

Sealing & Vent

Finish & Int. & Ext.

# SPECIFICATIONS FOR 100-B

Size is of paramount importance and should be the primary consideration of this design. Mounting for the 100B structure should be on the forward access door of an 86-D as close as possible to the leading edge of the fairing and as far as possible to the right of the center line. The Primary structure should be a platform on which are mounted the various components and fairings. This base should be secured to the aircraft structure with as few and as small fasteners as possible. The mounting of the base should in no way interfere with other functions of the access door. <sup>There</sup> ~~It~~ should be the least possible amount of modification to the aircraft structure and this should be capable of repair easily and quickly upon removal of the D100-B so that the original integrity of the structure is maintained. Access to camera lens ~~scope~~ display and scope controls should be simple and quick with the fewest possible number of quick fasteners being used on the fairing to provide access to these units. *This fairing mty. should be separate from the base mty.* The N-9 camera should be mounted with its lens longitudinal axis parallel to the aircraft's longitudinal axis with the lens axis forming the mid line of the scorer. Distance of  $3\frac{1}{2}$ " should be allowed between forward camera surface and lens window to accommodate the maximum focal lens measurement of 3". There is no need for azimuth adjustment of the camera. The camera axis should be accurately aligned with the aircraft longitudinal axis. Elevation should be <sup>and 50</sup> ~~+~~ or - ~~100~~ mils with the initial elevation adjustment at 0° relative to the lower surface of the access door. An aperture of 2" in elevation and 1" in azimuth should be provided at the front of the fairing for the camera's view. This window should be of water clear plate glass, <sup>and</sup> ~~should be~~ aligned with camera axis in its mid-point adjustment. Replacement of this window should not be made unduly difficult. Camera, overrun, shutter, and speed adjustment should be accessible for occasional adjustment. The whole area behind the camera should be left free for <sup>at least</sup>  $\frac{1}{4}$ " and for  $\frac{1}{8}$ " on the



magazine side. Area above the magazine should be left completely free. A small surface projecting into the magazine area coincident with the bottom of the camera should probably be incorporated to aid in loading. Paul Roos of Par Products will supply outline dimensions for the optics and scope tube assembly including the scope mounting. It will be mounted on the scope axis parallel to the camera axis with scope face set approximately 3" from front camera surface and tube projecting to the camera rear. Adequate space should be left for possible incorporation of a dichoric optical system. Camera mounting, fairing and main chassis should be as rigid as possible. Easy visual access to the face of the CRT should be possible.

Space behind the camera should be provided for CRT high voltage supply and controls. Focusing, intensity controls and voltage divider resistors will be incorporated in an oil filled hermetically sealed package not to exceed 27 cubic inches in space. This supply will be unregulated. Its primary power will be 110 volts single phase 400 cycle, taken from the inverter supply the primary power to the E-6's low voltage power supply. Fusing will be external, the fuse holder being the spare holder for the E-6 low voltage supply. Horizontal and vertical position control astigmatism controller fuse will be mounted for possible use on the sweep unit. This will be a sub-miniature unit tailored to and mounted in available space forward of the camera. This unit should be shock mounted in a well ventilated sheetmetal jacket. The video unit will be mounted in a similar manner. Voltages for these units will be -250 + 300 and + 150 regulated obtained from the E-6 low voltage power supply. No fusing will be necessary since the E-6 supply is internally fused. The video and sweep units shall be capable of providing the sweep on the K1194P11 tube of 5/10" long by 1/8" high. Display will be conventional A. Trigger and video signals from the G40RT unit will be supplied to sweep and video units through coaxial cables. B and C connectors mounted at the extreme rear of the scorer will provide a disconnect feature. All electrical connections will be brought through



through an      AN canon plug. This also will be mounted as near the rear of the unit as possible. Other necessary electrical connections to the plane + 28 volts fused at 5 amps external to the scorer unit. Camera trigger will also be externally fused.

*Wiring*