

## **ROBOTICS using DIGITAL/ANALOGUE TECHNIQUE**

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

**ROBOTIC-SIX LEG INSECT:** The actual resemblance of moving legs robot. It turns path automatically and can run in rough surfaces too. Looks like a KANAKHAJURA. Change the path using IR sensor in front.

**ROBOTIC 'YES MASTER' – AUTO CAR.** It always follow his master using IR sensor circuit to control.

**ROBOTIC IR CAR:** A robotic vehicle that is controlled remotely by IR transmitter using IR 38Khz modules with data encoder and decoder IC's. It can go forward, reverse, left or right.

**ROBOTIC AIR PROPELLED MOTOR BOAT:** A DC motor operated boat operates on propeller blade and the air pressure provides the power to run the boat. An RF remote control unit can be used to provide direction on either side.

**ROBOTIC HEART BEAT PULSE PLOTTER MACHINE:** This will draw the pulses from heart using a finger sensor and will put on paper with the help of solenoid coil assembly.

**ROBOTIC AUTO BREAKING VEHICLE:** A vehicle that makes autobrake when obstacle will arise in front of it, or it will change the path on right side.

**ROBOTIC DIGITAL LINE TRACER/FOLLOWER:** A digital circuit with opto-couplers sense the path and follow the black line only. The vehicle stops automatically if obstacle comes in front of it and start when it is removed.

**ROBOTIC METAL DETECTOR TO FIND MINES:** A metal finding vehicle will stop and gives warning (wireless or buzzer type) when it find metal on its path.

**ROBOTIC ANTI-FALLING VEHICLE:** A vehicle that sense the end of table and change the path automatically. This makes the robot as anti-falling robot. It has two or more sensors at base level.

**ROBOTIC OBJECT DETECTOR ON CONVEYOR BELT:** It check the metal or high size objects/boxes running on the belt. It stop the belt till it is being removed from it. It counts the no of selected objects and send RF signal to counter on other end.

**ROBOTIC OBJECT LIFTING JACK :** The object lifting Jack works with the help of geared motors and worm gear arrangement to lift the objects. The modified version can even lift car using the same principle. The remote operation of this is also an option.

**ROBOTIC MATERIAL HANDLING (X, Y, Z MOTION CONTROL):** - A switch controlled material handling mechanical assembly that can pick or place the goods in all three axis using three gear motors with timer circuit to control.

**ROBOTIC SOLAR SUN SEEKER:** - It actually track the sun as per its position and move the solar cell/water heating plates accordingly so as to get maximum power from sun light.

**ROBOTIC ARM WITH GRIPPER:** - A three-gear motor setup of robotic arm is an interesting project under material handling. Six keys operation controls the whole setup of the model. The remote operation can be done with IR or RF link.

**ROBOTIC CAR WITH SENSORS:** - This is a simple geared motorized vehicle with free wheel at front will always take right turn when the Infrared sensors sense any obstacle in front.

An emergency brake can be applied if required.

**ROBOTIC RADAR SYSTEM:** - This robotic radar moves 180 degree carries an IR or light sensor fires with an electromechanical Gun if finds some object.

**ROBOTIC IR AUTO BRAKING:** A simple auto braking in material handling robot that stops automatically when the obstracle comes in between. It create a switch, induction or paddle brake to apply to stop the vehicle.

**ROBOTIC AMPHIBEAN CAR:** The Air propelled or water propelled boat cum car that runs on water and surface both. The RF modules can be placed to control the same remotely.

**ROBOTIC CAR OPERATES ON MOBILE NETWORK:** The DTMF based robot car operated by any mobile to be placed on it. The vehicle can be remotely operated by another mobile.

**ROBOTIC JACK/ARM OPERATES ON MOBILE NETWORK:** The DTMF based robot operated by any mobile to be placed on it. The JACK OR ARM can be remotely operated by another mobile.

**ROBOTIC UNMANNED AUTOMATION FOR RAILWAY CROSSING GATE:** It automatically open and close the motorized gate. This is an unmanned railway crossing with magnetic reed sensors at the rain track.

**ROBOTIC 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

More to come.....