



Automatic CO₂/Air Mixer **Service Manual** **FC-5N** Ver. 5.6



Live Cell Instrument Co., LTD

A 404 Hage-technotown, 10 Nowon-ro 15-gil, Nowon-gu, Seoul, South Korea (ROK)

Tel. +82-2-3391-0596 Fax. +82-2-903-0597

E-mail: support@chamlide.com, info@chamlide.com

www.chamlide.com

FC-5N

- Touchscreen monitor
- Digital flow meter for the air flow rate
- Long life expectancy of the internal air pump
- Alarm function
- Able to change the internal parameter (e.g. PID values in the setup mode)



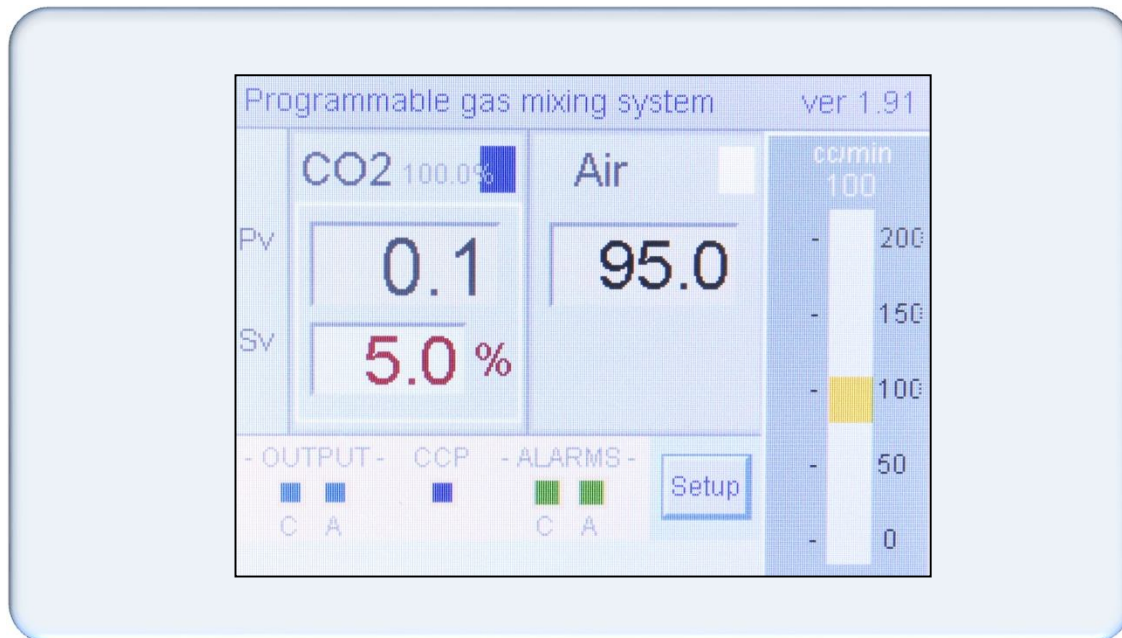
Specifications

CO ₂ control range	1 ~ 20% CO ₂
Flow rate range	Max. 200ml/min
Physical dimension (mm)	210 (W) x 260 (D) x 140 (H)
CO ₂ sensor	NDIR
Flow meter	Digital mass flow control
Voltage	100 ~ 230 V

Caution

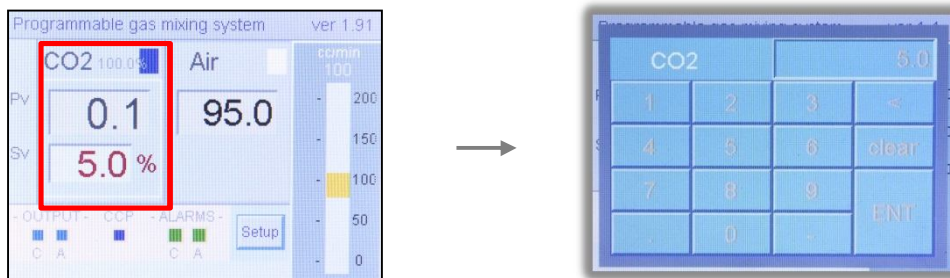
- Do not place the FC-5N in direct sun light, or in a room where the temperature is not controlled, or vibration is generated in the room. The FC-5N runs at optimum efficiency in an air-conditioned room where the room temperature is maintained around 25°C.
- In the event of any unexpected problems such as equipment malfunction, contact Live Cell Instrument (LCI) distributor.

Main Window



How to Set the CO₂ Percentage

- 1) Touch the CO₂ window to change the setting value for 3 seconds. The key pad will appear.



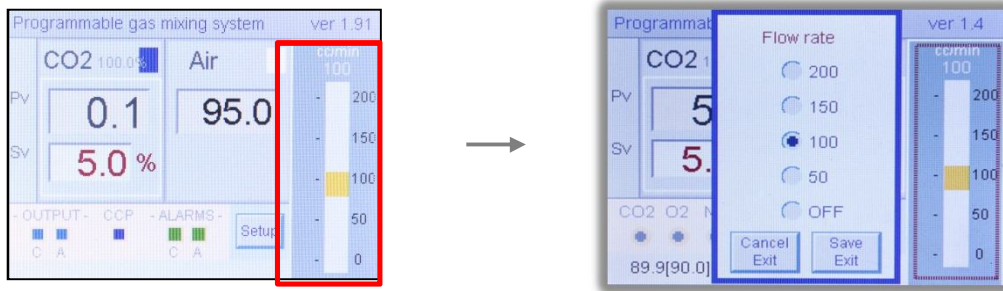
- 2) Using the key pad, enter the desired temperature and click the ENT key.
(The limit of CO₂: 1 ~ 20%)
- 3) If you set the CO₂, the percentage of the air will be set automatically.

NOTE

- SV (Set Value) indicates on % of the gas setting.
- PV (Process value) shows % of the actual gas.

How to Set the Flow Meter

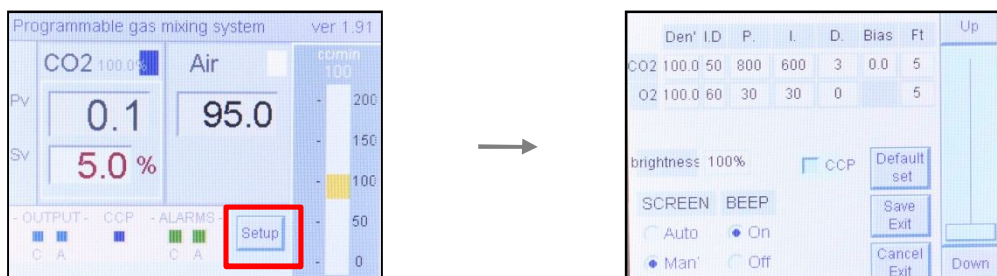
- 1) Click the flow meter for 3 seconds. The keypad will appear. You can select the desired flow rate and click "Save Exit". We recommend 50 or 100 ml/min for Chamlide incubator.



*** DO NOT connect to CU-501 but connect to incubator or humidifier directly.

Setup Mode

- 1) Enter the setup button for 10 seconds. Setup window will appear.
- 2) Setup mode is not for the user except the case of the necessary setting.



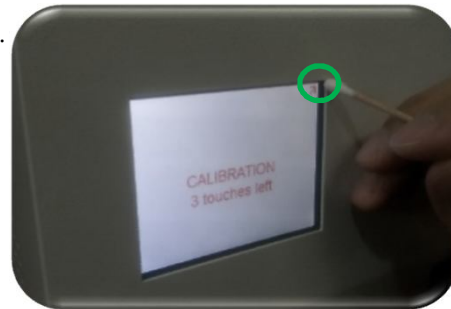
How to Calibrate

1.



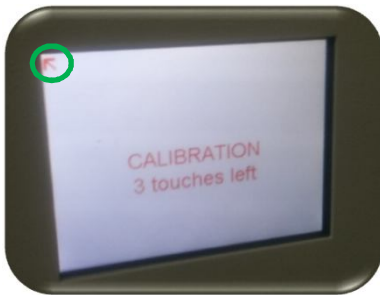
As soon as touch the screen, turn on the power.

2.

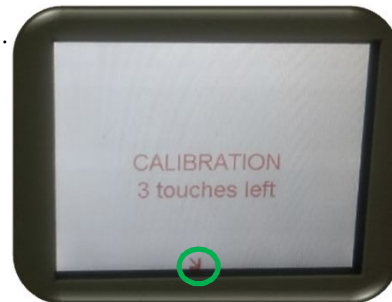


Follow the direction: touch the arrow.

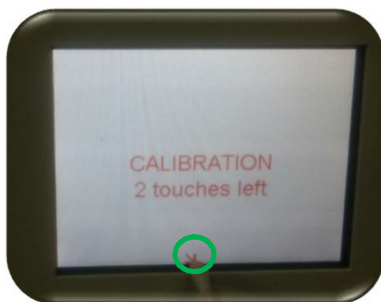
3.



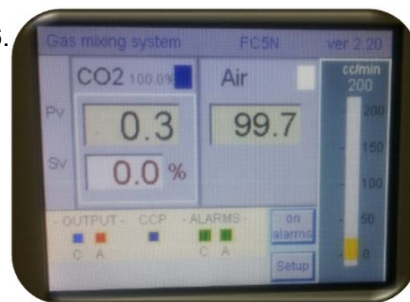
4.



5.



6.

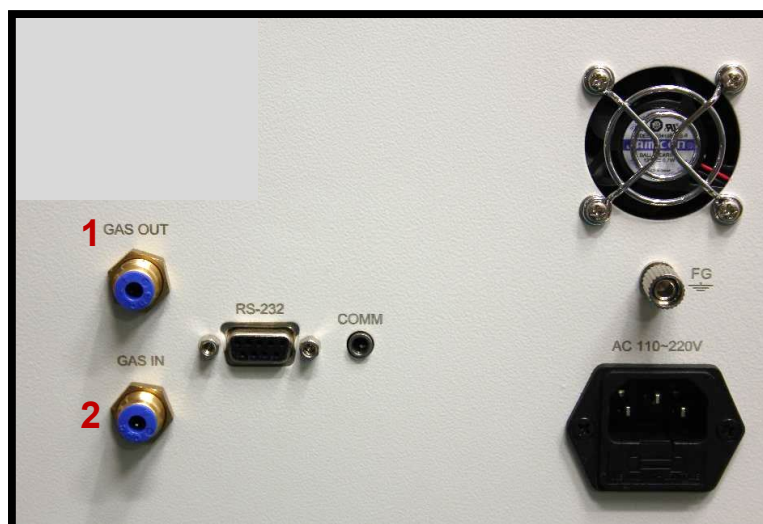


After all sets, the screen will black out to show this screen.

Gas Pressure Setting

	Gas pressure for regulator
CO₂	0.5 kg/cm ² (50 cc/min)
	0.8 kg/cm ² (100 cc/min)
	1.1 kg/cm ² (150 cc/min)
	1.4 kg/cm ² (200 cc/min)

Back Panel



1. For incubator or humidifier

2. 100% CO₂

How to Set Gas Regulator

- 1) Connect a gas regulator to the gas tank (CO₂, CO₂, N₂).
- 2) Remove the outlet fitting from the regulator and connect “gas control speed valve” we provided to the regulator instead. (A)

* Outlet fitting of every regulator is a universal size as gas control speed valve.

- 1) Connect one end of 4Ø polyurethane tubing to the gas control speed valve (d), and then connect the other end of tubing to “gas in” hole of the controller.
- 2) Open the main valve (a) of the gas tank, and set the gas pressure using the valve (b) of the regulator. (B)
- 3) Open the “gas control speed valve” (c) about one turn.



Gas control speed valve



- The gas control speed valve can be connected the tubing to the gas regulator easily.
- To connect the 4Ø polyurethane tubing, push end of the tubing into the female port of the gas control speed valve.
- To remove tubing, pull the tubing while pushing the blue surrounding of the gas control speed valve.