

***Weather Station User's Manual***

Issue Date: Oct 19,2018

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**NOTE:**

**FCC STATEMENT**

1. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
  - (1) This device may not cause harmful interference, and
  - (2) This device must accept any interference received, including interference that may cause undesired operation.
2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

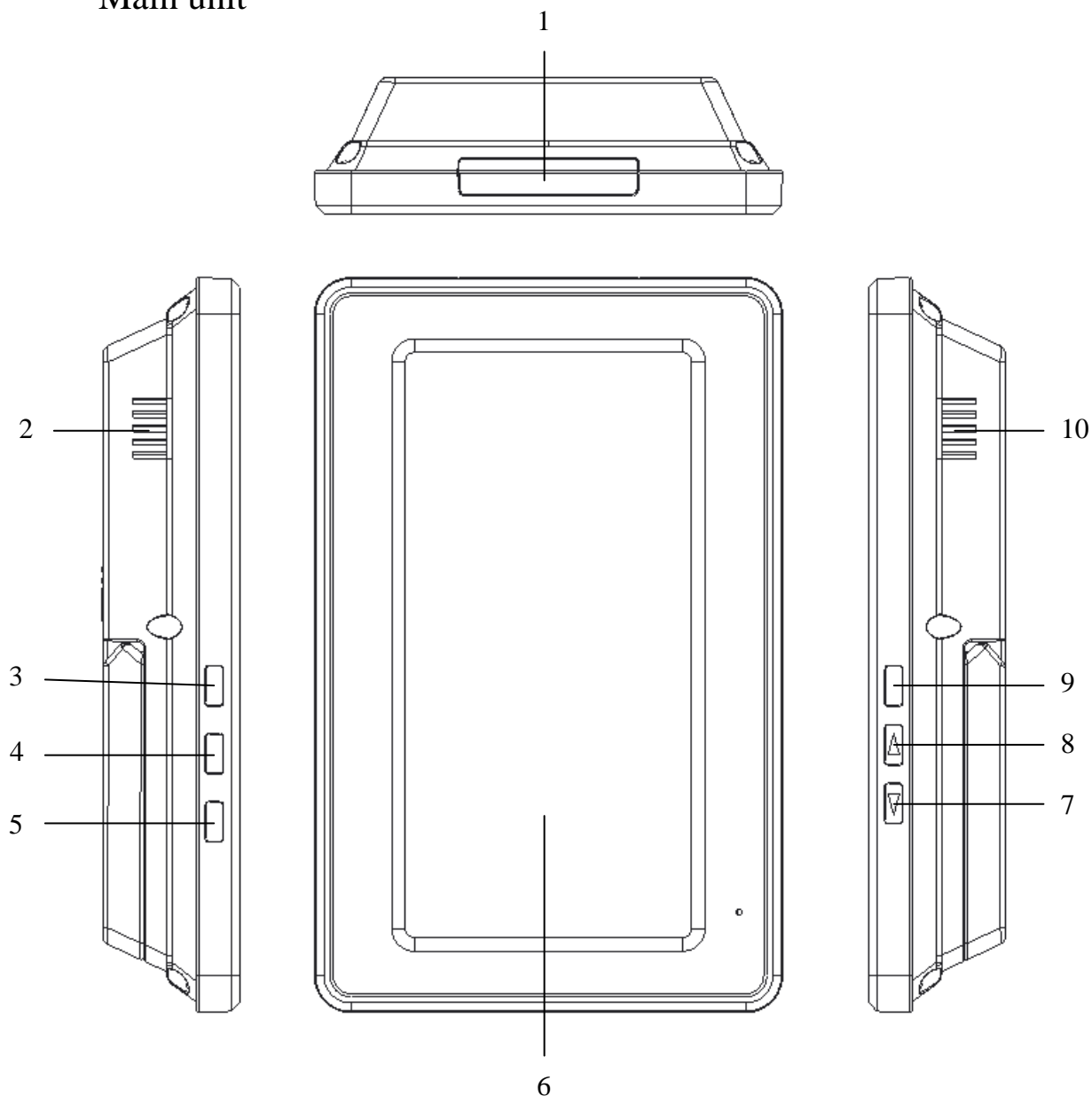
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.

**FCC Radiation Exposure Statement:**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, Human proximity to the antenna shall not be less than 20cm (8 inches) during normal operation

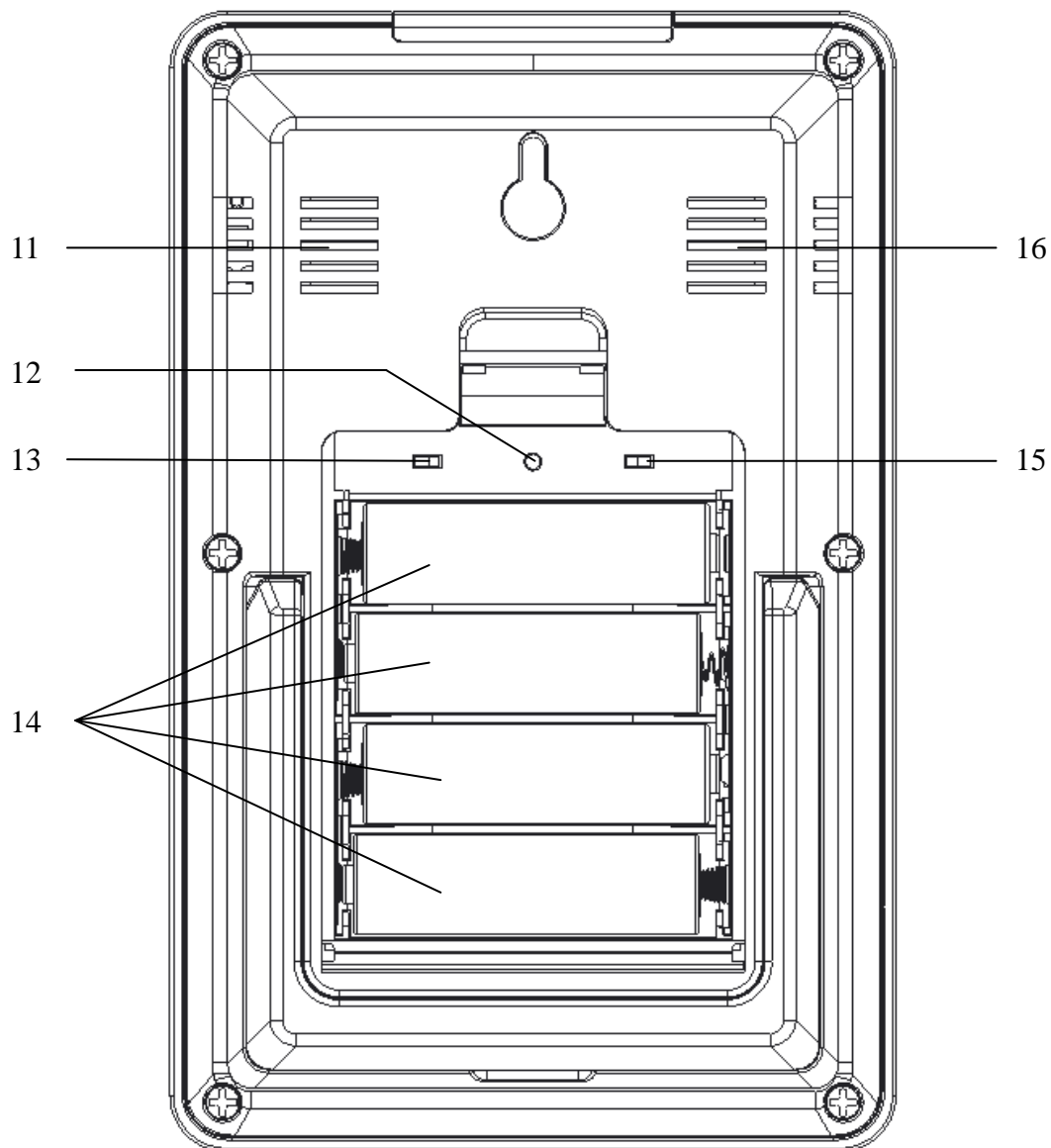
## 1.Overview

### Main unit



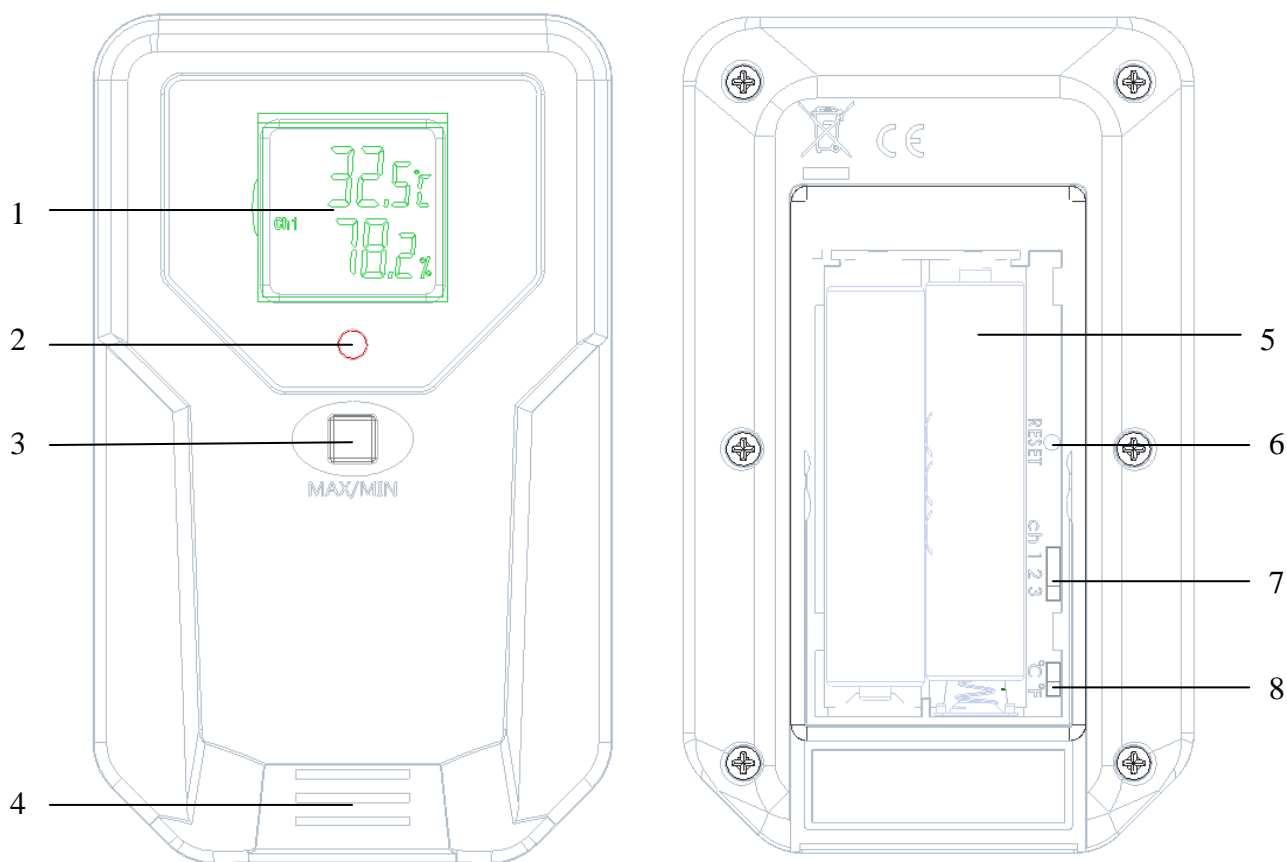
#### **Function:**

- |                              |                     |
|------------------------------|---------------------|
| 1. B/L key                   | 6.LCD               |
| 2. Air gap                   | 7. Lo Alarm (-) key |
| 3. Channel key               | 8. Hi Alarm (+) key |
| 4. Max/Min key(clear memory) | 9. History key      |
| 5. Time (Set) key            | 10. Air gap         |



- 11. Air gap
- 12. Reset key
- 13. mb/ inHg option[slide switch]
- 14. Battery
- 15. F/C option [slide switch]
- 16. Air gap

## Remote unit



### Function:

1. LCD
2. LED indicator
3. Max/ Min Key (Clear Memory)
4. Air gap
5. Battery
6. Reset key
7. Channel Option[slide switch]
8. F/C Option[slide switch]

## 2, Specification

### Main unit

	Scope	Resolution	Accuracy
Temperature	-40 ~ +70°C (-40 ~ +158°F)	0.1°C (0.2°F)	Max ±0.5°C Max(±1.0°F)
Humidity	0 ~ 100%RH	0.1%RH	Max ±3%RH
Pressure	400 ~ 1070 mb/ hPa (11.81inHg ~ 31.60inHg)	1 mb/hPa (0.01inHg)	MAX ±4 mb/hPa
Sampling Time	30 sec (Temp & Humidity) 15 minutes (Pressure)		
Calendar	Date/ Month (Europe) Month/ Date (USA) Day format (English/ French/ Germany/ Italian/ Spanish)		
Time	with daily alarm & snooze & world time		
Weather Forecast (w/ animation)	Day Time: Sunny, Cloudy, Rainy, Thunder Storm Night Time: Moon, Cloudy, Rainy, Thunder Storm		
RF Center Frequency	433.837MHz MHz (Europe)		
RF Modulation Mode	ASK		
RF Receive Sensitivity	-107dBm(50Ω antenna 1Kbps)		
RF Receive Frequency Bandwidth	200KHz		
Operating Temperature	-10 ~ +60°C (+14 ~ 140°F)		
Storage Temperature	-20 ~ +70°C (-4 ~ 158°F)		
Power supply	Battery 4 x 1.5V AA		
Input voltage	4.4V(Min)~6.4V(Max)		
Standby current	40uA(Max)		
Average current	280uA(Typ)		
Low Battery Indicator	Required		
Battery life	1 year based on alkaline battery		
Dimension	162mm x 102.5mm x 30mm		
Weight			
Waterproof grade	IP 0		

**Remote unit**

		Resolution	Accuracy
Temperature	-40 ~ +70°C (-40 ~ +158°F)	0.1°C (0.2°F)	Max ±0.5°C Max(±1.0°F)
Humidity	0 ~ 100%RH	0.1%	Max ±3%RH
Sampling Time	40 sec (Temp & Humidity)		
RF Center Frequency	433.837MHz MHz (Europe) 418 MHz (USA)		
RF Modulation Mode	ASK		
RF Transmitting Power	10dBm(TYPE)		
RF Frequency Offset	±50KHz		
RF Transmission Range	100m (~30 feet)		
RF Transmission Interval	40 seconds		
No. of Remote unit	up to 3 units		
Operating Temperature	-10 ~ +60°C (+14 ~ 140°F)		
Storage Temperature	-20 ~ +70°C (-4 ~ 158°F)		
Power supply	Battery 2 x 1.5V AAA		
Input Voltage	2.5V(Min)~3.2V(Max)		
Standby current	25uA(Max)		
Low Battery Indicator	Required		
Battery life	1 year based on alkaline battery		
Dimension	92mm x 58.5mm x 28mm		
Weight			
Waterproof grade	IP23		

### **3,Instruction**

#### **Power On and Wireless connection**

##### **1. Channel choose(Remote unit)**

At the beginning, use the Channel Option slide switch in the battery box of the Remote unit to set a unique channel number for each Remote unit in a set of RF Weather stations product.

##### **2. Power On and Wireless connection**

- i. On Main unit, Insert batteries, full screen display for a second.
  - Indoor Pressure (default mb/hPa)
  - Pressure Trend
  - Weather Forecasting
  - Pressure Trend in Bar Graph
  - Indoor Temperature (default C)
  - Temperature Trend
  - Indoor Humidity
  - Comfortable Index (The respective “Comfortable Index” appears when the corresponding channel is selected)
  - Real time Clock (default 12:00 00 am)
- ii. If the Remote unit is activated, Insert batteries into the Remote unit in sequence and power on, then the Main unit will automatically search the Remote unit and display the corresponding channel readings within two minutes after the Main unit is powered on.
- iii. Once the Main unit receives the signal, beep sound is given and the display shows the reading. And the “Receiving” symbol will start flashing.
- iv. If the remote sensor cannot register successfully within two minutes after the Main unit is powered on, the display shows “---” and the “Receiving” symbol will not be shown. Press the “Channel” to re-enforce the signal transmission.

##### **3. Comfortable Index**

- i. Sign of “COMFORT” or “WARM” or “COOL” shows on the display represents the selected channel environment condition at different temperature and humidity.



#### **4. Reset**

- i. Press “Reset” to reset the unit, all setting will be restored to factory setting.

#### **5. Low Battery Indicator**

- i. “Low battery indicator” appears on the Main unit whenever there is voltage drop of the Main unit or any Remote unit. (The respective “Low battery indicator” appears when the corresponding channel is selected)

### **Pressure**

#### **1. Real Time Pressure**

- i. When the unit is on it shows the real time reading of the pressure
- ii. When the reading beyond the measurement range, the display “HHH” or “LLL”

#### **2. History**

- i. Press “History” to view past 12 hours pressure records. The corresponding time shows inside the box from (-1, -2 ..... -12, -1.... )

#### **3. Pressure Unit**

- i. Press “mb/ hPa/ inHg” to select desired pressure unit.

#### **4. Pressure Trend**

- i. There is an indicator showing the trend of pressure.
- ii. They are “Rising”, “Steady”, and “Falling”

#### **5. Weather Forecasting**

- i. There is animation showing the weather forecast status.
- ii. They are (Day Time: Sunny, Cloudy, Rainy, Thunder Storm) and (NightTime: Moon, Cloudy)

#### **6. Pressure in Bar Graph**

- i. The pressure trend can also be shown in term of bar graph for the past 12 hours.

## **Temperature and Humidity**

### **1. Channel Selection (Main unit)**

- i. Press “Channel” to select desired reading of both temperature and humidity among the Main unit (indoor), Channel 1,2 and 3.
- ii. The display shows “IN” or Channel “1 or 2 or 3” and the respectively temperature and humidity reading.
- iii. If the reading beyond the measurement range, the display “HHH” or “LLL”

[When the connection to temperature sensor is lost, the reading shows “- - -”]

[When the connection to humidity sensor is lost, the reading shows “- - -”]

### **2. F/C Selectable**

- i. Press “F/C” to select desired temperature unit.

### **3. Max/ Min Memory Recalling**

- i. Select the desire channel (see 1. Channel Selection)
- ii. Press “Max/Min” to show maximum temperature & humidity tested. “MAX” shows on the display.
- iii. Press again to show minimum temperature & humidity tested. “MIN” shows on the display.
- iv. Press again to return to real time mode, “MAX” or “MIN” disappears; or
- v. The unit will automatically return to real time mode in 3 seconds, “MAX” or “MIN” disappears.
- vi. Press and hold this button to clear both maximum & minimum memory data.

[When the connection to temperature sensor is lost, the Max/Min reading shows “---”. When reconnected, set current temperature as Max/Min reading.]

[When the connection to humidity sensor is lost, the Max/Min reading shows “---”. When reconnected, set current humidity as Max/Min reading.]

### **4. Temperature & Humidity Hi/ Low Alarm Alert**

- i. Press “Channel” to select the desired channel for alarm setting.
- ii. Press “HI ALARM” once the display shows “HI” and the previous setting for a second and return to real time reading.
- iii. Press and hold “HI ALARM” to enter alarm set mode, “HI”, “AL” show and --- or last set value blinks on the display and Press “HI ALARM” to increase its temperature digit as the following:

--- → -40C → +70C → -40C → --- OR

--- → -40F → +158F → -40F → ---

- iv. Release the button when the desired value is reached.
- v. Then press “SET” to confirm and temperature digit stop flashing. While the humidity digit starts flashing.
- vi. Press “HI ALARM”, to increase the humidity digit value as the following:  
--- → 0%RH → 99%RH → 0%RH → --- (--- = alarm off)
- vii. Press “SET” to confirm and the unit returns to real time mode.
- viii. While the unit returns to real time mode, “HI” shows on the display to indicate high alarm is set.
- ix. When the temperature or humidity reach or beyond the set value, the display of Main unit will switch to that channel, “HI” blink and alarm sound (bi, bi, bi...) for 10 seconds.
- x. The unit stop the alarm sound after 10 seconds and “HI” keep blinking.
- xi. Press any key to stop the alarm sound, but the “HI” sign keep blinking.
- xii. The unit will compare the set value and real time value for every 40 seconds and response appropriately.
- xiii. When the current temperature or humidity no longer reach or beyond the set value, the “HI” sign disappears.
- xiv. Repeat (i) ~ (viii) for low alarm alert setting. (except alarm sound is bi, bi, bi bi, bi bi, ...)

Note: The Main unit can only allow to set alarm alert for one channel only. If one channel has set the alarm alert, the other channel cannot enable this function.

## **5. Comfortable Index**

- i. Sign of “COMFORT” or “WARM” or “COOL” shows on the display represents the select channel environment condition at different temperature and humidity.

## **6. Temperature & Humidity Trend**

- i. There is an indicator showing the trend of temperature and humidity of each channel.
- ii. They are “Rising”, “Steady” and “Falling”.

## **Time**

Press “Time” each to view each of the following

Real time clock (HH:MM SS) → Real time clock (HH:MM day) → Dual time clock (HH:MM 2nd time zone) → Calendar (dd/mm day) [bonding option to skip this function is required for LCD showing time and date separately as BR-9204 and BR-9206] → Alarm set → Real time clock (HH:MM SS)

Change GMT setting --:--:GMT difference

### **1. Time and Calendar Set**

- i. Press “Time” to real time clock. “TIME” sign switches on.
- ii. Press “Time” and hold for 3 seconds, “TIME” sign switches off, “12hr” or “24hr” starts flashing. (HH MM = 12 hr)
- iii. Press “+” or “-” to select 12 hours format or 24 hours format.
- iv. Press “Time” to confirm and the hour digit starts flashing
- v. Press “+” or “-” to adjust. (\*press and hold the button for rapid acceleration of the digit.)
- vi. Press “Time” to confirm and the minute digit starts flashing.
- vii. Press “+” or “-” to adjust (\*press and hold the button for rapid acceleration of the digit.)
- viii. Press “Time” to confirm and the second digit starts flashing. The GMT frame shows.
- ix. Press “+” or “-” to select (\*press and hold the button for rapid acceleration of the digit.) local time zone setting. The digit change from -12 → 0 → +12 → 0 → -12
- x. Press “Time” to confirm and to set calendar, “d/m” or “m/d” starts flashing.
- xi. Press “+” or “-” to select the day/ month (d/m) or month/ day (m/d) calendar format.
- xii. Press “Time” to confirm and “E” flashing.
- xiii. Press “+” or “-” to select the language, (E= English, D= German, F= French, I= Italian, S= Spanish).
- xiv. Press “Time” to confirm and display shows 2016 or current year starts flashing. The last 2 digits flashing. “YEAR” sign switches on.
- xv. Press “+” or “-” to set the year. (\*press and hold the button for rapid acceleration of the digit.)
- xvi. Press “Time” to confirm and the “D” shows and date digit starts blinking.

“YEAR” sign switches off.

- xvii. Press “+” or “-” to set the date. (\*press and hold the button from rapid acceleration of the digit.)
- xviii. Press “Time” to confirm and the “M” shows and month digit starts blinking.
- xix. Press “+” or “-” to set the month. (\*press and hold the button for rapid acceleration of the digit.)
- xx. Press “Time” and hold for 3 seconds to confirm and unit return to real time mode.
- xxi. While the second digit return to 00.

[Press “Time” and hold for 3 seconds to enter the time and calendar setting in real time clock mode. Press “Time” and hold for 3 seconds to exit the setting anytime.]

## **2. Dual Time Set**

- i. Press “Time” to dual time clock. “TIME” sign switches off. The display shows the 2nd time zone inside the frame. (the 2nd time zone default in the frame is -12)
- ii. Press “Time” and hold for 3 seconds, the digit in the box flashes.
- iii. Press “+” or “-” to change the 2nd time zone in the box. The digit change from -12 → 0 → +12 → 0 → -12
- iv. Press “Time” and hold for 3 seconds to confirm and display return to dual time clock.
- v. Press “Time” again to return real time clock. “TIME” sign switch on.

[Press “Time” and hold for 3 seconds to enter the 2nd time zone setting in dual time mode. Press “Time” and hold for 3 seconds to exit the setting anytime.]

## **3. Calendar Set**

[merge with Time Set for LCD showing time and date separately]

## **4. Daily Alarm and Snooze Set**

- i. Press “Time” to alarm set, press “+” to switch on the “bell” sign to activate the alarm function.
- ii. Press “+” again the switch on the “snooze” sign to activate the snooze function.
- iii. Press “+” again the switch off the “bell” and “snooze” sign.
- iv. Press “Time” and hold for 3 seconds. “AL” appears.
- v. The hour digit starts blinking.
- vi. Press “+” or “-” to adjust. (\*press and hold the button for rapid

- acceleration of the digit.)
- vii. Press “Time” to confirm and the minute digit starts blinking.
  - viii. Press “+” or “-” to adjust. (\*press and hold the button for rapid acceleration of the digit.)
  - ix. Press “Time” and hold for 3 seconds to confirm and the unit return to real time clock.
  - x. When the alarm time is reached the alarm “bi bi bi, bi bi bi, bi bi bi, ... will sound for 1 minute and backlight will turn on for 5 seconds. The “bell” flashes.
  - xi. Press any key to stop the alarm, alarm sound will be stopped and the “bell” will be stopped flashing. While the “snooze” starts flashing.
  - xii. The snooze alarm for every 5 minutes and repeat for 5 times.
  - xiii. When the snooze alarm turn on, the alarm “bi bi bi, bi bi bi, bi bi bi, ... will sound for 1 minute and backlight will turn on for 5 seconds. The “snooze” turns off while the “bell” flashes.
  - xiv. Press any key to stop the alarm, alarm sound will be stopped and the “bell” will be stopped flashing. While the ‘snooze’ starts flashing.
- [Press “Time” and hold for 3 seconds to enter the alarm setting in alarm mode.  
Press “Time” and hold for 3 seconds to exit the setting anytime.]