Simulators - Possible Projects

Reaction Control Simulator. (& gyro controls)
Sphere
Air Bearing - frictionless
Integrate Control ē jet system
Visual Windows ō retractable covers
Controls & console integrated ē seat

Purpose - training in reaction control of a space vehicle

2. Visual Orientation Simulator.
To determine tendency to become disoriented
under space visual conditions
To determine adaptability & ability to overcome
this tendency ē training

Simulation of orbital matching + tanker
connection (by combination of 1+2 simulators)
Simulation of landing techniques on moon. (combination 1+2)

Training in estimating distance + size of
other objects by light reflection form
scale models of objects likely to be
encountered in space. (1+2 combined)

Training in avoidance of threatening objects
detected.

Sphere of plexiglas for visual orientation
Walls of room (planetarium type) contain 1-way
mirror glass for observers use.
Integration of engine thrust controls with view-screen + rate
of approach of body landing being made on.

Terminology for Designating Planetary Orbits
   in the Solar System

<u>Planetary Designation</u>
   1st Letter of Name (or 1st 2)
   Symbol of Planet
   Combination
         Symbol for planet + Cap Letter of Moon Name.
                                          for Moons.

<u>Designation of Distance</u>
   Units of 1000 miles from body designated.
   <u>Examples</u>

$E_{O_1} \rightarrow E_{O_1}$ = Earth orbit of 1000 mi.

$E_{O_{1.075}}$ =   "   "   " 1075 mi

M_{O_5} = Mercury "   " 5000 mi.

$L_{O.25}$ = Lunar "   " 250 mi.

$L_{O_{10}}$ =   "   "   " 10,000 mi

                        or

Sun ☉	$☾_{.25}$ = Lunar O of 250 mi
Moon ☾	$⊕_{1.075}$ = Earth O of 1075
Mercury ☿	$♂_5$ = Mars O of 500 mi
Venus ♀	or $.5$
Earth ⊕	⎰ $☾O_{.25}$
Mars ♂	⎱ $♂O$
Jupiter ♃	or
Saturn ♄	Ⓒ$_{.25}$
Uranus ♅	Ⓞ♂$_{.5}$
Neptune ♆	Ⓐ$_{1.075}$
Pluto ♇	