ISSN (ONLINE): 2454-9762
ISSN (PRINT): 2454-9762
Available online at www.ijarmate.com

International Journal of Advanced Research in Management, Architecture, Technology and Engineering (IJARMATE)
Vol. 3, Issue 6, June 2017

ABS-FAULT DETECTION WITH REMOTE MONITORING FOR METRO TRAINS

K.Ormila[1]

[1]Lecturer/EEE, A.M.K.Technological Polytechnic College, Sembarambakkam, Chennai 600123.

Email Id: ormilaamk@gmail.com

Abstract

Programmed block signaling, or ABS, is a railroad interchanges framework that comprises of a progression of signals that partition a railway line into a progression of areas, or "squares". The framework controls the development of trains between the squares utilizing programmed signals. ABS activity is intended to permit trains working a similar way to follow each other in a protected way without hazard of backside impact. The presentation of ABS decreased railways' costs and expanded their ability, contrasted with more established manual square frameworks that necessary human administrators. The programmed activity comes from the framework's capacity to identify if blocks are involved or in any case deterred, and passing on that data to moving toward trains. The term programmed in ABS alludes to the activity of the framework with no external intercession and differentiations with more current traffic light frameworks that require outside control to build up a progression of traffic.

Keywords: ABS, train, fault detection.

1. Introduction

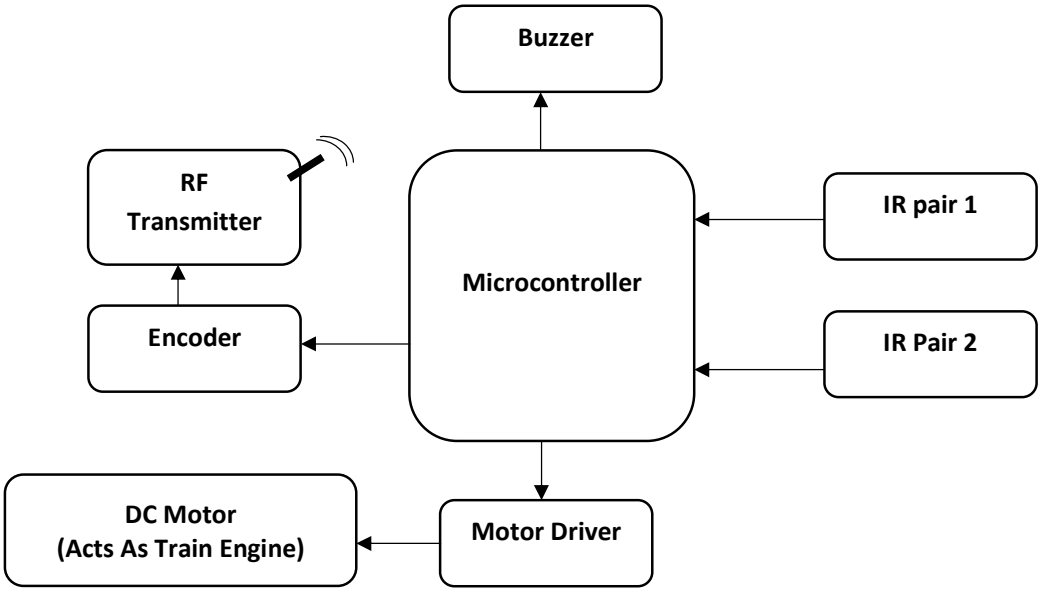
The most punctual method of dealing with numerous trains on one track was by utilization of a timetable and passing sidings [1]. One train held up upon another, as indicated by the guidelines in the timetable, yet on the off chance that a train was postponed under any condition, any remaining trains may be deferred, hanging tight for it to show up at the legitimate where they could pass securely [2]. Activity of trains by timetable alone was enhanced by telegraphed train orders [3]. Nonetheless, as time went on, numerous railroads came to see programmed block signaling as cost successful, since it diminished the requirement for employees to physically work each sign, diminished the maintenance costs and harm claims coming about because of crashes, made conceivable a more proficient

ISSN (ONLINE): 2454-9762
ISSN (PRINT): 2454-9762
Available online at www.ijarmate.com

International Journal of Advanced Research in Management, Architecture, Technology and Engineering (IJARMATE)
Vol. 3, Issue 6, June 2017

progression of trains, diminished the quantity of hours trains and crews sat idle, and diminished generally speaking transit times from one highlight another [4, 5].

2. Methodology:



The figure 1 shows overview of ABS system implanted for train.

Figure 1: Overview of train ABS system.

A force supply gives a consistent yield paying little heed to voltage variations."Fixed" three-terminal linear regulators are regularly accessible to create fixed voltages of in addition to 3 V. The L293D is intended to give bidirectional drive currents of up to 600-mA at voltages from 4.5 V to 36 V. gadgets are intended to drive inductive loads like relays,

ISSN (ONLINE): 2454-9762
ISSN (PRINT): 2454-9762
Available online at www.ijarmate.com

International Journal of Advanced Research in Management, Architecture, Technology and Engineering (IJARMATE)
Vol. 3, Issue 6, June 2017

solenoids, dc and bipolar stepping motors, just as other high-current/high-voltage loads in certain inventory applications. The train abs framework was embedded in proving ground as demonstrated in figure 2.

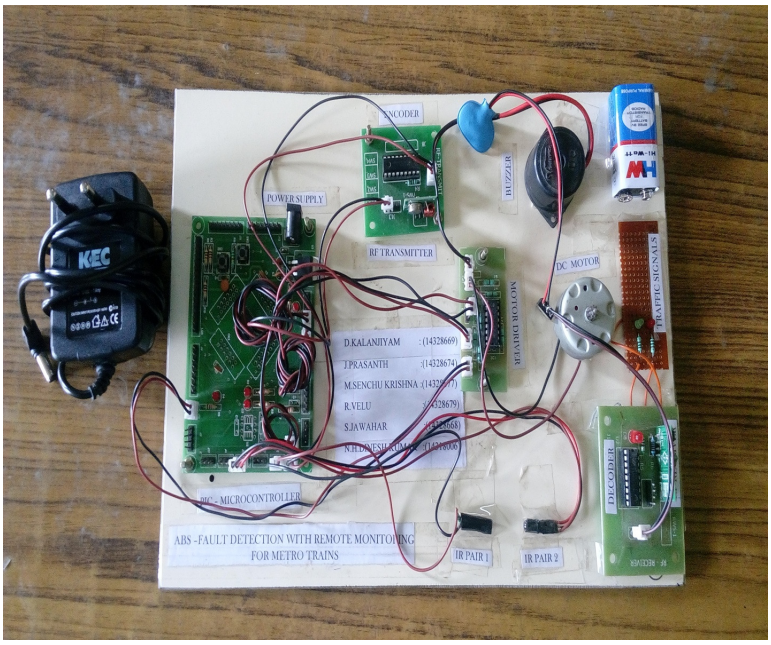


Figure 2 : Hardware implementation of train ABS system.

3. Conclusion

The braking arrangement of a railway vehicle is unmistakable from the braking arrangement of street vehicles. Instantly, the braking distance of any vehicles can be diminished with squeezing the brake pedal by the driver. Notwithstanding, the braking for railway vehicles is an exceptionally mind boggling measure that is of significance to railway vehicles and adds to traffic wellbeing. This entanglement is brought about by different wonders which happen during braking in multi-segment frameworks like mechanical, pneumatic, pressure driven, electronic, and so on The activity of the vacuum braking framework isn't reasonable for longer and fast trains and thusly has incredibly restricted applications. Then again, the compressed air brakes are more proficient than vacuum brakes.

ISSN (ONLINE): 2454-9762
ISSN (PRINT): 2454-9762
Available online at www.ijarmate.com

International Journal of Advanced Research in Management, Architecture, Technology and Engineering (IJARMATE)
Vol. 3, Issue 6, June 2017

References

1. Electric motor#The first electric motors
2. http://www.datasheetarchive.com/dl/Databooks-1/Book241-407.pdf
3. http://ww1.microchip.com/downloads/en/DeviceDoc/39630C.pdf
4. Frank Julian Sprague#Joining the emerging electrical industry
5. "PICmicro Family Tree", PIC16F Seminar Presentation http://www.microchip.com.tw/PDF/2004_spring/PIC16F%20seminar%20presentation.pdf