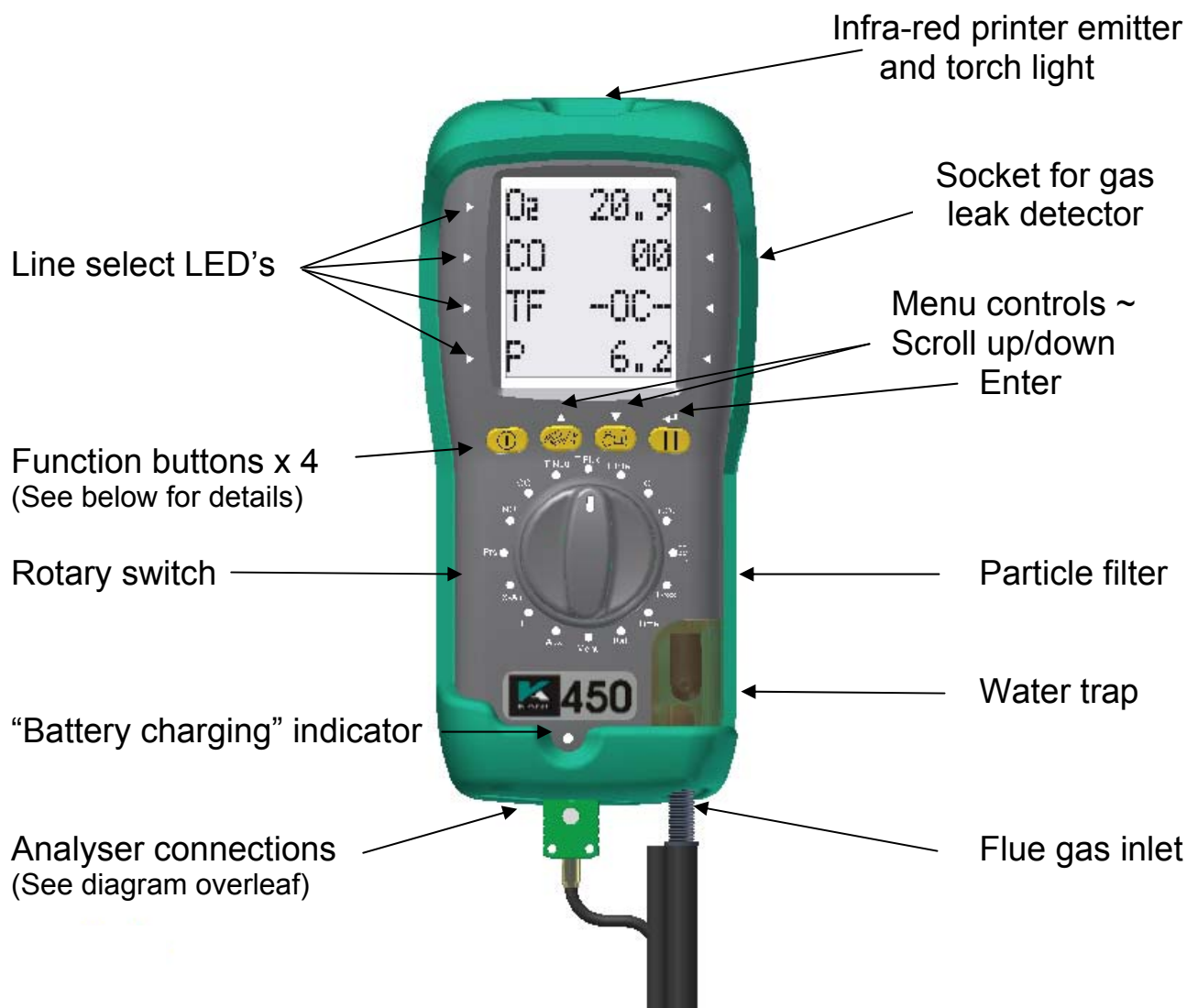


KANE450 QUICK REFERENCE GUIDE

INSTRUMENT FEATURES AND KEYPAD



ON / OFF

Turns the analyser ON / OFF



PUMP / CAL PRESSURE

Turns the pump ON / OFF
Press for 2+ seconds to zero the pressure sensor



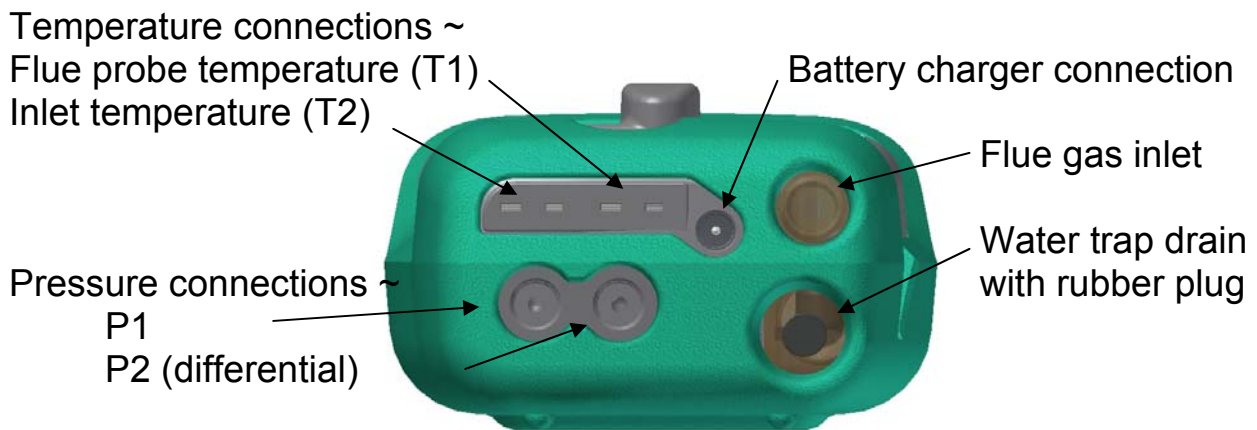
PRINT / BACKLIGHT

Press to print "live" or "frozen" data. Press again to abort.
Press for 2+ seconds to switch backlight & torch ON / OFF



LINE SELECT / FREEZE

Press to select active line on display as indicated by LED's
Press for 2 seconds to "HOLD"
Press longer to "LOG"



BEFORE USING ANY ANALYSER CHECK THAT:

- Calibration date has not expired
- Particle filter is not dirty inside
- Water trap and flue probe hose are empty of water
- Water trap is fitted correctly to the instrument including the drain plug
- Flue probe hose is connected properly to the flue gas inlet
- Flue probe temperature plug is connected into T1 connection

Please read the Safety Warnings in the User Manual

USING THE ANALYSER

With the flue probe in fresh air at the same temperature as the boiler inlet air press **I**. The analyser will auto-calibrate for 20 to 30 seconds and then a set of readings will be displayed. In fresh air the O₂ reading should be 20.9% \pm 0.1% and the CO reading should be zero. Check the battery status by selecting "Bat" on the rotary switch and select the correct fuel via the "menu" – See Using the Menu.

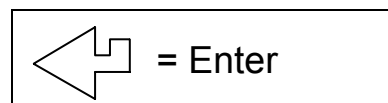
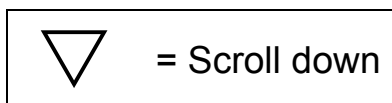
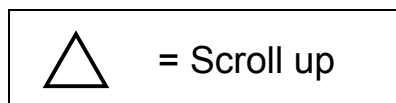
Insert the tip of the probe into the centre of the flue. After approximately 60 seconds the readings should stabilise. A printout can be produced if required by pressing **Print/Star**.

SETTING UP THE DISPLAY

Any four parameters can be displayed simultaneously. Press **Line Select** to move the line select LED to the line you wish to change, then use the rotary switch to select the new parameter you require. To change other lines just repeat the procedure.

USING THE MENU

Select "Menu" on the rotary switch and navigate using the function buttons...



MAIN MENU	SUB MENU	OPTIONS / COMMENTS
SETUP	SET FUEL	NAT GAS, L OIL, PROPANE, BUTANE, LPG, PELLETS
	N ← C → G	Select the combustion efficiency calculation required ~ N = nett eff, G = gross eff, C = for condensing boilers
	SET TIME	Uses "Military" time. 7am = 07:00, 7pm = 19:00
	SET DATE	UK users, select DD-MM-YY then set the date
	C ← → F	°C, °F
	PPM ← → MG	PPM, MG/M ³ (UK users should set to PPM)
	O2 REF	NO, YES (UK users should set to NO)
	LANGUAGE	various languages
PRESSURE	SMOOTH	OFF = fast response. ON = slow response
	RESOLVE	HIGH, LOW, selects the number of decimal places
	PS UNITS	mBar, mmH ₂ O, Pa, kPa, PSI, mmHg, hPa, InH ₂ O
STORE	VIEW	View logged readings
	AUTO STO	See KANE 450 REPORTS page
	DEL ALL	NO, YES
REPORT		See KANE 450 REPORTS page
SCREEN	CONTRAST	Factory setting is 04
	AUX	UK users normally set to display the current fuel type
	HEADER	Sets printout header, 2lines, 20 characters per line
SERVICE	CODE	Leave set at "0000"

To EXIT the MENU at any time simply move the rotary switch to any position other than "Menu". Any changes that have not been "entered" will be ignored.

KANE450 REPORTS

AUTO STORE ~ (stores up to 255 tests)

From the menu select STORE, AUTO STORE, YES.

Set the time interval (in seconds) between logs.

The analyser starts logging as soon as you exit the menu and stops when you select STORE, AUTO STORE, NO.

To view the results select STORE, VIEW, then enter the log number required. Use the rotary dial and line selector to view the readings as normal. Use scroll up/down to view other log numbers.

To delete select DEL ALL, YES

TEST	11
DATE	03/08/05
TIME	16:27:32
FUEL	NATU GAS
O2 %	9.3
CO2 %	6.6
CO ppm	21
FLUE °C	148.6
INLT °C	-OC-
NETT °C	125.8
EFF (N)	92.5
PRS mBAR	0.001
LOSSES %	7.5
XAIR %	80.1
CO/CO2	0.003

etc.

PRESSURE ~ (stores up to 8 tests)

From the menu select REPORT, PRESSURE, TEST.

Press the "Pump" key to zero the pressure sensor.

CONNECT the pressure hose to pressure connection P1.

Press "Enter" to start the 1 minute stabilization period.

Press "Enter" again to start the 2 minute tightness test.

To view the results select REPORT, PRESSURE, VIEW.

Use scroll up/down to view other log numbers.

To exit press "Enter". To delete select DEL ALL, YES

TIGHTNESS TEST

LOG	05
TIME	15:40 03/08/05
PRS_1 mBAR	20.110
PRS_2 mBAR	19.998
DURATION MINS	3:00

.....
Customer

.....
Appliance

etc.

TEMPERATURE ~ (stores up to 8 tests)

From the menu select REPORT, TEMP, TEST.

CONNECT the thermocouples, "flow" to Tf, "return" to Ti.

Press "Enter" once to view readings and once more to log.

To view the results select REPORT, TEMP, VIEW.

Use scroll up/down to view other log numbers.

To exit press "Enter". To delete select DEL ALL, YES

TEMP TEST

LOG	02
TIME	16:37 03/08/05
FLOW °C	48.3
RETURN °C	39.7
NETT °C	8.6

etc.

ROOM CO ~ (stores up to 8 tests)

From the menu select REPORT, ROOM CO, TEST.

The pump will run and the analyser will log the CO reading every minute for 15 minutes.

To view the results select REPORT, ROOM CO, VIEW.

Use scroll up/down to view other log numbers.

Use "Enter" to view each reading within the ROOM CO TEST

To exit use rotary switch. To delete select DEL ALL, YES

ROOM CO TEST

LOG	01
TIME	09:20 04/08/05
TEST	CO ppm
0	00
1	02
14	02
15	01
MAXIMUM CO	02

etc.

To print a displayed REPORT hold the "Print" key for 2+ seconds.

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