

Dedication

It is our genuine gratefulness and warmest regard that we dedicate this work to our mothers, who taught us that even the largest task can be accomplished if it is done one step at a time.

It is also dedicated to our teachers, who taught us that the best kind of knowledge to have is that which is learned for its own sake.

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Abstract

This project ‘designing and implementing ECG signal using microcontroller’ deals with a transfer of ECG data from the patients to be displayed in labVIEW.

The idea of our project is firstly taking up an ECG signal from the patient using electrodes. Then the signal is applied to an instrumentation amplifier (AD624) then to band pass filter (TL072) and amplification using TL072.

After that the signal was read in PC using an Arduino UNO (an open-source electronics prototyping platform based on flexible, easy-to-use hardware and software) board then sent to labVIEW (system design software) software.

The obtained signal is then compared to a normal one then determined either it is normal or not.

المستخلص

هذا المشروع " التصميم والتنفيذ لاشارة ECG باستعمال مايكروكنترولر " يهتم بتحويل بيانات اشارة ECG من المريض ليتم عرضها في برنامج LabVIEW.

فكره المشروع تتم اولا بأخذ اشارة ECG من المريض باستخدام الكترودات . ثم تم تطبيق الاشارة على AD624 وبعدها طبق عليها مرشح باستخدام TL072 ومن ثم تم تكبيرها باستخدام TL072 كمكبر.

بعد ذلك الاشارة تمت قراءتها في حاسوب شخصي باستخدام Arduino UNO board ثم أرسلت الى LabVIEW. الاشارة التي تم الحصول عليها تمت مقارنتها مع اشارة طبيعية لتحديد إذا كانت الاشارة المتحصل عليها طبيعية او لا باستخدام.

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