The outboard handholds and center armrest provide stability and comfort for the astronauts when they are seated. The armrest, made of fiberglass, supports the astronaut’s arm while he is manipulating the hand controller.

The floor panels in the crew station are made of beaded aluminum panels, which can support the full lunar weight of the astronauts when standing. The seat belts are made of nylon webbing and are designed for simple attachment and reléase.

Both astronauts are seated so that both front wheels are visible during normal driving. Molded fiberglass fenders protect the vehicle and astronauts from lunar dust particles which may be ejected up and forward by the wheel-soil interaction.

The operating equipment in the forward chassis area includes the drive control electronics (DCE), signal processing unit (SPU), directional gyro unit (DGU), and two batteries. Passive protection is provided by a multilayered aluminized Mylar and nylon netting insulation blanket with a beta cloth (polished glass) outer layer. Aluminum termal straps connected to the SPU and DGU transfer heat away from the electronic components and store it in the batteries and fusible-mass heat sinks.

Thermal control of the DCE is accomplished with a fusible-mass heat-sink tank and a thermal radiator attached to its upper surface. At the end of the lunar sortie, the heat which has been accumulated in the batteries and heat sinks is allowed to escape through radiation.

The astronauts open fiberglass dust covers to expose fused silica thermal mirrors mounted on top of the batteries, DCE, SPU, and heat sinks. The mirrors act as space radiators, thus cooling the equipment. When the batteries reach a lower operating temperature limit of approximately 7.2"C (45"F), the covers close automatically, preventing ad,ditional cooling from taking place and protecting the batteries from dust collection during a sortie.

All instruments on the vehicle's control and display console (Fig. 2b) are mounted on an aluminum plate, which is isolated from the rest of the vehicle by fiberglass mounts. The external surfaces of the console are coated with heat-resistan t paint (Dow-Corning 92-007), and the facgplate is black anodized to control the temperature and to reduce reflection.

The tubular sections of the seats, footrests, handholds, and center and aft floor panels are also anodized with an aluminum oxide, which provides a heat-reflecting and radiating surface.

LIBRO🡪

The machine seemed familiar enough fifty years ago that some of the

press treated it as the inevitable, almost comic product of the most

automotive people on Earth. Of course we’d send a car into space.

In truth, there was no “of course” about it. Basic layout aside, the rover

had little in common with any other vehicle built in the nearly eighty years of

the horseless carriage that preceded it, and bore no resemblance to any other

1969 General Motors product, which is essentially what it was. It was called

on to cross country that no Earth car would encounter, in conditions that

would cripple any terrestrial vehicle instantly: temperatures of minus 250

degrees Fahrenheit in the shade and plus 250 in the sunshine; a surface of

clingy, abrasive dust that could foul any moving part; fierce solar radiation;

and a constant shower of micrometeoroids smaller than grains of sand but

moving faster than bullets. All while wrapped in an airless vacuum.