

2.2 Radar Tracking Control System

The example will illustrate the use of HyPneu with a complex feedback type of system. A radar tracking system is shown schematically as an example of a feedback control system. The dynamic response of this system was simulated for the case where the target changed from +1 radian from the reference point to a -1 radian at 2 seconds. The curves of the radar receiver position and the feedback control signal are shown for illustration purposes.

The purpose of this example is to illustrate the ability of HyPneu to handle electro-mechanical-hydraulic control systems. The servo valve and instrumentation feedback with dead band presents the electronic parts while the gear reducer and disk pedestal are mechanical components. All of the remaining components are hydraulic.

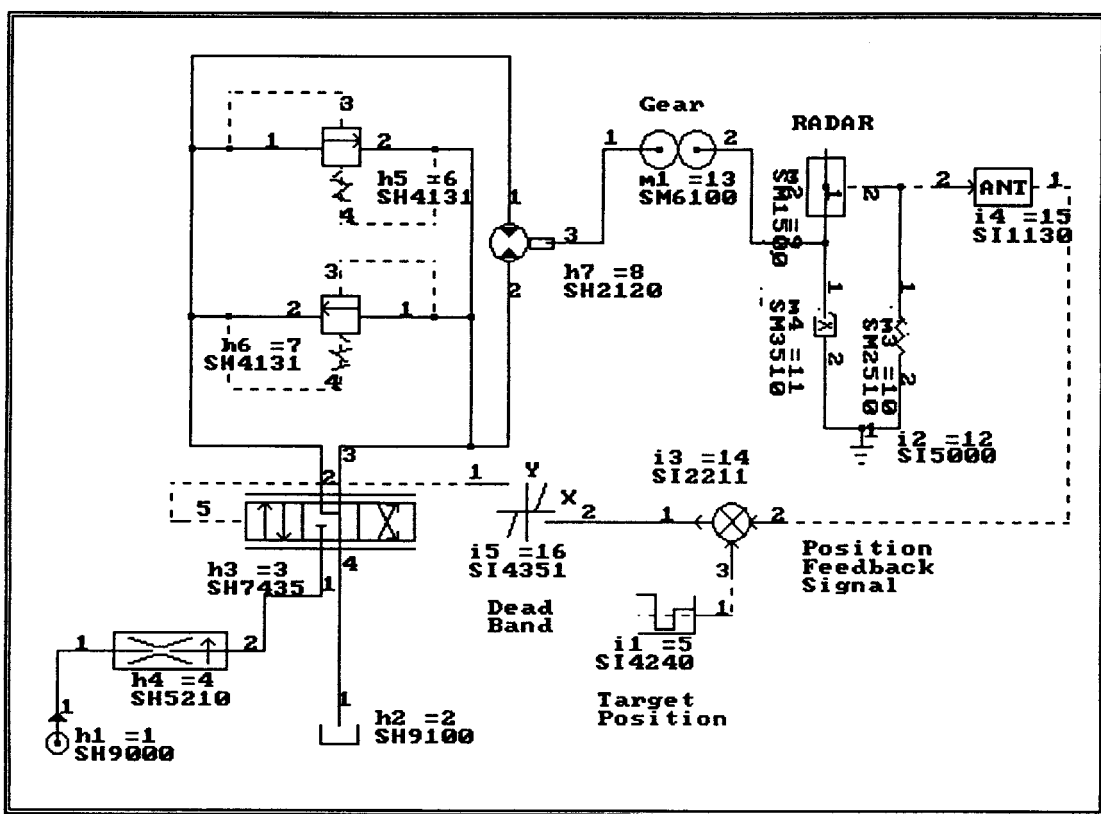
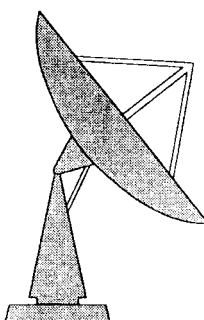


Figure 2.2a. Radar Tracking Control System Schematic



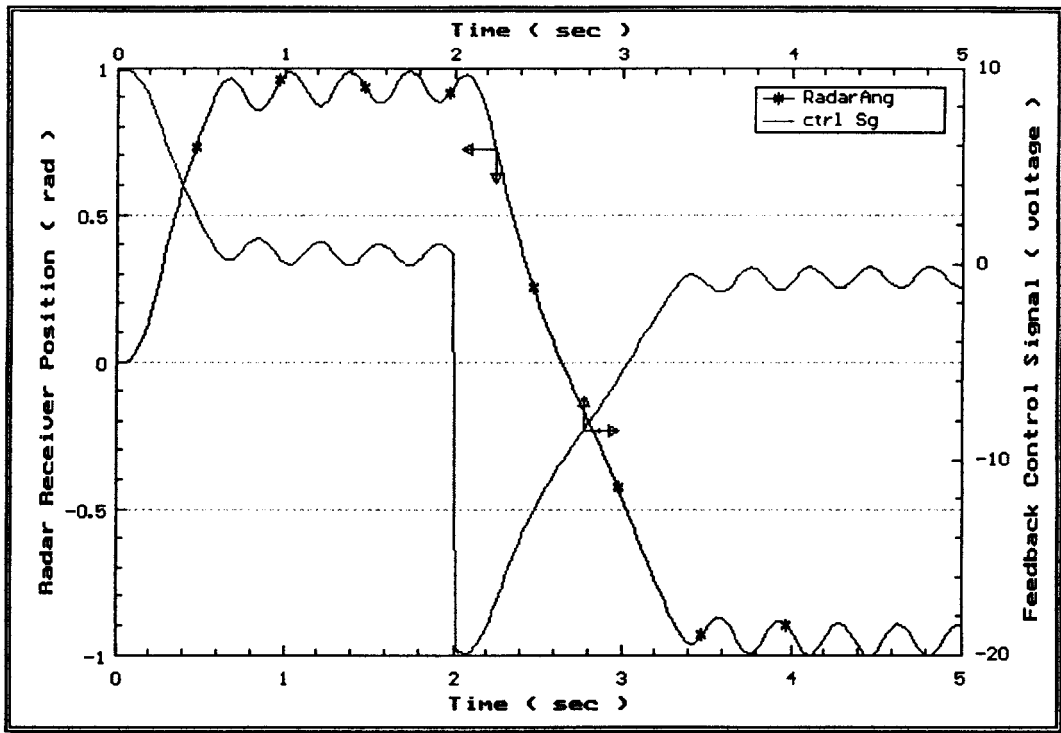


Figure 2.2b. Radar Tracking Control System Analysis