

TECHNOLOGY LEARNING CENTER

..Finishing School for Engineer's

ELECTRICAL MINI PROJECT LIST 2014

- 1 Shock proof electrical appliances control system for physically challenged using at89s52 MCU
- 2 High sensitive electronic ear (poor man's hearing aid)
- 3 Voice transmission using frequency modulation technique for college radio application
- 4 Radio frequency based remote industrial appliances control system
- 5 Coin operated milk dispensing system
- 6 Intelligent pollution control system: auto ignition cut off for automotive by detecting carbon monoxide level
- 7 Infrared sensor based intelligent hand dryer with hot air blower
- 8 Density based traffic light system with auto traffic signal
- 9 High sensitive alcohol sensor with auto car ignition disable function
- 10 Design and implementation of gsm based car engine control system to prevent car theft
- 11 High sensitive heart beat monitoring system on pc using at89s52 MCU



TECHNOLOGY LEARNING CENTER

..Finishing School for Engineer's

- 12 Patient monitoring system
- 13 Automatic plant irrigation system with dry / wet soil sense and controlling 230v water pump for agricultural applications using at89s52 MCU
- 14 Intelligent automatic podium light control system
- 15 Design of electrical oven temperature monitoring and controlling
- 16 Power devices operated through movement sensor
- 17 RFID based electrical equipments access control system
- 18 Temperature based speed controlling of exhaust fan
- 19 Street light controlling and monitoring using mobile phone
- 20 EEd variation of dc motor using PWM
- 21 Intelligent street lights controller using LDR
- 22 Electrical plant boiler temperature and water level monitor and control
- 23 Intelligent temperature monitoring system and load controlling
- 24 temperature monitoring system in multi zone
- 25 Industrial devices operated through wireless technology



info@tlcindia.org

www.tlcindia.org



+91-9705351122

TECHNOLOGY LEARNING CENTER

..Finishing School for Engineer's

- 26 Industrial transformer conservation from over heat and voltage
- 27 Controlling speed and direction of dc motor using mobile phone
- 28 Electric motor speed control system with clockwise and anti-clockwise directions
- 29 Smart card based access control system for power devices
- 30 Speed controlling of dc motor using pc
- 31 Supervising & mechanization of agricultural field environment (temp, soil, LDR)
- 32 Acceleration operating of dc motor through IR
- 33 Automatic gate operating and vehicles counting in corporate companies
- 34 Checking and auto control of water level using wireless sensor
- 35 Speed moderate of dc motor through remote device
- 36 Season based street light control system
- 37 Implementation of PWM technique for electric motor using h-bridge
- 38 Active intelligent door and load controlling system using sensors
- 39 Efficient energy utilization in corporate field with PIR sensor



TECHNOLOGY LEARNING CENTER

..Finishing School for Engineer's

- 40 Design and development of water sprinkler system for plants
- 41 Microcontroller based vehicles speed display for highways
- 42 Aero dynamic wind mill with reverse charge protection for rural power generation applications
- 43 Solar based E-Uniform for soldiers who work at extreme high temperature or extreme low temperature(same uniform can be used to warm up or cool down body temperature)
- 44 Foot step power generation system for rural energy application to run AC and DC loads
- 45 Hand cranked dynamo based energy generation system for emergency headlamp applications for mining workers and engineers who work under ground and dark conditions
- 46 Renewable Energy management – Solar based lighting system with inverter and CFL lamp load
- 47 Farmer friendly Solar based electric fence for rural agriculture
- 48 Solar based fan with tagged speed selection for rural people
- 49 Solar based cool cap (wearable electronics: feel the coolness, even in the sunlight)



TECHNOLOGY LEARNING CENTER

..Finishing School for Engineer's

- 50 Solar based mobile charger for rural areas (Charge your mobile anywhere with sunlight)
- 51 Solar highway lighting system with auto turn off on day time
- 52 Design and implementation of maximum power tracking system by automatic control of solar panel direction according to the sun direction (Model Sunflower)
- 53 Farmer friendly Solar based electric fence for rural agriculture
- 54 Intelligent Automatic Plant Irrigation System with water pump control based on soil moisture condition
- 55 Transformer less solid state Power Supply Design
- 56 Triac based AC motor speed control system / Light Dimmer
- 57 Foot step power generation system for rural energy application to run AC and DC loads
- 58 Hand cranked dynamo based energy generation system for emergency headlamp applications for mining workers and engineers who work under ground and dark conditions
- 59 Aero dynamic wind mill with reverse charge protection for rural



TECHNOLOGY LEARNING CENTER

..Finishing School for Engineer's

power generation applications

- 60 Solar based E-Uniform for soldiers who work at extreme high temperature or extreme low temperature(same uniform can be used to warm up or cool down body temperature)
- 61 High sensitive Alcohol sensor with auto car ignition disable function
- 62 Intelligent IR based automatic highway lighting system with day / night sensor
- 63 High Sensitive LDR based Automatic night lamp with morning alarm
- 64 Airport security Luggage scanner system with conveyor belt arrangement
- 65 IR based third eye implementation for Industrial safety with 60dB loud siren audible up to 2 km
- 66 Intelligent Fire Detector with automatic water sprinkler system air blower to avoid fire Accidents
- 67 Diamond security system in museums with loud 60dB siren
- 68 Intelligent Automatic Street Light Control System using high sensitivity LDR
- 69 Industrial electrical appliances control system using IR Remote



TECHNOLOGY LEARNING CENTER

..Finishing School for Engineer's

(TSOP1738 IR receiver module)

- 70 IR based intelligent Automatic washbasin / mirror lamp controller
- 71 Timer based industrial liquid pump controller with user defined time slots
- 72 Renewable Energy management – Solar based lighting system with inverter and CFL lamp load
- 73 H- Bridge implementation for DC motor direction control for robotic applications
- 74 Error free Sound Activated Switch (Triggers the load on second clap sound)
- 75 Wireless petroleum level sensor using RF communication
- 76 Radio frequency based remote Industrial Electrical Appliances control system
- 77 Design and implementation of Micro Inverter for CFL lamps
- 78 High sensitive metal detector for detecting metal objects (Better security system to detect terrorists / human bombs)
- 79 Passive infrared based security with remote controlled activation and deactivation



TECHNOLOGY LEARNING CENTER

..Finishing School for Engineer's

- 80 Solar based fan with tagged speed selection for rural people
- 81 Solar based cool cap (wearable electronics: feel the coolness, even in the sunlight)
- 82 Solar based mobile charger for rural areas (Charge your mobile anywhere with sunlight)
- 83 High sensitive LPG Sensor with gas leak alert buzzer
- 84 Mobile Phone signal Transmission Detector (Mobile Bug)
- 85 Solar highway lighting system with auto turn off on day time
- 86 Level indicator for petrol dispensing stations with audio alert system
- 87 Infrared sensor based intelligent Hand dryer with hot air blower
- 88 Assistive technology – implementation of high sensitive intelligent Blind Stick to assist visually challenged
- 89 Mining safety – implementation of Electronic Nose to detect dangerous gases for alerting mining workers and engineers for preventive actions – (This nose can sense various odors and gases like methane, carbon monoxide, liquid petroleum gas etc - more sensitive than human nose)
- 90 Assistive technology - Implementation of Blind man's Cap with



TECHNOLOGY LEARNING CENTER

..Finishing School for Engineer's

artificial eyes on it to assist visually challenged

- 91 Optically Isolated Fuse blown Indicator with Sound and light indicator
- 92 Pyro electric based Fire Alarm
- 93 Coin operated milk dispensing system using IR sensor
- 94 Automatic public tap control system using IR sensor to prevent wastage of water
- 95 DTMF based industrial automation/home automation
- 96 Smart card based door lock system for MNC's
- 97 Visitor counter
- 98 Automatic room light control using PIR sensor
- 99 Intelligent fire detector
- 100 PIR sensor based human accident prevention with vehicles(auto-breaking on scanning human)
- 101 Coin based mobile phone charger
- 102 Vision based automated car parking system
- 103 Aero dynamic wind mill with reverse charge protection for rural



info@tlcindia.org

www.tlcindia.org



+91-9705351122

TECHNOLOGY LEARNING CENTER

..Finishing School for Engineer's

areas

- 104 Smart card based bank security system
- 105 ZIGBEE based intelligent helmet for coal miners safety purpose
- 106 Intelligent traffic control using IR sensor
- 107 Human recognition using RFID technology
- 108 Anti theft system for valuable items using LDR
- 110 Life cycle testing of electrical loads by down counter
- 111 Automatic dialing to any telephone using i2c protocol on detecting burglary
- 112 Networking of multiple microcontrollers
- 113 Line following robotic vehicle using microcontroller
- 114 Detecting power grid synchronization failure on sensing frequency or voltage beyond acceptable range
- 115 Cell phone based DTMF Controlled garage door opening system
- 116 BLDC motor speed controller with rpm display
- 117 Predefined speed control of BLDC motor
- 118 Distance measurement by using ultrasonic sensors



info@tlcindia.org

www.tlcindia.org



+91-9705351122

TECHNOLOGY LEARNING CENTER

..Finishing School for Engineer's

- 119 Portable programmable medication remainder
- 120 IR obstacle detection to actual load
- 121 Programmable energy meter for electrical load survey
- 122 Sun tracking solar panel
- 123 Security system with user changeable password
- 124 Dish positioning system control by IR remote
- 125 Stamp value calculator for postage needs
- 126 Speed checker to detect rash driving on highways
- 127 Password based circuit breaker
- 128 Parallel telephone lines with security system
- 129 Industrial temperature controller
- 130 Programmable ac power control
- 131 Dual converter using
- 132 Contactless liquid level controller
- 133 SCADA (supervisory controller& data acquisition) for remote industrial plant
- 134 Automatic surveillance camera panning system for pc



info@tlcindia.org

www.tlcindia.org



+91-9705351122

TECHNOLOGY LEARNING CENTER

..Finishing School for Engineer's

- 135 Closed loop control for a brushless dc motor to run at the exactly entered speed
- 136 Using a TV remote as a cordless mouse for the computer
- 137 Movement sensed automatic door sensing system
- 138 DTMF based load control system
- 139 RFID card based paid car parking
- 140 Auto intensity control for street lights
- 141 Precise digital temperature control
- 142 Optimum energy management system
- 143 Four quadrant dc motor speed control with microcontroller
- 144 Pre stampede monitoring and alarm system
- 145 Pc based electrical load control
- 146 Bidirectional rotation of an induction motor with a remote control device
- 147 Precise illumination control of lamp
- 148 Speed controlled unit designing for a dc motor
- 149 Speed and direction controller of electric dc motor using smart phone



TECHNOLOGY LEARNING CENTER

..Finishing School for Engineer's

- 150 SMS based weather report
- 151 Electric motor speed control system with clockwise and anti-clockwise direction
- 152 Radio frequency based remote controlled robot with wireless video camera mounted on it
- 153 Construction of electrical oven temperature monitoring and controlling with time management
- 154 Active door and load controlling system using sensors
- 155 Auto door code lock
- 156 Automatic rail way gate control using microcontroller
- 157 GPS and microcontroller based location display on LCD display
- 158 Implementation of mobile based hi-tech door locking system
- 159 Industrial conveyer belt for object counting system
- 160 Home security robot prevent theft
- 161 Radio frequency based industrial wireless control system
- 162 Real time pedestration detection and tracking at night time for driver assistance system



TECHNOLOGY LEARNING CENTER

..Finishing School for Engineer's

- 163 Remote controlled bomb disposable robot
- 164 RF based multiple device control using single remote
- 165 RFID based book tracking system in libraries
- 166 Secure wireless data communication
- 167 Wireless digital code lock with a status display
- 168 Power devices operated through movement sensor an effective fault governing on universal motor
- 169 Distribution transmission line voltage monitoring and alert system
- 170 Temp based speed controlling of frezle(exhaust) fan Integrated chip based electrical equipments access control system
- 171 Intelligent street light operation and status through mobile phone
- 172 An efficient power saver for street lights using LDR and RTC
- 173 Electrical plant boiler temperature and water level monitor and contro
- 174 Dynamic temperature adjustable system and load controlling using triac
- 175 Multi zone temperature monitoring with voice announcement system
- 176 Industrial devices operated through wireless technology



TECHNOLOGY LEARNING CENTER

..Finishing School for Engineer's

- 177 Handheld computer based speed controlling of dc motor
- 178 Smart card based access control system for power devices
- 179 Supervising & mechanization of agricultural field environment
- 180 Acceleration operating of dc motor through IR
- 181 Automatic gate operating and vehicles counting in corporate companies
- 182 Checking and auto control of water level using wireless sensor
- 183 Speed moderate of dc motor through remote device
- 184 Season based street light control system
- 185 Implementation of PWM technique for electric motor using h-bridge
- 186 Efficient energy utilization in corporate field with PIR sensor
- 187 Design and development of water sprinkler system for plants
- 188 Wireless RF Controlled LPG Detecting Robot for underground and mining applications
- 189 RF controlled robotic wheel chair for physically challenged with obstacle identification and musical alert system



TECHNOLOGY LEARNING CENTER

..Finishing School for Engineer's

- 190 IR based escaping cock robot (Inspired by nature: inspired by nature
– escapes from you, if you try to catch it)
- 191 Pc controlled spy robot
- 192 Voice controlled robot for physically challenged people
- 193 super intelligent robot using smoke sensors and light dependent resistor
- 194 Robot with camera interface which can be used as a spy-bot.
- 195 Play with robotic eye (IR SENSOR).
- 196 wired robot
- 197 Obstacle detector robot
- 198 A live human being detector in war fields
- 199 fire fighting robot (AT89S52)
- 200 robot control using TV remote



TECHNOLOGY LEARNING CENTER

..Finishing School for Engineer's



info@tlcindia.org

www.tlcindia.org



+91-9705351122

TECHNOLOGY LEARNING CENTER

..Finishing School for Engineer's



info@tlcindia.org

www.tlcindia.org



+91-9705351122