Model P4482
Kill A Watt™ Control Operation Manual

Thank you for purchasing the P4482 Kill A Watt™ Control. This operating manual will provide an overview of the product, safety instructions, a quick guide to operation, and complete instructions for correct usage. Take the time to completely review these instructions as well as safety warnings to ensure your best use of the product.

Now you can protect your valuable electronics and find out what they are actually costing you. Simply connect your appliance to the Kill A Watt™ Control and it will assess how efficient they are. By programming the ON/OFF periods you can save money. The unit combines the advantage of traditional mechanical and electronic timers. It is easy to program the 15 minute interval ON/OFF periods for 7 days and 24 hours the same way you would program a traditional mechanical timer. The unit is not limited to one day of programming only – each day can have a unique program. The informative LCD display will inform you which time periods are set to ON or OFF.

Advanced features also include:
● Check the quality of your power by monitoring Voltage, Amperage, KWH and more.
● Display KWH savings, Elapsed Time, Costs and CO2 emissions.
● Holiday and Random mode.
● Surge, over current, over voltage, and under voltage protection provide clean safe power to your expensive equipment.
● Zero power crossing switch provides a spike free ON/OFF relay control to prolong your appliance's life.
● An LED LCD backlight, also acts as a programmable night light.

Now you'll know how much power your appliances are using, and save power with the graphic timer. With the innovative Kill A Watt™ Control you'll have peace of mind in more ways than one.
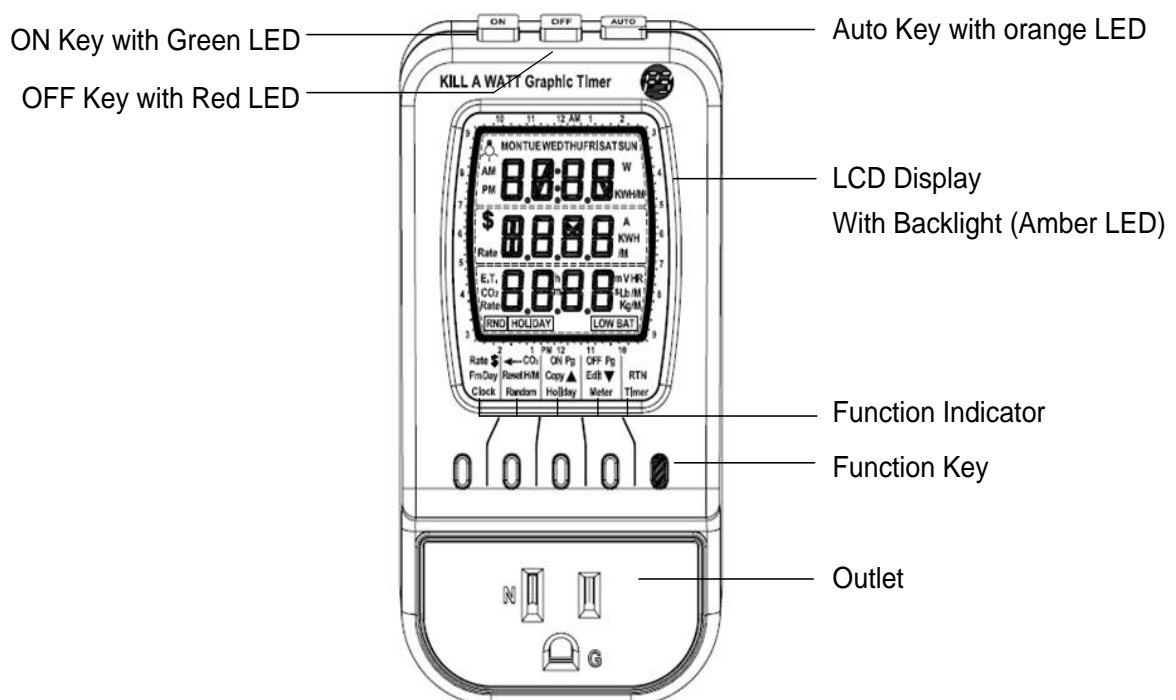
Safety Instructions:

● The operating voltage is limited to +/- 10% of Line voltage 120Vac. Do not use it in other voltage rating.
● The maximum output current is 15A.
● To reduce the risk of electric shock, do not remove cover. No user-serviceable parts inside. Refer servicing to qualified service personnel.
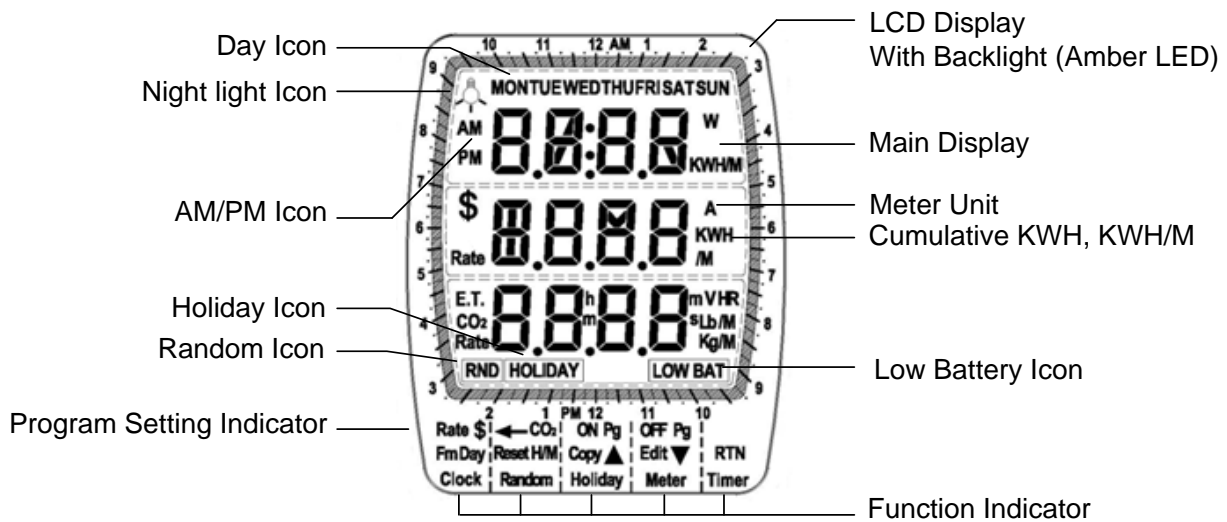
Warning:

● To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.

Feature Locations:

Display Panel:

Day Icon —
Night light Icon —
AM/PM Icon —
Holiday Icon —
Random Icon —
Program Setting Indicator —

LCD Display With Backlight (Amber LED)
Main Display
Meter Unit
Cumulative KWH, KWH/M
Low Battery Icon
Function Indicator

Installation:

1. Using the appropriate flat screwdriver open the battery cover, and position the 3 (AAA) batteries according to the +/- terminal. When the batteries are in place, press the battery cover back into its original position. **Now you can operate the unit by battery power, allowing full programming of the unit without needing to plug it into the wall.**
2. Turn off the appliance before connection to the unit and remove the power cord from the outlet. Connect the Kill A Watt™ Control unit to the outlet and appliance to the unit.
3. Press the **ON** key on the Kill A Watt™ Control, and turn the appliance back on and confirm normal operation. If the appliance does not function, please recheck your installation.

ON, OFF and Auto key function:

1. Pressing the **OFF** key will turn off power to the outlet at once. The **OFF** key will illuminate in red, and the function keys and LCD display will continue to operate.
2. Pressing the **ON** key will turn power on to the outlet at once. The **ON** key will illuminate in green. The unit features a spike-free switch function which activates at zero-crossing and will present clean power to your connected appliance, and the function keys and LCD display will operate.
3. Pressing the **Auto** key activates **Auto** mode. The **Auto** key will illuminate in orange. The unit will automatically turn ON or OFF according to the **Program**. If the **Program** is ON, the unit will switch ON at once no matter what the previous state was. If the **Program** is OFF, the unit will switch OFF at once no matter what the previous state was.
4. When pressing the ON or OFF key, the output will be switched to on or off accordingly, but the Auto key stays lit and the **Program** continues to control the output, the next **Program** event (on or off) is the next time that the on/off state is changed.
5. Pressing the **Auto** key again to **Manual** mode can disable auto on or off function and **Auto** key LED will be dark. You can switch the outlet on or off manually using the ON and OFF keys.
6. Pressing and holding the **OFF** or **ON** key for 2 seconds, will switch the output off or on accordingly, This activates the **Manual** mode as well and will disable the auto on or off function and the **Auto** key LED will be dark. You can switch the outlet on or off manually using the ON and OFF keys
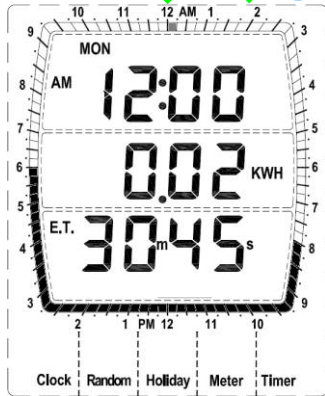
Remark:

A flashing display segment indicates this item can be edited or changed.

Menu mode:

- Includes **Clock, Random, Holiday, Meter** and **Timer** 5 modes.
- LCD display default will show **Clock**, **KWH** and **E.T.**
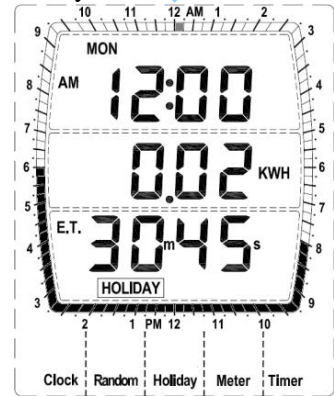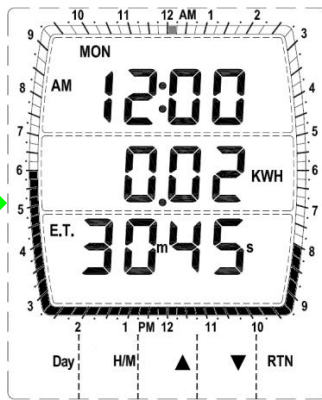- **E.T.** = Elapsed time.

◎ MENU Mode
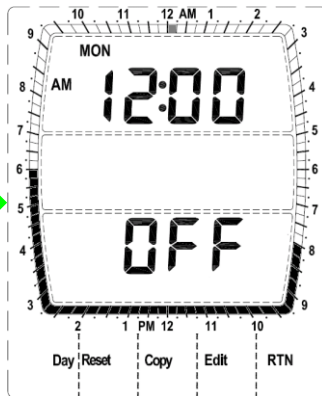
Power ON

Press Random

Press Holiday

Press Clock

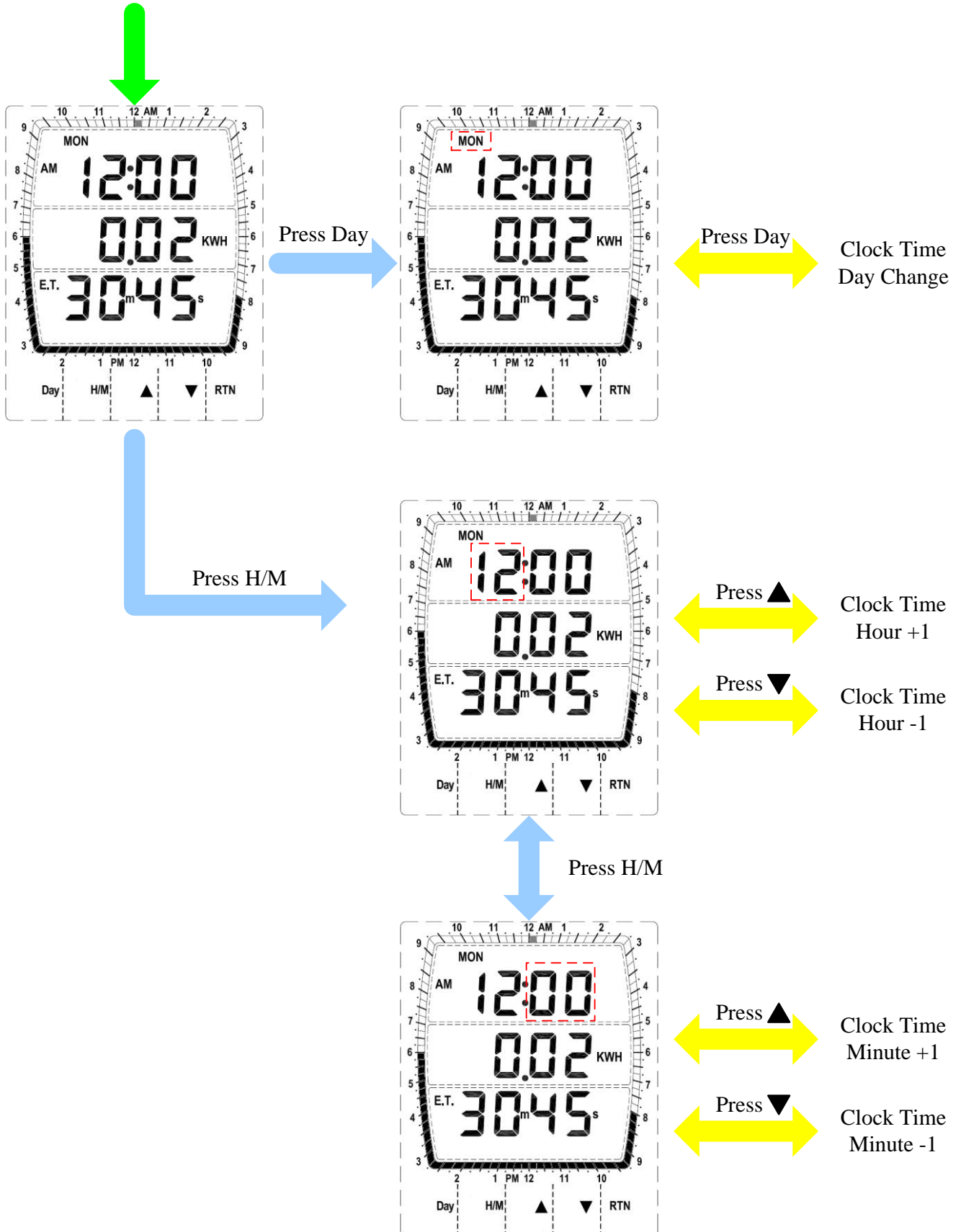Press RTN

Press Meter

Press RTN

Press Timer

Press RTN

Clock mode:

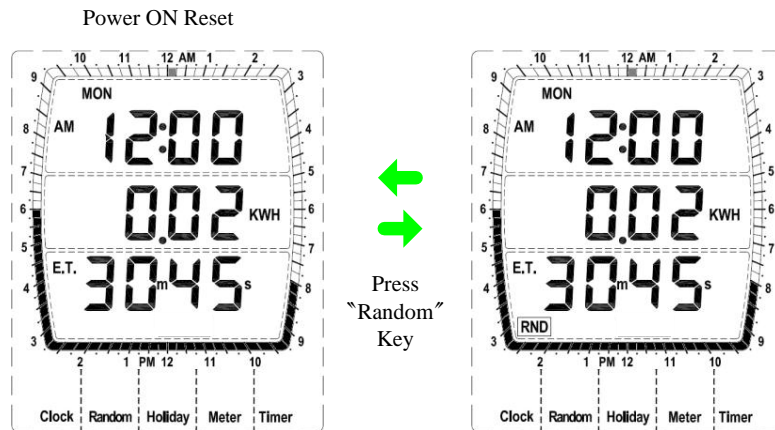- Includes **Day** selection and **Hour, Minute** adjustment.
- **Day**: MON, TUE, WED, THU, FRI, SAT and SUN.
  H/M: Hour, Minute.
  ▲　: +1.
  ▼　: -1.
  RTN: Return to **MENU** mode.
  E.T.: Elapsed time.

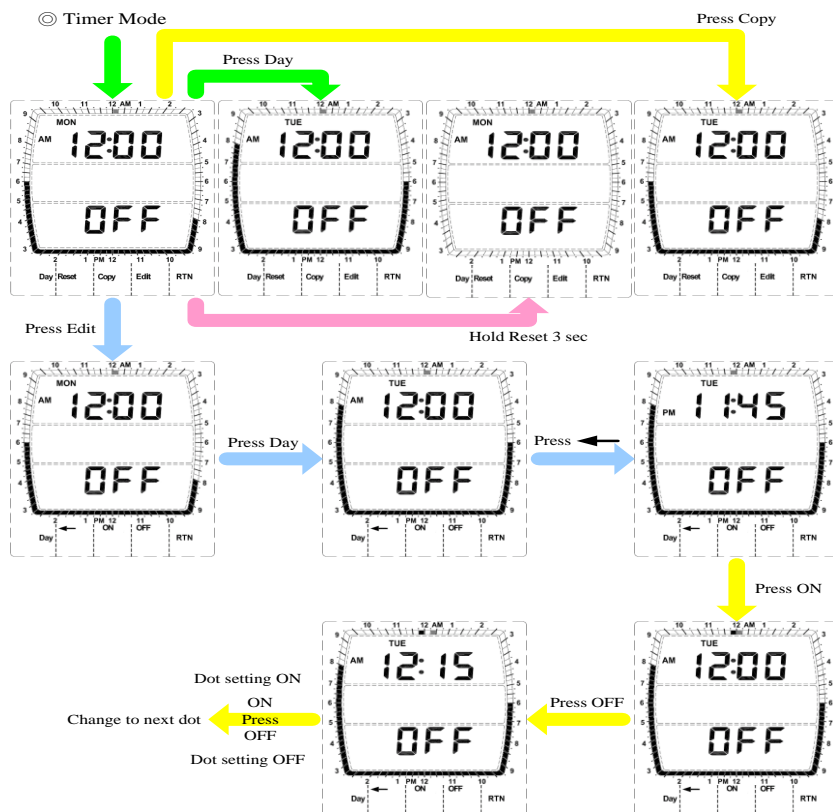◎ Clock Mode

Random mode:

It provides a random time offset to the **Program** output on/off +/- (0 to 15 min).

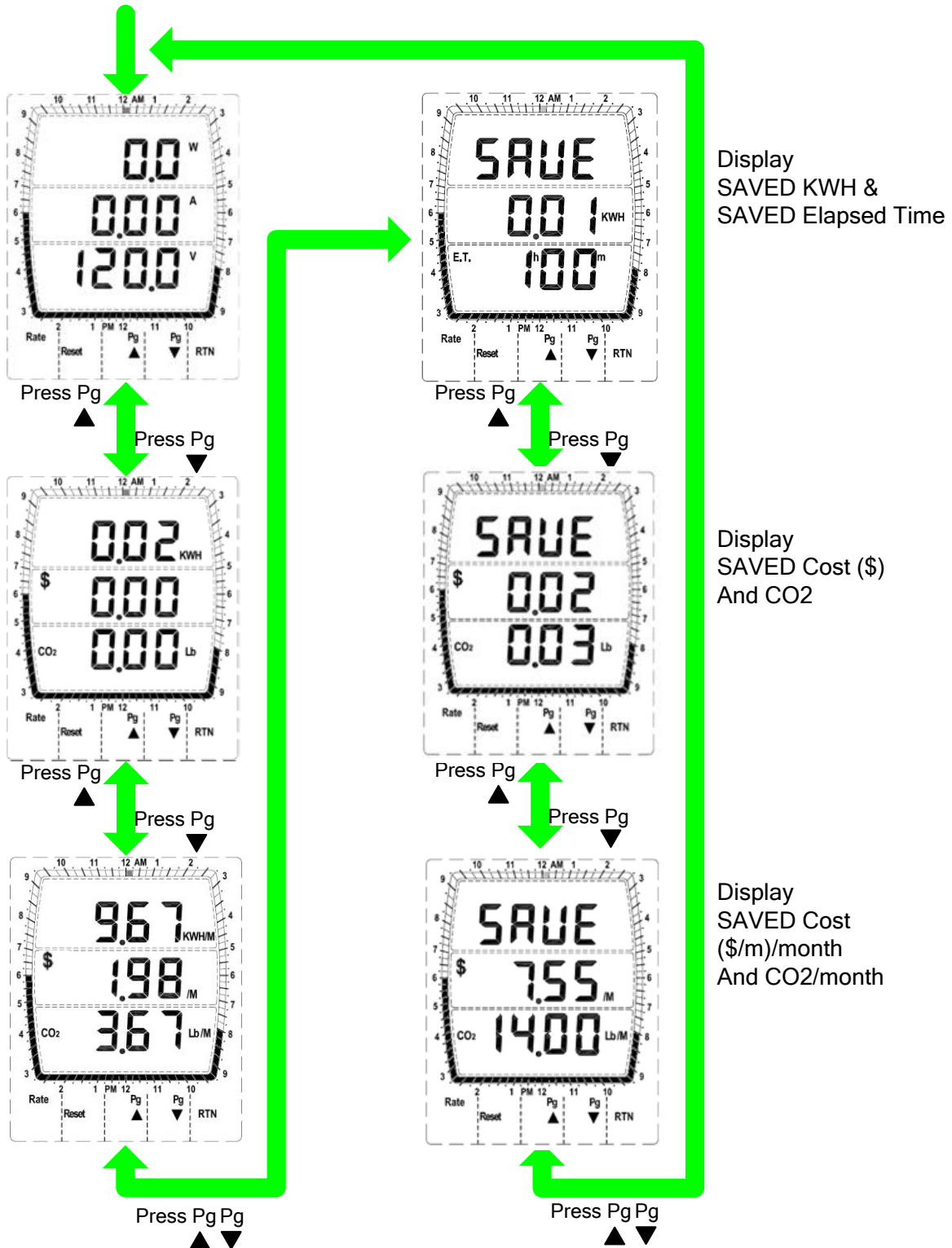Power ON Reset

Press "Random" Key

Program mode:

- Includes **Day** selection, output **ON/OFF** edit, **Reset**, and a **Copy** function to easily edit for consecutive days the same ON/OFF timer program.
- **Day**: MON, TUE, WED, THU, FRI, SAT, SUN, Holiday and nightlight.

  Reset: Hold **Reset** key over 3 seconds will reset the clock to zero and all segments to be off.

  Copy: Copy all programs to the next day, cycle through MON to SUN, Holiday and nightlight.

  Edit: ON: The current flashing cursor of outer LCD will be set to on and flashing cursor will be moved to next segment for setting.

  OFF: The current flashing cursor of outer LCD will be set to off and flashing cursor will be moved to next segment for setting.

  ← : Counterclockwise.

  RTN: Return to **MENU** mode.

- **Nightlight**: The LCD backlight amber LED can be programmed as a nightlight. ON is amber LED light, OFF is amber LED dark.
- **Holiday**: The user can edit the holiday timer ON/OFF in advance and recover to normal timer mode automatically when the holiday ends. For Timer non-scheduling day, user can edit its special Timer output ON/OFF.
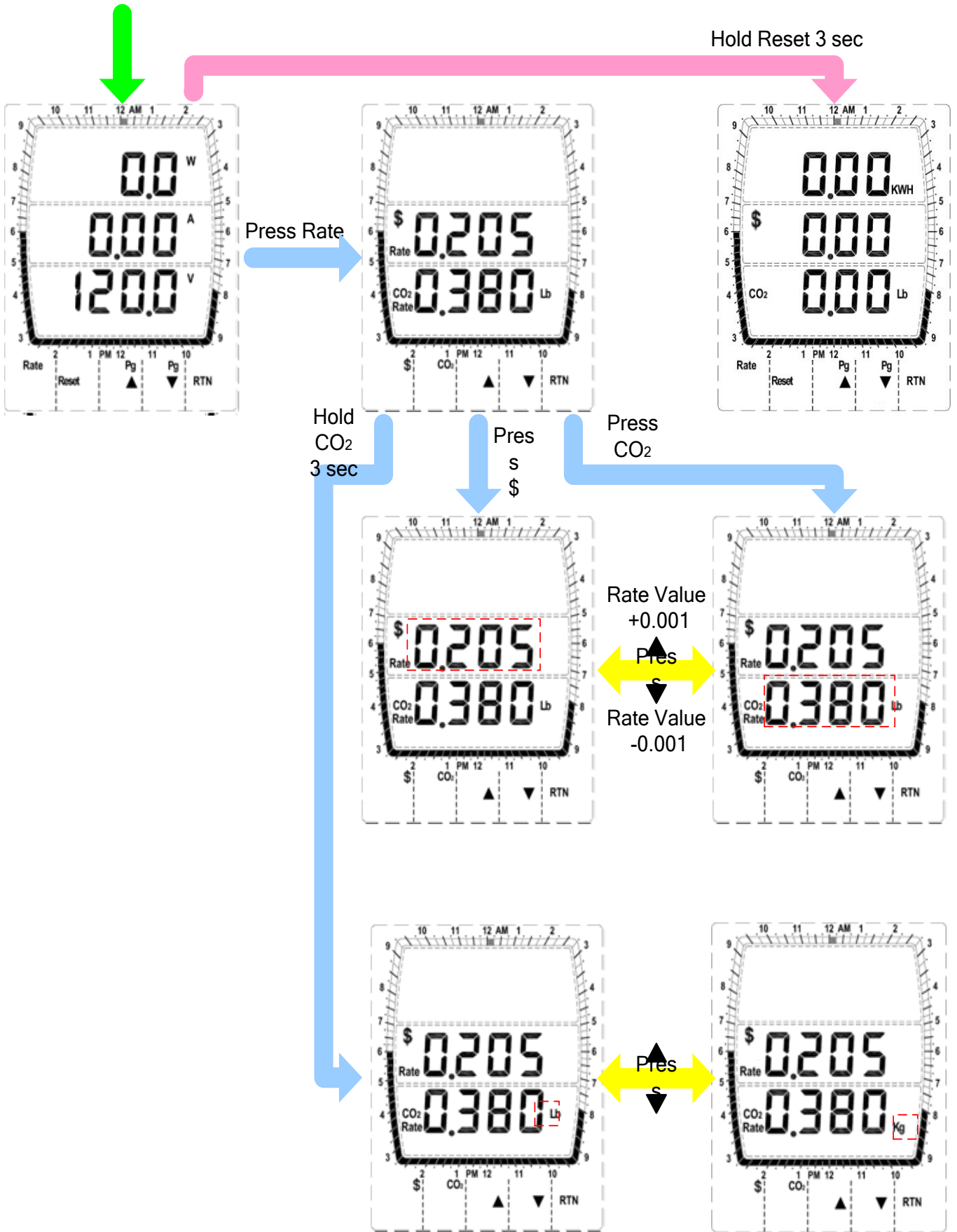
Meter mode:

- Not only shows the electronic appliance instant **W**att, Current(**A**), **V**oltage, power consumption **KWH**, **Cost**, Cost **rate**, **CO2** emission, **CO2 rate**, **Lb/Kg** selection, monthly **KWH**, **Cost**, **CO2** forecasts**,** but also how much **Power**, **Elapsed time**, **Cost**, **CO2** have been saved when timer off, predict monthly **Cost** and **CO2** savings.
- **Rate**: Cost and CO2 rate.
  Reset: Hold **Reset** key over 3 seconds will clean KWH, Cost and CO2 value.
  Pg▲ : +1 page.
  Pg▼ : -1 page.
  RTN: Return to **MENU** mode.
  SAVE: Predict Timer off KWH, Elapsed time, cost and CO2 saving.
  $: Cost
  CO2: CO2, unit Lb and Kg is selected.
  ▲ : Rate value +0.001.
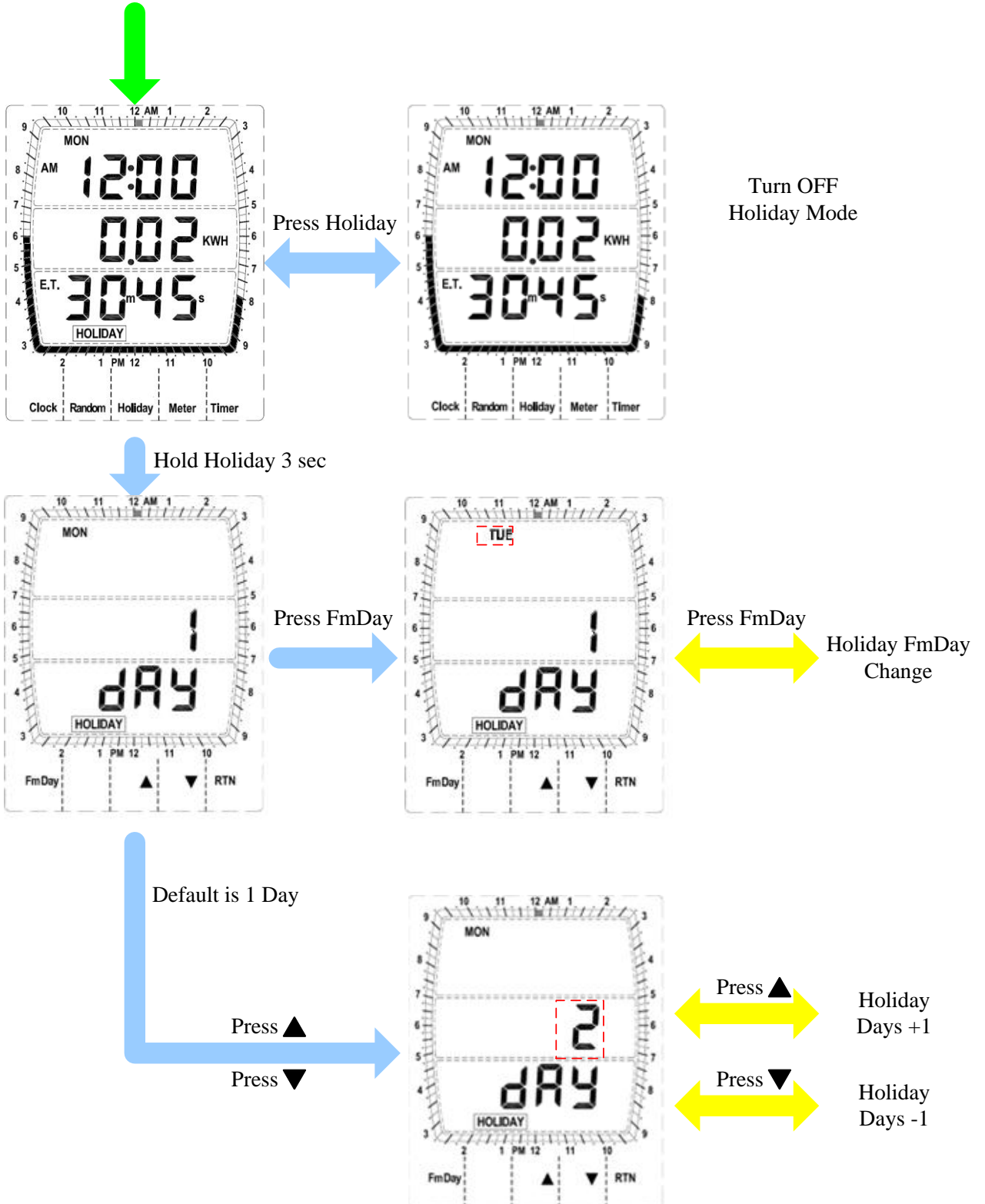 ▼ : Rate value -0.001.

◊ Meter Mode

Display
SAVED KWH &
SAVED Elapsed Time

Display
SAVED Cost ($)
And CO2

Display
SAVED Cost
($/m)/month
And CO2/month

Ⓘ Meter Mode

Hold Reset 3 sec

Press Rate

Hold CO₂ 3 sec

Press $

Press CO₂

Rate Value +0.001
Press ▲

Rate Value -0.001
Press ▼

Press ▲ ▼

Holiday mode:

- The user can edit the holiday timer ON/OFF in advance and recover to normal timer mode automatically when the holiday ends.

    So you need to:

    1, Edit holiday timer which shall be different from normal day, holiday timer ON/OFF edit, please refer to **Timer** mode.

    2, Setting holiday start day and duration: press and hold **Holiday** 3 seconds, select which day and duration.

    FmDay: From which day, MON, TUE, WED, THU, FRI, SAT and SUN.

    ▲ : +1.

    ▼ : -1.

    RTN: Return to **MENU** mode.

    3, Activate/deactivate holiday function: toggle **Holiday**.
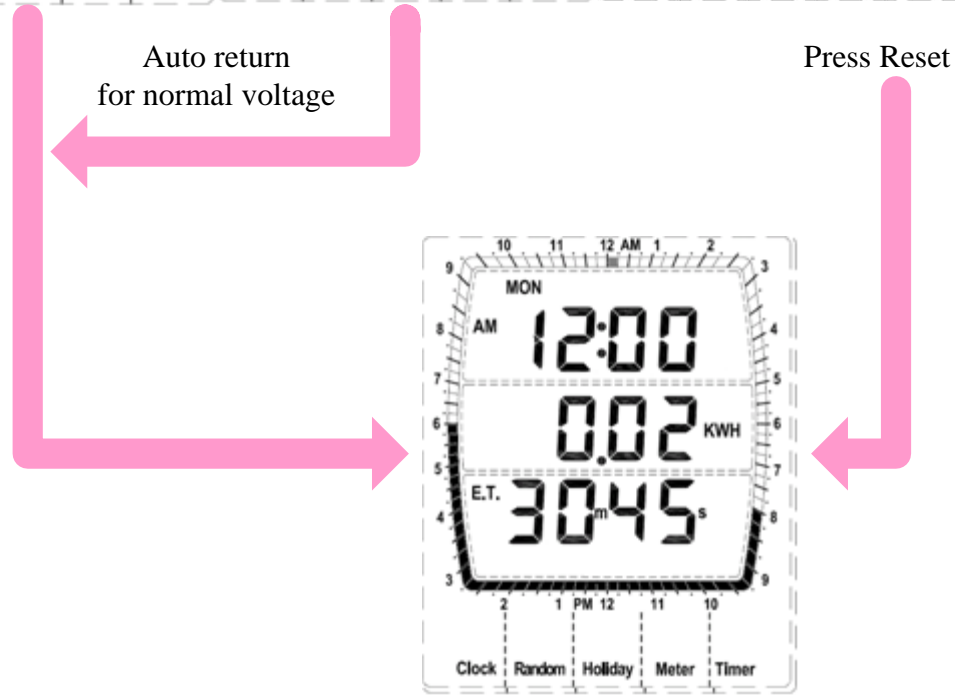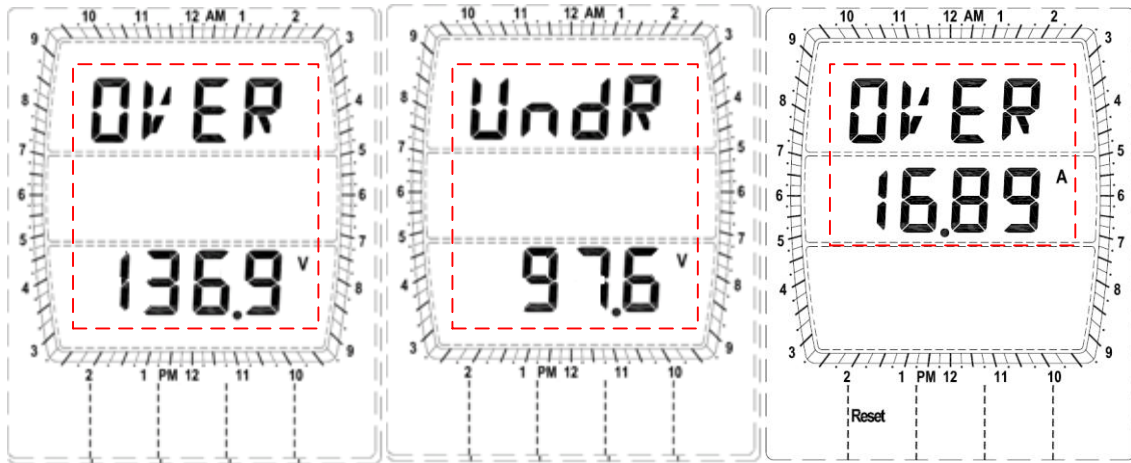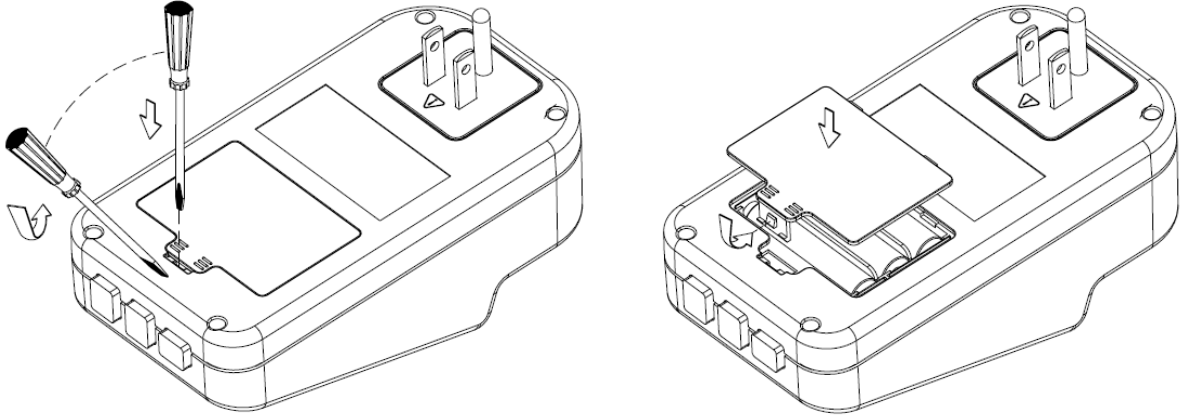
◎ Holiday Mode

Alarm mode:

1. **Abnormal Voltage mode**: When the voltage presented at the wall outlet is over or under the normal voltage range, the unit will switch to Abnormal Voltage mode. The power will be switched off to the outlet. The **OFF** key will illuminate in red. The main display will flash the protected voltage value. The Abnormal Voltage icon **OVER/UndR** will display and the audible alarm will sound. When the AC line voltage delivered by the wall outlet returns to a normal range and is stable for at least 2 seconds, the unit will switch back to normal mode and restart power immediately. The unit will enter Abnormal Voltage mode if the AC line voltage is over normal by 13% or under normal by 18%. The unit will switch back to normal mode when the AC line voltage returns to +10% to -15% normal.

2. **Over Current and Over Temperature mode**: When the current load presented by the connected appliance exceeds the max. Current (15A), or a certain temperature, the unit will switch to Over Current mode or Over Temperature mode. The power will be switched off to the outlet. The **OFF** key will illuminate in red. The main display will flash the protected current value. The **OVER** icon or **HIGH TEMP** icon will display and the audible alarm will sound. Remove the appliance; press the Reset key to turn off the audible alarm and erase the main display protected current value and Over icon. Then press **ON** key to turn the power back on.

3. **Low battery indication:** When the battery voltage is under 3.3V, "**LOW BAT.**" Icon will appear on the display. After you change the battery, the clock will need re-setting.

◎ Alarm Mode

Battery backup function:

1. When power to the unit is interrupted, the internal power supply will be switched to battery backup mode immediately. The LED backlight is also disabled.
2. The battery backup feature also allows the user to program the unit without having it plugged into an outlet. You can change the settings while holding the unit in your hands which is more convenient than crouching down to reach a wall outlet.
3. Do not leave the unit unplugged with batteries installed for an extended period. Otherwise the batteries will be exhausted prematurely. When the unit is plugged back in or AC power is restored, the internal power supply will be switched back to AC line power.
4. To replace the battery: Using the small flat screwdriver opens the battery holder, and position the 3 (AAA) batteries, ensuring polarity is correct. When the batteries are in place, press the battery holder back into its original position and use the screwdriver to secure.

Retained measurements:

1. When power to the unit is interrupted, the cumulative power consumption KWH and Elapsed Time will be retained automatically into EEPROM memory no matter if the battery back up mode is working or not. It the user forgets to change the battery when the unit is in low battery condition, these measurements will still be retained in memory. The user programmed Timer ON/OFF information is also retained in EEPROM memory whenever it is set.
2. When the AC power is restored or the unit is plugged into another outlet, cumulative power consumption KWH and Elapsed Time will be retrieved automatically.

Specification:

Item	Specification		Accuracy		Response Time	
	Range	Res.	Typ	Max	Action	Recovery
Voltage	108.0~132.0 V	0.1V	0.1%	0.4%	1sec	
Current	0.00~15.00 Amp	0.01A	0.5%	1% ± 0.1A	1sec	
Active power	0.0~99.9 Watt	0.1W	1%	2% ± 1W	1sec	
	100~1980 Watt	1W		2% ± 5W		
KWH	0.00~99.99 KWH	0.01KWH	1%	2% ± 5W	1sec	
	100~9999 KWH	1KWH				
Elapsed Time	00:00~59:59 (min/sec)	1sec	30 ppm		1sec	
	00:00~99:59 (hour/min)	1min				
	100~9999 (hour)	1 hour				
Monthly, Total Cost	0.00~99.99	0.01	1%	2% ± 5W	1sec	
	100~9999	1				
Monthly, Total CO_2	0.00~99.99	0.01	1%	2% ± 5W	1sec	
	100~9999	1				
Save KWH	0.00~99.99 KWH	0.01KWH	1%	2% ± 5W	1sec	
	100~9999 KWH	1KWH				
Save Time	00:00~59:59 (min/sec)	1sec	30 ppm		1sec	
	00:00~99:59 (hour/min)	1min				
	100~9999 (hour)	1 hour				
Monthly Total	0.00~99.99	0.01	1%	2% ± 5W	1sec	

Item	Range / Spec	Resolution	Accuracy	Accuracy	Response	Recovery
Save Cost	100~9999	1				
Monthly Total	0.00~99.99	0.01	1%	2% ± 5W	1sec	
Save CO₂	100~9999	1	1%	2% ± 5W	1sec	
Cost Rate	0.000~9.999	0.001	---		---	
Kg(Lb)-CO₂ Rate	0.000~1.999	0.001	---		---	
UVP	Output Off : <98.4 V 〈120 Vrms -18%〉 Then On if Vac :>102.0 V 〈120 Vrms -15%〉	---	0.1%	0.4%	5sec	2 Sec 〈Auto〉
OVP	Output Off : > 135.6 V 〈120Vrms +13%〉 Then On if Vac : < 132.0 V 〈120Vrms +10%〉	---	0.1%	0.4%	5sec	2 Sec 〈Auto〉
OCP	Output Off: > 15.38 A (15A +2.5%)	1A	0.5%	1% ± 0.1A	5sec	Manual
Clock	7 Day, 24 Hour	1min	30 ppm		1min	
Timer	7 Day 24 Hour + Holiday 1~199 day	15min	30 ppm		15min	
Night-Light	24 Hour	15min	30 ppm		15min	
Back Light	3 LED 〈Amber〉	---				
Outlet	3-prong grounded plug and receptacle	---				
Output status LED	Output ON：Green Output OFF：Red Output AUTO：Yellow	---				
Buzzer	Key：1 short sound	---				
	Abnormal：continuous short sound	---			1sec	---
Spike free switch	ON/OFF on zero power	---				

ENVIRONMENT CONDITIONS
IN DOOR USE ONLY
ALTITUDE : UP TO 6560 Ft.
OPERATION TEMPERATURE : 32°F ~ 122°F, Max. R.H. 90%
NON OPERATION TEMPERATURE : 14°F ~ 140°F Max.R.H. 95%
OPERATION VOLTAGE IS LIMITED TO ±10% OF LINE VOLTAGE
POLLUTION DEGREE : 2
CAT II

GENERAL SPECIFICATION	
POWER RATING	120 Vrms ± 10%, 50/60Hz
POWER CONSUMPTION	Max. 1.0 Watt
Ratings	15 Amp (1980 Watts) Resistive and Inductive, 600 Watts Tungsten, 1/3 H.P. 120V.A.C.
L/W/H	6¼ x 3½ x 2¾
WEIGHT	Around 9.8 oz.

Note: 1. The specification is based on sine wave and resistance load.

Troubleshooting:

Item	Symptoms	Action	Description
1	The main display flashes when the unit is first connected to the wall outlet.	Clock setting	1. This is normal operation, Clock is not set yet. 2. New unit connect to AC line or battery change will be reset clock
2	Over icon display and Amp value is flashing, audible alarm is sounding. Output is off and OFF key illuminate red.	Check and remove the appliance which is drawing over current to the unit, press Reset key and ON key to restart the unit.	This is over current protection function indicating the total power consumption is larger than the max. by 2.5%.
3	Over/Under icon display and Volt value is flashing, audible alarm is sounded. Output is off and OFF key illuminate red. ,	The unit will restart automatically when the AC power line voltage returns to normal voltage within 2 seconds. If condition persists call a qualified technician.	This is abnormal voltage (too high or too low) protection function.
4	LCD displays low battery icon	Battery change.	This is a normal condition.
5	No display in the LCD, no response from pressing keys.	1. Check that the unit connected to an energized AC wall outlet or battery. 2. Request technical support.	When the unit is not connected to an energized AC power and no power of battery, it shall be no display in the LCD, no response from pressing keys. Or something defective internally.

Maintenance

- Protect the meter from adverse weather conditions. The unit is not waterproof. Do not expose the LCD display to direct sunlight for long periods of time.
- CAUTION: To avoid damage to the meter, do not expose it to sprays, liquids, or solvents.
- Clean the exterior of the meter by removing dust with a lint-free cloth.
- Use care to avoid scratching the clear plastic display filter.
- For further cleaning, use a soft cloth or paper towel dampened with water. You can use a 75% isopropyl alcohol solution for more efficient cleaning.
- CAUTION: To avoid damage to the surface of the meter, do not use abrasive or chemical cleaning agents.

*Specifications subject to change without notice.

P3 INTERNATIONAL CORPORATION LIMITED WARRANTY

If you experience difficulty in the operation of your unit, or if your unit requires repair please contact:

P3 INTERNATIONAL CORPORATION
TECHNICAL SUPPORT
Tel: 212-741-7289
Fax: 212-741-2288

Email: techsupport@p3international.com   Rev1113