

Braeburn 2020NC

Braeburn 2020NC Programmable Thermostat User Manual

Model: 2020NC | Brand: Braeburn

INTRODUCTION

The Braeburn 2020NC is a digital programmable thermostat designed for precise temperature control in residential and light commercial applications. This thermostat is compatible with single-stage gas, oil, or electric heating and cooling systems, including single-stage heat pumps and 250Mv – 750Mv millivolt heating systems. It features a bright blue backlight display and a user-friendly interface for easy operation and programming.

This manual provides detailed instructions for the installation, operation, and maintenance of your Braeburn 2020NC thermostat.

KEY FEATURES

- **5-2 Day Programming:** Allows for customized temperature schedules for weekdays and weekends.
- **Large Display with Backlight:** A 2 square inch display with a bright blue backlight for easy viewing.
- **Dual Power Options:** Can be powered by 24-volt AC or two AA alkaline batteries.
- **Adjustable Temperature Limits:** Set minimum and maximum temperature settings.
- **Permanent Memory:** Retains user settings and programming even during power outages.
- **Filter Check Monitor:** Reminds you when to check or change your air filter.
- **Adaptive Recovery Mode (ARM):** Intelligently starts heating or cooling early to reach desired temperature by programmed time.
- **Compressor Short Cycle Protection:** Prevents damage to your HVAC system.
- **Temporary Program Override & Extended Hold:** Provides flexibility for temporary schedule changes.
- **Front Access Reset Button:** Easily restore default settings.
- **Fahrenheit/Celsius Switch:** Select your preferred temperature unit.

PRODUCT OVERVIEW



Figure 1: Front view of the Braeburn 2020NC Programmable Thermostat. This image shows the main display, the up/down arrow buttons on the right, and the various control buttons along the bottom, including SYSTEM (COOL OFF HEAT), PROG, HOLD, RETURN DAY/TIME, and FAN (AUTO ON). A small reset button is also visible on the left side below the display.

The thermostat's design emphasizes ease of use with clearly labeled buttons and a prominent digital display. The SYSTEM switch allows selection between heating, cooling, or off modes, while the FAN switch controls the fan operation. Programming and setting adjustments are made using the PROG, HOLD, RETURN DAY/TIME, and arrow buttons.

SETUP AND INSTALLATION

Important: Installation should be performed by a qualified technician. Disconnect power to the heating/cooling system before installation to prevent electrical shock and equipment damage.

Powering the Thermostat

The Braeburn 2020NC can be powered in two ways:

- **Hardwire:** Connect to a 24-volt AC power source from your HVAC system.
- **Battery Powered:** Use two AA alkaline batteries (3.0 volt DC). Batteries are included.

Mounting

The thermostat is designed for wall mounting and includes a separate sub-base for simplified installation. It can also be mounted to a horizontal junction box.

Wiring Compatibility

This thermostat is compatible with:

- Single-stage gas, oil, or electric heating systems.
- Single-stage cooling systems.
- Single-stage heat pump systems.
- 250Mv – 750Mv millivolt heating systems.

Refer to the wiring diagram provided with your thermostat packaging for specific terminal connections. Ensure all connections are secure and correct before restoring power.

OPERATING INSTRUCTIONS

Display and Buttons

The digital display shows the current temperature, setpoint, and system status. Use the **Up** and **Down** arrow buttons on the right side of the thermostat to adjust temperature settings.

System Mode Selection

Use the **SYSTEM** switch located on the bottom left to select the desired operating mode:

- **COOL**: Activates the cooling system.
- **OFF**: Turns off both heating and cooling systems.
- **HEAT**: Activates the heating system.

Fan Operation

Use the **FAN** switch located on the bottom right to control the fan:

- **AUTO**: The fan runs only when the heating or cooling system is active.
- **ON**: The fan runs continuously, regardless of heating or cooling calls.

Programming Your Schedule (5-2 Day)

The 2020NC allows for 5-2 day programming, meaning you can set one schedule for weekdays (Monday-Friday) and another for weekends (Saturday-Sunday). Detailed programming steps are typically found in the full manual, but generally involve:

1. Press the **PROG** button to enter programming mode.
2. Use the **RETURN DAY/TIME** button to navigate between program periods (e.g., Wake, Leave, Return, Sleep).
3. Use the **Up** and **Down** arrows to adjust the start time and temperature for each period.
4. Repeat for weekdays and weekends.
5. Press **PROG** again or wait for the thermostat to exit programming mode automatically.

Hold Function

Press the **HOLD** button to temporarily or permanently override the programmed schedule. The thermostat will maintain the current temperature setting until HOLD is cancelled or a new HOLD temperature is set. Press **HOLD** again to cancel.

Adaptive Recovery Mode (ARM)

ARM is a feature that allows the thermostat to learn how long it takes for your system to reach a desired

temperature. It will then activate your heating or cooling system early to ensure the programmed temperature is reached by the scheduled time, rather than starting at the scheduled time.

MAINTENANCE

Battery Replacement

The thermostat will display a low battery indication when the AA batteries need replacement. Replace both batteries simultaneously with fresh alkaline batteries to ensure proper operation.

Filter Check Monitor

The built-in filter check monitor will remind you when it's time to inspect or replace your HVAC system's air filter. Follow your HVAC system's manufacturer guidelines for filter maintenance.

Cleaning

Clean the thermostat's exterior with a soft, damp cloth. Do not use abrasive cleaners or solvents.

TROUBLESHOOTING

Problem	Possible Cause	Solution
Thermostat display is blank or dim.	Low or dead batteries; no 24V AC power.	Replace AA batteries. Check 24V AC power supply to the thermostat.
System not responding to thermostat settings.	Incorrect system mode; wiring issue; HVAC system problem.	Ensure SYSTEM switch is set to HEAT or COOL. Check wiring connections. Consult an HVAC technician if the system still doesn't respond.
Temperature fluctuates widely.	Thermostat location; incorrect temperature differential setting.	Ensure thermostat is not in direct sunlight or near heat sources/drafts. Check adjustable temperature differential setting (refer to advanced settings in full manual).
Compressor short cycling.	Normal operation (short cycle protection); system issue.	The thermostat has built-in compressor short cycle protection (typically 5 minutes delay). If cycling is excessive and not due to protection, consult an HVAC technician.
Cannot program or settings are lost.	User error; low battery (if battery-only powered); internal issue.	Review programming steps. Replace batteries. Use the front access RESET button to return to default settings, then reprogram.

Resetting the Thermostat

To return all user and program settings to their default values, locate the small **RESET** button on the front of the thermostat (often recessed) and press it gently with a small, non-conductive object (like a paperclip).

SPECIFICATIONS

Feature	Detail
Model Name	Braeburn 2020NC

Feature	Detail
Dimensions (H x W x D)	3.62" x 4.72" x 1.38" (9.19 cm x 11.99 cm x 3.51 cm)
Power Source	24 VAC or 2 AA Alkaline Batteries (included)
Voltage	24 Volts
Temperature Control Range	45°F to 90°F (7°C to 32°C)
Temperature Accuracy	+/- 1°F (+/- 0.5°C)
Humidity Range	5% to 95% Relative Humidity (non-condensing)
Display Type	Digital with Bright Blue Backlight
Programming	5-2 Day Programmable
Connectivity Technology	Wired
Item Weight	8.8 ounces (249.5 grams)
UPC	833732001768

WARRANTY AND SUPPORT



For specific warranty information and technical support, please refer to the documentation included with your Braeburn 2020NC thermostat or visit the official Braeburn website. Warranty terms typically cover defects in materials and workmanship for a specified period from the date of purchase.

When contacting support, please have your model number (2020NC) and purchase date available.

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This manual is for informational purposes only. Specifications are subject to change without notice.

Related Documents - 2020NC

	<p>Braeburn 2020NC & 2220NC Programmable Thermostat User Guide</p> <p>Detailed user guide for Braeburn 2020NC and 2220NC programmable thermostats, covering installation, operation, programming, maintenance, and warranty information.</p>
	<p>Braeburn Thermostats: Programmable, Non-Programmable & Touchscreen Models</p> <p>Explore the full range of Braeburn thermostats, including Builder, Economy, Premier, and Deluxe series. Find features, specifications, and contractor solutions for optimal home comfort and energy efficiency.</p>

Braeburn 2020NC Programmable Thermostat - Features and Specifications

Detailed information on the Braeburn 2020NC single-stage heat/cool conventional or heat pump programmable thermostat, including features, architectural and product specifications, and compatibility.

Manuel de l'installateur Braeburn 4030/4235 : Thermostats Programmables

Guide d'installation et de câblage pour les thermostats programmables Braeburn modèles 4030 et 4235 de la Série Premier. Inclut les spécifications techniques, les paramètres et les procédures de vérification du système.

Braeburn Thermostats: The Brighter Choice for Indoor Comfort

Explore the range of Braeburn thermostats, including Builder, Economy, Premier, and Deluxe series. Discover features like large displays, easy-to-use programming, and energy-saving capabilities. Braeburn offers solutions for residential and commercial applications, focusing on reliability and innovative design.

Braeburn 5025 Programmable Thermostat User Manual

User manual for the Braeburn 5025 programmable thermostat. Covers features, installation, programming schedules (7-day, 5-2 day, commercial), system and fan control, temperature settings, status indicators, advanced features like Auto Changeover and Adaptive Recovery, maintenance, and warranty information.