Meat Temperatures

Chef & USDA Recommended

For additional temperature recommendations, go to blog.thermoworks.com

BEEF	SERVE TEMPERATURES*		LAMB • VENISON
Bleu	**110°F**	**43°C**	
Rare	**120 - 130°F**	**49 - 54°C**	
Medium Rare	**130 - 135°F**	**54 - 57°C**	
Medium	**135 - 145°F**	**57 - 63°C**	
Medium Well	**145 - 155°F**	**63 - 68°C**	
Well	**155°F - up**	**68°C - up**	
Ground Beef	**160°F**	**71°C**	USDA Recommended
Beef Brisket - **BBQ**	**190 - 205°F**	**88 - 96°C**	Fork tender

PORK			VEAL • FRESH HAM
Medium	**137°F**	**58°C**	
USDA - Done	**145°F**	**63°C**	
Well Done	**150°F - up**	**66°C - up**	
Pre-Cooked Ham	**120°F**	**49°C**	Carmelized glaze, juicy
Sausage	**160°F**	**71°C**	Warm, juicy
Pork Ribs - **BBQ**	**190 - 205°F**	**88 - 96°C**	Fall off the bone
Pork Shoulder - **BBQ**	**190 - 205°F**	**88 - 96°C**	Fork tender

POULTRY			CHICKEN • TURKEY • DUCK • PHEASANT • QUAIL • GOOSE
Whole or Ground	**165°F**	**74°C**	USDA & Chef Recommended
Legs and Thigh	**170 - 180°F**	**77 - 82°C**	Safe at 165°F, but more tender at higher temp

SEAFOOD			
Ahi Tuna	**115°F**	**46°C**	"Sashimi" grade
Shrimp	**120°F**	**49°C**	Pink, slightly constricted
Salmon	**125°F**	**52°C**	Flaky and tender
Halibut	**130°F**	**54°C**	Opaque, moist
Scallops	**130°F**	**54°C**	Milky white, firm
Lobster	**140°F**	**60°C**	Opaque, not constricted

***PULL MEAT • LET IT REST –** Remember to remove meat from the heat prior to reaching your ideal internal temperature. During the rest, the internal temperature may rise anywhere from a few to several degrees depending on cooking temperature and the size and thickness of the meat.

ThermoWorks

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American Fork, UT 84003

For service or warranty:
1-800-393-6434
1-801-756-7705
t echsupport@thermoworks.com

P-18-009-02-b

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.

This equipment complies with the FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

This device complies with Industry Canada Licence-exempt RSSs. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Special Notice
Changes or modifications not expressly approved by the party responsible for compliance could void the user's 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 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.

CE

***FCC ID:** 2AI67-S4T / **IC:** 22116-S4T*
***FCC ID:** 2AI67-S4R / **IC:** 22116-S4R*

Smoke X4™

Operating Instructions

Getting Started:
Turn Smoke X4 and Smoke X4 Receiver on and within 30 seconds they will be connected ('con' will be displayed on Smoke X4 Receiver until it connects). Smoke X4 Receiver will update information every 30 seconds from the base unit while in range.

Wireless transmission can be turned on or off by pressing the wireless button on the rear of the base unit. Wireless signal can be received 6,562-feet (1.24-miles) line-of-sight with no obstructions, less if transmitting between walls or obstacles.

To set an alarm simply press "CH" to select the desired channel and then press "SET" to first turn the alarm function on or off. ALARM ON or OFF will begin to flash, use the arrows to change from on or off on the selected channel. Press "SET" again to accept the change and move to adjusting the HIGH ALARM. With the HIGH ALARM digits flashing use the up and down arrows to adjust the desired temperature. Press "SET" again to accept the HIGH ALARM changes and move on to LOW ALARM. With the LOW ALARM digits flashing use the up and down arrows to adjust the desired temperature. Press "SET" again to accept all changes and return to normal mode. Smoke X4 Receiver will show the updated alarm settings within 30 seconds of adjustment on the base unit. Alarms that are sounding can be muted with any button press either on the base or Smoke X4 Receiver.

You're now ready to use Smoke X4 for the first time.

Smoke X4/Smoke X4 Receiver Sync Instructions

Smoke X4 and Smoke X4 Receiver come synced out of the box so you should only need to do this when replacing or adding additional Smoke X4 Receivers.

How to Sync Smoke X4 with Smoke X4 Receiver:
- With Smoke X4 powered on press and hold ((•)) button for 5 seconds until "Sync" appears on the screen.
- Now that Smoke X4 is in Sync mode, make sure Smoke X4 Receiver is powered on.
- Press and hold the "VOL" button for 5 seconds on Smoke X4 Receiver. The display should read "Sync" for a short amount of time.
- Both Smoke X4 and Smoke X4 Receiver will beep and return to normal functionality signaling a successful pairing.

NOTE: To sync multiple Smoke X4 Receivers to one base, please follow the steps above on one Smoke X4 Receiver at a time. Putting Smoke X4 into Sync mode will not disable or interfere with previously synced Smoke X4 Receivers.

Tips for Use & Care Instructions

What's Included:
Smoke X4 (base), Smoke X4 Receiver (receiver), Batteries (Installed), (3x) Pro-Series® High Temp Cooking Probe (TX-1001X-OP), Pro-Series® High Temp Air Probe & Grate Clip (TX-1003X-AP), lanyard, 8 High Temp Silicone Color Probe Rings, and this instruction card.

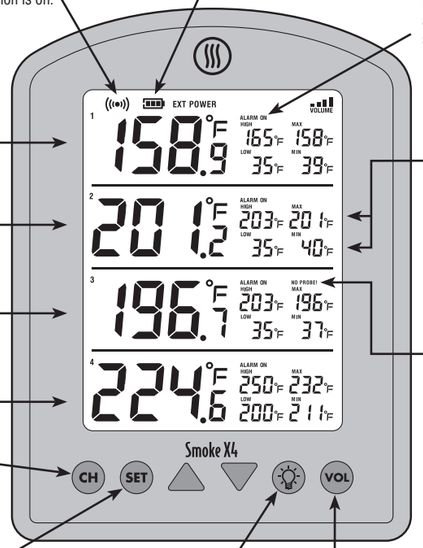
Tips for Use:
- Your Smoke X4's body should not be affixed directly to a smoker or grill's lid or left in the smoker or oven. The high heat will melt the pastic housing.
- Insert the cooking probe so that the tip rests at the thickest part of the meat or food. Avoid gristle or bone.
- Pinch Grate Clip, insert probe, and attach clip to the grate. Place air probe 1-2 inches away from food, avoiding sides of the cooker.
- Grate Clip can be adjusted for different-sized grates by gently bending. We recommend leaving the air probe in the clip while adjusting.
- Set your desired alarm temperatures. Chef-recommended doneness temperatures are on the reverse of this card. If cooking meat, set the alarm somewhat lower to allow for carryover heat during resting.
- The cables may be closed in an oven door or under a BBQ hood with the following precautions.

Cautions for Pro-Series Probes
- Use hot pads or gloves when removing the probe from meat. It will be hot!
- Do not pull on the cable. Use the molded mini-handle.
- The cables will withstand 700°F (370°C) and the transition/handle 644°F (340°C) for short periods.
- Probe tip itself is rated to 572°F (300°C). Do NOT expose probe tip to flames or coals.
- Construction is moisture-resistant but we do not recommend full immersion of the cable.
- Clean probe by wiping with damp cloth and kitchen cleaner.
- Keep the probe cable away from oven elements, flames, coals, grill or oven racks—all of which can reach temperatures far higher than 700°F (even if an oven is set lower). The probe cable can be damaged at higher temperatures. The inner insulation will melt and the probe will short (displaying "NO PROBE!" on the alarm display).
- When using ovens or smokers, avoid pinching the cable between hot surfaces such as a cast metal grill hood without some insulating protection. Use an access hole if available.
- Avoid repeated kinking or twisting of the probe cable which can break wires.
- With care, the probe should last a long time. Eventually, you may need to replace it. If the probe becomes damaged, the base unit will flash "NO PROBE!". Affordable replacements are available. See our website for full list of probe options.

Indicates wireless transmission is on.

Battery life indicator.

Make sure "On" is displayed next to each channel if you want to use the alarm function. Use the "CH" and "SET" buttons to select and change settings. Alarm will remain on until muted.



Both Low and High alarm settings are always visible. Use the "Set" button to change settings. When alarm temp is triggered "LOW ALARM" or "HIGH ALARM" will flash, even if sound is muted or silenced. ANY BUTTON PRESS SILENCES ALARM.

Continuous display of maximum and minimum temperatures. Reset by turning unit off and on again. This feature can remind you of your start temp, the peak temp during resting, or a high temp that was reached when you were away.

When 'NO PROBE!' flashes, probe is not connected or has failed. Make sure plug is fully inserted.

Press to select a probe channel to adjust settings. If no settings are changed after 10 seconds, the display will return to normal.

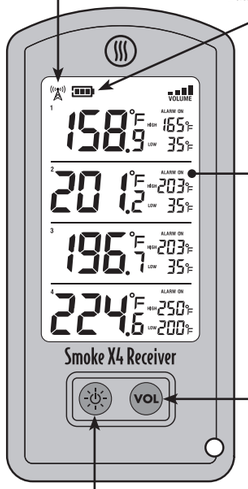
Press to select and adjust the following settings on the probe channel selected with the "CH" button. ALARM ON/OFF, HIGH ALARM, and LOW ALARM. The selected settings will flash. Use the up and down arrows to make any adjustments. Press "SET" again to save and move to the next setting.

Turns backlight on for 20 seconds. Light shuts off to preserve battery. Press again when needed.

Changes alarm volume setting or mutes alarm.

Indicates wireless transmission is on, flashes when transmission is active.

Battery life indicator.



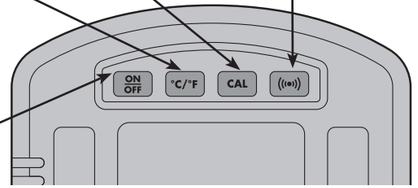
Smoke X4 Receiver display updates every 30 seconds with live temperatures from Smoke X4. It will also show the High/Low Alarm temperature settings and if the alarm is on or off.

Changes alarm volume setting or mutes alarm.

Calibration. New from the factory your Smoke X4 will read within ±1.8°F even after changing probes so you should never really need to use the CAL feature. However, you can fine-tune the calibration for accuracy better than ±1°F with an individual probe. Go to www.thermoworks.com/smokex4 for full calibration instructions.

Press to turn on or off the transmission to Smoke X4 Receiver. This allows you to use Smoke X4 as a standalone 4 probe alarm thermometer while conserving battery life.

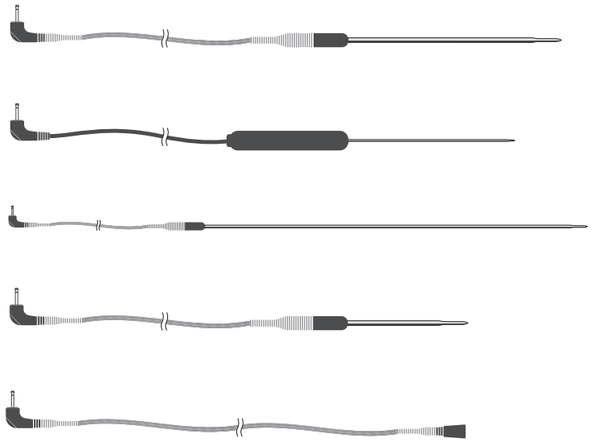
Changes display between Celsius and Fahrenheit.



Press to turn Smoke X4 on. Press and hold for 3 seconds to turn Smoke X4 off.

Press to turn on Smoke X4 Receiver, mute alarm, and to enable backlight for 20 seconds. Press and hold for 3 seconds to turn Smoke X4 Receiver off.

Optional Accessories



High Temp Straight Penetration Probe, 4.5-inch
The durable High Temp Straight Penetration Probe delivers better accuracy, faster readings, and a wider temperature range than probes sold with "low-cost" houseware temperature alarms. **Model #TX-1004X-SP**

Waterproof Needle Probe
Excellent choice for cooking thick or thin portions. Also, ideal for monitoring the internal temperature of food during Sous Vide cooking. Needle probe delivers Super-Fast® 2-second response. Fully submersible. **Model #TX-1002X-NP**

High Temp 12-inch Probe
Great for larger cuts of meat or deep insertion into soup urns or hot holding tanks. Durable, fast, and accurate. **Model #TX-1005X-12**

High Temp 2.5-Inch Probe
This shorter High Temp Straight Penetration Probe is perfect for thinner or smaller cuts of meat where the extra probe length can get in the way. Insert into briskets or loins to continuously monitor them as they cook. **Model #TX-1009X-ST**

Cable Extension
Extend your Pro-Series probes' cable an extra meter with this durable cable designed to keep your readings accurate. **Model #TX-1008X-PX**

AC Adapter
Optional AC Adapter for Smoke X4.
Model # TX-1012X-SA

Billows™ BBQ Temperature Control Fan
Eliminate vent adjustments and take control of the temperature in your smoker.
Model #TX-1600

Large Zippered Storage Case
Zippered storage case designed to store all of your favorite thermometers and probes.
Dimensions: 8" x 9.5" x 2"
Model #TX-1010X-SC

Spare Smoke X4™ Receiver
A ruggedized receiver device to be paired directly to Smoke X4's base unit with audible alerts.
Model #TX-1801-XX

Go to **www.thermoworks.com/smokex4** for additional product information and more tips for use.

CABLE SHOULD AVOID:

Flames **Immersion** **Racks** **Coals** **Elements** **Kinks**

Damage from the above voids probe warranty.

Pro-Series Probes available at www.thermoworks.com/pro-series

Pro-Series Probes work with Smoke X4™, Smoke X2™, Smoke™, Signals™, ChefAlarm®, DOT® and BlueDOT™