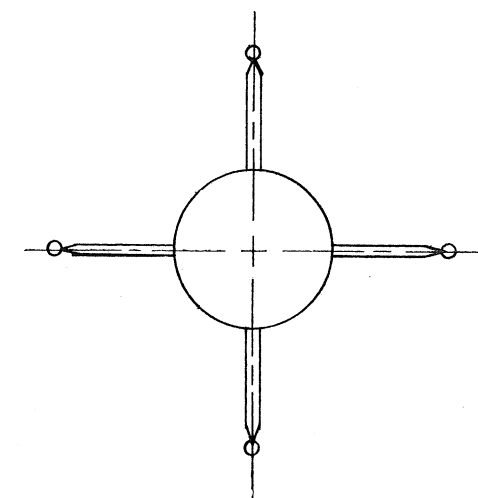
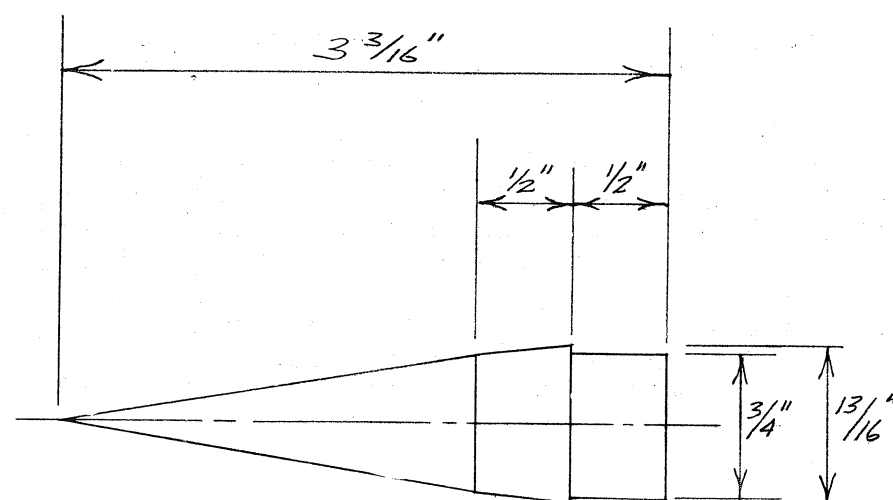


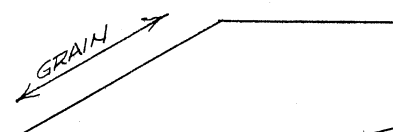
SIDE VIEW



FRONT VIEW




NOSE CONE



FIN PATTERN

WEIGHT (NO MOTOR) - 0.8 OZ.

FOR NON COMMERCIAL USE ONLY	
	NATIONAL ASSOCIATION OF ROCKETRY
	PLAN PROGRAM
VERONIQUE	
MODEL SCALE: 1:26.7	DRAWING SCALE: Full
SCALE SOURCE: Newell "Sounding Rockets"	
DESIGN BY: Stine	DRAWN BY: GHS
CHECKED BY: WSR	RELEASED: Jan. 1961
DRAWING NUMBER: NAR- 107	

National Association of Rocketry

Plan No. 107

PLAN PROGRAM FACT SHEET

Model Name VERONIQUE

Prototype Data: The Veronique (pronounced ver-on-eeék) sounding rocket was designed and built by the French government. The first Veronique rocket was fired in France in August 1950. Improvements in the rocket led to the "IGY version," shown in NAR Plan 107; this latest version of the Veronique is longer and has different fins than the original "NA" models. The Veronique is 20.4 feet long and 21.7 inches in diameter. Its empty weight is 615 pounds. Takeoff weight is 2,962 pounds. It is designed to carry a payload of scientific instruments weighing 132 pounds to an altitude of 135 miles, reaching a velocity of 6,250 feet per second. It is a liquid propellant rocket using nitric acid and turpentine to produce a thrust of 8,820 pounds for 49 seconds; specific impulse is 202 seconds.

The Veronique is a fin-stabilized rocket with no guidance system. However, it employs a very unusual stabilization method (not shown on the plans) during takeoff. Four long arms are attached to the fins with quick-release bolts; cables are attached to the ends of the arms. As the Veronique takes off, all four cables unreel at equal speeds from drums under the launcher, thus holding the Veronique in vertical flight. At 180' altitude, the arms and cables drop off since the rocket has then gained enough speed for aerodynamic stability.

Many Veronique rockets were fired by the French from the Sahara Desert during the International Geophysical Year.

Model Data: Being a scale model, extreme care is required for the construction of the Veronique. The center of gravity of the model should match the points shown on the plan.

The model body is made from a rolled paper tube with an o.d. of 13/16" and an i.d. of 3/4"; the body tube is 7-3/4" long. The nose cone should be lathe-turned from hardwood. Fins may be cut from 1/16" sheet balsa; the balsa grain should run as indicated on the fin pattern of the plan. Various recovery systems may be installed -- parachute, streamer, or simple nose separation. Refer to manufacturers' recommendations for the particular motor used. The model was designed to use NAR Type A or Type B engines. Color scheme is a checkerboard red and white as indicated by shading on the side view of the plans.

Because of its low weight, this model makes an excellent Scale Altitude competition model. It is shown in the plans designed for tower launching; however, a guide lug made from model aircraft tubing may be glued to the side of the body for launching from a rod. Always use a launcher at least 30" long. The Veronique model flies well with high performance.