



Watchman™



Model #9-90

Owner's Manual

Catalyst monitor with programmed audio signals

Models 9-90 and 9-90AC Fahrenheit temperature display
for catalytic wood-burning stoves & fireplaces

QUALITY MANUFACTURED



IN NORTH CAROLINA

1. Consult manufacturer's manuals

When installing a Condar Watchman™ with any wood-burning stove or fireplace, first consult manufacturer's manual for catalyst operation information. While visual LED read-out is accurate within 50 degrees, **target operating temperature or engage-catalyst temperature for your wood-burner may vary from general guide.**

This product isn't an automatic thermostat. Informed and watchful consumer operation is required to operate your wood-burner properly. **Audio beep-codes are programmed for signaling operation of typical wood-burners, but may vary from instructions in your specific product's owner's manual.**

Condar's factory in Columbus, North Carolina can reprogram electronic beep codes to customize the Watchman monitor for your application. **There's a labor charge, and customer pays shipping.** For information about costs and turn-around time, please e-mail Watchman@Condar.com.

2. Install batteries inside monitor (9-90 only)

Monitor power source: 9-volt battery included
Install from marked side only.

Remove three black end-cap screws only on the one side that's marked. You can use one or two alkaline or lithium 9-volt batteries, but don't mix battery types. Two batteries operate in parallel, not in series. To install optional second battery, push down (don't remove) the foam. Remove insulator cap from second pair of connector wires to install a second battery.

3. Where to locate the electronic monitor

The 6-foot thermocouple cable allows you to locate Watchman monitor well away from stove or fireplace. Don't place on any surface that will exceed 110 degrees. If it's to hang on a wall, use metal strip with screws, included as optional hanger.

4. Locate the probe into your stove or fireplace

It's important probe end is properly located, to measure accurately catalysis temperatures within the combustor "honeycomb." ½ inch to 1½ inch away from the ceramic or steel is ideal. **Don't have probe actually touching the combustor.** If manufacturer's hole for locating probe & cable isn't obvious, or if you need to drill a hole, consult your authorized dealer for instructions.

5. Attach cable to Watchman monitor

After locating probe & cable correctly, connect the yellow K-plugs at the back of the monitor. **When disconnecting the K-plugs, carefully pull them apart.** Never yank the cable out, because this will break the delicate thermocouple wire inside the K-plug. Repair to K-plug and cable will be charged for, during Condar factory repairs.

All thermocouple cables and monitors are quality-tested before leaving Condar's North Carolina factory.

DISPLAY TEMP button

Continuous display of temperature readings is unnecessary and consumes battery power (9-90). Condar's programming of Watchman's LED visual read-out limits the temperature display to what's necessary during normal operation. In the target operating zone of 700 to 1350 degrees, you'll view your current temperature, briefly, **once per minute automatically**. A single press to the manual DISPLAY TEMP button, at any time, **commands continuous read-out for 2½ minutes**.

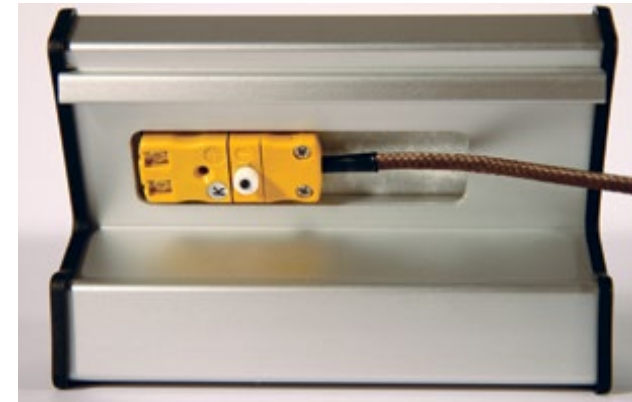


Lb in visual display (9-90 only)

The LED display *Lb* signifies Low Battery.



Replace one battery. If *Lb* read-out still continues and you installed two, replace both batteries. Limit pressing the DISPLAY TEMP button to minimize power consumption.



Replacing Thermocouple Cable/Probe

Replaceable thermocouple cable length: 6 feet
Probe length: 4 inches Probe diameter: ¼ inch
Maximum probe temperature rating: 1950 degrees

Excessive temperatures and long-term use will wear out the high-temperature probe. If your batteries (9-90) are fresh but the monitor begins to operate erratically, you are probably due for a new cable-probe assembly.

Order on-line at Condar.com/watchman.html



LED display operation guide:

To activate or deactivate the **Watchman™**, press



COOL temperature display

At temperatures lower than 250 degrees, Watchman's visual read-out says **COOL** and doesn't display precise temperatures in normal 50-degree increments. **This feature encourages you to accelerate fire warm-up quickly for catalytic operation.** Display and power dot flashes every 3 seconds.



Warm-Up 250 to 650 degrees

During catalyst temperatures in this range, your monitor displays temperatures in 50-degree increments. Some up-and-down readings are normal. **At steady 500 degrees or higher, your ceramic catalytic combustor can be engaged.** Close the bypass and your catalyst will give you added heat and reduce smoke emissions from the flue. **If your stove or fireplace is equipped with a Condar SteelCat™ catalyst, engage the combustor at 400 degrees.** Display and power dot flashes every 3 seconds.



Target catalyst operating zone 700 to 1350 degrees

Efficient and safe fires are between 700 and 1350 degrees. Esthetics and heat desired from your fire determine where you want to be. **Watchman informs you when your catalyst is getting hotter than necessary** and is approaching overheating temperature at 1400 degrees. Many users discover they can burn wood longer, still achieving a pretty fire, by adjusting draft to bring temperatures down. The nice thing is, when your catalyst is engaged, even an apparent smoky fire is environmentally responsible, because the combustor takes care of transforming smoke into extra heat with the only emissions being minor water vapor and carbon dioxide. Display flashes every 1 minute; power dot flashes every 3 seconds.



Overheating catalyst 1400 degrees and higher

Above 1400 degrees a catalyst no longer achieves any additional catalytic benefit. At 1600 degrees adjust draft immediately to avoid destruction of your catalytic combustor and potential damage to stove or fireplace components. Display is continuous.



AUDIO SIGNAL button:

During normal operations it isn't necessary to press the AUDIO SIGNAL button. **An illuminated dot in the lower right corner of Temperature Display area** (pointed to by the graphic around AUDIO SIGNAL button) **affirms you're in programmed audio mode to generate beep codes automatically.** Beep codes are generated by a piezo type audio component in the monitor. Extensive audio signaling can cause batteries to wear down quickly.



Audio Signal to ENGAGE CATALYST

Audio begins **intermittent beep** at 500 degrees through 600 degrees. **This signal times out after 40 seconds,** whether you've chosen to engage your catalyst or not. It isn't necessary to press the AUDIO SIGNAL button to remain in audio mode. If you press the button once, it will take you out of audio mode, and the illuminated dot will go out.



Intermittent beep code can be muted by pressing

Audio Signal for OVERHEATING

Audio begins **intermittent beep** at 1400 and continues through 1550 degrees. Adjust draft to bring operating temperature down to the target operating zone of less than 1400 degrees. **Above 1400 degrees a catalyst no longer achieves any additional catalytic benefit in extra heat.** If you find this signal irritating, press AUDIO SIGNAL button once to extinguish the beep code and the illuminated dot will go out. After you return your stove or fireplace to target temperature operating zone, the AUDIO SIGNAL feature will resume automatically and the dot will illuminate.



Intermittent beep code can be muted by pressing

Audio Signal CATALYST DESTRUCTION and SAFETY

At 1600 degrees **continuous warning beep code** begins. **This audio warning cannot be manually shut off, even by pressing the AUDIO SIGNAL button.** When you hear the continuous beep code, adjust draft immediately to avoid destruction of your catalytic combustor and potential damage to stove/fireplace components. **Continuous warning beep code cannot be muted.**

