

# Wireless Power Transmission For Vehicle Using Arduino

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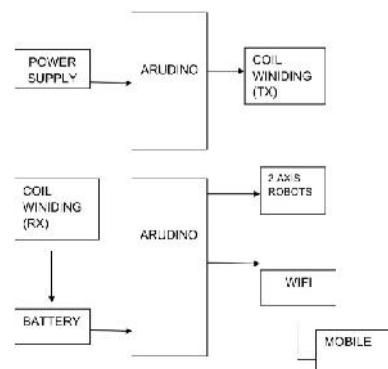
**Abstract-** *Wireless power transfer (WPT) is the current technology using magnetic resonance which could set error free from the frustrating wires. In fact, the WPT adopts the same concepts which have already been developed with the term inductive power transfer. WPT technology is developing hastily in recent years. At kilowatts power level, the transfer distance increases from several milli meters to several hundred milli meters with a grating to load efficiency above 90%. This enhancement makes the WPT very attractive to the electric vehicle (EV) charging applications in both stationary and dynamic charging situations. This paper reviewed the technologies in the WPT area suitable to EV wireless charging. By introducing WPT in EVs, the obstacles of charging time, range, time and cost can be easily mitigated. Battery technology is no longer similar in the mass market penetration. It is hoped that scientists could be encouraged by the state-of-the-art achievements, and push forward the further growth of WPT as well as the expansion of EV.*

## I. INTRODUCTION

For energy, environment, and many other aspects, the electrification for transportation has been carrying out. In railway systems, the electric locomotives have already been well urbanized for many years. However, for electric vehicles (EVs), the high elasticity makes it not easy to get power in a similar way. Instead, a high power and large capacity battery pack is usually prepared as an energy storage unit to make an EV to operate for an acceptable distance. Owner has to face some complex scenarios by means of this wired EV. Until now, the EVs are not so attractive to consumers even with many government motivation programs. Government subsidy and tax incentive are one key to increase the market share of EV today. The problem for an electric vehicle is nothing else but the electricity cargo space technology, which requires a battery which is the bottleneck today due to its unacceptable energy density, limited life time and high cost.

## WORKING PRINCIPLE

working principle Wi-Fi is a high speed internet connection and network connection without use of any cables of wires. the wireless network is operating three essential elements that are radio, signals antenna and router. Wi-Fi allows the person in order to get access to web any place in the actual provided area.



## POWER SUPPLY

A regulator circuit removes the ripples and also remains the same dc value even if the input dc voltage varies, or the load connected to the output dc voltage changes. This voltage regulation is usually obtained using one of the popular voltage regulator IC units.

## TRANSFORMER

The potential transformer will step down the power supply voltage (0-230V) to (0-6V) level. Then the secondary of the potential transformer will be connected to the precision rectifier, which is constructed with the help of op-amp

## BRIDGE RECTIFIER

When four diodes are connected as shown in figure, the circuit is called as bridge rectifier. The input to the circuit is applied to the diagonally opposite corners of the network, and the output is taken from the remaining two corners.

## IC VOLTAGE REGULATOR

Voltage regulators comprise a class of widely used ICs. Regulator IC units contain the circuitry for reference source, comparator amplifier, control device, and overload protection all in a single IC. IC units provide regulation of either a fixed positive voltage, a fixed negative voltage, or an adjustably set voltage

## II. CONCLUSION

Thanks to its simple and accessible user experience, Arduino has been used in thousands of different projects and applications. It runs on Mac, Windows, and Linux. Teachers and students use it to build low cost scientific instruments, to prove chemistry and physics principles, or to get started with programming and robotics. Designers and architects build interactive prototypes, musicians and artists use it for installations and to experiment with new musical instruments. Makers, of course, use it to build many of the projects exhibited at the Maker Faire, for example. Arduino is a key tool to learn new things. Anyone - children, hobbyists, artists, programmers - can start tinkering just following the step by step instructions of a kit, or sharing ideas online with other members of the Arduino community.

## REFERENCES

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