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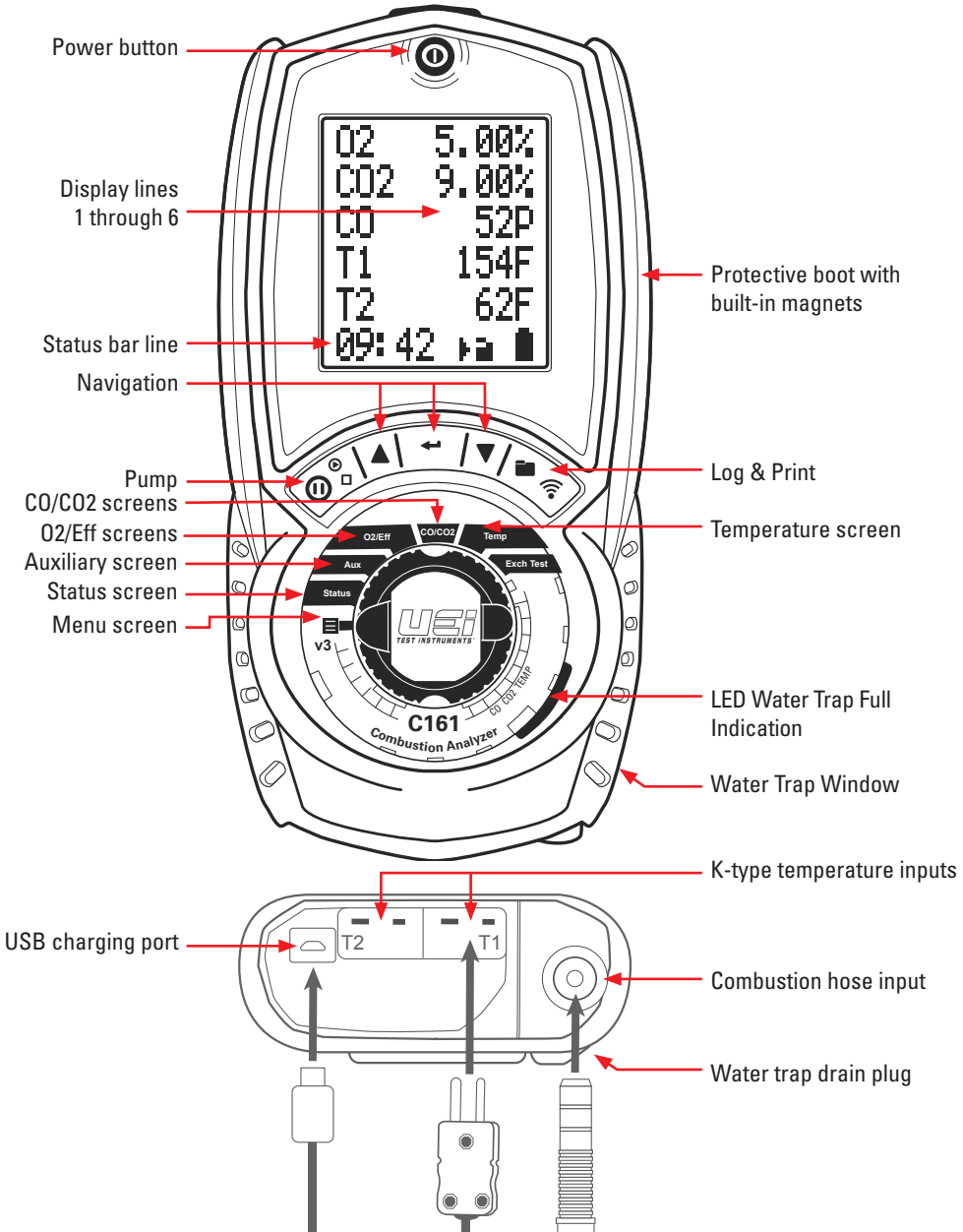


1-800-517-8431

5 Commonwealth Ave  
Woburn, MA 01801

TestEquipmentDepot.com

# C161 OVERVIEW



## MENU SCREEN - C161 START UP

Press **Ⓚ** "Power" Button for 2 seconds. The analyzer will perform a 60 second purge. This should be done in fresh air.

Rotate Selector Dial to **MENU** to set up or customize your settings.

Selected parameter are centered, highlighted with arrow icons on either side.

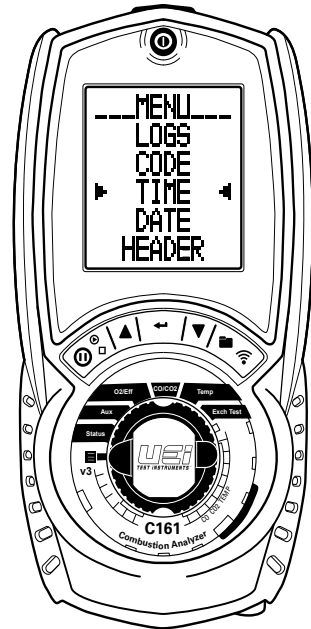
Use **▲** and **▼** buttons to scroll menu options.

Press **←** to select and edit a parameter.

Press **▲** and **▼** buttons to change contents of a field.

Press **←** button to scroll fields.

Press **←** to enter content and move to next field.



## STATUS SCREEN

Rotate Selector Dial to **STATUS** to view parameters.

### Selected Fuel

**Ti** = Ambient Temperature

**ATM** = Atmospheric Pressure (measured in mbar)

**CAL** = Days remaining until calibration

Press **▲** and **▼** buttons to scroll Status Bar options.

**Time, Pump Status, Battery Status**

**Fuel Type**

**Date**

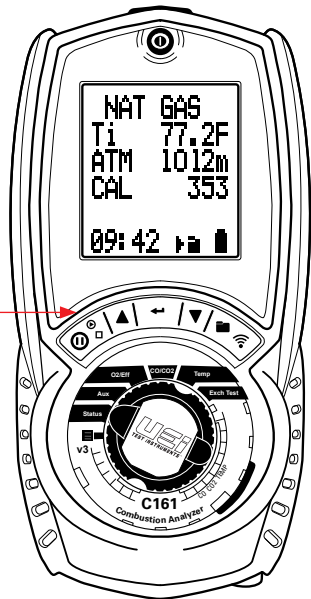
### Change Fuel Type in STATUS SCREEN

Press **▲** and **▼** buttons to the currently selected fuel.

Press and Hold **←** button until arrows indicate fuel edit mode is activated.

The **▲** and **▼** to scroll fuel types.

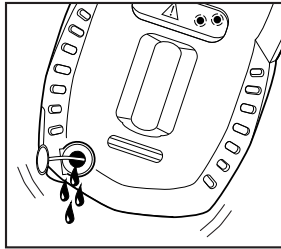
Press **←** to select desired fuel.



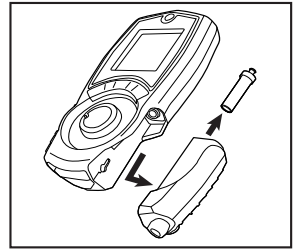
# BEFORE TESTING

## CHECKLIST

- Clean particle filter
- Water trap and probe line are free of water
- All hose and thermocouple connections are properly secured
- Water trap is fitted correctly
- Power on and zero
- Flue gas probe is sampling ambient FRESH air

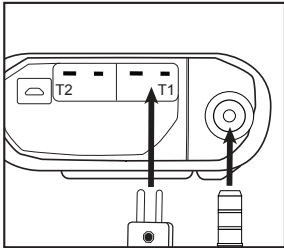


Remove the rubber boot and red drain plug. Allow the water to drain out. Re-insert the rubber plug and replace boot cover.

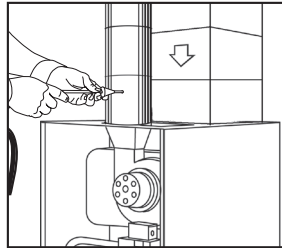


Remove protective rubber boot. Remove water trap from analyzer. Remove particle filter from spigot and replace with new one. Reattach trap and boot.

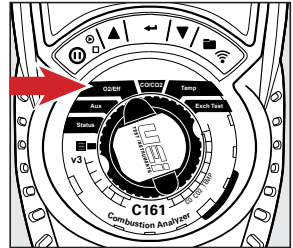
# COMBUSTION ANALYSIS



Insert flue probe into combustion input. Insert K-type temperature probe into input T1.

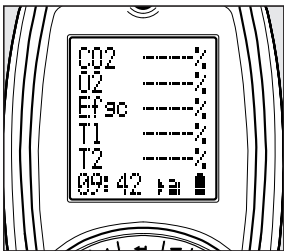


Insert flue probe into stack. Adjust cone so the probe tip is approximately at the center of the stack.

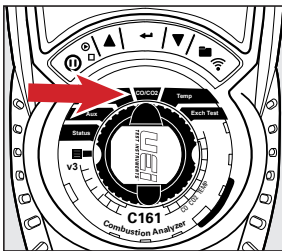


Rotate function rotary dial to O2/Eff for Test Screen 1 parameters.

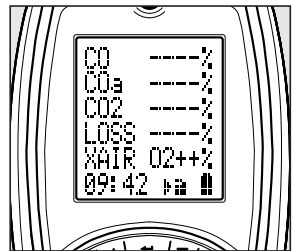
**NOTE:** If there is no hole, check with service and installation instructions of appliance for best testing method or check with your local authority on best practice



O2/Eff displays CO<sub>2</sub>, O<sub>2</sub>, Gross Efficiency, Flue temperature, Inlet temperature.

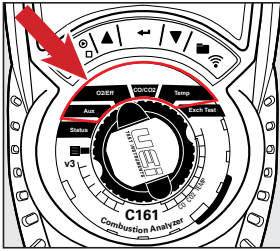


Rotate the function rotary dial to CO/CO<sub>2</sub> for Test Screen 2 parameters.

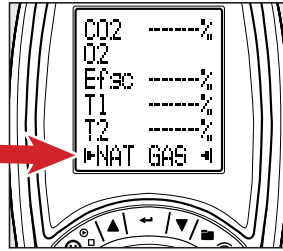


CO/CO<sub>2</sub> displays CO (ppm), Losses calculated, Excess air %. Make any adjustments needed for proper Combustion and wait for analyzer to display change in readings. (Repeat as necessary).

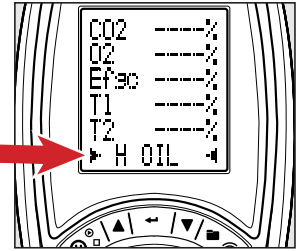
## CHANGE FUEL TYPE



Rotate the dial to either AUX, O2/Eff, CO/CO2 or TEMP setting.

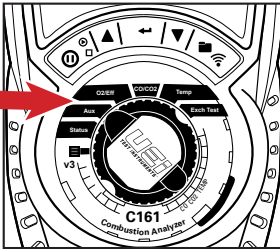


Press  $\blacktriangledown$  button until the Fuel Type displays on the Status Bar.  
Press and Hold  $\leftarrow$  until two arrow icons display.

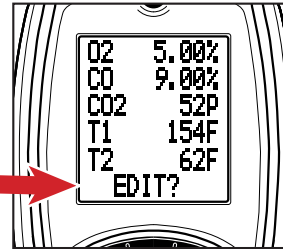


Press  $\blacktriangle$  and  $\blacktriangledown$  buttons to scroll fuel selections.  
Press  $\leftarrow$  to select fuel.

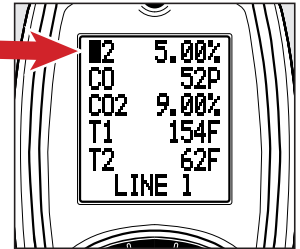
## AUXILIARY SCREEN



When performing a combustion Test, Rotate function rotary dial to AUX to view the Auxiliary Test Screen's custom parameters.



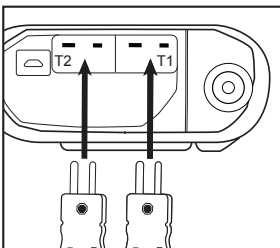
AUX displays 5 lines of editable parameters. To edit line values Press  $\blacktriangledown$  button until **Edit?** displays on the Status Bar.  
Press and Hold  $\leftarrow$  until the Status Bar reads **LINE 1**.



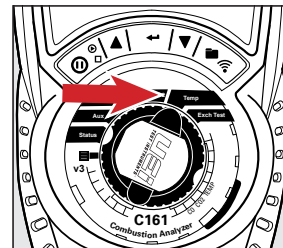
Press  $\blacktriangle$  and  $\blacktriangledown$  buttons to scroll parameter selections.  
Press  $\leftarrow$  to select a parameter and advance to the next Line.  
Continue until cursor is back to Status Bar to exit.

The AUX screen allows you to assign any of the following parameters on any display line.  
O2, CO, Display Fuel Type, CAL, XAIR, LOSS, Efgc, ATM, Ti,  $\Delta T$ , T2, T1, CO2, COa, or COn

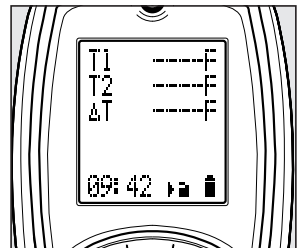
## TEMPERATURE TEST



Insert K-type temperature probes into input T1 and T2.

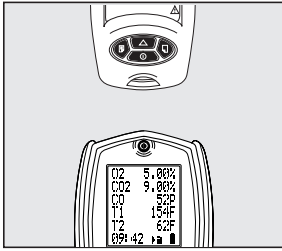


Rotate function rotary dial to TEMP for Temperature Test Screen.

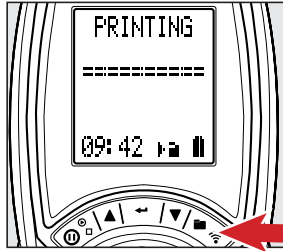


TEMP displays T1, T2 and Differential Temperature.

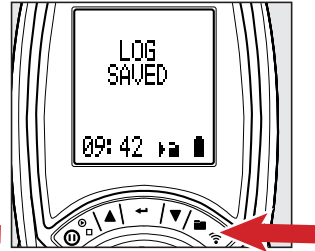
## PRINTING & LOGGING



To Print: Align printer (sold separately) above Analyzer.

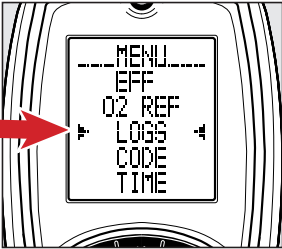


During testing, Press to start printing.  
Press again to abort.

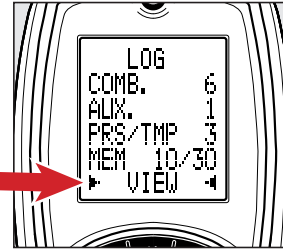


To Log: During testing, Press and Hold to log a report.  
To view these Logs, see **View Saved Logs** section.

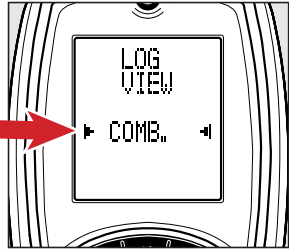
## VIEW SAVED LOGS



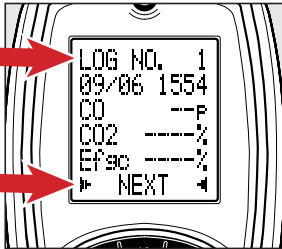
Rotate the dial to MENU.  
Press button until the LOGS is selected between two arrow icons. Press to select.



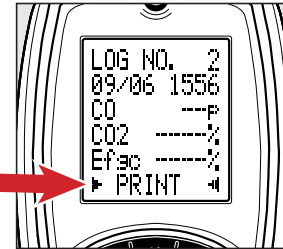
Screen displays all saved LOGS.  
With VIEW selected in the Status Bar, Press to select.



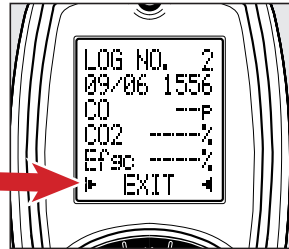
Press and buttons to scroll Test Report categories.  
Press to select a category.



Line 1 displays the LOG number on screen.  
To view another LOG, Press and buttons to NEXT.  
Press to advance to next log.  
Repeat until you reach desired LOG.



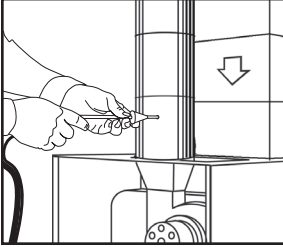
To print the LOG, Press and buttons until PRINT is selected between two arrow icons. Press to select to start printing.



To EXIT, Press and buttons until EXIT is selected between two arrow icons. Press to EXIT screen.  
Repeat until return to MENU screen.

## POST TESTING

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Remove the probe from the flue and allow analyzer to purge with fresh air until readings return to zero. O<sub>2</sub> to 20.9%, CO to Zero  
**CAUTION:** probe tip will be HOT.

### POWERING OFF

When you power off the C161, there is a 10 second purge.



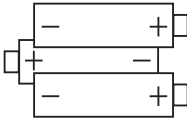
### CAUTION

Make sure you do not exceed the analyzer's operating specifications.

- Do not exceed the flue probes maximum temperature (1112°F)
- Do not exceed the analyzer's internal temperature range 112°F (50°C)
- Do not put the analyzer on a hot surface
- Do not exceed the water trap's level
- Do not let the particle filter become dirty and blocked

## BATTERIES

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The analyzer is fitted with 3 (AA) size rechargeable batteries. Observe correct polarity when replacing.

**Always check operation immediately after battery replacement.**

Do not leave batteries in unit for extended periods of non-use.



### WARNING

**Do not recharge with Alkaline batteries fitted. Alkaline batteries are not rechargeable. Attempting to recharge alkaline batteries may result in product damage and create a fire risk.**

Time and Date will need to be reset after changing batteries.

Always dispose batteries using approved disposal methods that protect the environment.



**SCAN THIS CODE**

## WARRANTY

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The C161 combustion analyzer is warranted for one year including sensors. If within the warranty period your instrument should become inoperative from such defects, the unit will be repaired or replaced at UEi's option. This warranty covers normal use and does not cover damage which occurs in shipment or failure which results from alteration, tampering, accident, misuse, abuse, neglect or improper maintenance (calibration). Batteries and consequential damage resulting from failed batteries are not covered by warranty. Any implied warranties, including but not limited to implied warranties of merchantability and fitness for a particular purpose, are limited to the express warranty. UEi shall not be liable for loss of use of the instrument or other incidental or consequential damages, expenses, or economic loss, or for any claim or claims for such damage, expenses or economic loss. A purchase receipt or other proof of original purchase date will be required before warranty repairs will be rendered. Instruments out of warranty will be repaired (when repairable) for a service charge. Warranty only covers hardware and does not extend to software applications. Contact UEi for specific warranty and service information.

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

# ANNUAL RECERTIFICATION SERVICES



Complete care for your C160 series combustion analyzer.

When you:

***Request Recertification or Service Online  
Within 1 Year of Purchase or Service***

BACKED BY



**10**  
YEAR  
WARRANTY



UEi will:

**10 Year Warranty:** All UEi combustion analyzers have a standard 1-year warranty. Each recertification extends the warranty for 1 more year for up to **10 years** from the date of purchase.

*Contractors who book recertification of a C160 series analyzer within 12 months from either the date of purchase or the date of the last recertification will receive reduced service pricing<sup>1</sup> that lowers the cost of ownership and 2 additional benefits:*

**Same Day Service:** All qualifying analyzers received for recertification through UEi Service+ are returned on the same business day.\*

**Free Shipping:** UEi Service+ offers free shipping both to and from our service center. When customers book their recertification, they receive a prepaid UPS Ground shipping label.

\*Analyzers that include the additional NO (Nitric Oxide) sensor requires 48-hour turnaround.

## Register Online

Registering you analyzer online is quick and easy. Just log in or setup an account, it only takes a couple of minutes. Once logged in you can register you analyzer by providing some product information and uploading a proof-of-purchase.

When it's time to request recertification, just log into your account, select the analyzer, select the service and place your order.