

เครื่องกำเนิดสัญญาณพัลส์ที่โปรแกรมได้  
สำหรับการสร้างภาพโดยเอ็นเอ็มอาร์



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**PROGRAMMABLE PULSE GENERATOR FOR NMR IMAGING**



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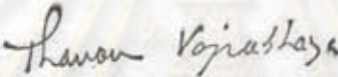
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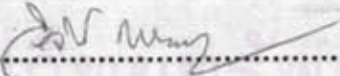
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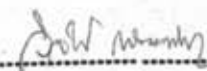
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เครื่องกำเนิดสัญญาณพัลส์ที่โปรแกรมได้จะสามารถสร้างสัญญาณไฟฟ้าให้มีรูปร่างต่าง ๆ ตาม  
ที่โปรแกรมไว้ด้วยเครื่องคอมพิวเตอร์ และสามารถกำหนดการปล่อยสัญญาณไฟฟ้าที่มีรูปร่างต่าง ๆ นี้ให้ได้  
ตามเวลาที่โปรแกรมไว้เช่นกัน เครื่องกำเนิดสัญญาณพัลส์ที่โปรแกรมได้ประกอบด้วย เครื่องโปรแกรม  
เวลาและเครื่องกำเนิดสัญญาณพัลส์รูปร่างต่าง ๆ ภายในของแต่ละเครื่องมีหน่วยความจำในการเก็บ  
ตารางเวลาและเก็บรูปพัลส์ที่ต้องการตามลำดับ ตารางเวลา และรูปพัลส์ถูกสร้างขึ้นบนคอมพิวเตอร์  
แล้วถูกนำไปเก็บในแผ่นจานแม่เหล็ก เมื่อต้องการจะนำมาใช้งานก็ทำการอ่านจากแผ่นจานแม่เหล็กแล้ว  
ส่งไปเก็บในตัวเครื่องกำเนิดสัญญาณพัลส์โดยผ่านระบบ IEEE488 การควบคุมให้เครื่องทำงานควบคุมได้  
จากเครื่องคอมพิวเตอร์ เครื่องกำเนิดสัญญาณพัลส์ที่โปรแกรมได้นี้ถูกออกแบบมาเพื่อใช้ช่วยในการเก็บ  
ข้อมูลสำหรับการสร้างภาพโดยเอ็นเอ็มอาร์

ศูนย์วิทยทรัพยากร  
จุฬาลงกรณ์มหาวิทยาลัย

ภาควิชา ..... ฟิลิกส์  
สาขาวิชา ..... ฟิลิกส์  
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ลายมือชื่อนิสิต 

ลายมือชื่ออาจารย์ที่ปรึกษา 

ลายมือชื่ออาจารย์ที่ปรึกษาช่วย 

พิมพ์ต้นฉบับบทคัดย่อวิทยานิพนธ์ภายในกรอบสี่เหลี่ยมนี้เพื่อส่งมอบเล่ม



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Programmable pulse generator can generate any shapes of electrical signal and can release these electrical signals at times, which were programmed by the computer. It consists of pulse programmer and pulse shaping unit; both having memories for storing time table and pulse shapes, respectively. The time table and the shapes can be constructed on the computer to be stored in magnetic diskette. On application the computer reads them from magnetic diskette and sends them to the programmable pulse generator by passing through IEEE488 system. The programmable pulse generator can be executed by the computer. This programmable pulse generator is designed to facilitate in taking data of NMR imaging.

ศูนย์วิทยทรัพยากร  
จุฬาลงกรณ์มหาวิทยาลัย

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ศูนย์วิทยทรัพยากร  
จุฬาลงกรณ์มหาวิทยาลัย



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