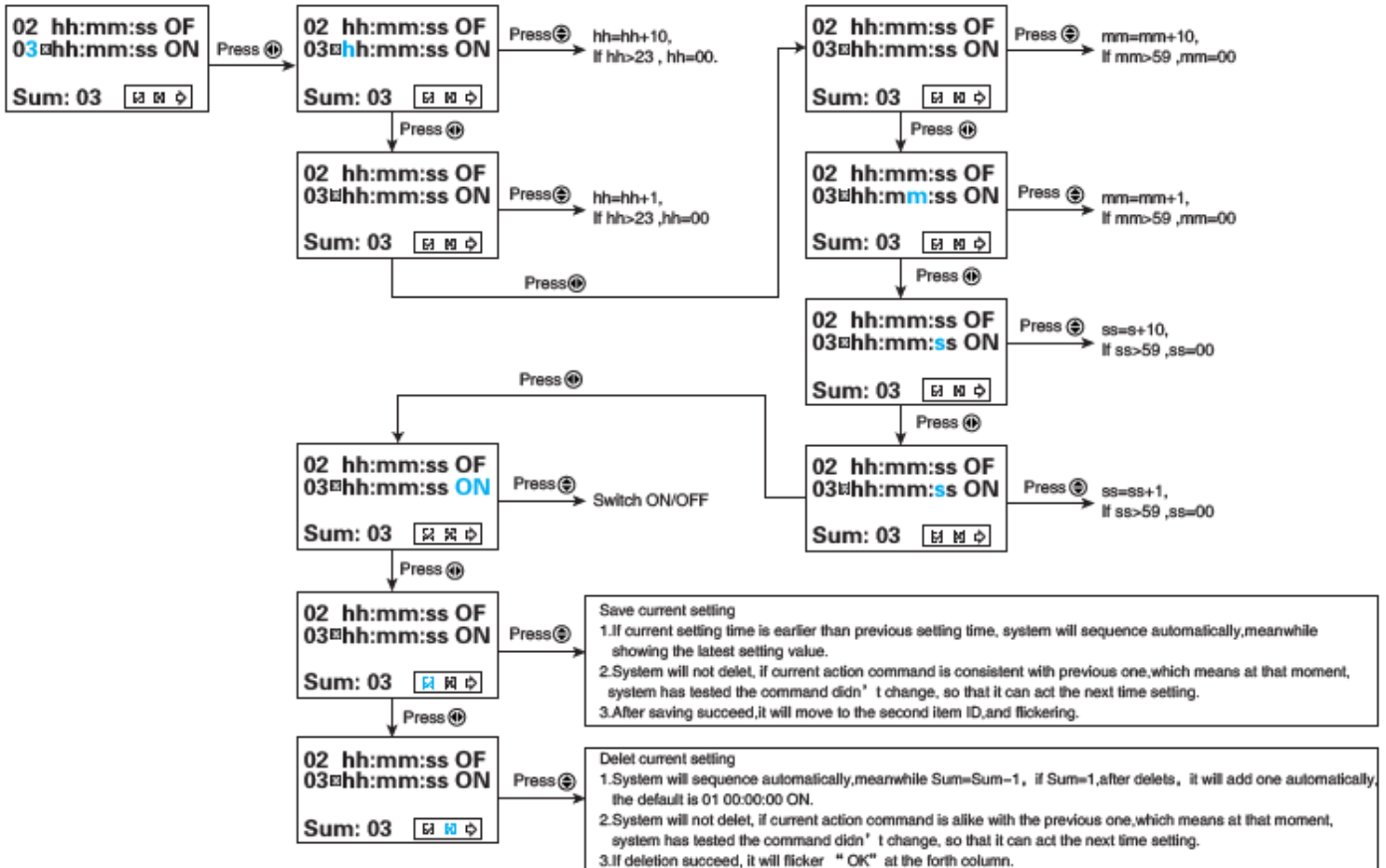
If ID>Sum, ID=01.
If ID<=Sum, it will show current setting message, while edition symbol will indicate M.
If ID=Sum+1, it will show setting message of ID=Sum, but control command negates, and indicate green part, while edition symbol will show+, which means the addition item.
If ID-1>0, it will show setting message of ID-1 at first row, or the first will be blank.
If D+1<Sum, it will show setting message of ID+1 at third row, or the third will be blank.

Special Notes : It could browse previous setting record rapidly by pressing M at this position.

```
01 hh:mm:ss ON
Sum: 03
```

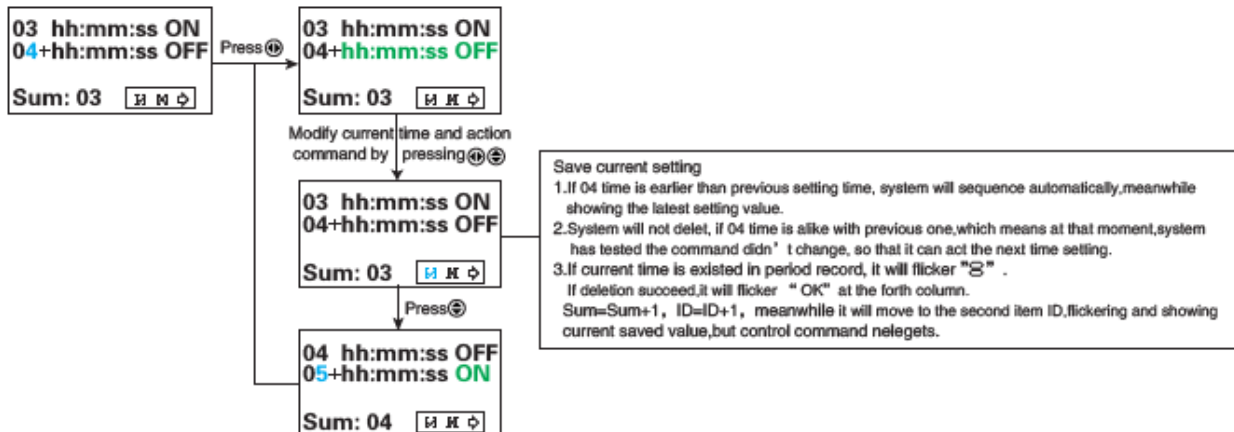
```
01 hh:mm:ss ON 02 hh:mm:ss ON 02 hh:mm:ss OF
02 hh:mm:ss OFF 03 hh:mm:ss ON 03 hh:mm:ss ON
Sum: 03 Sum: 03 Sum: 03
```

B area, C area existed edition time operation instructions

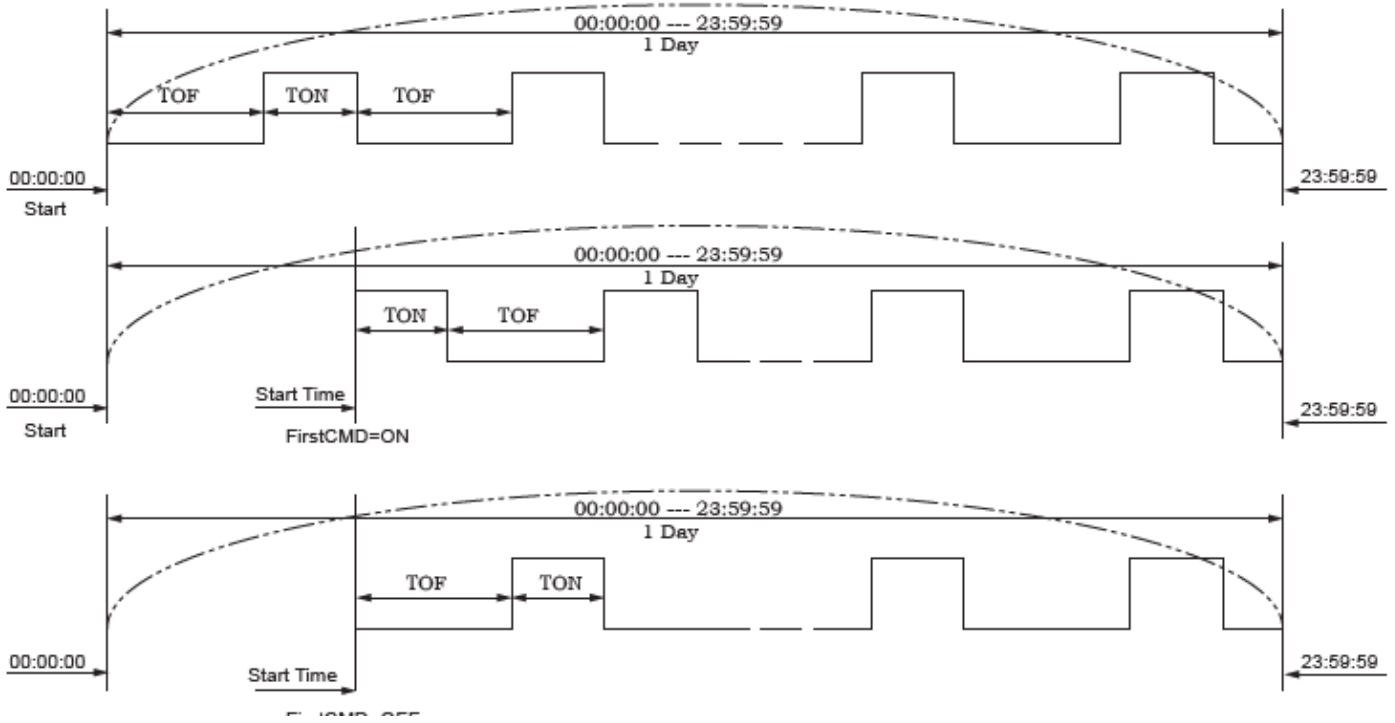


Special Notes: Switch rapidly by flexibly pressing **Ⓜ** in edition,in order to improve setting efficiency, since it could only move step by step in using **Ⓜ**.

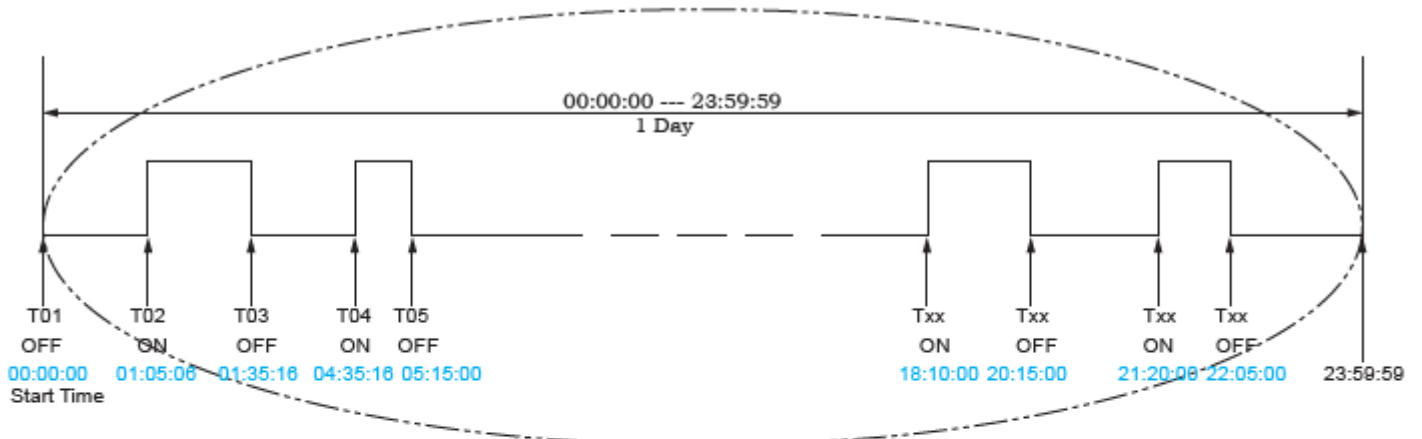
Add a time at B area, C area operation instructions



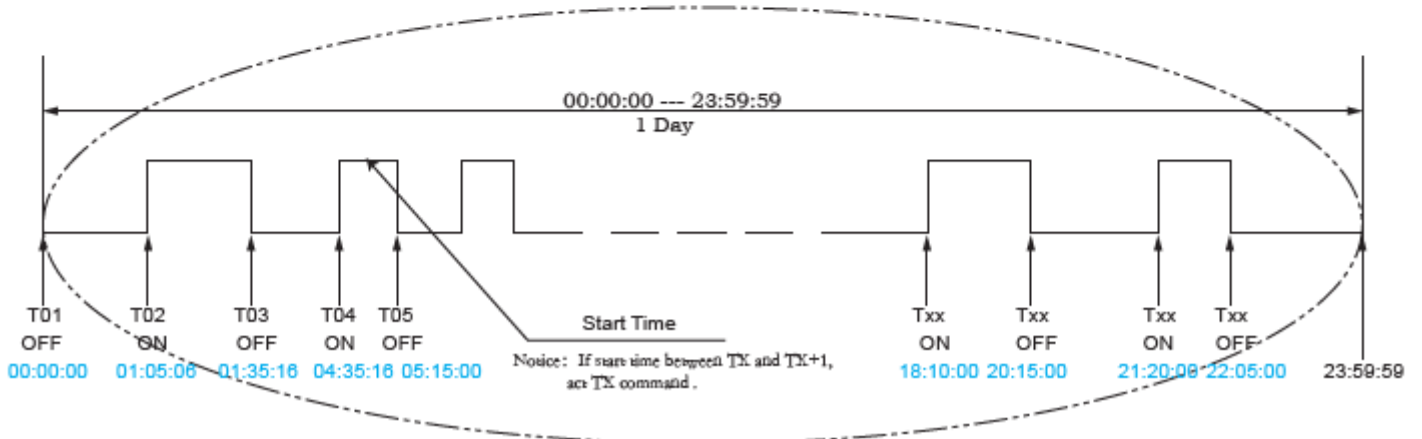
Mode_Pulse:



Mode_Time:

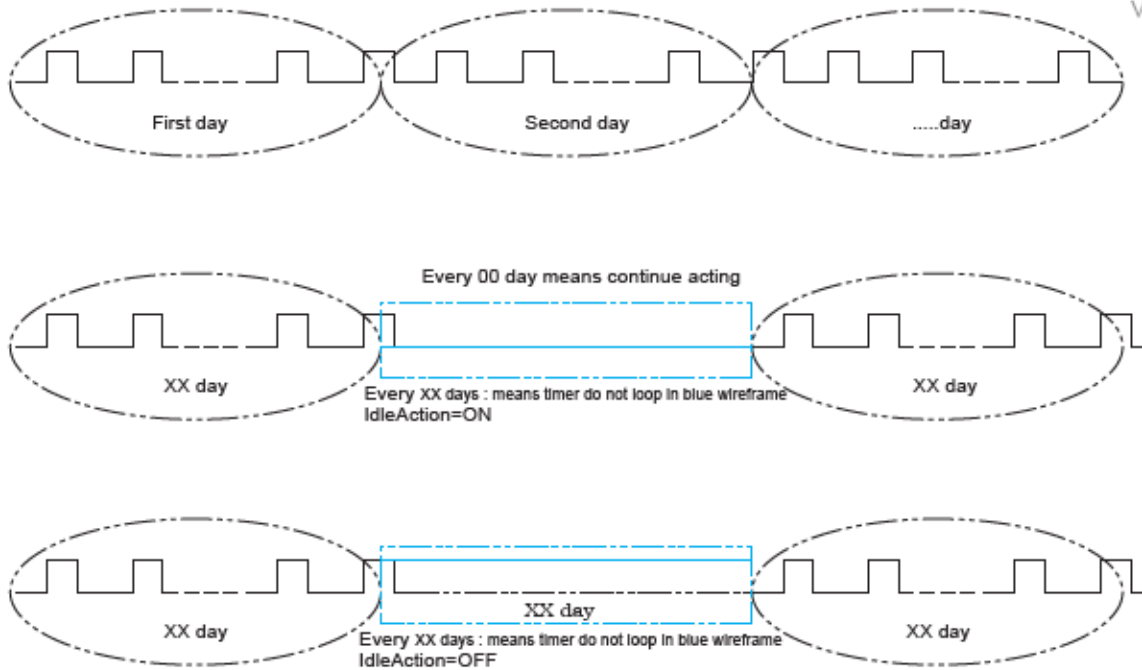


Notice: Start at 00:00:00, If T01=00: 00: 00 exists, actuators act T01 command, or it will act FirstCMD command.



Loop_Day:

Ver: 20150728



Loop_Week:

