

The control section consists of a double row of illuminated pushbuttons across the lower extremity of the panel face. The upper row is green and the lower red. These pushbuttons control all valves, both vacuum pumps, the projectile latch and the oscilloscope camera shutters. The circuits are designed in such a way that all lights must be green immediately prior to firing. This feature enables the operator to make one final check just prior to firing to be sure the system is "go". There is one set of pushbuttons which are not in-line with the others. These buttons are at the right end of the row. The upper button, which is the one out of sequence, is the "dump" actuating button. Upon depressing this pushbutton the previously mentioned dump valve is actuated and all other valve circuits are simultaneously opened, thereby causing all other valves to close.

The center section of the panel contains the pressure monitoring devices. At left, the $2\frac{1}{2}$ " diameter gauge reads the pressure of the bottle gas entering the high pressure pump. Directly below this gauge are two pushbuttons which actuate a motor-driven pressure regulator, thus allowing for remote control of the pump inlet pressure. The vent gauge in this sequence indicates the air pressure to the high pressure valve actuators. The third gauge reads the air inlet pressure to the pump. The two buttons below this gauge enable one to regulate the air inlet pressure to the pump.

The gauge directly in the center of the panel monitors the reservoir pressure. Below this gauge a thermo-couple gauge readout indicates the pressure in the barrel when under a vacuum.

Breech pressure is monitored by the two large gauges on the right. Both gauges read to an accuracy of $\pm\frac{1}{4}\%$ of full scale. The left gauge is calibrated in 5 psi subdivisions and indicates pressures from 0 to 1500 psi. The right gauge is calibrated in 25 psi subdivisions and indicates pressures from 0 to 10,000 psi. These gauges are connected to the breech fill line by capillary tubing (1/8" OD x 0.028" wall 316 SS). The low pressure gauge may be