

**Department of Electronic Science
Best Practice- 2023-24
Wallpaper / Poster Presentation by Students
Report**

Objective	<ul style="list-style-type: none">• To cultivate out of box thinking, such as inter-disciplinary thinking, synthesizing knowledge of different disciplines and to cope with complexity among students.• To ensure the knowledge acquiring among the student's community.• To make them understand the emerging concepts from known concepts.• To stimulate in-depth learning of the concepts and understanding of various topics.
The Context	<ul style="list-style-type: none">• This event is to provide an opportunity for the students to share their knowledge with the peer group members.• The digital poster is prepared in advance with desired technical framework to share the knowledge on inter-disciplinary fields.• This activity will lead to encourage the students to participate in symposia, technical presentation.
Evidence of Success	Outcome of this practice enables the students to <ul style="list-style-type: none">✓ Participate in technical presentation✓ Project Expo✓ Participate in skill-oriented competitions
Challenging Issues	Resources are the main challenges for participation in the competition. <ul style="list-style-type: none">• For success of such practices require attitude and willingness without which it is difficult to motivate students which is the target audience of the Institute.• Degree of motivation required in the minds of the students can result in success of such practices.



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Article Name →

Cordless Power Controller.

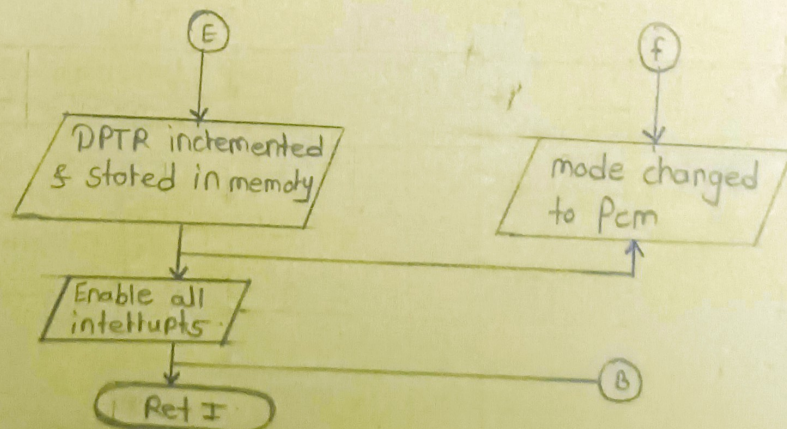
Introduction →

Cordless power controller (CPC) is essentially a remote control implemented with the help of a cordless telephone.....

Connecting CPC to the telephone line makes it possible to control lights, fans and other appliances of our home using our cordless phone.....

The interesting feature of CPC is its ability to control two types of devices; They are on/off control and on/off with speed/intensity control. CPC is developed as a microcontroller 8051 based device which controls the devices depending on the codes entered through telephone keypad. Intensity/speed variation is about is by altering the phase of the gate pulses given to the triac for triggering it. fan.....

Diagram →



Working →

- ① on reset, cpc would be in the telephone mode. Power Control mode (pcm) only after dialing a particular code. After the code has been entered, cpc switches to the power control mode. the indicator and the tone generator tell us that the device has been selected. And the relay disconnects telephone from the lines.
- ② In the pcm, we can select different devices by dialing appropriate codes for each. (for eg. 1. for bulb) etc. 2 for fan
- ③ After selecting a device we can control the on/off state of the device by entering a different key.
- ④ If the device selected is fan, we can control the speed of it by using two dedicated switches, for increasing & decreasing the speed respectively.
- ⑤ The mode changes automatically to telephone when the phone is disconnected thus the device works in two modes namely..

* Application →

- ① Automotive Power management Ics. voltage Hickeys. watchdog timers.
- ② Automotive magnetic sensor Ics (Hall effect Ics)
- ③ Automotive Real-Time clocks (RTcs)
- ④ Automotive operational Amplifiers.

* Advantages →

Cordless Power.

Cordless power tools have been a hanging success in the last few years & they have given traditional tools a run for their money. But every latest product isn't always the best, sometimes is tools.

① Convenience →

lack of physical cords and the light weight enable manufactures

achieve a more ergonomic & compact design that in turn allow for extra addition of convenience.

2) Probability →

Because of a compact design and absence of electrical cords cordless power tools are a lot more portable than their counterparts as you can easily tuck them into your bags.

3) No need of power outlet →

One of the major advantages of cordless tools is that they use lithium batteries for operation so you don't need a power source. For the same reason tools can be of great use in remote areas where power is not available.

● safety →

● As there are no physical cords, there is a lesser chance of operator or any other person at the job site to trip over & fall. Besides lack of physical cords also lessen the risk of electrocution.

Disadvantages →

1) Expensive →

Cordless tools use the latest technology & more often than not modern technology is relatively expensive as OEMs are trying to cover their research & development costs which is quite understandable.

● less reliable →

● Traditional tools are being manufactured for decades hence the engineering involved in the manufacturing of traditional power tools is the far more reliable & time tested. On the other hand manufacturing procedures & engineering of cordless tools are still in their infancy & need time to achieve the same level of perfection. If you are working with a cordless power tool you must remember to recharge your battery after every project.

2) less powerful →

Although it's not that big of an issue for a casual consumer, the lack of heavy duty performance may become a deal breaker for a professional.