DCS141xA-010

Electronic Andon System.

Operation Manual

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1. What is an Electronic Andon System?

An Andon is a visual control that indicates the status of a machine, manufacturing line or work process. The Electronic Andon System is accompanied by 7-Segment Displays, audible alarms, Short Message Service to alert supervisors when there is a defect in product line.

Andon System is an effective way to alert support personnel who must attend to several automated processes at a time or are not always located in close proximity to the work they oversee.

2. Keypad and Andon Unit.

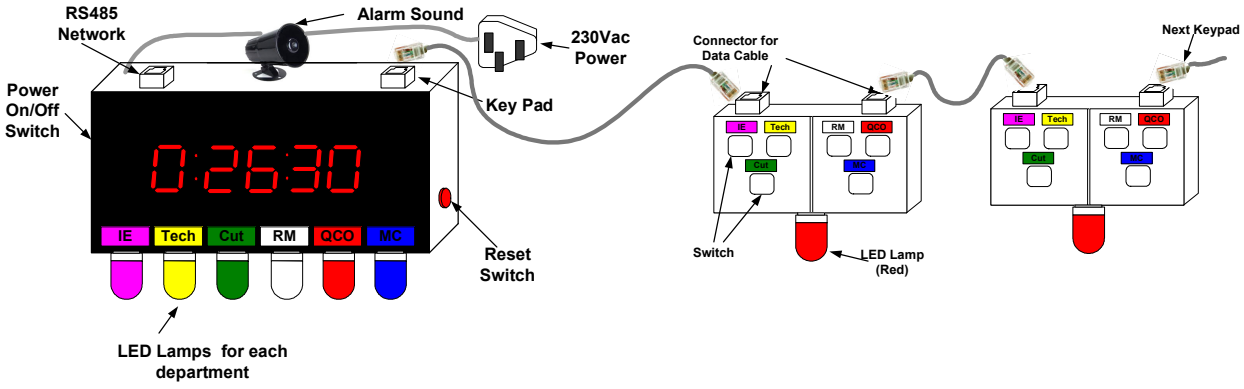


Figure 2.1

How it works

Start an Event.

- Key pad consists of 6 switch inputs for each department.
- Andon consists of 6 different color LED lamps for each department.
- When a problem occurs in a production line, the switch of the relevant department must be turned on.
- Then the relevant Red LED lamp in the keypad will shine. It is very important to identify the location of the error from far away and reach it very soon.

- Andon will automatically start counting time and display It in its display panel.
- In addition to time display, relavant Alarm sound is heard , and perticular colour LED lamp is indicated.
- Reset switch can be used to reset alarm sound if necessary.
- The Andon sends timer data to main PC.

Stop an Event.

- Once the problem is solved in the production line, the particular switch should be turned off.
- Then, the lamp in the key pad will go off.
- Andon unit will stop counting time, Alarm sound and LED lamp as well.
- The Andon sends timer data to main PC.

3. Department Display Unit.

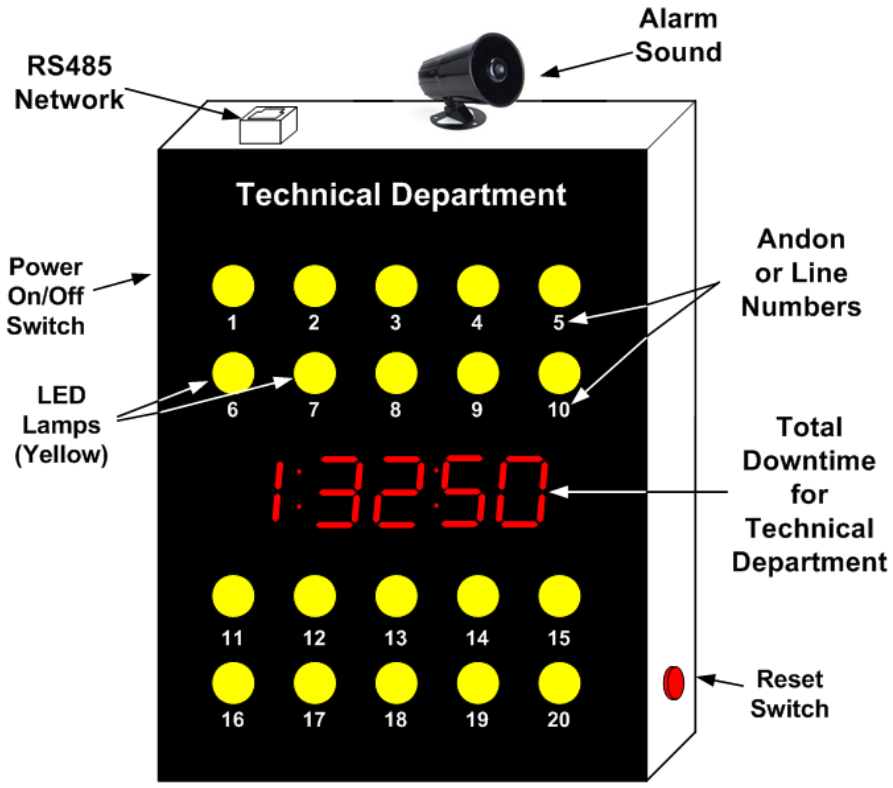


Figure 3.1

How it works

- This unit consists of LED yellow lamps for each Production Line. (Each production line has one Andon unit)
- When a problem occurs in a production line, it will appear in this panel by lighting relevant LED lamp.
- The total downtime for the department will display in the display panel in minutes.
- Reset switch can be used to reset alarm sound if necessary.

4. Andon Software.

- Select “DTCS-14xxx” icon and Double Click on it.

- Select the correct COM PORT for Andon and Click on “Connect” Button.

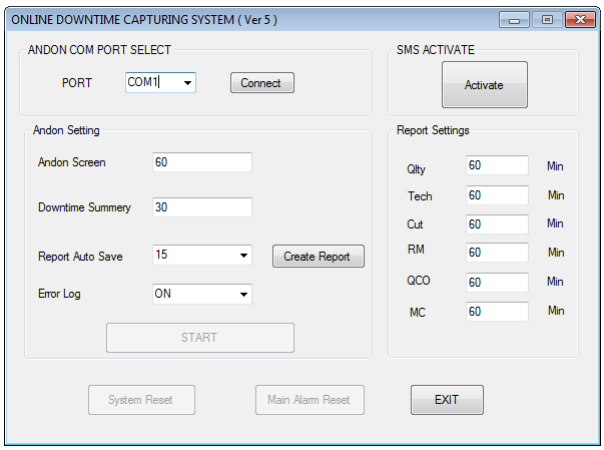


Figure 4.1

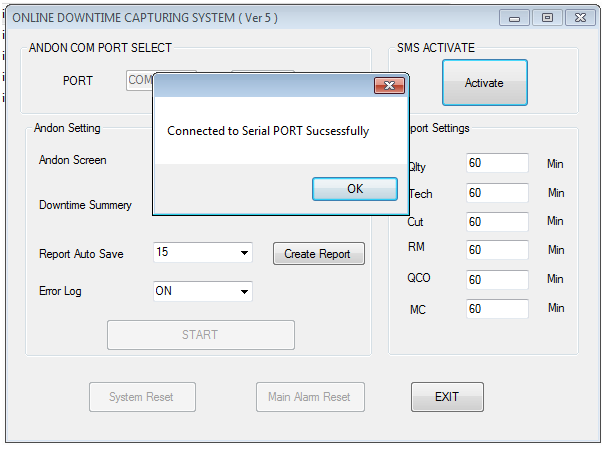


Figure 4.2

- Click on “START” button.

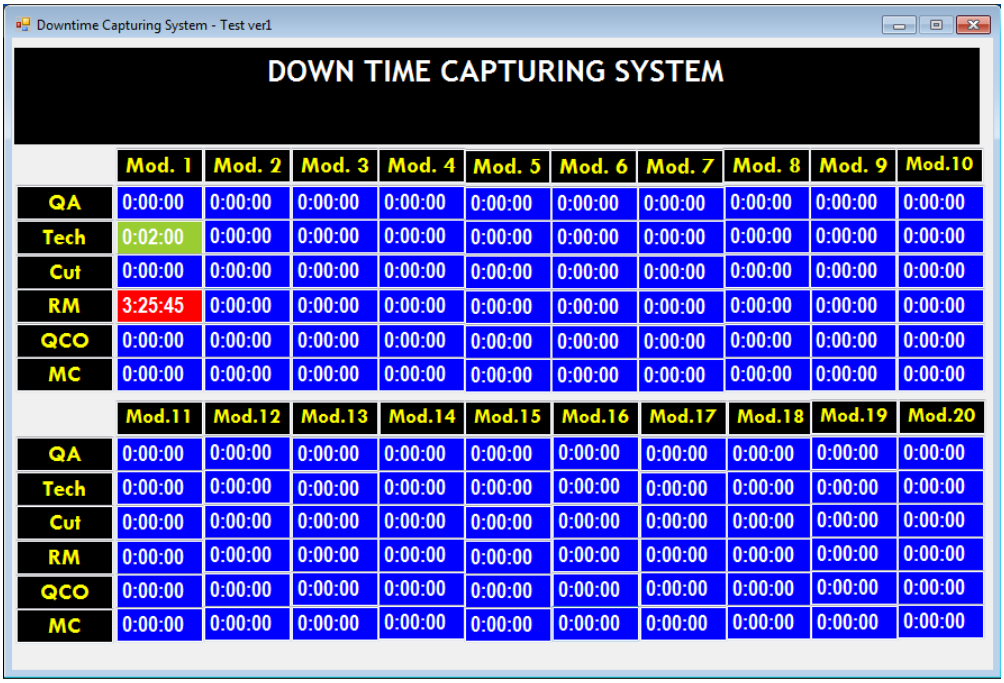


Figure 4.3

How it works

Event Start

- Data coming from Andon unit is displayed on Andon software as shown in figure 4.3
- Cells in the software are normally blue in colour.
- When a new event occurs Andon units send data to PC.
- Then the color of the relevant cell changes to Green and display cumulative time value, in the cell.
- After 10 Minute, cell automatically changes to red color.

Event Stop

- Ones the problem is solved in the production line, the switch is turned off at the production line.
- Andon unit stop counting time and sends data to PC.
- Then the relevant cell changes in to blue.

5. SMS Server Software.

How it works

- To activate the “SMS Server” software, click on “Activate” button.

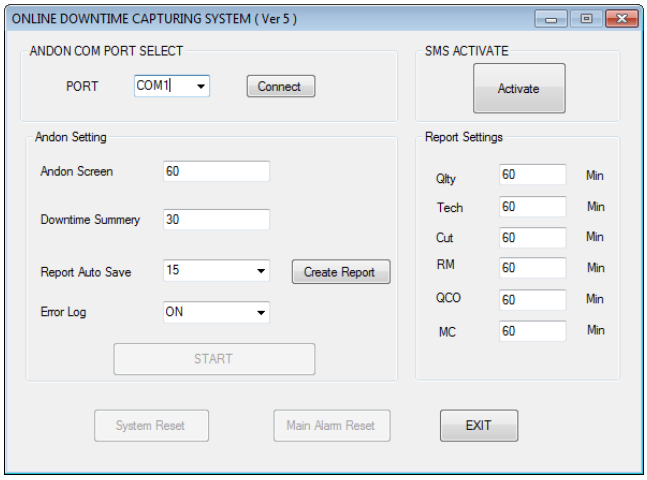


Figure 5.1

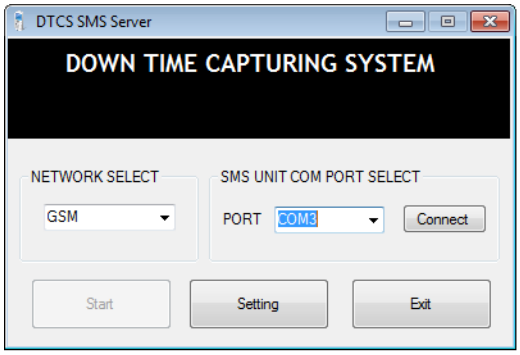


Figure 5.2

- Then, the “DTCS SMS Server” software will appear as in figure 5.2

- Now, select the correct COM port relevant to the Modem. Click on "Connect" button. The "Connected to Modem Successfully" message will appear as in figure 5.3.

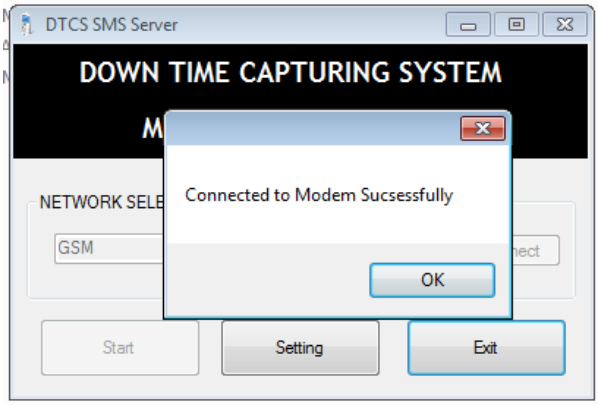


Figure 5.3

- Click on "Start" button. The "SMS Server" Software will be minimizing to notification area.

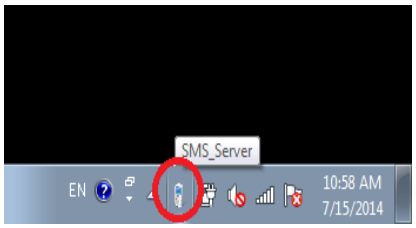


Figure 5.4

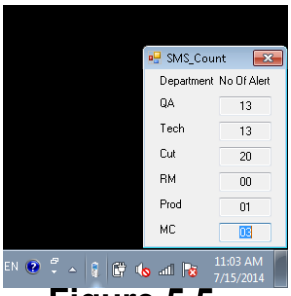


Figure 5.5

SMS Message is issued in 4 steps.

1. The 1st step to supervisors in 5 minutes
2. The 2nd step to Executives in 10 minutes
3. The 3rd step to general managers in 20 minutes
4. The 4th step to general managers in 30 minutes

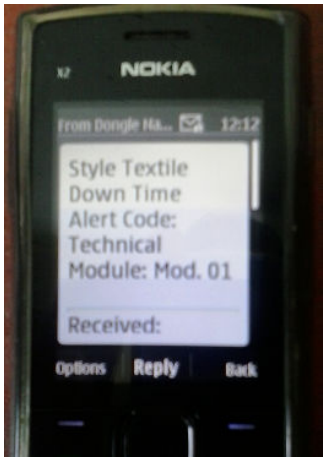


Figure 5.6

6. Reports

- Reports are saved automatically in the “hard disk”

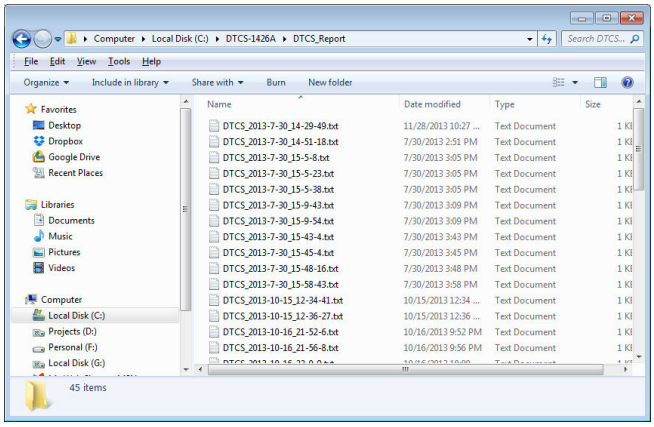


Figure 6.1

- Reports are saved in Text format.

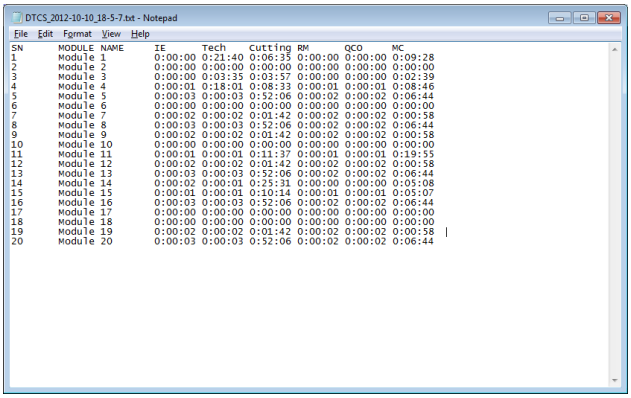
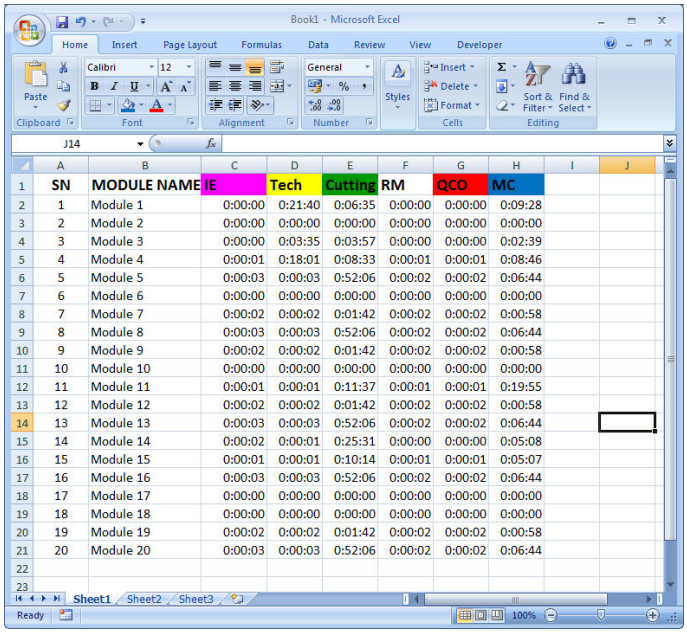


Figure 6.2

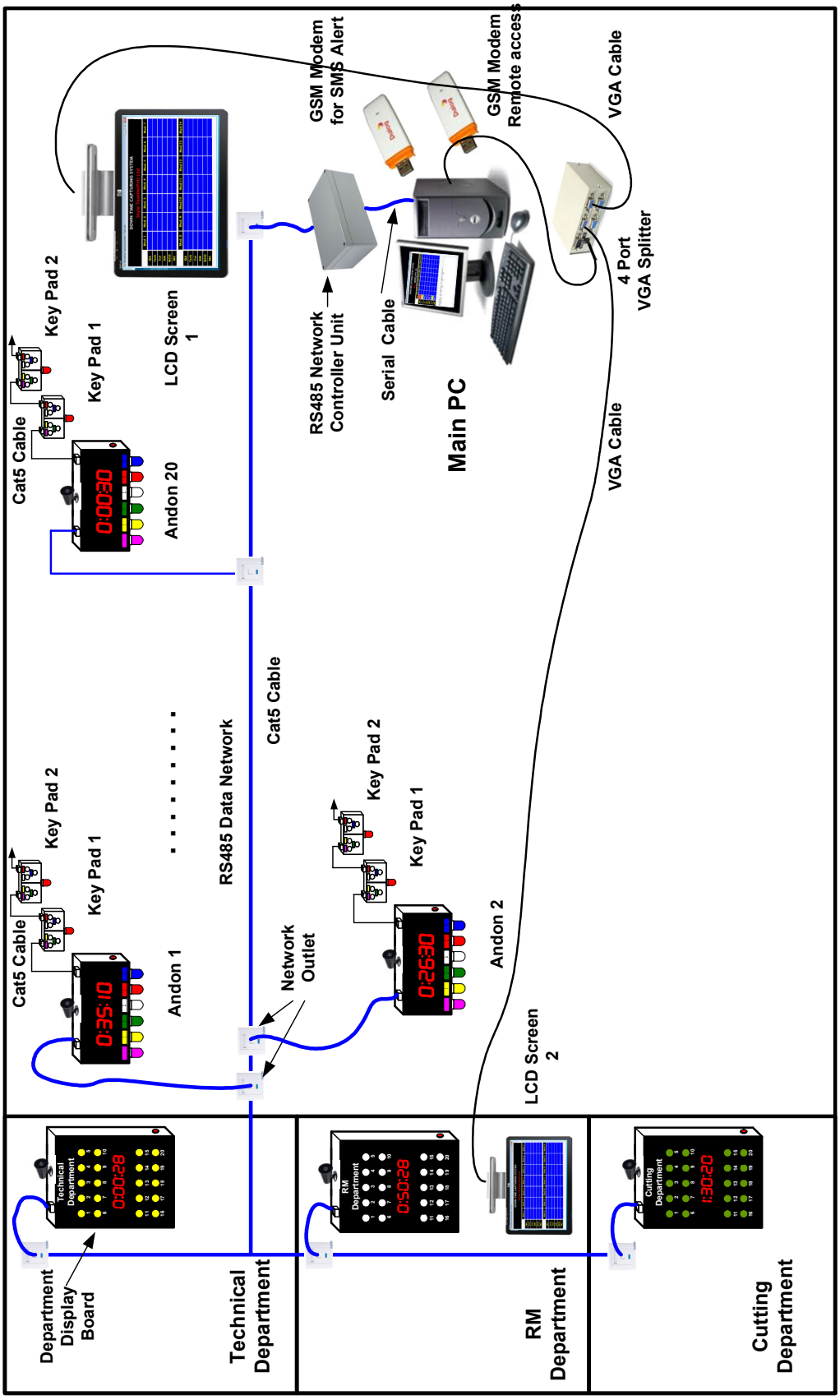
- Data can be easily imported to excel file.



	A	B	C	D	E	F	G	H	I	J
1	SN	MODULE NAME	IE	Tech	Cutting	RM	QCO	MC		
2	1	Module 1	0:00:00	0:21:40	0:06:35	0:00:00	0:00:00	0:09:28		
3	2	Module 2	0:00:00	0:00:00	0:00:00	0:00:00	0:00:00	0:00:00		
4	3	Module 3	0:00:00	0:03:35	0:03:57	0:00:00	0:00:00	0:02:39		
5	4	Module 4	0:00:01	0:18:01	0:08:33	0:00:01	0:00:01	0:08:46		
6	5	Module 5	0:00:03	0:00:03	0:52:06	0:00:02	0:00:02	0:06:44		
7	6	Module 6	0:00:00	0:00:00	0:00:00	0:00:00	0:00:00	0:00:00		
8	7	Module 7	0:00:02	0:00:02	0:01:42	0:00:02	0:00:02	0:00:58		
9	8	Module 8	0:00:03	0:00:03	0:52:06	0:00:02	0:00:02	0:06:44		
10	9	Module 9	0:00:02	0:00:02	0:01:42	0:00:02	0:00:02	0:00:58		
11	10	Module 10	0:00:00	0:00:00	0:00:00	0:00:00	0:00:00	0:00:00		
12	11	Module 11	0:00:01	0:00:01	0:11:37	0:00:01	0:00:01	0:19:55		
13	12	Module 12	0:00:02	0:00:02	0:01:42	0:00:02	0:00:02	0:00:58		
14	13	Module 13	0:00:03	0:00:03	0:52:06	0:00:02	0:00:02	0:06:44		
15	14	Module 14	0:00:02	0:00:01	0:25:31	0:00:00	0:00:00	0:05:08		
16	15	Module 15	0:00:01	0:00:01	0:10:14	0:00:01	0:00:01	0:05:07		
17	16	Module 16	0:00:03	0:00:03	0:52:06	0:00:02	0:00:02	0:06:44		
18	17	Module 17	0:00:00	0:00:00	0:00:00	0:00:00	0:00:00	0:00:00		
19	18	Module 18	0:00:00	0:00:00	0:00:00	0:00:00	0:00:00	0:00:00		
20	19	Module 19	0:00:02	0:00:02	0:01:42	0:00:02	0:00:02	0:00:58		
21	20	Module 20	0:00:03	0:00:03	0:52:06	0:00:02	0:00:02	0:06:44		
22										
23										

Figure 6.3

7. Wiring Diagram.



8. System Requirements.

- PC, running with “Windows 7” operating system and should have one **serial port**.
- 01 Mobile SIM is required for SMS Alert
- UPS power supply is required for Andon units and Department display units.
- Mounting brackets are required for Andon, Keypad and Department display units.

“Qio” Queue Management Systems

Electronic Andon Systems

Sky Security Systems

Digital Watches and Timers

Alarm Systems

Power Supplies

LED Display Systems

Electronic Books

Electronic Classes

PIC Microcontroller Accessories

Printed Copper Boards

Sky Technologies.

For all kind of Microcontroller Based electronic circuit Designing, PCB designing and fabricating.