NEW!

MADE IN USA

Residential Combustion Analyzer
Fyrite® INSIGHT® Plus

BACHARACH
The Measurable Difference

Fyrite®
iNSIGHT PLUS
with B-SMART

POWERED BY
Tune-Rite™
SOFTWARE

Features & Benefits:

- Includes exclusive **Tune-Rite™** On-Demand HVAC Assistant
- Vibrant, full-color display shows easy-to-read, real-time analysis
- Fast and accurate O_2, CO (0-4,000 ppm), T-stack/air temperature and draft/pressure measurements
- 9 pre-programmed, user-selectable fuels (+2 custom)
- Print stored data (100 records) and data download via USB with Fyrite® User Software
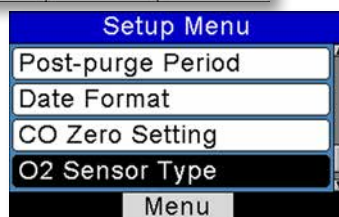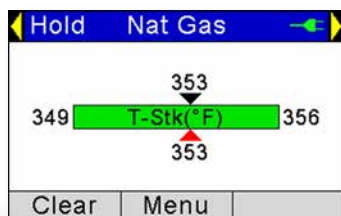
As easy as 1-2-3: Select fuel type, select appliance type and then start analysis.

The Fyrite® INSIGHT® Plus is Bacharach's premium residential and light commercial combustion analyzer. This American-made analyzer uses advanced technology to accurately measure, analyze and report results that validate safe operation, efficiently tune older systems and save customers' money.

Powered by innovative **Tune-Rite™ software,** the industry's first-ever on-demand HVAC "assistant," it helps both new and seasoned technicians save money by making more thorough and efficient service calls.

Featuring industry-exclusive B-Smart® CO sensor technology, it enables technicians and HVAC/R service representatives to install pre-calibrated sensors right in the field to avoid costly downtime and inconvenience.

Five Tools in ONE with Real-Time Analysis

The Fyrite® INSIGHT® Plus is a five-in-one steady state combustion analyzer that is capable of measuring flue gas and room air CO, and can also function as a dual channel digital thermometer (up to 999° F) and a digital manometer (which measures draft, gas pressure, ESP, and up to +/- 40 INWC).

An Industry Innovation - Introducing Tune-Rite™

A technological first, Tune-Rite™ is an on-demand "assistant" that will help you save money and win customer loyalty by documenting more thorough and efficient service calls - with fewer callbacks.

Tune-Rite™ is geared for residential appliance checks, including natural gas furnaces, hot water heaters and oil boilers. At the touch of a button, the software monitors the combustion analysis process in real-time to:

✔ Deliver the **most accurate analysis** every time
✔ Make instant **troubleshooting** suggestions
✔ Provide **guidance based on live data** plus typical characteristics of the combustion appliance

Steady-State and Tune-Rite™ - Why It Matters

As it evaluates the flue gas, Tune-Rite's™ full-color graphic display shows you when the appliance has reached steady-state, which is critical for consistent, repeatable, and accurate combustion testing. Measured values of oxygen, stack temperature and carbon monoxide are compared to typical values for the equipment under optimum conditions.

Tune-Rite™ tells you the optimum time to begin the analysis.

Based on the appliance type, Tune-Rite™ helps you to determine if it's operating safely and in the acceptable ranges. If not, you'll get a list of possible causes related to the readings and an easy-to-navigate troubleshooting checklist.
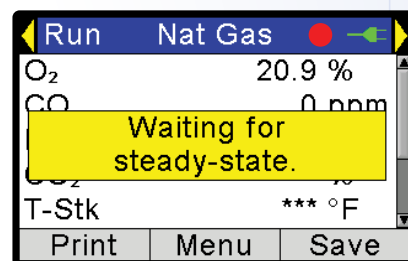
Combustion analysis should be performed only after combustion parameters indicate that the appliance has reached "steady-state" operating conditions. Steady-state can be gauged by three things:

✔ The change in temperature of combustion products in the vent system
✔ The change in the percentage of oxygen in the flue gas mix, which assists in determining if there is excess air or excess fuel in the combustion process.
✔ The change in Carbon Monoxide (CO) over time - CO levels will spike during the initial fire which is normal, but they should normalize to a lower output as steady-state is reached.

Tune-Rite™ shows real-time data at steady-state so adjustments can be made to optimize appliance performance.
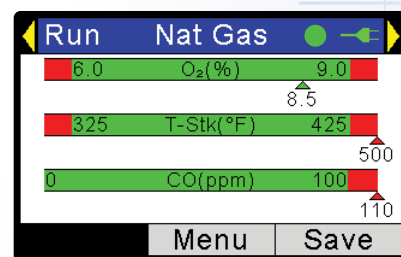
If a steady-state is not reached, the equipment may require major tuning, repairs or replacement. Tune-Rite™ helps service technicians to start the analysis at the optimum time, yielding more accurate readings and an effective diagnosis. Once this stable condition is reached, combustion analysis can be performed.
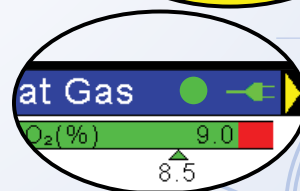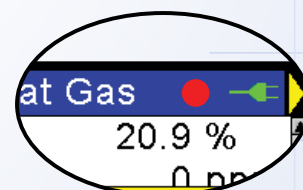
The Benefits Of Tune-Rite™ Technology

Tune-Rite™ software eliminates the guesswork commonly involved in determining steady-state by showing you a live graphical representation of all combustion parameters as they settle into a steady-state condition. When the combustion equipment reaches steady-state, a red dot displayed on the LED readout changes to green and is ready for analysis. It's that simple.

At-a-glance steady-state indicators (red or green)

What Readings Should You See During Testing?

The simple answer is, it's not simple. Measured values of oxygen, stack temperature and carbon monoxide vary depending on the heating equipment and fuel type. Even seasoned pros find it challenging to keep up with combustion guidelines for all possible equipment types and manufacturers. Sometimes furnace or boiler manufacturers will detail the optimum ranges in their installation manual – however tracking down the information can be difficult.
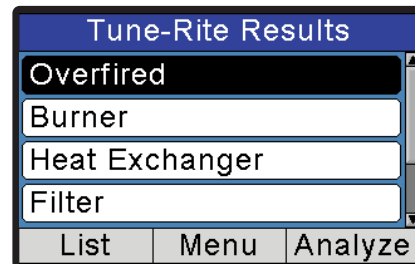
Fortunately, Bacharach has done the homework and programmed into the Tune-Rite™ software typical ranges for these parameters based on the fuel and equipment type. Those ranges can be seen in an easy-to-read bar graph format, along with the current values. Green, red and yellow indicators show whether the readings are in range (green), out of range (red), or unstable (yellow).
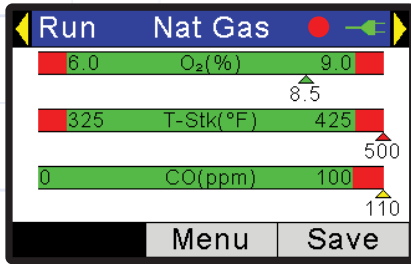
Using color-coded arrows, Tune-Rite™ shows which readings are in range (green), unstable (yellow) or out of range (red).

What If The Readings Are Out Of Range?

Combustion analysis results that are not in the expected ranges indicate there is a problem. Depending on the readings, it is possible to narrow down the potential causes of a problem. Tune-Rite™ software recommends possible ca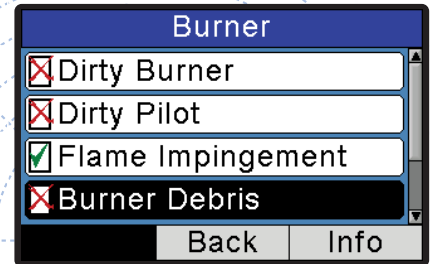uses for out-of-range measurements - and it will display a prioritized list of most likely potential issues to investigate. A drill-down into a "checklist" helps to keep track and record what has been inspected, adjusted, repaired or found to be an issue.

Tune-Rite™ narrows down potential causes when analysis readings fall beyond expected ranges.

Generate Credible, Comprehensive Service Reports

With today's informed homeowner, the importance of "proof of service" is critical for customer trust and loyalty. Homeowners may be skeptical until they see a detailed service record. Using "As Found" readings taken before you've performed any service and then recording the "As Left" readings, clearly documents the results of the adjustments or repairs that you've made.

Tune-Rite™ helps you do that with easy-to-store data, along with a checklist of issues that you have reviewed and possibly corrected. Stored records can be printed immediately as a comprehensive account of your work which presents a professional and credible record of everything that was done during the service call.

Using your saved "As Found" and "As Left" readings, Tune-Rite™ generates a comprehensive leave-behind service report showing the homeowner what was inspected, adjusted or repaired.
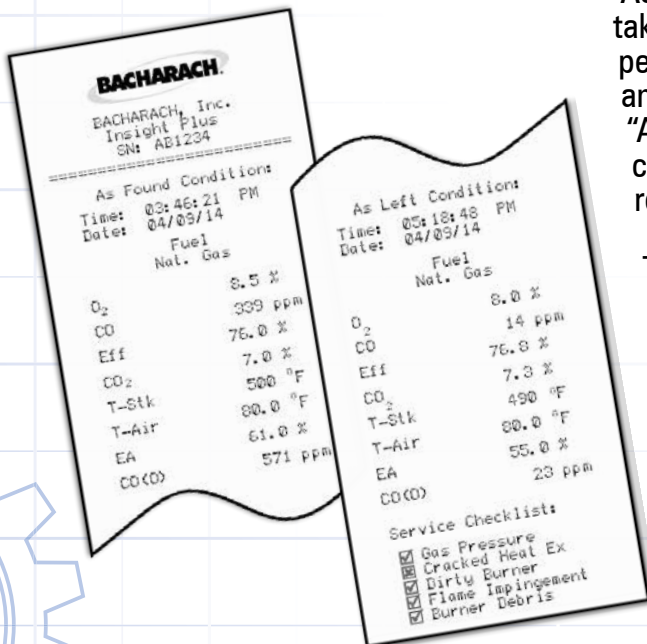
Fyrite® INSIGHT® Plus
Features & Benefits:

Five tools in ONE!
- Combustion and efficiency analyzer
- Room air CO test instrument
- Flue gas CO tester
- Dual channel digital thermometer
- Digital manometer

Full-Color Graphic LCD display
- Vibrant color screen displays easy-to-read real-time graphs, status and analysis results.

User diagnostics
- O_2 sensor life indication
- Calibration reminders

Reporting package (optional)
- Customize test reports with your company logo
- Upload custom fuels
- Software updates

Pre-calibrated B-Smart® CO sensor with integral NOx filter

Manual Zero/Auto-Zero (CO) feature

New! Tune-Rite™ On-Demand HVAC Assistant

New! High CO Shut-Off/Protection feature

New! 2-year or 3-year O_2 sensor warranty

B-SMART SENSORS

The B-Smart® Sensor Exchange Program allows users to replace pre-calibrated sensors in the field, eliminating the need to send the instrument in for calibration. With the B-Smart® Sensor Exchange Program, you receive factory-calibrated sensors, just plug them in and continue to use your instrument – there's no down time and it saves time and money.

Fyrite® INSIGHT® Plus Specifications

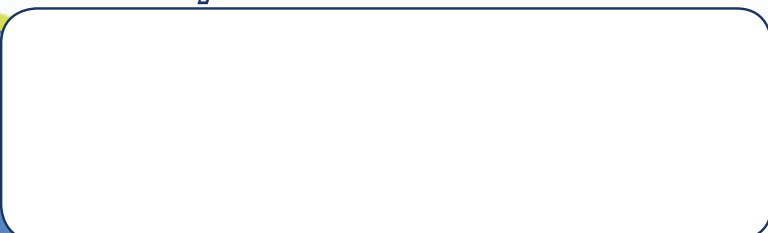|		
9 User-Selectable Fuels:	Natural Gas, Oil #2, Oil #4, Oil #6, Propane, Coal, Wood, Kerosene, B5 (+ 2 custom)	
Measurement Ranges:	Combustion Air/Ambient Air Temperature	-4 to 600° F (-20 to 316° C)
	Flue Gas Temperature	-4 to 1,202° F (-20 to 650° C)
	Oxygen (O_2)	0.0 to 20.9%
	Carbon Monoxide (CO)	0 to 4,000 ppm
	Draft / Differential Pressure	-40 to +40 INWC (100 mBar)
Calculated Ranges:	Combustion Efficiency	0.1 to 100%
	Carbon Dioxide (CO_2)	0.1 to a fuel dependent max. value in percent
	Carbon Monoxide (air free)	0 to 9,999 ppm
	Excess Air	0 to 250%
Dimensions:	8.0"H x 3.6"W x 2.3"D (20.3 cm x 9.1 cm x 5.8 cm)	
Weight:	16 oz. with batteries (0.45 kg)	
Power:	4 AA Alkaline batteries (incl.), Universal power adapter or USB cable Minimum of 15 hours typical battery life	
Warranty:	Instrument and sensors - 2 years + 2-year warranty on O_2 sensor Long-life O_2 sensor carries a 3-year warranty	
Approvals:	EN 50270 (CE mark), EN 50379	
Display Languages Available:	English, French, Spanish, Polish, German, Italian, Dutch, Danish	
Contents:	**Fyrite® INSIGHT® Plus**: instrument comes with probe, spare filters, protective rubber boot, 4 AA batteries, user manual and hard-carrying case. **Fyrite® INSIGHT® Plus w/Reporting Pkg. Kit:** instrument comes with probe, spare filters, protective rubber boot, IrDA printer, USB cable, Fyrite® User Software, 8 AA batteries, hard-carrying case	

Fyrite® INSIGHT® Plus Ordering Information

0024-8517	Fyrite® INSIGHT® Plus (with Long-Life O_2 sensor)
0024-8518	Fyrite® INSIGHT® Plus w/Reporting Pkg. Kit (with Long-Life O_2 sensor)
	*INSIGHT® Plus with Tune-Rite™ software is only available on North American models.

Fyrite® INSIGHT® Plus Accessories

0024-1492	Fyrite® INSIGHT® Plus Reporting Kit (with IrDA printer, USB cable & software)
0024-1400	IrDA Printer w/Disposable (AA) Batteries and Magnet
0024-1310	Printer Paper (5 rolls)
0024-1611	Universal AC Power Adapter
0104-1797	Thermocouple 10 ft. (combustion at temp.)
0104-1798	Thermocouple 1 in. (ambient air temp.)
0024-8242	Differential Pressure & Temperature Kit
0024-1591	Long-Life O_2 Replacement Sensor
0024-1593	CO Sensor (not calibrated)
0024-1616	B-Smart® CO Sensor (pre-calibrated)
0024-8257	Long-Life O_2 Sensor Upgrade Kit

Distributed By:

BACHARACH
The Measurable Difference

TÜV SÜD

MADE IN THE USA

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