7. COMBUSTION ANALYSIS AUTO MODE

QUICK GUIDE CA502

YELLOW JACKET®

Screen: MENU
11/12/17 10:00

MENU
▶Measurements
 Memory
 Configuration
 Diagnostic
 Info service

Screen: MEASUREMENTS
11/12/17 10:00

MEASUREMENTS
▶Comb. analysis
 Draft
 CO air
 Pressure
 Tightness test

Screen: AN. SETTINGS
11/12/17 10:00

AN. SETTINGS
▶Mode   AUTO
 Fuel
         Natural gas
 Interval   1 s
 Memory   1/5

| Start | |

Screen: ANALYSIS [1/3]
11/12/17 10:00

ANALYSIS [1/3]
Tf   190.1 C
Ta   15.4 C
O2   4.2 %
CO   23 ppm
CO2   2.9 %
COr   ---- p

| Pause | 1/3 1 |

Start

Automatically saves the first sample when the set interval expires, and so on until the third sample.

Screen: AVERAGE [1/3]
11/12/17 10:00

AVERAGE [1/3]
Tf   190.1 C
Ta   15.4 C
O2   4.2 %
CO   23 ppm
CO2   2.9 %
COr   ---- p

| | Print |

Print

Screen: PRINT
11/12/17 10:00

PRINT
 Average
▶Copy number   1
 Printer   OFF
 QR Code   ON
 Pairing BT

| | Print |

Print

Scan the QR code using the YJ Combustion APP to download the acquired data related to the average analyses and the additional measures, if performed.

For additional information, please scan the QR code to the left for the digital CA502 user manual or go to: **www.yellowjacket.com**.

Visit the app store to download the free **"YJ Combustion" App**.

*Download on the App Store*
GET IT ON Google Play
COMBUSTION

FEATURES:
- Combustion analysis in Auto or Manual Mode
- Calculation of stack heat loss and efficiency
- CO environment measurement
- Measuring differential pressure
- Draft measurement
- Pressure measurement in the gas supply pipe
- Generation and display of a QR Code for downloading the data of the analyses
- Possibility to print on ticket the analyses and the performed measures with a Bluetooth® printer (optional)

⚠ The magnets in the back of the instrument can damage credit cards, hard drives, mechanical watches, pacemakers, defibrillators and other devices proven sensitive to magnetic fields. It is recommended to keep the instrument at a distance of at least 10" away from any of these devices.
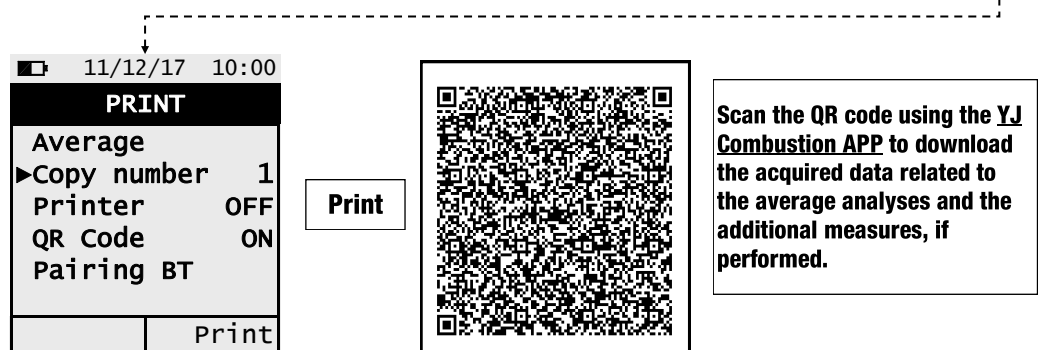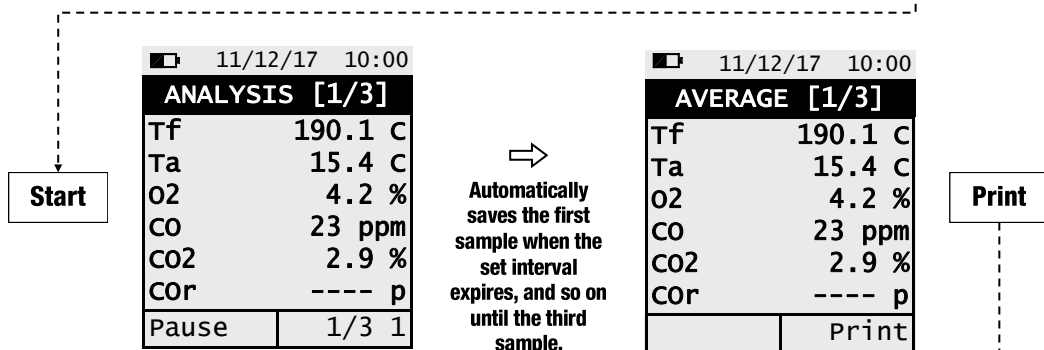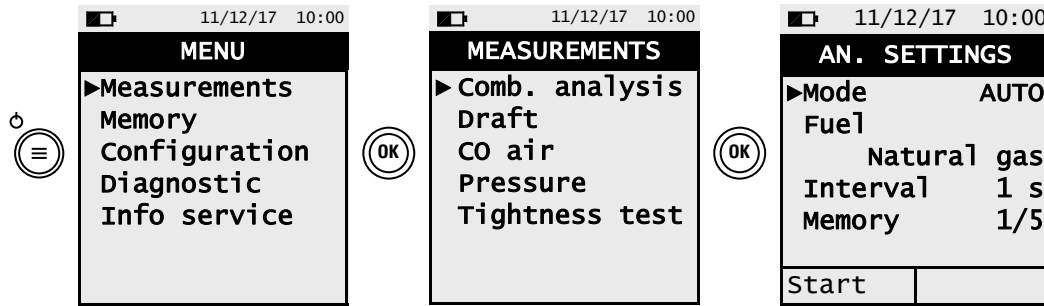
KEYBOARD FUNCTIONS

KEYS	FUNCTION
∧ ∧	Activate the context keys shown on the display.
⏻ ≡	Turns on and off the instrument. - If pressed briefly, accesses the instrument menu. - If pressed for at least 2 seconds, turns off the instrument.
ESC	Exits the current screen.
OK	Confirm settings.
∧ < > ∨	Select and/or Modify.

CONTEXT KEYS

CONTEXT KEY	FUNCTION
Save	Saves the data in the instrument memory.
Print	Display the printing options screen and consequently execute it.
Delete	From the main screen erase the memory. From every measure or analysis screen, erase the single data.
Keep	Proceed with the combustion analysis.
Repeat	Repeat the autozero phase.

⚠ - Before starting the combustion analysis, select the utilized fuel.
- If it is desired to print the ticket of the average analyses and the additional measures enable the printer in the "PRINT" menu.
- If it is desired to print the complete analysis and the performed measures, it will be necessary to enter the memory menu "MEMORY," select the related memory number and push the "PRINT" interactive function button.
- To download the data of the single performed analyses, it's necessary to enter the "MEMORY" menu, select the memory number used to save the analyses and the measures and select one at a time the single rows.

1. USING THE FLUE GAS ANALYZER

⚠️
- Be sure all connections are tight to assure accurate sampling.
- When conducting measurements, the water trap/filter assembly MUST be in a VERTICAL position to prevent damage from moisture & particles to sensors.
- **When testing is completed, <u>always drain</u> the water trap.**

P/N 68613

P/N 68622   P/N 68620
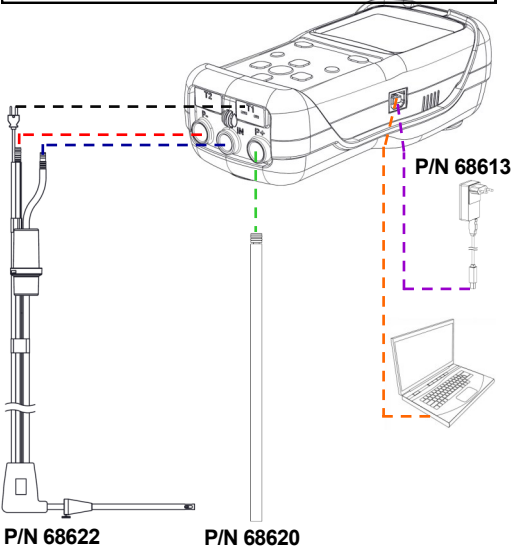
P/N	DESCRIPTION
68601	Combustion Analyzer (CA502)
68602	Combustion Analyzer with Printer (CA502P)
68611	Combustion Analyzer Printer
OPTIONAL ACCESSORY	
68620	Combustion Analyzer Manometer Hose
REPLACEMENT PARTS	
68612	Combustion Analyzer Filters 5 PK
68613	Combustion Analyzer AC Charger Kit
68614	Combustion Analyzer USB Cable for Charge
68615	Combustion Analyzer Carrying Case
68616	Combustion Analyzer Printer Paper 5 PK
68617	Combustion Analyzer Water Trap ASM
68618	Combustion Analyzer O-Ring for Water Trap
68619	Combustion Analyzer O2 Sensor
68621	Combustion Analyzer POSG Cone for Probe
68622	Combustion Analyzer Flue Gas Probe
68623	Combustion Analyzer Battery
68624	Combustion Analyzer Rubber Probe Cover

2. ON / OFF

⚠️
- Before switching on the instrument, insert the Tc-K connector of the smoke probe to the instrument for primary air acquisition.
- Perform the Zero phase of the instrument in fresh clean air.
- When the Zero phase is over, push the button related to the interactive function "Keep" to store the acquired temperature value.

⏻ ≡ ⟹

Keep pressed for a few seconds

YELLOW JACKET
CA-502
S.N.: 61005965
FW rev.: 1.37

```
▪️  11/12/17  10:00
      AUTOZERO

         60

      Primary air
      acquisition
```

```
▪️  11/12/17  10:00
      AUTOZERO
      Primary air
      acquisition
       T: 21.5°C


   Keep      Repeat
```

3. MEMORY

Menu→Memory

```
◼️  11/12/17  10:00
      MEMORY
►Memory        1/5
 Status       Full
 Time        09:50
 Date     11/12/17

Select
```

Procedure to set the memory number where it will be possible to store the analyses/measures

OK   ∧ ∨   OK

```
◼️  11/12/17  10:00
      MEMORY
►Memory        1/5
 Status       Full
 Time        09:50
 Date     11/12/17

Select
```

Procedure to visualize the content of a memory

Select

4. DRAFT MEASUREMENT

Menu→Measurements→Draft

```
◼️  11/12/17  10:00
      DRAFT
 Inlet         P
-
 Draft       ---
P
►Zero

Save      Print
```

<u>Procedure to Perform the Draft Measurement:</u>
- Perform the Zero phase of the pressure sensor: Select "Zero" => push.
- Connect the pressure output of the probe with the P- inlet of the instrument.
- Insert the tip of the smoke probe in the stack.

5. CO AIR MEASUREMENT

Menu→Measurements→CO air

```
◼️  11/12/17  10:00
      CO AIR
 CO        1412 P
 CO Max    1413 P



Save      Print
```

⚠️ **WARNING**
It is compulsory to perform the Zero phase in clean air, so that the environment CO measurement results correct. It is advisable to turn on the instrument and wait for the Zero phase completion outside the area where the test is being performed.

6. PRINT

Menu→Configuration→Print

```
◼️  11/12/17  10:00
      PRINT
►Copy number     1
 Printer        IR
 Mode         fast
 QR Code        ON
 Pairing BT
```

Ticket Print
Set the parameter "Copy number"
Set the parameter "printer" on BT or IR
<u>Only if the printer is set on IR:</u>
Set the parameter "Mode" on fast or slow
<u>Only if the printer is set on BT:</u>
Associate the instrument to the BT printer through the parameter Pairing BT (only for the first time)

QR Code Generation
Set the parameter "QR code" on ON