**MULTI CHANNEL FAULT ANNOUNCEMENT SYSTEM USNG TEMPERATURE, SMOKE AND LDR SENSORS**

**DESCRIPTION:**

Security is primary concern for everyone. There are many ways to provide security at homes or in industries. This Project describes a design of effective security system that can monitor an industry by using various sensors for communication.

The project is designed and implemented in such a way that we interface various sensors such as smoke, LDR and temperature sensors to the microcontroller. The microcontroller continuously checks the status of the sensors. Here we are using APR9600 voice module in which we pre record the voices, which are been played back according to the sensor output. If the sensor value exceeds the threshold limit then the same information is been sent to the APR9600 will make that corresponding voice chunk to be played as output. There by providing a continues monitoring and fault announcement provision for industrial applications.

This project uses regulated 5V, 500mA power supply. 7805 three terminal voltage regulator is used for voltage regulation. Full wave bridge rectifier is used to rectify the ac output of secondary of 230/12V step down transformer.

# TECHNICAL SPECIFICATIONS:

**HARDWARE:**

Micro controller : AT89x series

Crystal : 11.0592 MHz

LCD : HD44780

Temperature sensor : Thermistor

Smoke Sensor

LDR

APR9600 module

**POWER SUPPLY**

Transformer : 12V step down

Filter : 1000uf/25V

Voltage Regulator : 7805, 7812

**SOFTWARE:**

Keil IDE

UC flash

Proteus

**APPLICATIONS**

* Industrial applications
* Household applications

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**BLOCK DIAGRAM:**

Power Supply

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LDR

16X2LCD

Smoke sensor

APR9600

Temperature sensor

**POWER SUPPLY BLOCKDIAGRAM:**

Step down Transformer

Filter

Regulator

Output

Bridge Rectifier