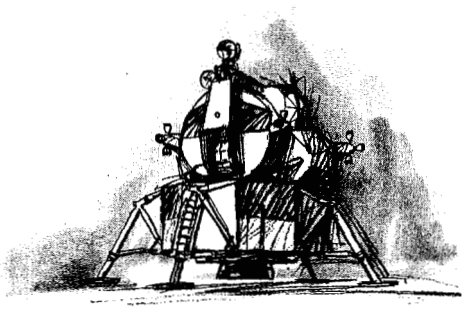
# LUNAR MODULE
# Subsystem Assembly and Installations



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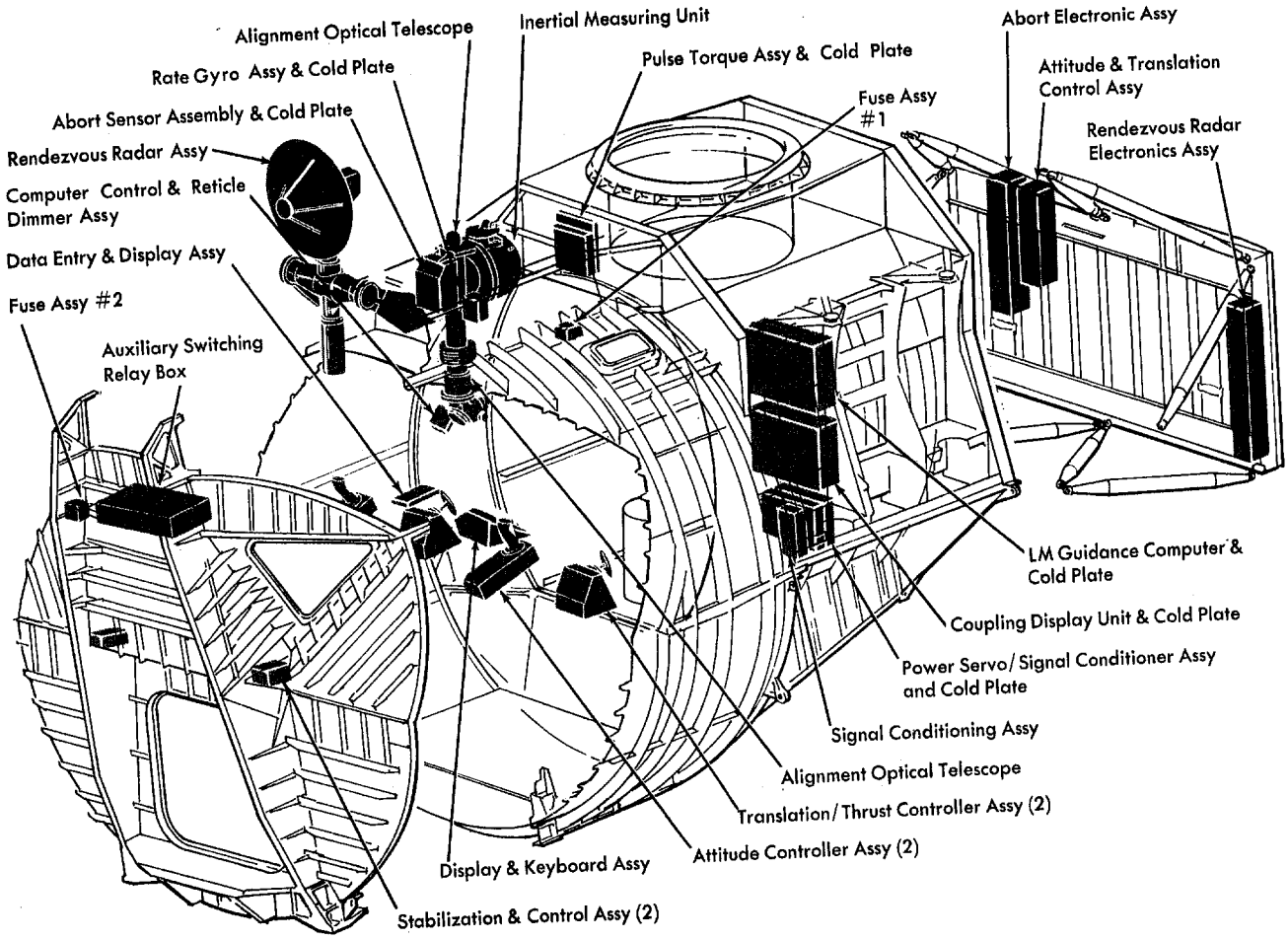


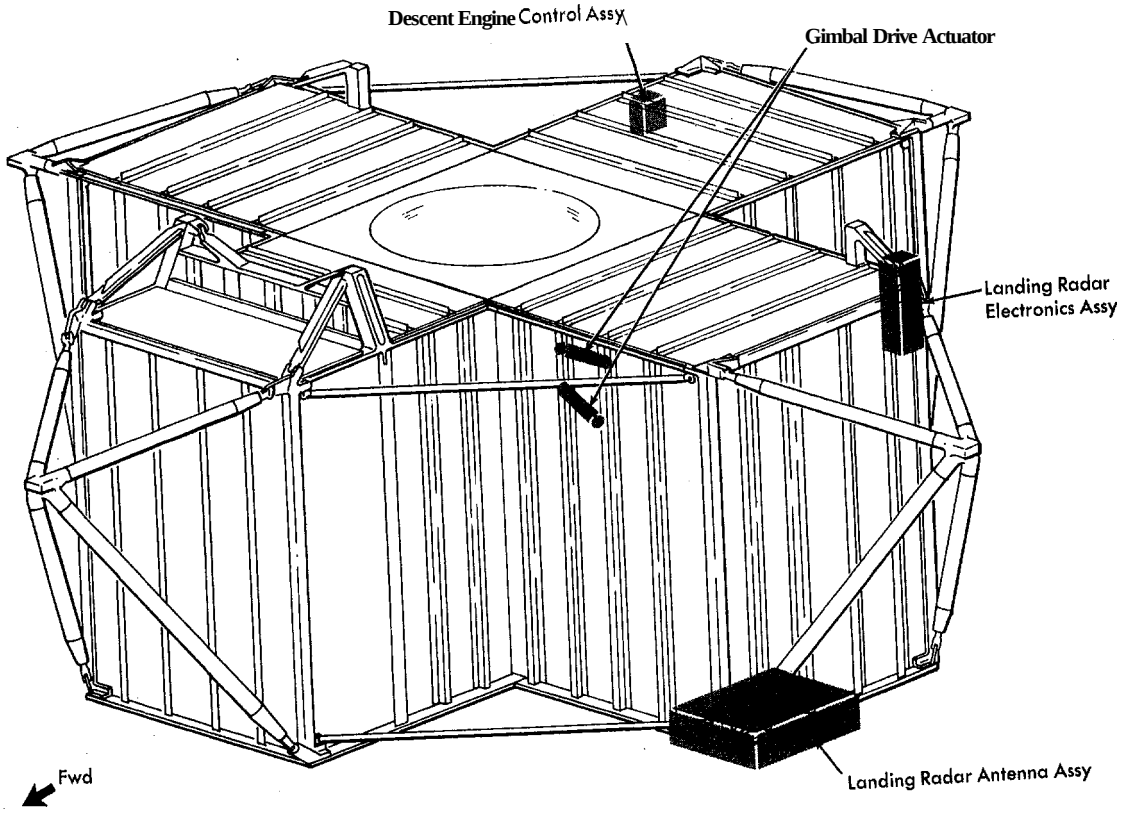


**Figure 10 Guidance, Navigation and Control Subsystem**

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## 9. GUIDANCE, NAVIGATION AND CONTROL (GN & C)

The Guidance, Navigation and Control Subsystem (Figure **10)** provides for flight path control of the LM throughout the mission. It consists of four major sections: Primary Guidance and Navigation Section, Radar Section, Control Electronics Section and the Abort Guidance Section.

The Primary Guidance and Navigation Section is essentially an aided inertial system whose principal aids are the alignment optical telescope and Radar Section consisting of the landing radar and rendezvous radar. The inertial measurement unit is aligned to an inertial reference by star sightings with the alignment optical telescope. Altitude and velocity information from the landing radar is used to update the inertially derived data. During the coasting descent, lunar stay, and rendezvous phases of the mission, the rendezvous radar coherently tracks its transponder in the CSM to provide range, range rate, and angle measurements (with respect to antenna axes) to the LM guidance computer.

The Control Electronics Section processes the flight data that controls the LM vehicle during all phases of the mission. The Abort Guidance Section provides semi-automatic pre-programmed flight control data to the Control Electronics section when a mission abort maneuver is being executed due to malfunction of the Primary Guidance and Navigation Section.