

Manual

Product Description : Wireless Kitchen Thermometer

Customer Name : Maverick

Customer Model No. : XR-40, RT-40

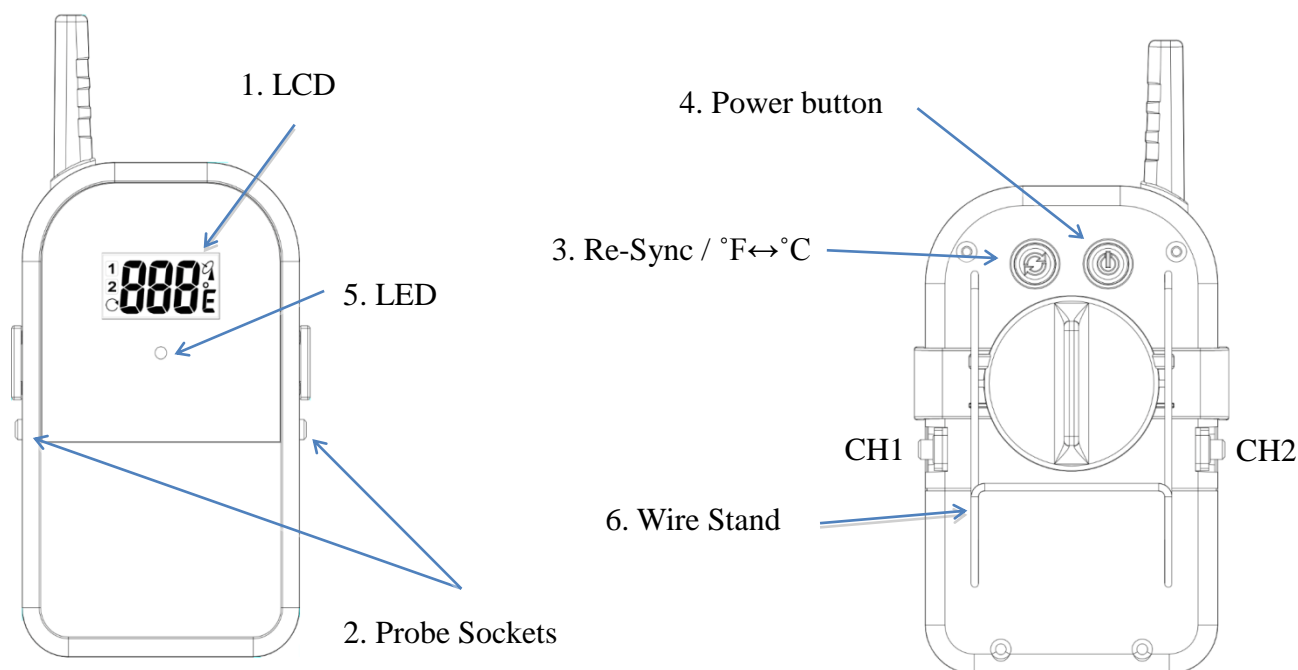
Revision History : 2017/12/07 – Change customer model no. and add required FCC & CE Statements

Wireless Barbecue Thermometer includes a Receiver that receives the temperature signal from a Transmitter using two stainless steel probes to detect meat or barbecue chamber temperatures.

A. Transmitter unit (MAV238)

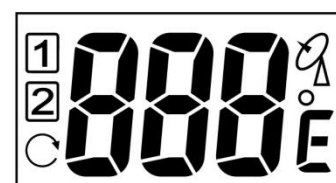
The transmitter unit displays the measured temperatures and sends it to receiver unit

Features and specifications:



1. LCD Display

- a. 1-line LCD display toggles the measured food / barbecue temperatures from two channels (probes).
- b. Uses probe to measure meat or oven temperature. (See accessory section for the selected probe type).
- c. Displayed Temperature unit is °F / °C, user selectable. Default temperature unit is °F. Optional design on PCB to allow the change of default temperature unit to °C.
- d. Antenna icon shall show up when the unit is transmitting RF data to receiver unit.
- e. Battery Low indication: LCD displays “Lo” on most right two digits for 2 seconds and probe temperature reading (3 seconds each) alternatively when the battery low level is detected. E.g. T1(if any) → “Lo” → T2(if any) → “Lo” and then repeat.



Full Display



Battery Lo Display

2. LED light up when the unit is transmitting RF data to receiver unit.
3. Probe sockets
 - a. Equipped with 2 probes Max.
 - b. Both probe wires can resist temperature up to 716°F / 380°C is specification of the wire only. Temperature sensor with maximum 300°C is used inside the probes. Temperature above 572°F (300°C) will not be displayed properly as this is the temperature limits of the sensors.

NB: Temperature sensor inside the probe might be damaged if the probe is exposed to temperature above 572°F (300°C) for a long time.
4. RF link Re-Sync / °F ↔ °C
 - a. Press and hold the button for 2 sec will re-synchronize with the Receiver unit if there was a loss link.
 - ✧ The Transmitter and Receiver shall be linked in pair before Ex-factory. In normal case the user does not require to pair the unit even though the battery is replaced. Unless the user purposely wants to pair the Receiver to another Transmitter, or ID lost on Receiver due to whatever reasons, user may follow the pairing procedure to link the Transmitter and wanted Receiver in pair again. (refer to user guide for pairing procedure in detail)
 - ✧ see receiver section 2C for Rx pairing procedure.
 - b. Short press the button will select displayed Temperature unit °F / °C.
5. Power button – Press and hold for 2 sec to turn ON or OFF of the unit.
6. Equipped with Wire Stand to let the transmitter stand on desktop or it can be reversed as a hanger.
7. Low Battery detection: 2.70V +0.15 / -0.1V
8. Power: DC 3V (2 x AAA size Batteries)
9. Water-resistant housing design IPx4. O-ring is applied to the battery compartments for water resistant.
10. Specifications (Transmitter):
 - a. Temperature measurement range: 32 °F to 572 °F (0°C to +300°C).
 - i. If temperature below 32°F (0°C), “LLL” will be displayed.
 - ii. If temperature above 572°F (300°C), “HHH” will be displayed.
 - b. Temperature reading resolution: 1 °F (1°C)

- c. RF center frequency: 433.92MHz
- d. Operating Distance >500ft (150m) line of sight.
- e. Wireless data transmission interval:12 seconds.
- f. Data modulation scheme: GFSK
- g. Operating Voltage = 2.6V – 3.3V
- h. Battery life \geq 12 months
- i. Operating Environments:
 - ✧ Temperature = 32to122 °F (0to50 °C)
 - ✧ Relative Humidity = 20 to 90%
- j. Storage Environments:
 - ✧ Temperature = 14 to140 °F (-10to60 °C)
 - ✧ Relative Humidity = 15 to 95%
- k. Product dimension (L x W x H mm) = 128x 65 x 34 (without hanger)

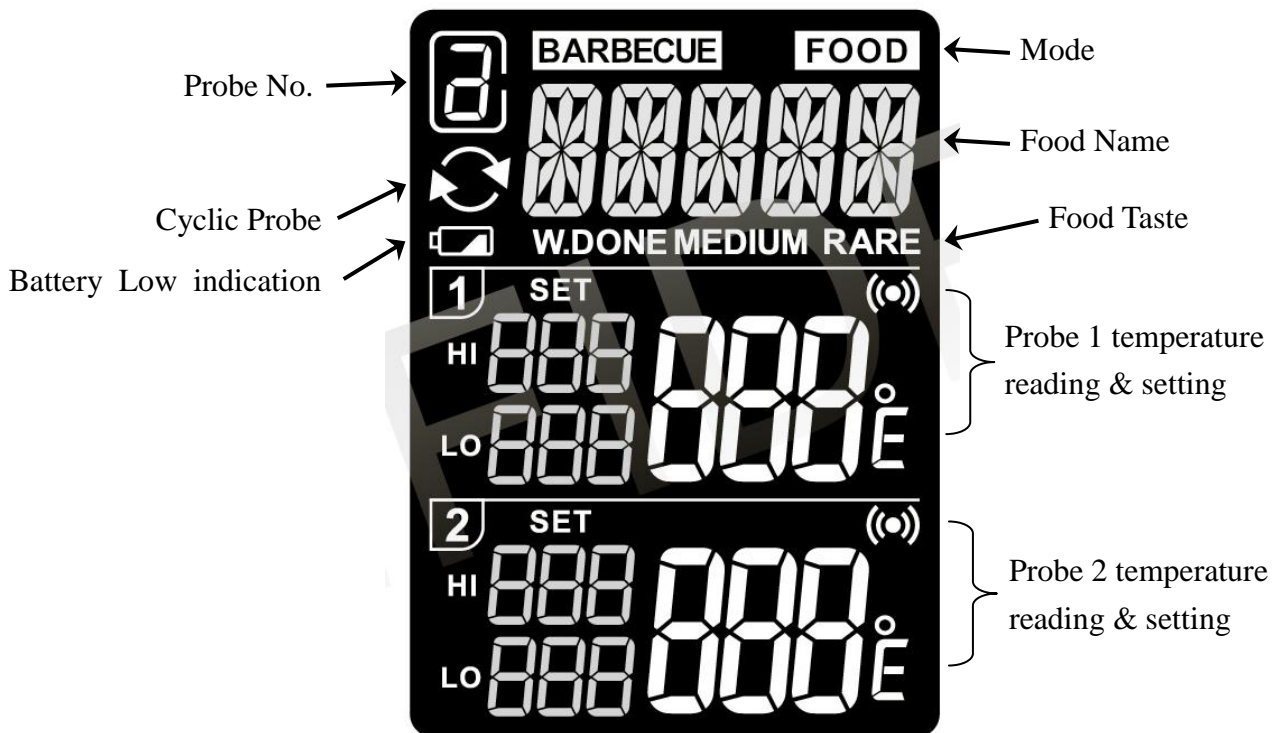
B. Receiver unit (MAV237)

The receiver displays the temperatures measured by the transmitter and alerts the user when the measured temperatures go out from user programmed temperature limits.

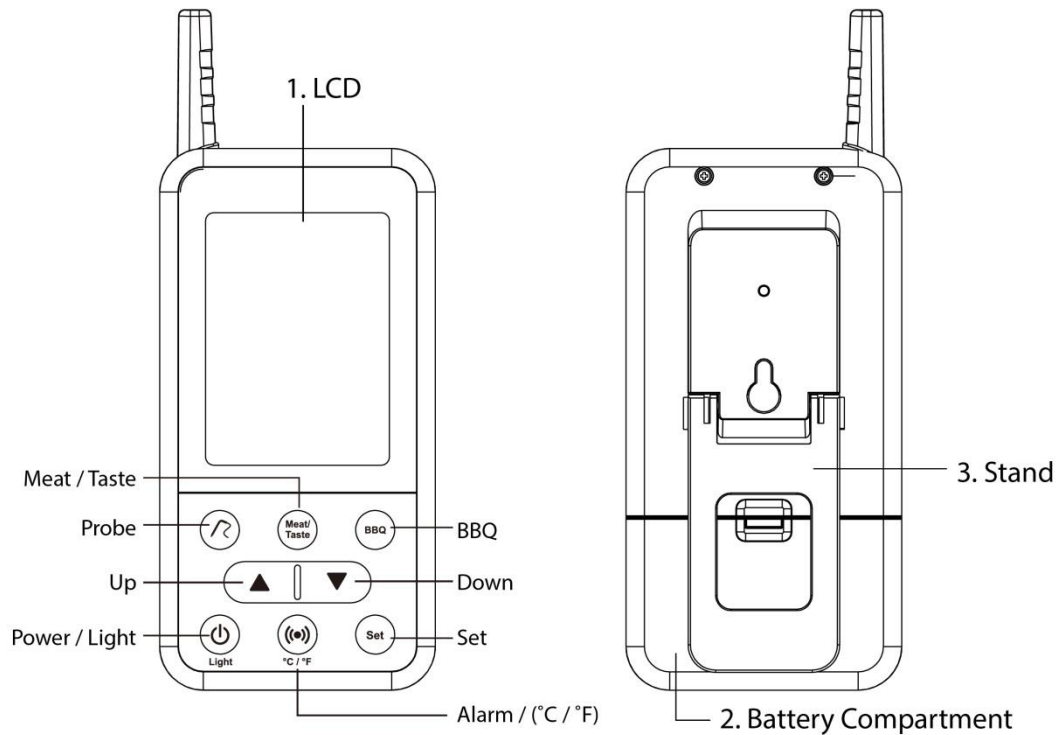
Features and specifications:

1. LCD Display

- a. FSTN LCD displays temperature with Amber backlit.
- b. 3-line LCD Display
 - 1st line: Mode / Meat/ Taste display
 - 2nd line: Channel one measured/ programmed temperature display
 - 3rd line: Channel two measured/ programmed temperature display
- c. Battery Low icon show up when the battery level is low.
- d. Cyclic probe icon show up when the temperature data measured from two channels is displayed alternatively.
- e. The layout of LCD full segments are shown as below:



2. Key Buttons



a. PowerON-OFF

- When the unit is OFF, press and hold [Power/Light] for 2 seconds, the unit turns ON and connects to pre-registered transmitter, alert beeps and LCD backlight turns ON for 8 seconds. All last user setting shall be resumed except high visibility mode setting.
- If the unit is ON, press and hold [Power/Light] for 2 seconds, alert beeps and the unit goes into OFF mode and LCD backlight turns OFF.

b. LCD Backlit

- In normal mode (Battery saving): short press any button except [Light button] will turn ON the LCD backlight for 8 seconds. Before the backlight turned OFF automatically, press any button except [Light button] will keep the backlight ON for another 8 seconds.
- In high visibility mode: short press [Light] button the LCD backlight shall be kept ON until power OFF or short press [Light] button again. Unit shall return to normal mode after power OFF.

c. Up and Down buttons

In setting mode, if food mode is selected, press Up or Down key will increase or decrease the target temperature (HI) value. Long press this key for 2 seconds, can fast increase or decrease the target temperature (HI).

In setting mode, if barbecue mode is selected, press Up or Down key will increase or decrease the HI or LO target temperature value. Long press this key for 2 seconds, can fast increase or decrease the HI or LO target temperature.

In normal mode, long press Downkey for 2 seconds will enter the RF registration mode and link the Receiver to Transmitter in pair. Long press 2 seconds again will quit the RF registration mode. (refer to user guide for pairing procedure in detail)

d. Probe

In setting mode, press this key will change and select the probe channel.

e. BBQ

In setting mode, press **[BBQ]** to switch current channel from food mode to barbecue mode.

If barbecue mode is selected, press this key will switch between the setting of HI and LO target temperature value.

f. Meat / Taste

In setting mode, press **[Meat/Taste]** to switch current channel from barbecue mode to food mode.

If food mode is selected, press this key will switch between different meat types and food doneness.

g. Alarm / (°C / °F)

➤ In normal mode, short press this key to enable / disable the Temperature Alert sound. LCD keeps flashing once temperature alert is triggered.

➤ In normal mode, press and hold this key for 2 seconds will change the displayed temperature unit (°F↔°C).

h. Set

➤ In Normal Mode, long press 2 seconds of this key the device will enter into Setting Mode. The Channel number will flash.

➤ In Setting Mode, short press this key to confirm the setting of current parameter and then go to next step, or exit the setting mode if it's the final step.

➤ In Setting Mode, long press 2 seconds of this key any time to confirm the setting of current parameter and the device will exit the Setting Mode.

3. Power: DC 3V (2 x AAA size Battery)

4. Retractable stand to keep the receiver unit stand on table.
5. Temperature Setting - Two channels can be selected as FOOD mode or BARBECUE mode
 - a. Barbecue Mode - Alert user when the cooking temperature fails out of user programmed range.
 - User Programmable High Temperature range (HI):34°F ~ 572°F (1°C ~ 300°C)
 - User Programmable Low Temperature range (LO):32°F ~ 570°F (0°C ~ 299°C)
 - b. Food Mode - Alert user when the cooking temperature goes above the target temperature set by user or the default USDA temperature according to the meat type & taste level selected.
 - User Programmable temperature range: 32°F ~ 572°F (1°C ~ 300°C)
 - USDA recommended 15 Meat types and Taste temperature are listed in the table as below.

Food Name	Display Short Form	Taste			
		Well Done	Medium	Medium Rare	Rare
Beef	BEEF	160°F/71°C	150°F/66°C	140°F/60°C	125°F/52°C
Veal	VEAL	160°F/71°C	150°F/66°C	140°F/60°C	----
Lamb	LAMB	160°F/71°C	150°F/66°C	140°F/60°C	----
Pork	PORK	160°F/71°C	150°F/66°C	----	----
Chicken	CHICK	170°F/77°C	----	----	----
Turkey	TURKY	170°F/77°C	----	----	----
Deer	DEER	----	----	140°F/60°C	135°F/57°C
Elk	ELK	----	----	140°F/60°C	----
Moose	MOOSE	160°F/71°C	----	140°F/60°C	----
Buffalo	BUFLO	----	----	140°F/60°C	125°F/52°C
Rabbit	RABBT	----	160°F/71°C	----	----
Boar	BOAR	----	150°F/66°C	----	----
Duck	DUCK	----	----	----	135°F/57°C
Bird	BIRD	----	160°F/71°C	----	----
Fish	FISH	----	----	135°F/57°C	125°F/52°C

6. All user settings will be saved when the unit is powered off. All user settings will be reset to factory setting once replacing the battery.
7. Transmitter ID is saved in the memory of receiver. User does not have to pair the device in every use.
8. Temperature Alert - LCD flashes and Alert sounds beep until user pressing any key.
9. Pre-alert - If probe temperature higher than set temperature minus 10°F, pre-alert sound will active (if ALERT enabled), the alert icon will flash. Short press any key to stop alert sound & alert icon stop flashing.

10. Lost link Alert –“---” will be shown on temperature displays. Alert Tone is emitted when Transmitter is detected “out-of-range” more than 36 seconds (i.e. consecutively lost link in 3 cycles of Rx signal checking). Alert tone keeps on beeping until user pressing any key or it stops automatically in 2 minutes.

11. Key tone – Beep sounds to confirm key pressing.

12. Specifications (Receiver):

- i. Temperature display range: 32 °F to 572 °F (0 °C to +300 °C).
- ii. Temperature reading resolution: 1 °F (1 °C)
- iii. Temperature alert sound level @ 10cm > 65dBA.
- iv. Low Battery detection: 2.70V +0.15 / -0.1V
- v. Battery life (Use continuously before having battery low indication):
≥ 130 hours operation in Battery Saving mode;
≥ 15 hours operation in High Visibility mode.
- vi. Operating Environments:
 - ✧ Temperature = 32 to 122 °F (0 to 50 °C)
 - ✧ Relative Humidity = 20 to 90%
- vii. Storage Environments:
 - ✧ Temperature = 14 to 140 °F (-10 to 60 °C)
 - ✧ Relative Humidity = 15 to 95%
- viii. Product dimension (L x W x H mm) = 148 x 60 x 24

C. Accessories:

- a. 2 pieces AAA are used for each of the receiver and transmitter, included in the packaging
- b. Two 3 feet hybrid probes measure food or barbecue temperatures.
- c. 2 pcs of clip for probe to attach to grill rack.
- d. User manual.

D. Type approval

FCC

CE

Helpful Hints

If the receiver and / or the transmitter display LLL or HHH instead of the probe temperature, wait for probe to reach room temperature. If LLL or HHH is still displayed or you get a false temperature, squeeze the probe jacks harder into the transmitter and twist them back and forth so they make good contact. If the problem still persists it is likely the internal probe wire has shorted out either through moisture or heat damage.

Do not immerse the probe in water while cleaning.

Do not allow the probe or probe wire to come into contact with flames.

Within the warranty period, return defective probe to address below along with return address and we will send you a replacement probe at no charge.

If the temperature displayed seems to read too high or the temperature seems to increase too quickly, check to make sure the probe tip is not poking through the food to outside. Reposition the probe tip in the center of the thickest part of food. Avoid touching bone or heavy fat areas.

Cautions:

- 1) Always wear a heat resistant glove to touch the stainless steel probe sensors or wires during or just after cooking. Do not touch with bare hands.
- 2) Keep the stainless steel probe sensors and wires away from children.
- 3) Clean the stainless steel probes and dry thoroughly after each and every use.
- 4) Do not use the receiver in the rain. It is NOT rain proof. The transmitter is rain proof but not water tight. Do not immerse in water.
- 5) Do not expose the plugs of the stainless steel probes or the plug in holes of the transmitter to water or any liquid. This will result in a bad connecting and faulty readings.
- 6) Do not expose the receiver or transmitter to direct heat or surface.
- 7) Do not use stainless steel probes in microwave oven.
- 8) The Barbecue Thermometer registers temperatures as low as 32 °F (0 °C) and as high as 572 °F (300 °C). LLL will be displayed below 32 °F and HHH will be displayed above 572 °F. Do not use the stainless probe sensor above 572 °F. Doing so will deteriorate the wire.
- 9) Not Intended for Use by Persons ages 12 and under.

Cleaning

- 1) Always wear a heat resistant glove to touch the stainless steel probe sensors or wires during or just after cooking. Do not touch with bare hands.
- 2) Keep the stainless steel probe sensors and wires away from children.
- 3) Wash the metal probe tips with hot soapy water and dry thoroughly. Do not immerse the probe in water while cleaning.

4) Wipe the transmitter and receiver with damp cloth. Do not immerse either in water.

Information to user

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the users' authority to operate the equipment.

Note: 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 generate,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.

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.

To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

The normal function of the product may be disturbed by strong Electro-Magnetic Interference. If so, simply reset the product to resume normal operation by following the instruction manual. In case the function could not resume, please use the product in other location.

LIMITED **NINETY DAY WARRANTY**

Maverick Industries Inc. warrants the XR-40MAVERICK Barbecue Thermometer to be free of defects in parts, materials and workmanship for a period of 90 days, from date of purchase. Should any repairs or servicing under this warranty be required, contact Maverick Customer Service by email or mail for instruction on how to pack and ship the XR-40MAVERICK Barbecue Thermometer Thermometer to Maverick's National Service Center located as follows:

Maverick Customer Service

94 Mayfield Ave.

Edison NJ 08837

Telephone: (732) 417-9666

email: help@maverickhousewares.com

Do not send any parts or product to Maverick without obtaining a Return Authorization Number and instructions.

This warranty is VOID if instructions for use are not followed; for accidental damage; for commercial use; for damage incurred while in transit; or if the XR-40 MAVERICK Barbecue Thermometer has been tampered with.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

Replacement Probes

To purchase, out of warranty, stainless steel replacement probes please mail us a check to the address below and specify probe type:

All prices include shipping & handling. NJ residents add 7% sales tax.

Attn Customer Service

Maverick Industries, Inc.