

# **DIGITAL & ANALOG BASED PROJECTS** **(NO PROGRAMMING REQUIRED)**

RF COMMUNICATION PROJECTS USING DIGITAL AND ANALOGUE TECHNIQUE

## **RF (Radio Frequency) BASED PROJECTS**

PROJECTS IN THIS LIST ARE NOT BASED ON EMBEDDED TECHNOLOGY. PLEASE REFER SEPARATE LIST (MICROCONTROLLER AND PC BASED LIST) FOR THAT

**WIRELESS VIDEO TRANSMITTER:** - The signals of any video can be transmitted to TV with in 15/20mtr range. (13-162)

**WIRELESS RF OBJECT COUNTER FOR INDUSTRY:** - This wireless object counter count the number of items produced by a machine placed 50mts. far from source. One can control the power of machine remotely (RF transmitter and receiver unit) when desired.

**WIRELESS RF HOME SECURITY SYSTEM:** - It has an intruder sensor cum transmitter and a receiver. The sensor reacts to light, sound and mechanical movements. (17-35)

**WIRELESS RF HOME SECURITY SYSTEM WITH DIGITAL CODE LOCK:** - It has an intruder sensor cum transmitter and a receiver. The sensor reacts to light, sound and mechanical movements. One can enter only if the four digit code number is rightly entered. (17-35)

**WIRELESS RF HOME SECURITY SYSTEM WITH VOICE MESSANGER:** - It has an intruder sensor cum transmitter and a receiver. The sensor reacts to light, sound and mechanical movements. It will transmit the audio file to FM using digital voice recording and play back circuit.(17-35)

**WIRELESS RF LAND ROVER :** A robotic vehicle that is controlled remotely by RF transmitter using RF 433 Mhz modules with data encoder and decoder IC's. It can go forward, reverse, left or right. Detecting metal and inform to the operator is an optional attachment in this project.

**WIRELESS RF CODE LOCK FOR CAR/DOOR:** Digital combination code lock to be opened remotely by RF transmitter and activate the door relay and motor to open the same.

**WIRELESS WI-FI (Demo) AMPLIFIER:** - A wireless FM transmitter and receiver unit with suitable amplifier.

**WIRELESS RF DATA COMMUNICATION CDMA DEMO:** The data modules will transmit data signals using suitable RF modules showing basic CDMA communication technique.

**WIRELESS RF LOCAL POSITIONING SYSTEM:** The distant location of vehicle / train can be checked / traced by this simple technique using RF modules with data encoders and decoders.

**WIRELESS RF PULSE RATE/HEART BEAT COUNTER :** The simple event counter with dual display and a minute timer can count the RF HEART pulses coming from distance. The pulse rate of heart will be taken from the infrared IR finger sensor.

**WIRELESS RF PULSE RATE/HEART BEAT COUNTER CUM GRAPH PLOTTER:** The simple event counter with dual display and a minute timer can count the RF pulses of HEART coming from distance and plot the graph on paper to read. The pulse rate of heart will be taken from the Infrared

IR finger sensor. (9-143)

**WIRELESS RF WALKIE TALKIE:** FM transmitter with receiver circuit in combine for both way voice communication.

**WIRELESS RF WATER LEVEL INDICATOR CUM CONTROLLER:** The data transmission from overhead tank will be displayed at ground level for remote viewing.

**WIRELESS RF TIME OPERATED ELECTRICAL DEVICE:** An electrical device will be remotely operated for specific time using simple timer circuit.

**WIRELESS RF REMOTE SWITCH BOARD:** The data transmission using RF 433 Mhz module will enable to operated four electrical device switching or single fan speed control.

**WIRELESS RF DC/AC MOTOR SPEED CONTROL:** The remote operation to control speed of fan or motor using single RF signal circuit with gear motor driver. Can be used as remote lamp dimmer.

**WIRELESS RF RADIO CONTROLLED SWITCH:** Single device operation to on or off the electrical device using Radio communication.

**WIRELESS F.M. RECEIVER:** - A complete FM radio set to tune frequency between 80-108MHz.(13-86 – 16-57)

**WIRELESS/CORDLESS FM MIC:** - It will transmit your voice at FM frequency and it can be received by any FM radio. (10-133 -)

**WIRELESS RF ANTI-COLLISION TRAINS WITH AUTOBRAKING SYSTEM:** The circuit will activate the auto key controlled switch brakes when two trains are coming on the same track and the distance between them is less than specified limit.

**WIRELESS RF WEATHER MONITORING DEVICE:** For Earth quake, Tsunami, or Flood with or without voice processor. The circuit can be modified as Weather monitoring Radio station.

**WIRELESS RF INDUSTRIAL FAULT MONITORING DEVICE:** It detects the faults in any industrial machine lik power failure, overload, overheat, over voltage at the distance using RF link as data communication.