Smart Flue Gas Analyser

DC711

Contents

Introduction

Thank you for purchasing TPI brand products. The DC711 Flue Gas Analyser is a state of the art, easy to use analyser designed not only to display and calculate the required readings from a flue but also to cover most of the other measurements associated with combustion.

If your DC711 model is compatible with the FREE, subscription FREE, TPI View app., then please download that by scanning the QR Code below: -

The FREE App.

Download on the App Store

GET IT ON Google Play

You can connect your View enabled DC711 by searching & choosing it from the List and the DC711 will enter Remote Control Mode.

Once connected to TPI View you can control your View enabled DC711 on the app, remotely, and take advantage of all the enhanced features the View app has to offer such as Job Management, GPS tagged Reports and the ability to e-mail and share the reports.

General Overview

The following guidelines will help prevent damage to your sensors:

Always use the mini pump filter when testing flue gases. Periodically check and replace the mini pump filter as needed.
Always make sure the in-line filter / water trap is installed properly. Periodically check and replace the in-line filter as needed.
Always remove water or condensation from the inside of the in-line filter / water trap assembly prior to performing tests.
Always use the optional oil filter when performing tests on oil burning equipment unless you are using the DC711 with an NO sensor fitted. Do not use the oil filter on the DC711 with NO sensor fitted because the oil filter will filter out Nitric Oxide (NO).
Never over saturate your sensors by performing tests on equipment with gas levels beyond the capability of your analyser.
Always keep the water trap / filter assembly clean & dry and replace the internal filter as necessary.

This manual will guide you through the functions of the DC711 which will give you many years of reliable service.

Your DC711 Flue Gas Analyser comes complete with the following standard accessories, as a minimum: -

- DC711 Analyser
- Soft Carrying Case - 1 each
- Flue Temperature Sampling Probe - 1 each
- In-Line Filter / Water Trap installed on Flue probe - 1 each
- Disc water filter installed in water trap - 1 each
- Spare In-Line Filter - 1 each
- Ambient Air Temperature Probe - 1 each
- USB “C” Charger Cable - 1 each
- Mini Pump Protection Filter Assembly - 1 each
- Instruction Manual

Kit options & Upgrades

In addition to the standard accessories there are various kit options and upgrades available such as NO sensor addition or replacing the standard CO sensor with a HIGH CO sensor, as well as a Bluetooth Printer and many more essential accessories and consumables.

These can be viewed by visiting your local regions websites listed below: -

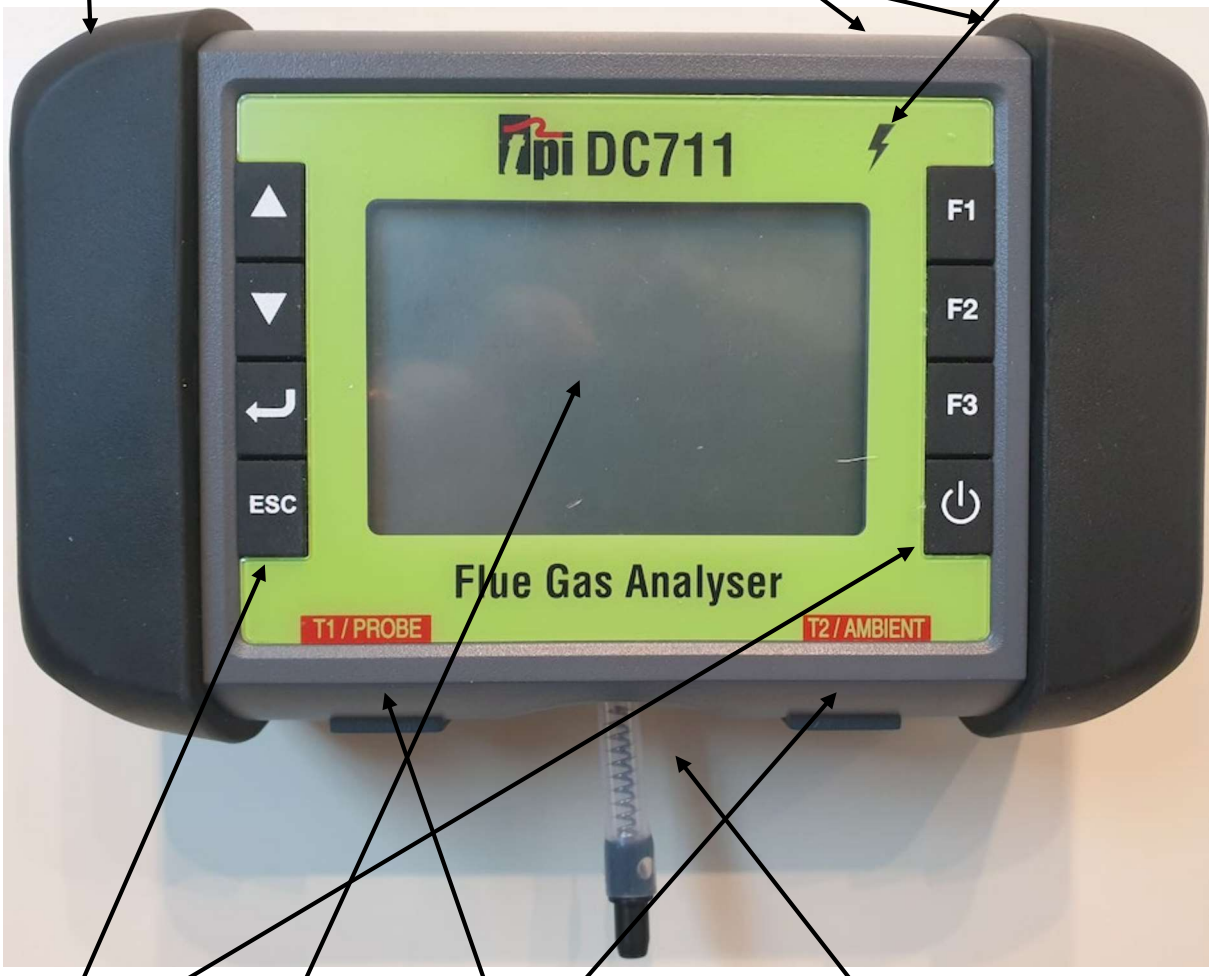
https://www.tpieurope.com/flue-gas-analysers/dc711-flue-gas-analyser/

https://www.testproductsintl.com/gas-detection/combustion-efficiency-analyzers/

https://www.tpicanada.com/gas-detection/combustion-efficiency-analyzers/

Instrument Overview

Front View



Instrument Overview

Soft Keys

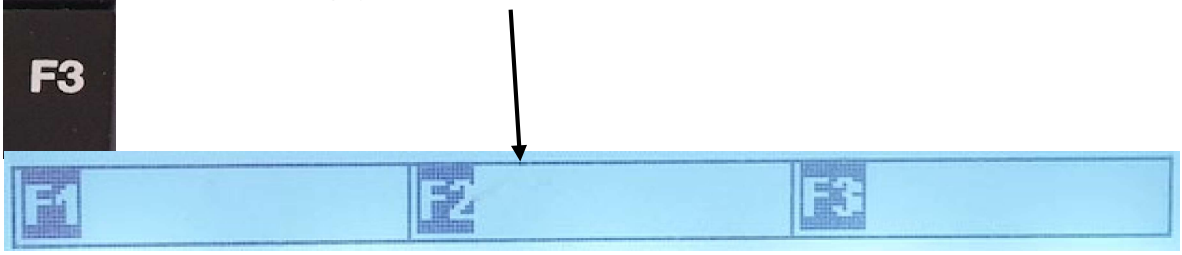
On/Off Key used to turn the analyser on and off
PLEASE NOTE: If gas is present in the analyser, then the Off function may be disabled to avoid sensor saturation.

Up & Down Arrow Keys used to move to up and down any highlightable lists on the screen.

Enter Key used to select a highlighted menu option and enter that function.

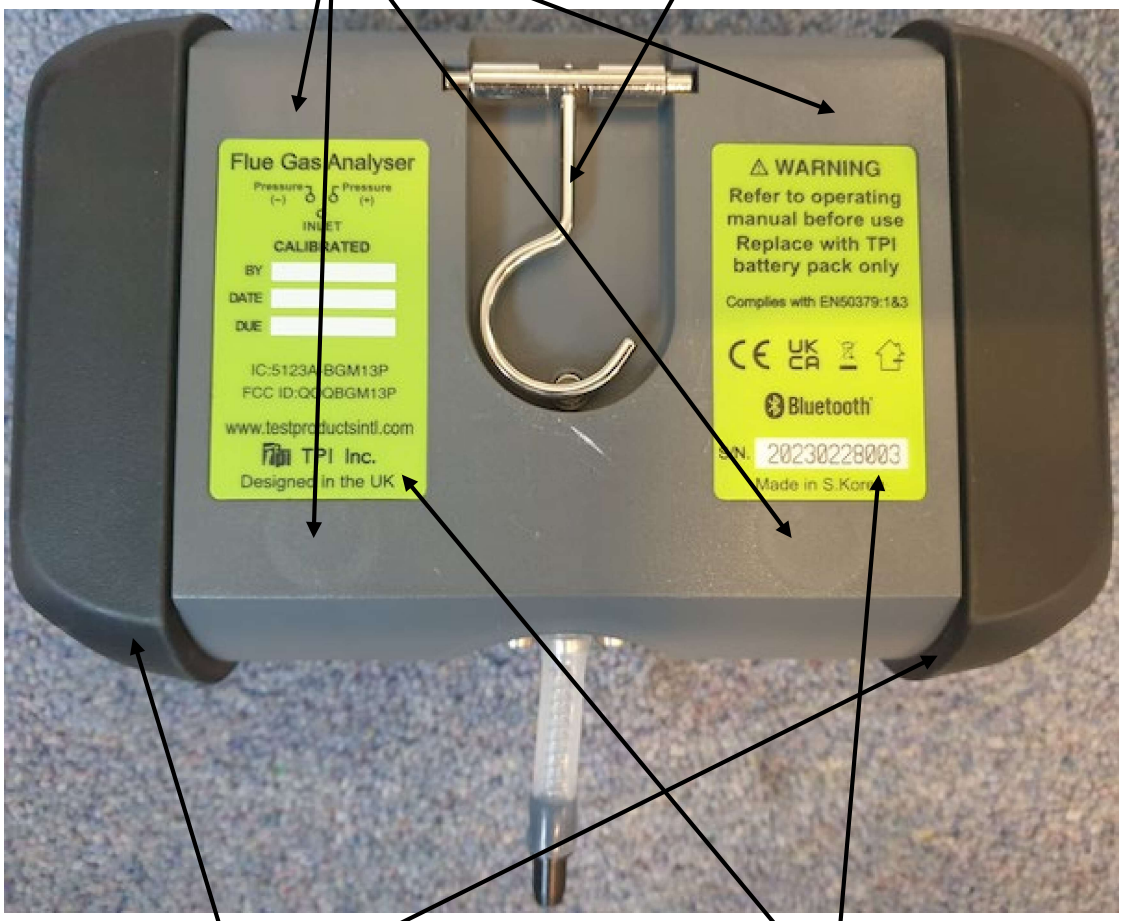
Escape key is used to back out of various functions.

Function Keys actions will change depending on the screen the DC711 is in. These will be displayed at the bottom of the screen and change accordingly.



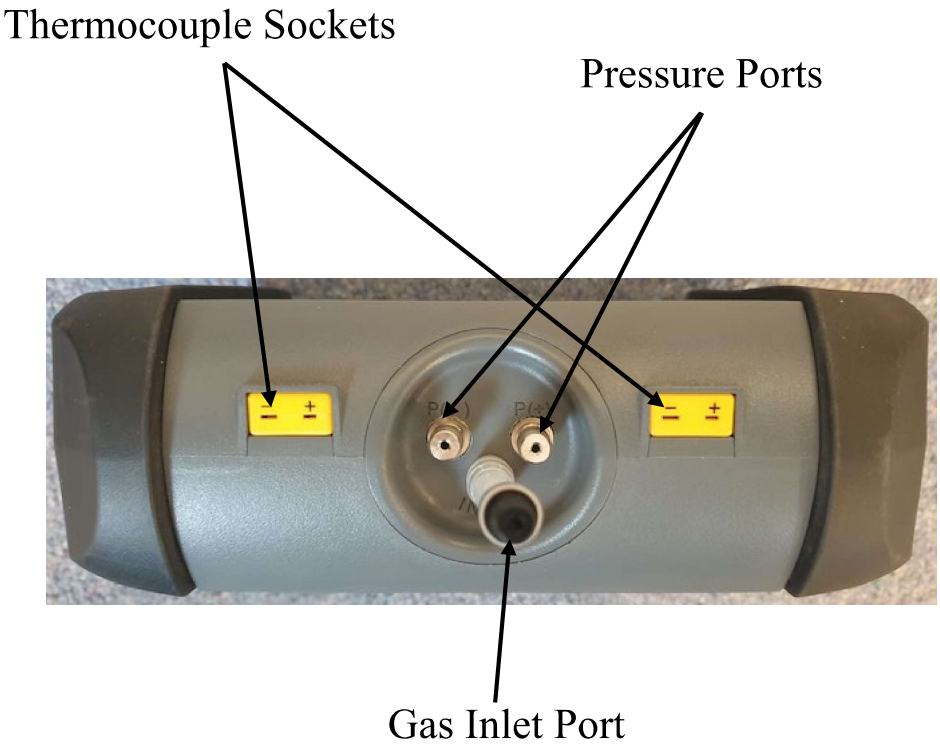
Instrument Overview

Back View

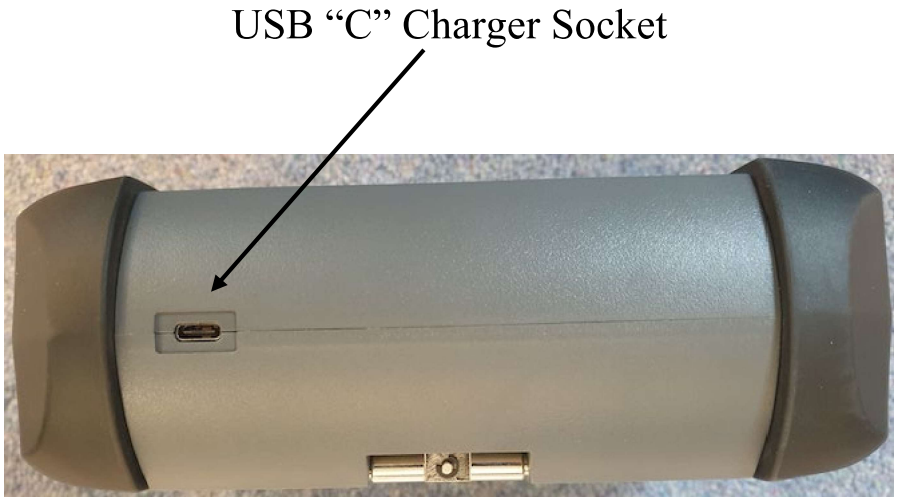


Instrument Overview

Bottom View



Top View



Basic Analyser Functions

Charging

Plug the USB “C” cable into the USB “C” charger socket.
While charging the charge indicator light will illuminate RED

Once charging is complete the charge indicator light will illuminate GREEN

Turning ON

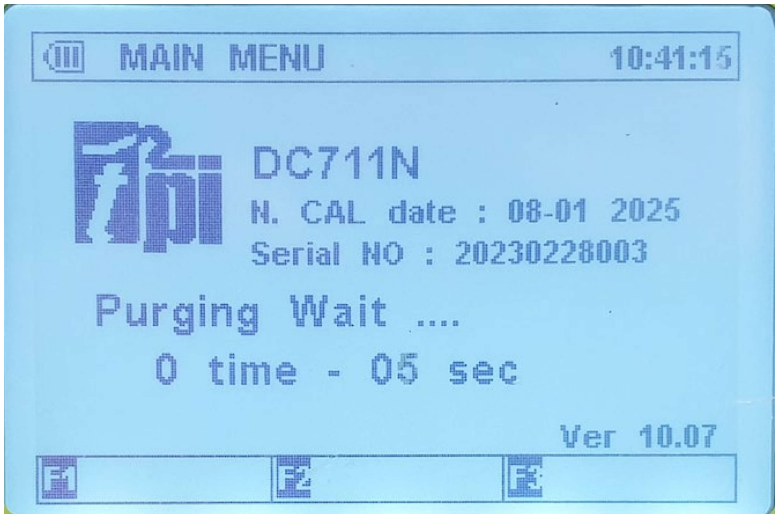
***Always**: - Before turning on please ensure that **ONLY** the in-line pump protection filter is connected to the Gas Sample Port. This in-line pump protection filter **MUST** be fitted to the instrument at all times!!*

Please **DO NOT** have the gas sampling probe attached at this point. The gas sampling probe needs be fitted to the DC711 only at the point where combustion analysis begins.

Press and hold the ON/OFF key down for approximately 3 seconds. The DC711 will beep and the initial start-up screen will be displayed.

The initial start-up screen displays the following information:

- Battery Level
- Date & Time
- Model
- Next Calibration Due Date
- Serial Number
- Firmware Version



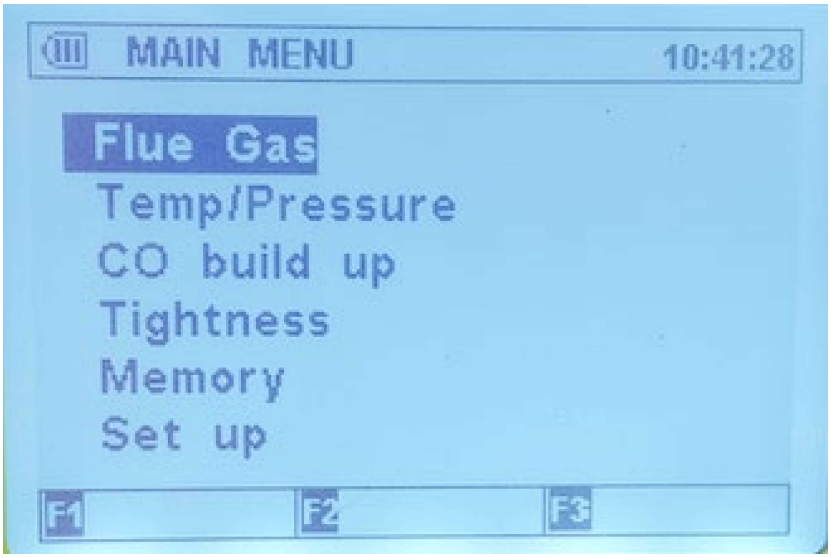
Calibration Due Date Messages

As the Annual Next Calibration Due Date Approaches or is Overdue one of the following screens may appear: -

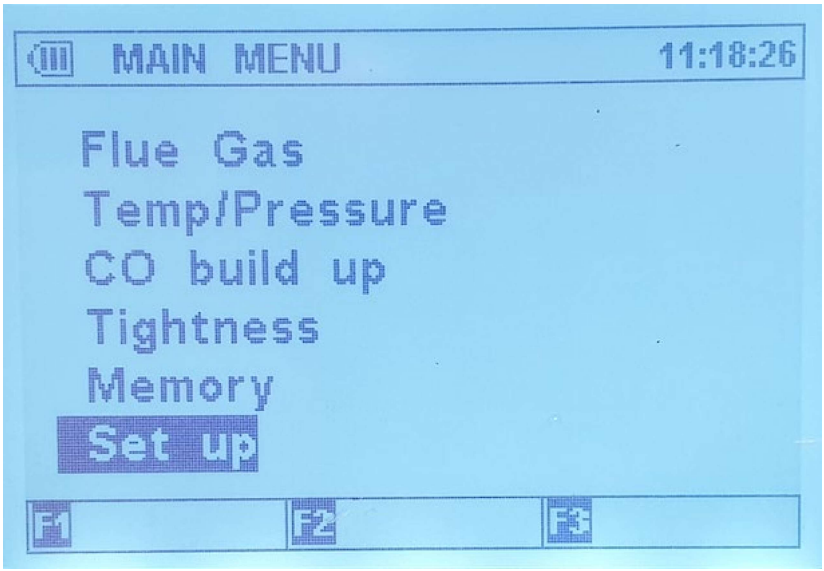
Choosing “Next” will move you onto the Main Menu Screen as displayed below.
Please Note: In the UK, it is a requirement of BS7967 that an FGA is within calibration and used in conjunction with the manufacturer’s instructions therefore it is NOT recommended that “Next” be chosen by the user if the Calibration is Overdue. Doing so will contravene the requirements of BS7967.

Main Menu

Once the Purge Period has elapsed or “Skip” is pressed the Main Menu will be displayed.



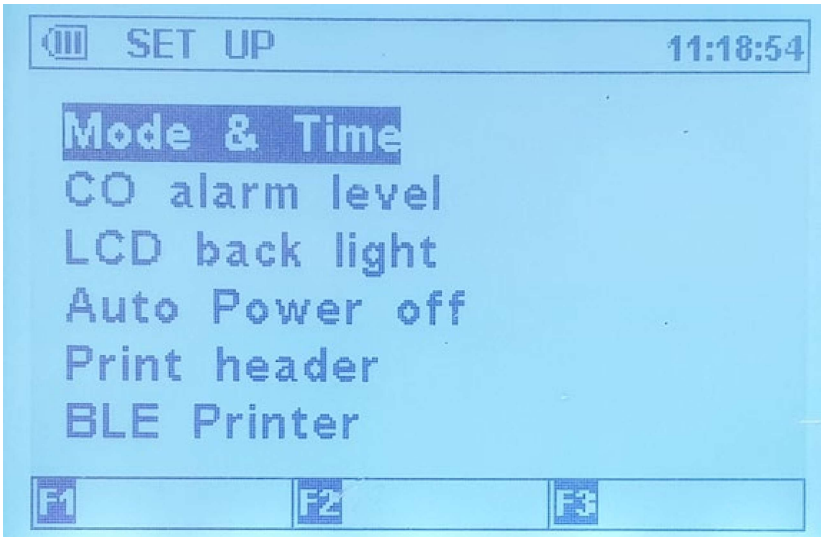
If this is the first time you are turning the DC711 on, we suggest you head over to the “Set-Up” section to investigate the options as described below. Press the Up or Down Arrow Keys, to highlight “Set up” then press the “Enter” key.



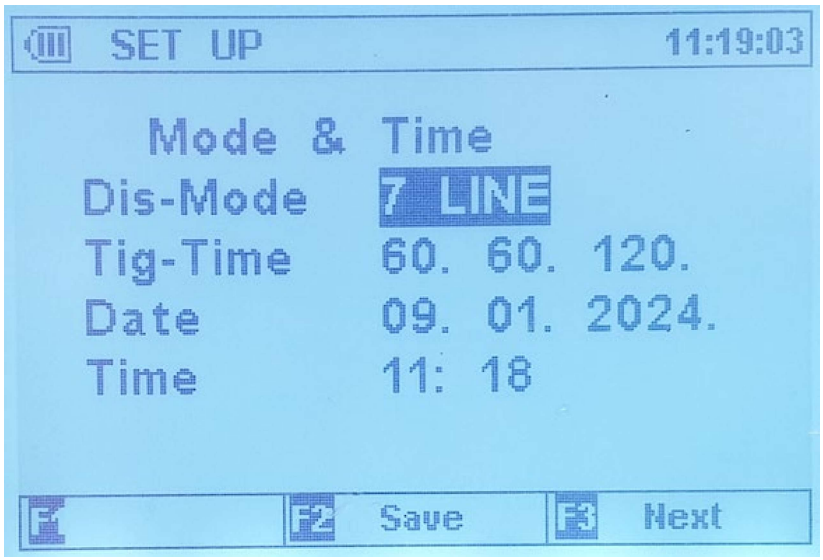
Set Up Menu

Mode & Time

Entering the Set Up Menu will display the following: -

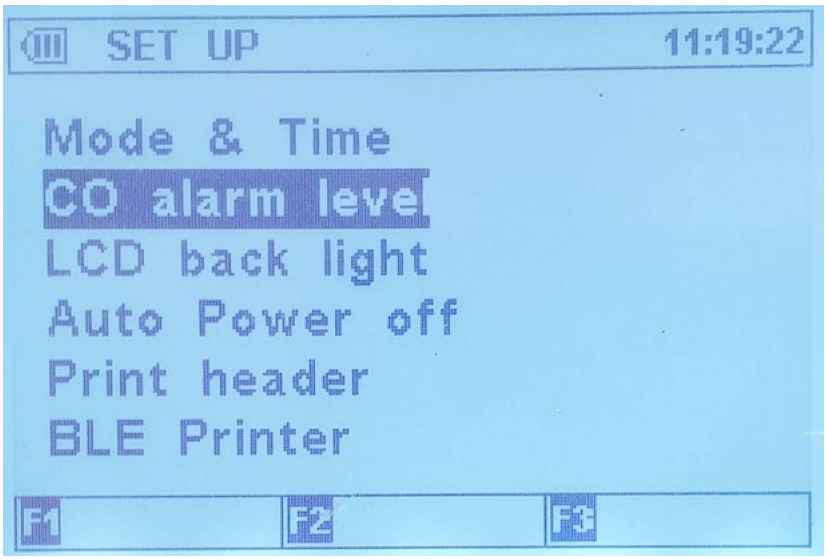


Entering “Mode & Time” will display the following where you can toggle the Display Mode between 7 & 4 Line, adjust the timings for the Let By, Stabilisation & Tightness Pressure Test as well as adjusting the Date & Time



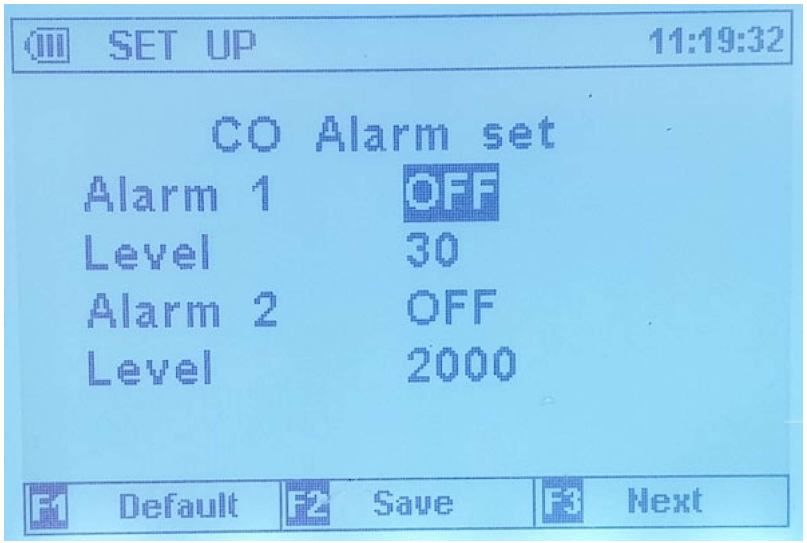
Set Up Menu

CO alarm level



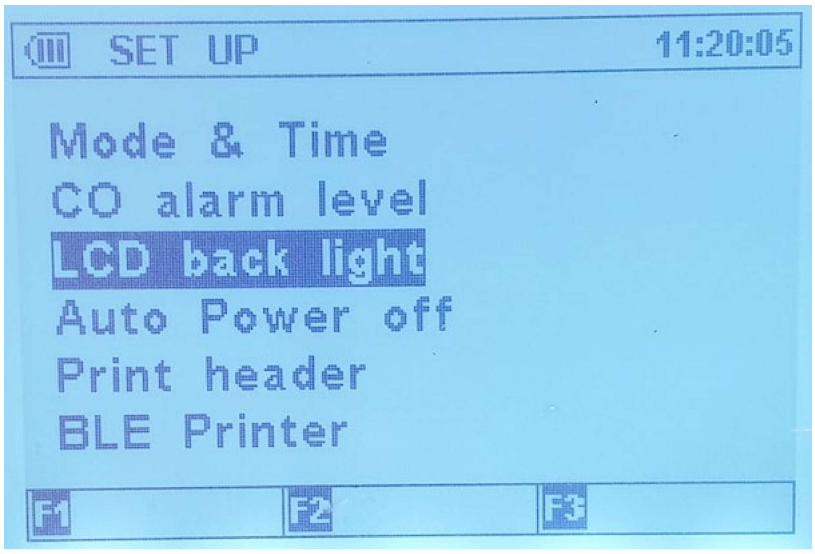
Entering “CO alarm level” will display the following where you can toggle the ambient and High CO alarms On & Off, as well as adjusting the default levels to suit your testing requirements

Alarm 1 is the ambient CO alarm and Alarm 2 is the High CO alarm for combustion tests.

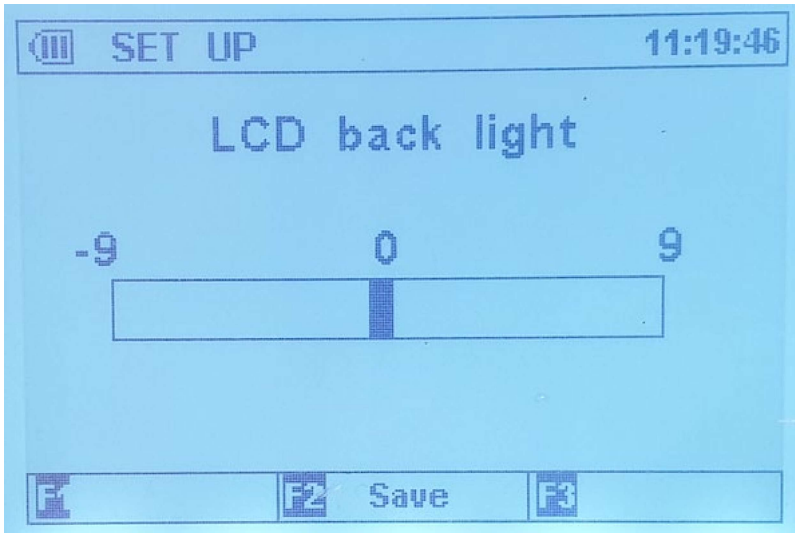


Set Up Menu

LCD back light

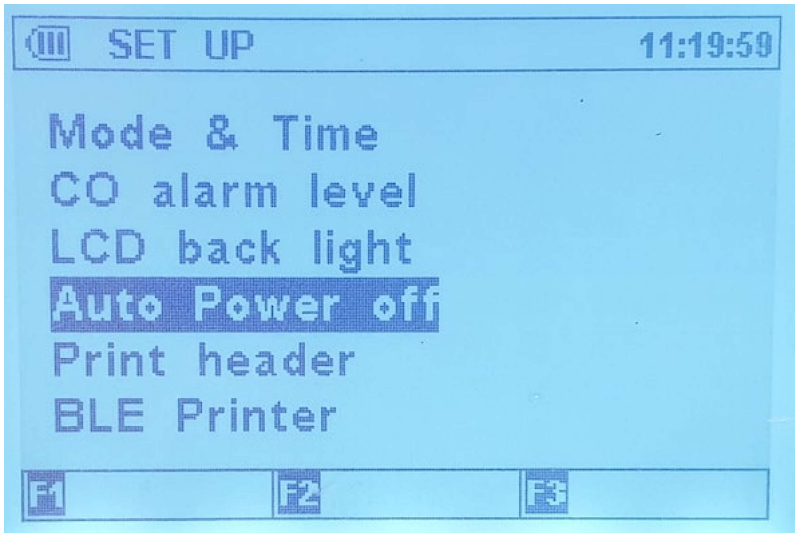


Entering “LCD back light” will display the following where you can adjust the LCD backlight level. Higher levels of backlight will reduce battery life.

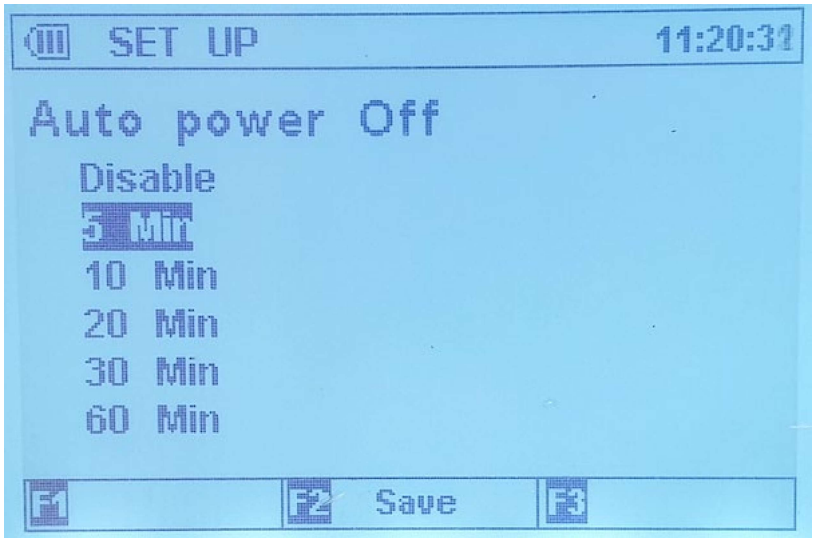


Set Up Menu

Auto Power Off

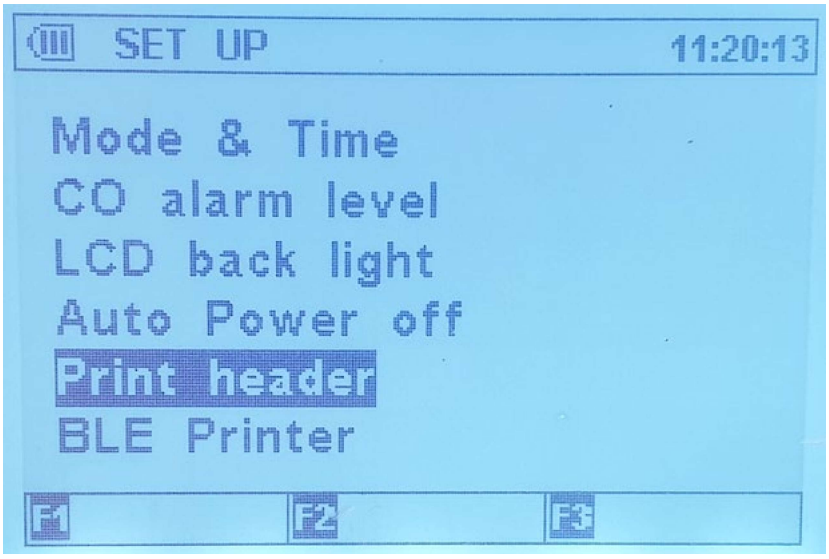


Entering “Auto Power off” will display the following where you can disable the Auto power off or change the Auto power off time.

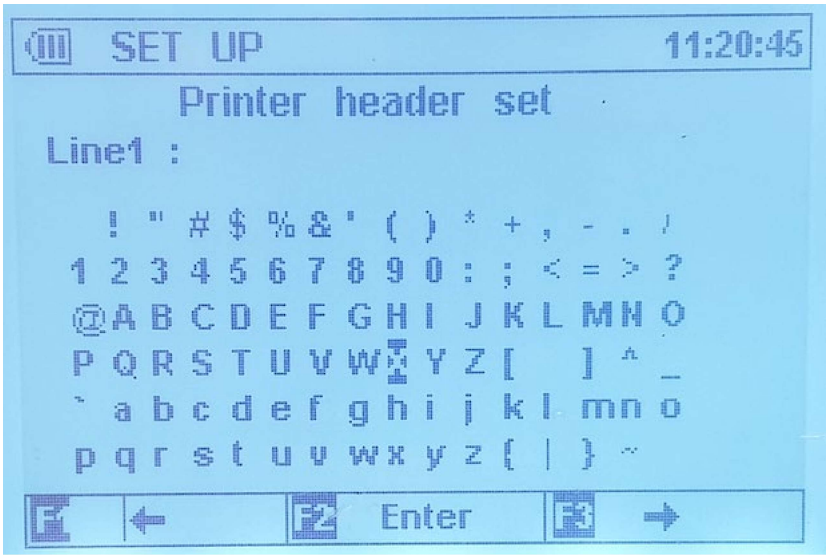


Set Up Menu

Print header

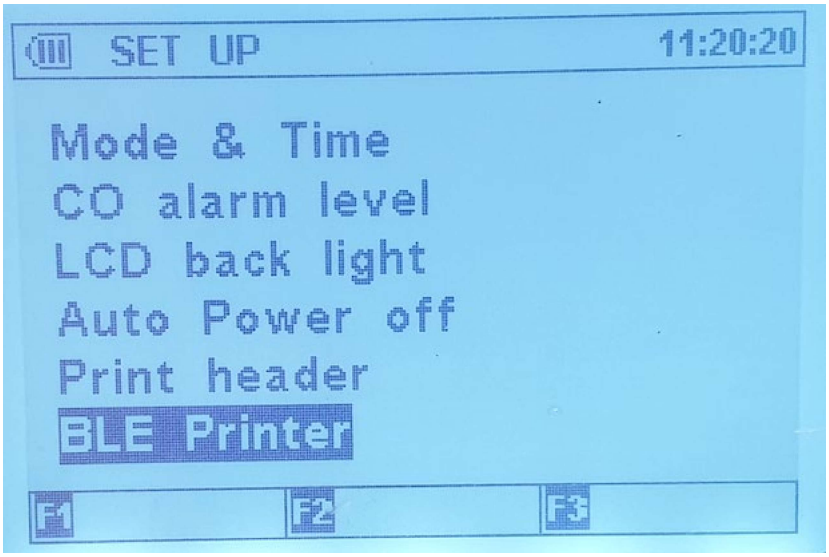


Entering “Print header” will display the following where you can add or edit the details that will print out at the top of each report when using the optional A741BT printer and direct printing from the analyzer.

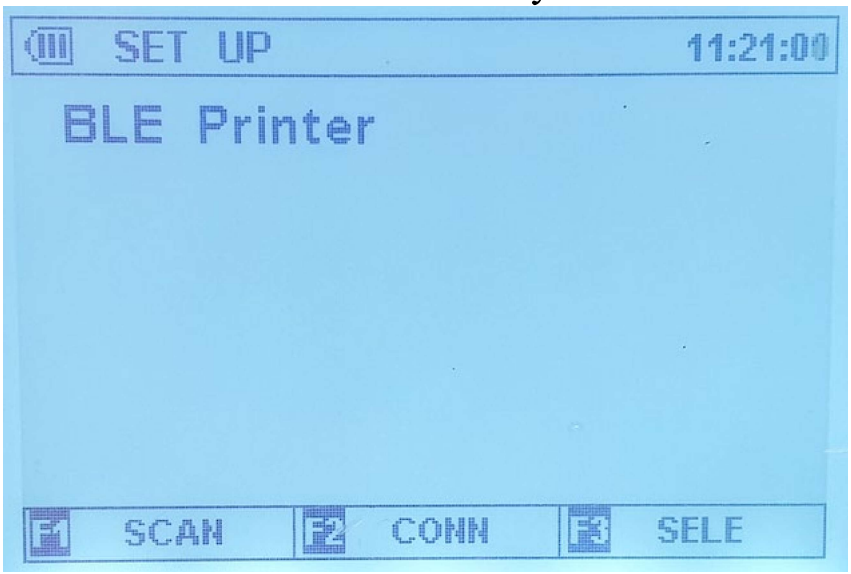


Set Up Menu

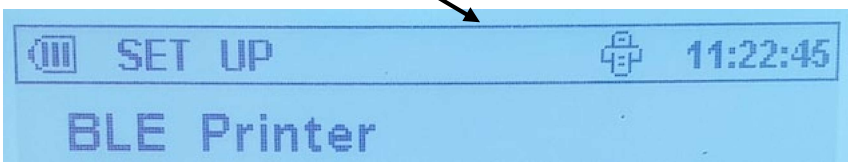
BLE Printer



Entering “BLE Printer” will display the following where you can scan and pair available optional A741BT Bluetooth Printer to your DC711.



When paired and connected the Printer Icon will display.



You only need to pair once. Each time a paired A741BT is switched on it will automatically connect and display the Printer Icon.