



**INVENTORS**

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# GREENHOUSE MONITORING SYSTEM

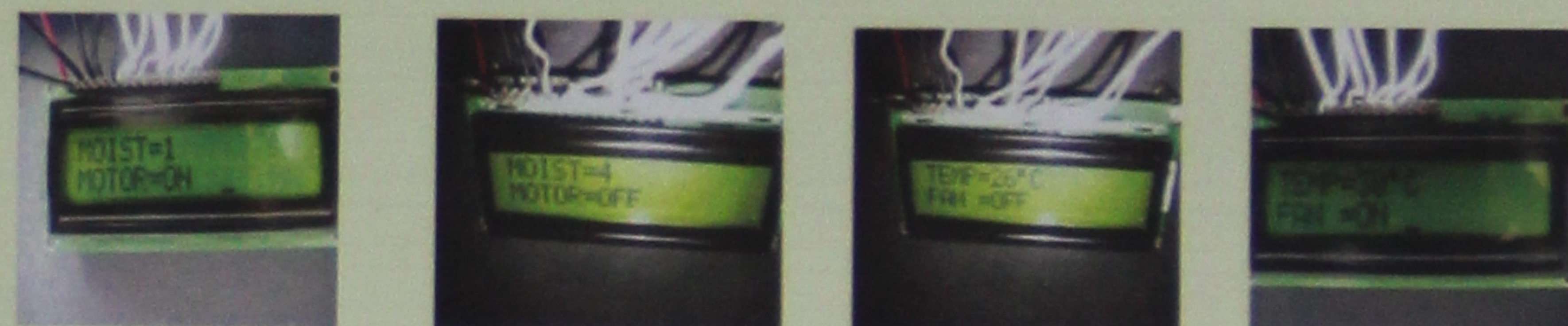
## PRODUCT DESCRIPTION

A greenhouse is a building where plants are grown. Light and temperature control allows greenhouses to turn in-arable land into arable land, thereby improving food production in well environments." By the combining effective irrigation and ventilation, it will monitor the a suitable environment. It is preferable to have automated system to control when you are out during the day. The controller used is 8-bit microcontroller called 8051. Moisture meter are communicated with chip to control the operation of irrigator according to the moisture condition in soil. This sensors use capacitance to measure the dielectric permittivity of a surrounding medium.

## NOVELTIES

- Control soil moisture and temperature automatically
- Low cost
- Low energy consumption

## PRODUCT PERFORMANCES



## PROCESS FLOW

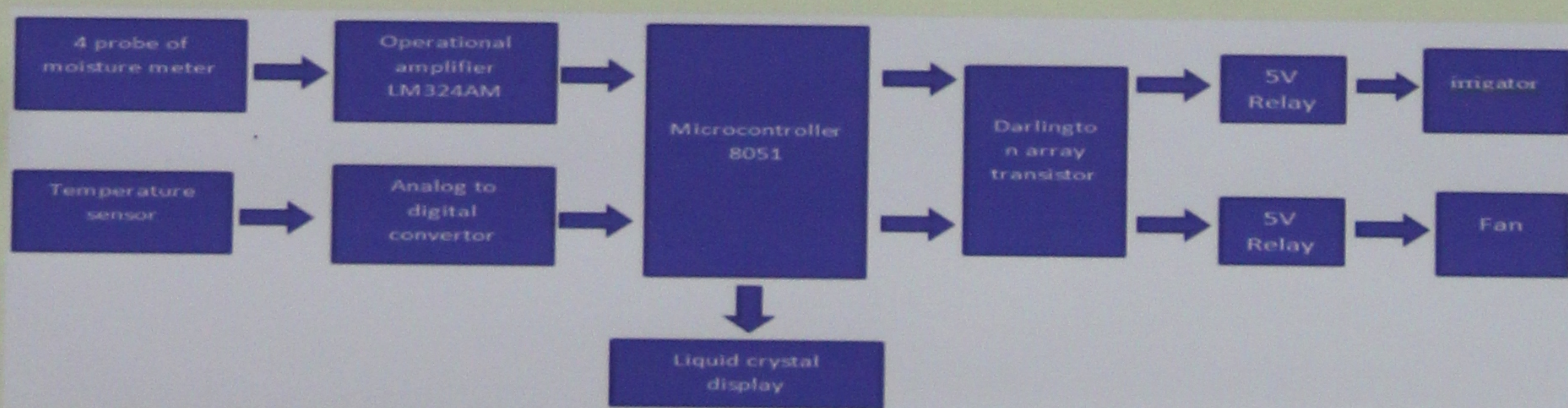


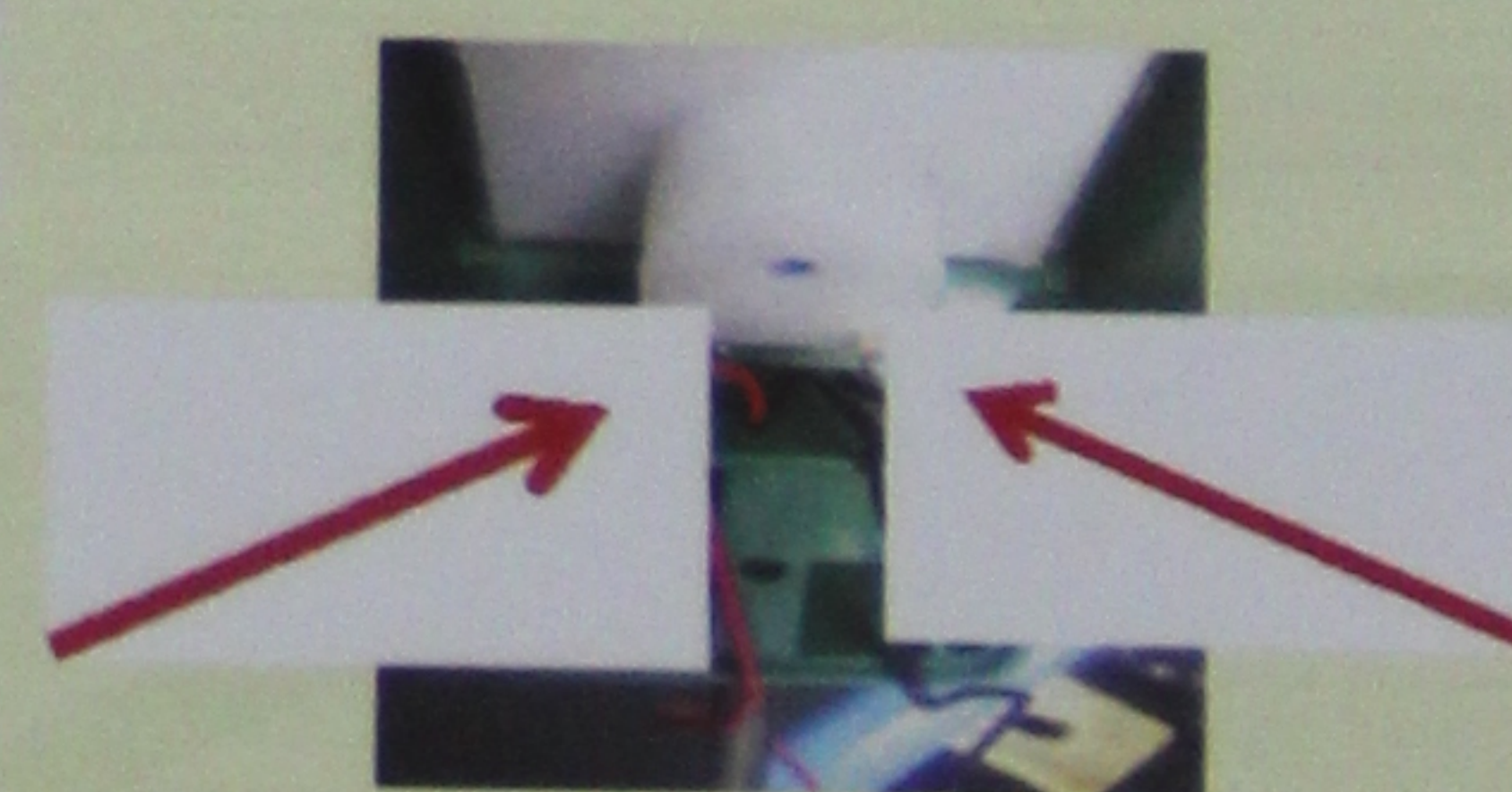
TABLE OF OPERATION OF MOISTURE CONTROL

MOISTURE	STATUS OF MOTOR	TIME FOR ON (second)	TIME FOR OFF (second)
0	ON	5	-
1	ON	4	-
2	ON	3	-
3	ON	2	-
4	OFF	-	4

## POTENTIAL APPLICATION

This project has been met all of objective in control greenhouse environment which are to achieve maximum Plant growth and yield, to control soil and moisture Temperature and to reduce cost of maintaining a Conventional greenhouse powered by low power.

- It is also quite flexible because the moisture of soil can be set using Potentionmeter to adjust the Vin (-) of ohm-amp.
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Moisture	Output voltage(mV)
1	
2	
3	
4	
5	117.7
6	141.2
7	175.9
8	217.3
9	276.0
10	300.0

OPTIMON MOISTURE