

R.F. Note #124
NSCL
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NSCL Cyclotron RF Servo System

INTRODUCTION 2

USER INTERFACE AND PID CONTROL 2

Introduction

The servo controls for the NSCL rf systems are being upgraded. Five distinctly different modules are being replaced with a single new module. The upgrade is significant because it provides for 1) controls configurable via software, 2) reducing the unique module count from 4 to 1) increasing reliability by replacing 83 aging obsolete modules with modern ones, 4) improving tuning accuracy by providing both improved setpoint accuracy and increased tuning sensitivity, and 5) substantially automates frequency changes. The upgrade also continues the transition from analog control interfaces to digital control interfaces. The RF Servo Module is the second module designed with these capabilities and allows for both full local and remote control. The system is fully documented in the NSCL Electronics Department bundle #208.

User Interface and PID Control

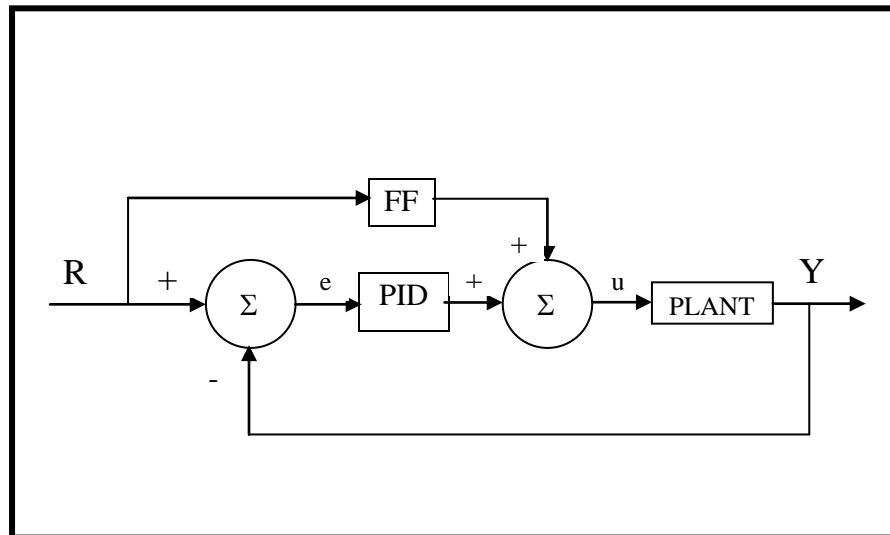


Figure 1
PID Block Diagram