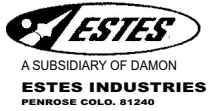


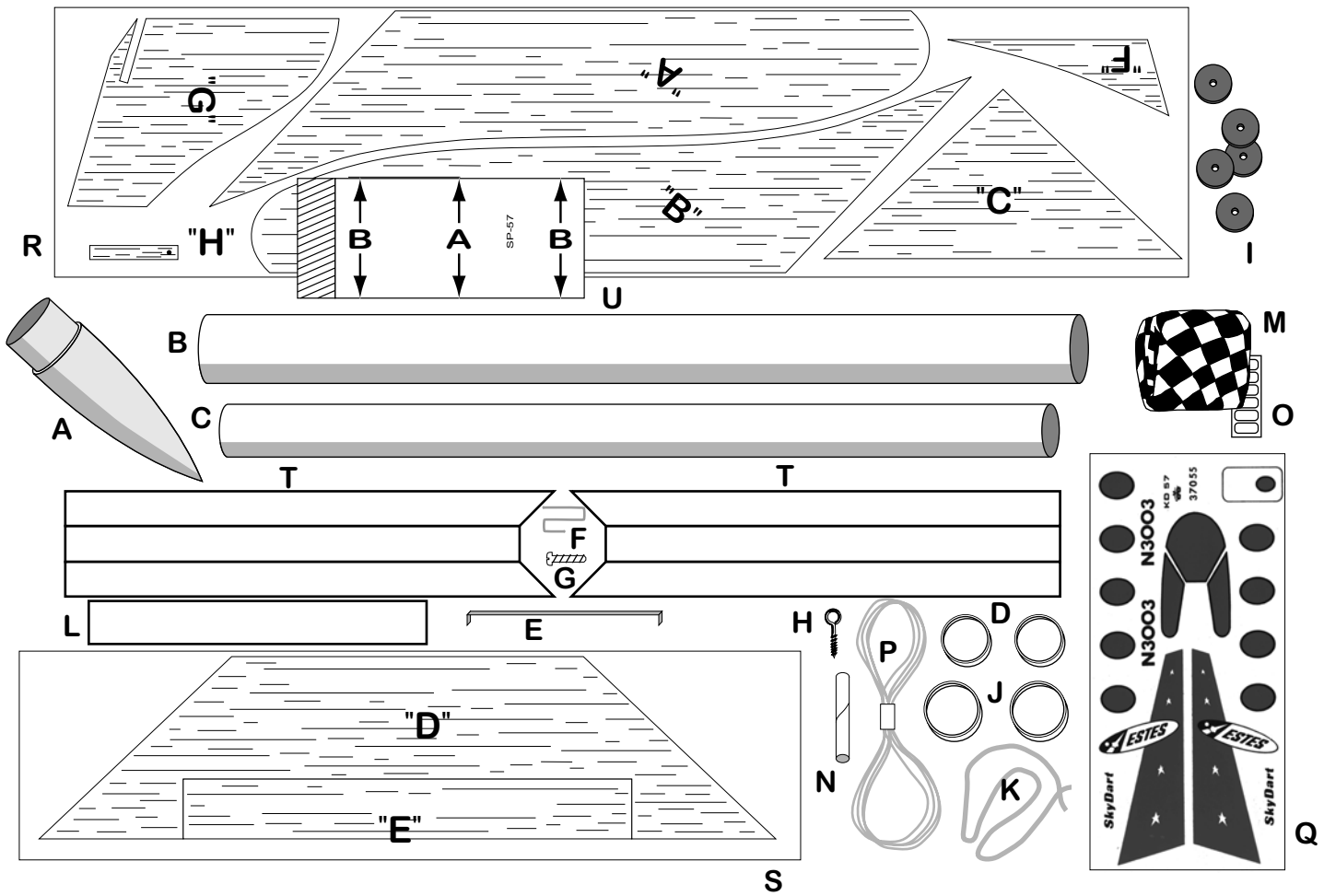
K-57

A Business SST  
Concept

# SkyDart



Designed by Larry H. Renger

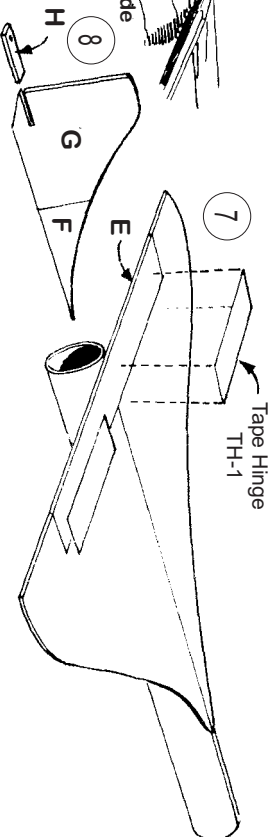
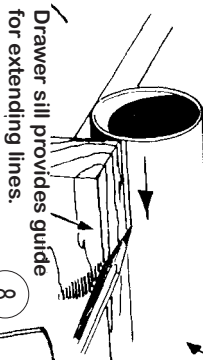
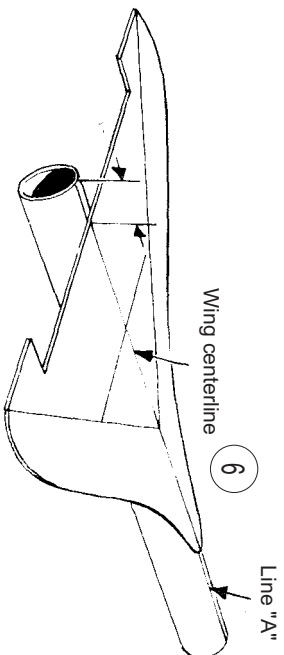
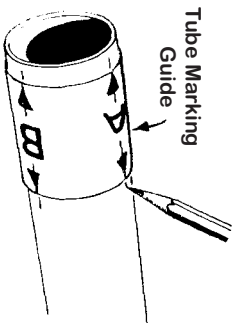
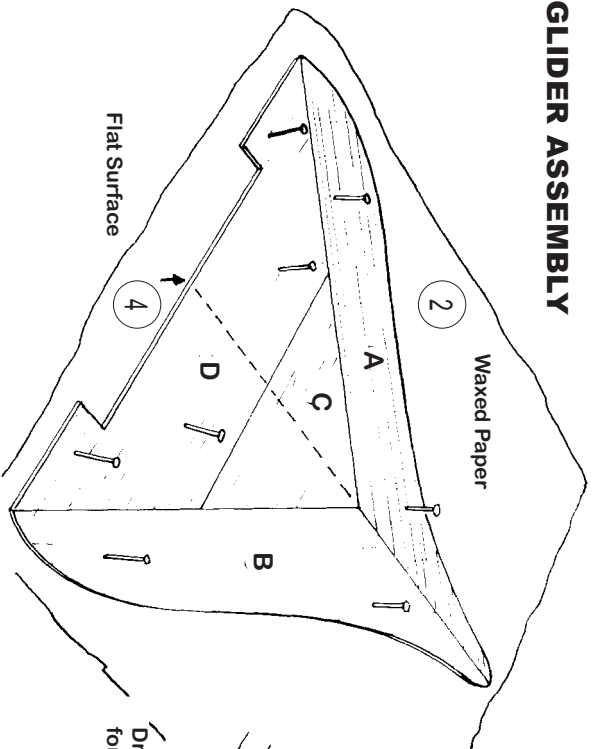


## PARTS LIST

A	1	Nose Cone	BNC-50K	L	1	Hinge Material	TH-1
B	1	12.7" Body Tube	BT-50L	M	1	Parachute	PK-8A
C	1	12" Body Tube	PBT-20KB	N	1	Launch Lug	LL-2A
D	2	Engine Blocks	EB-20A	O	6	Tape Strips	TD-2F
E	1	Engine Hook	EH-2	P	1	Shroud Line Length	SLT-72
F	1	Elevator Retainer Clip	ER-1	Q	1	Decal	KD-57
G	1	Nylon Screw	AS-1	R	1	Fin Stock, Die Cut 18" x 4" x 3/32"	BF-57A
H	1	Screw Eye	SE-3A	S	1	Fin Stock, Die Cut 12" x 3" x 3/32"	BF-57B
I	5	Noes Weights	NCW-1A	T	2	Die Cut Nacelles	TA-57
J	2	Ring Adapters	AR-2050	U	1	Tube Marking Guide	SP-57
K	1	Elastic Thread	ET-1				

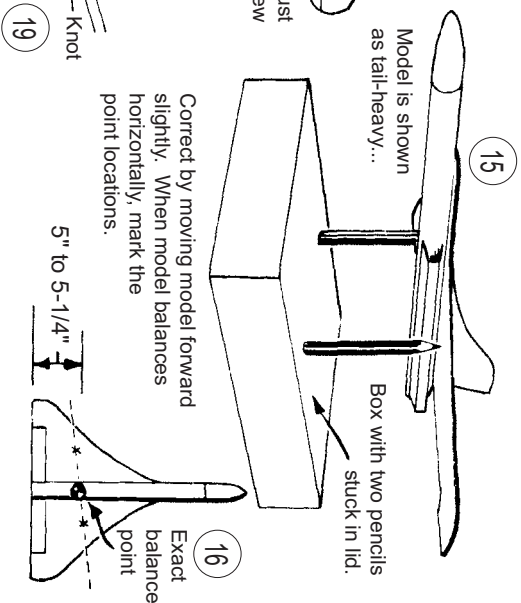
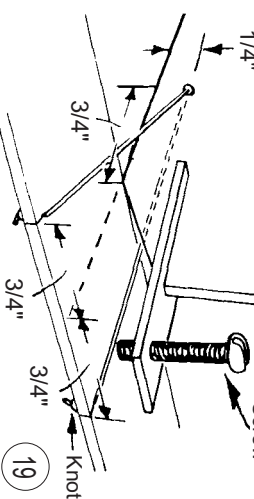
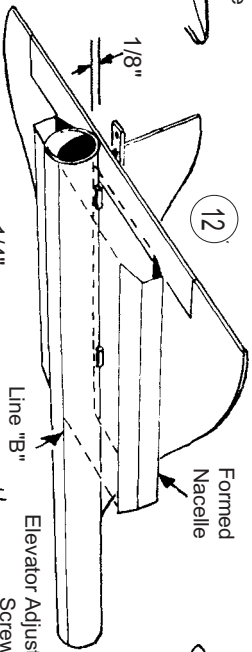
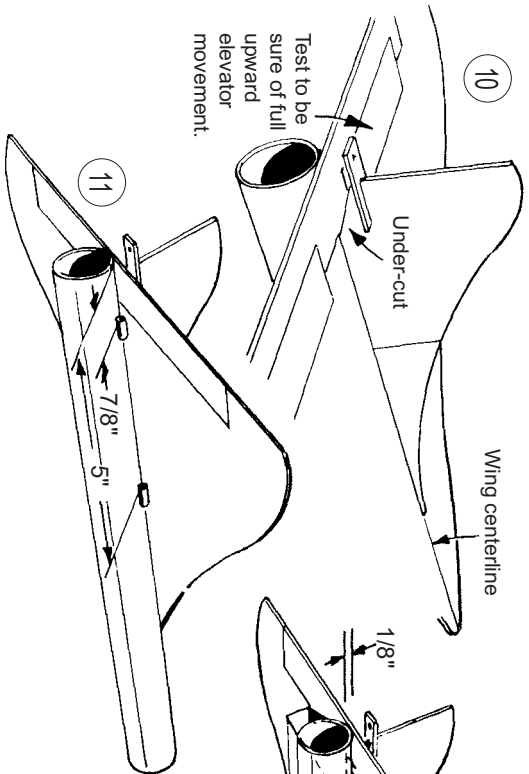
In addition to the parts above, you will also need the following: Sand paper, sanding block, glue, sealer, paint, knife or razor blade, pencils, straight edge and scissors.

# GLIDER ASSEMBLY



- 1 Transfer the wing templates to 3/32" balsa and cut the parts out using a sharp knife.
- 2 Glue parts A through D together. Pin the wing down over waxed paper to a flat surface and allow to dry. Be sure surface is perfectly flat!
- 3 Sand both sides of the wing smooth. Sand leading edges round.
- 4 Lightly mark the centerline on one side of the wing with a ball point pen.
- 5 Mark the body tube BT-50L using the marking guide. Extend the lines down the entire tube length.

- 6 Glue the wing to the body, using the line on the wing and line "A" on the body for alignment. Place wing so the elevator training edge will be even with the end of the body.
- 7 Cut out the elevator (part E) from the balsa sheet. Sand elevator smooth on both sides and edges. Attach the elevator to the wing with the TH-1 strip cut in half as shown.
- 8 Cut out parts F, G and H from the balsa sheet. Glue F and G together and pin flat over waxed paper to dry.
- 9 Sand both sides of this fin unit smooth. Round the leading and trailing edges. Glue part "H" in place with screw hole to the rear.



Correct by moving model forward slightly. When model balances horizontally, mark the point locations.

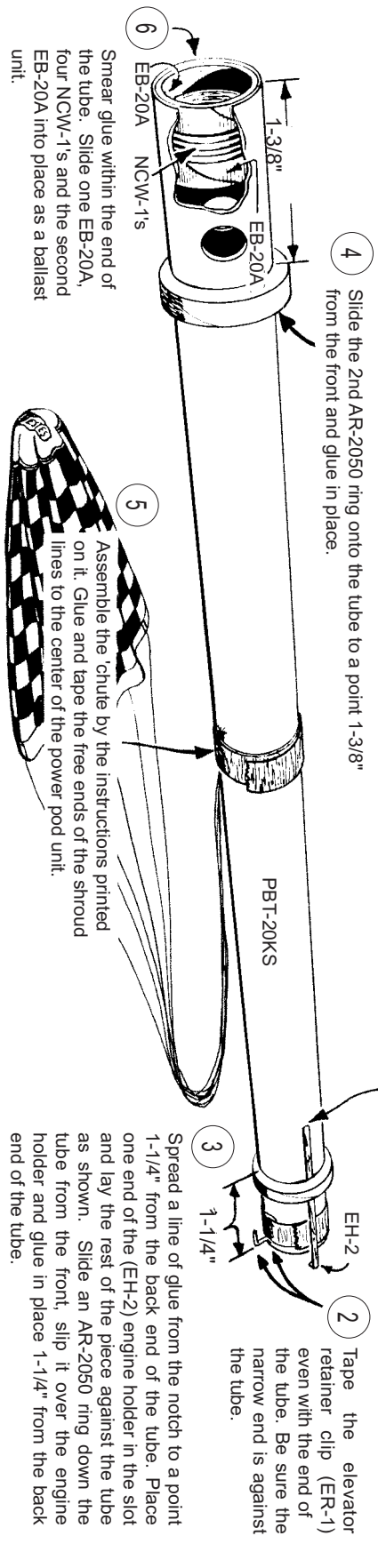
Exact balance point

5" to 5-1/4"

Test to be sure of full upward elevator movement.

- 10 Glue the fin to the wing along the wing centerline. Position the fin undercut as shown to allow for elevator movement.
- 11 Cut the launch lug (LL-2A) in half. Glue one half at 7/8" and the other half at 5" from the rear edge of the body tube. Both parts fit against the wing body joint.
- 12 Fold the engine nacelles to form them as shown. Glue each of them to the body with the lower edge along line "B" (Remember - there is a line "B" for each nacelle), and the upper edge to the body 1/8" below the wing.
- 13 Fine sand all the balsa parts, including the nose cone. Paint them with sanding sealer. Sand lightly and repaint with sealer. Sand again, very lightly.
- 14 Spray the entire model with a light coat of flat-white paint.
- 15 Insert the nose cone and nylon elevator adjust screw. Check the balance point of the model by supporting it on two pencils stuck through a cardboard box. When the model balances horizontally, mark the point locations.
- 16 Sight a line between the marks made in the previous step. Mark the exact balance point where the line crosses the centerline of the model. The balance point must be between 5" and 5-1/4" from the rear edge of the body. Add or

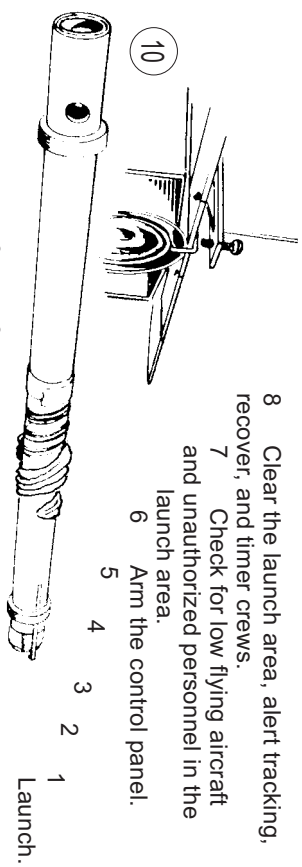
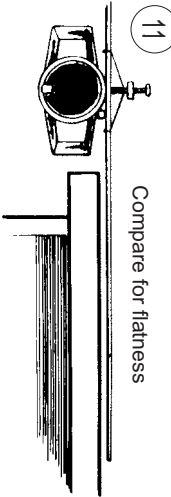
## INTERNAL POD ASSEMBLY



- 1 Cut a 1/8" notch, 2-1/2" from the tube end without holes.
- 2 Tape the elevator retainer clip (ER-1) even with the end of the tube. Be sure the narrow end is against the tube.
- 3 Spread a line of glue from the notch to a point 1-1/4" from the back end of the tube. Place one end of the (EH-2) engine holder in the slot and lay the rest of the piece against the tube as shown. Slide an AR-2050 ring down the tube from the front, slip it over the engine holder and glue in place 1-1/4" from the back end of the tube.
- 4 Slide the 2nd AR-2050 ring onto the tube to a point 1-3/8" from the front and glue in place.
- 5 Assemble the chute by the instructions printed on it. Glue and tape the free ends of the shroud lines to the center of the power pod unit.
- 6 Smear glue within the end of the tube. Slide one EB-20A, four NCV-1's and the second EB-20A into place as a ballast unit.
- 7 Clear the launch area, alert tracking, recover, and timer crews.
- 8 Check for low flying aircraft and unauthorized personnel in the launch area.
- 9 Arm the control panel.
- 10 Launch.
- 11 Compare for flatness
- 12 Study the general assembly view and cut the decals apart in groups of units as shown. Apply each decal in turn, by soaking it for about 5 seconds in WARM water, then remove. After 20 seconds, decal may be slid directly from the backing paper to its location on the model. Smooth out and blot dry.
- 13 Bore a small hole in the base of the fin and cut two notches in the elevator. Stretch the elastic actuator cord through the hole and notches. Knot the cord ends as shown and secure the cord with a drop of glue in each notch.
- 14 Sand the entire model very lightly and spray with a final light coat of gloss-white enamel.
- 15 Bore a small hole in the base of the fin and cut two notches in the elevator. Stretch the elastic actuator cord through the hole and notches. Knot the cord ends as shown and secure the cord with a drop of glue in each notch.
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## FLYING...

- 12 Screw the elevator-adjust screw down so the elevator is even with the top of the body tube. To get an initial glide test position, unscrew the adjustment screw eight (8) turns.
- 11 Check the vertical tail and wings for warps by laying them over the edge of a flat table. Warps may be removed by holding the wings high over a hot plate or stove burner while twisting the wing opposite the warp. Be careful not to get the wiring too close or not to burn yourself.
- 10 Wrap the parachute around the pod and slip into the body tube. Use the elevator retainer to hold the elevator down with the pod in place.
- 9 Choose an engine and insert it into the power pod. Install an igniter. Disarm the launch control and slide the model down over the launch rod.



- 1 Launch.
  - 2
  - 3
  - 4
  - 5
  - 6
  - 7
  - 8
  - 9
  - 10
  - 11
  - 12
- Observe the glide carefully. If no stall is present, unscrew the elevator adjust 1 full turn. If a continuous stall is present, screw the adjustment down 1/2 turn.
- Fly the rocket several times until you are satisfied with the glide. Put a drop of glue on the adjust screw threads to lock it in place.

# GENERAL INFORMATION

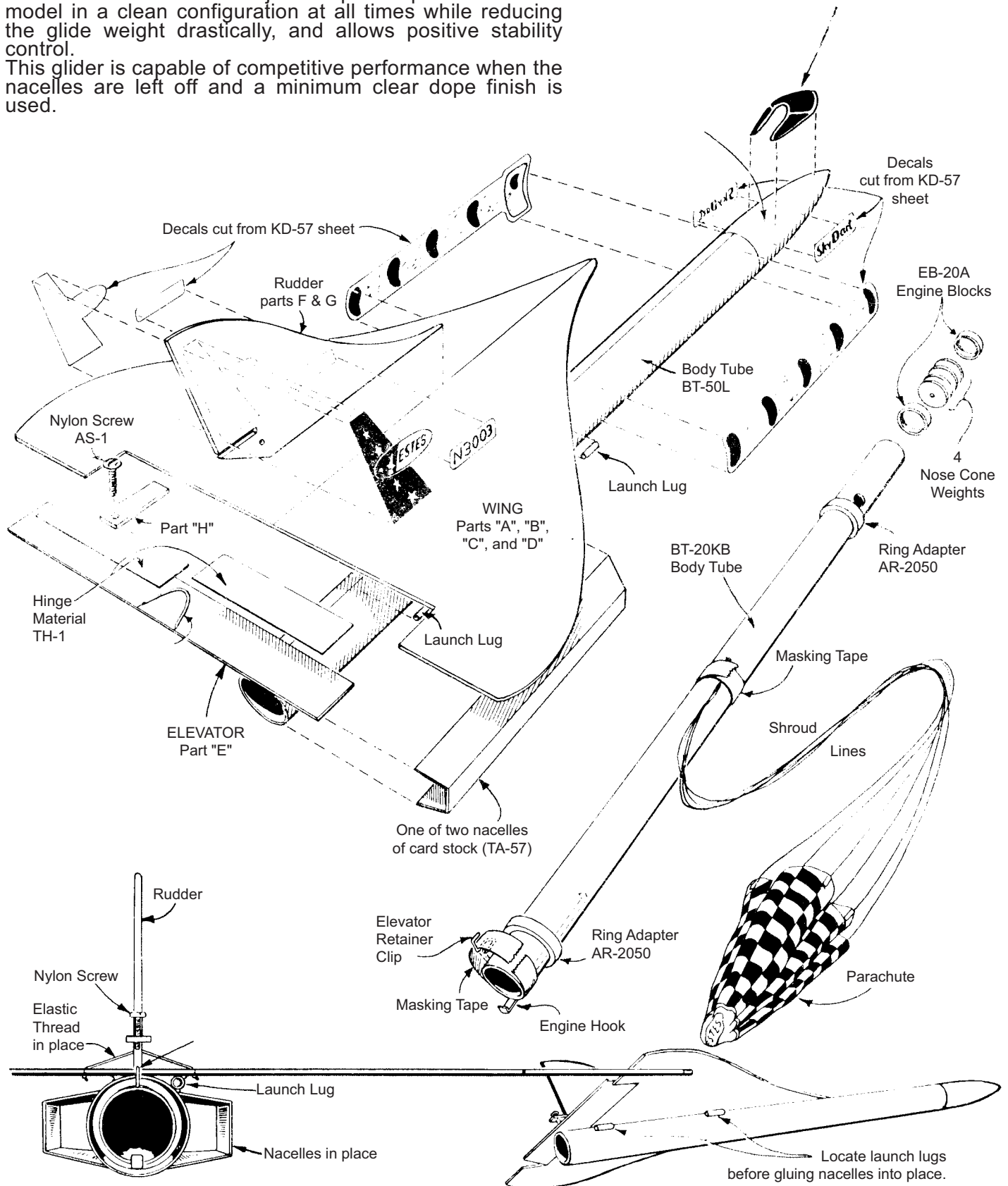
SkyDart is an all-new boost-glider design. This model is based on design proposals for a business SST.

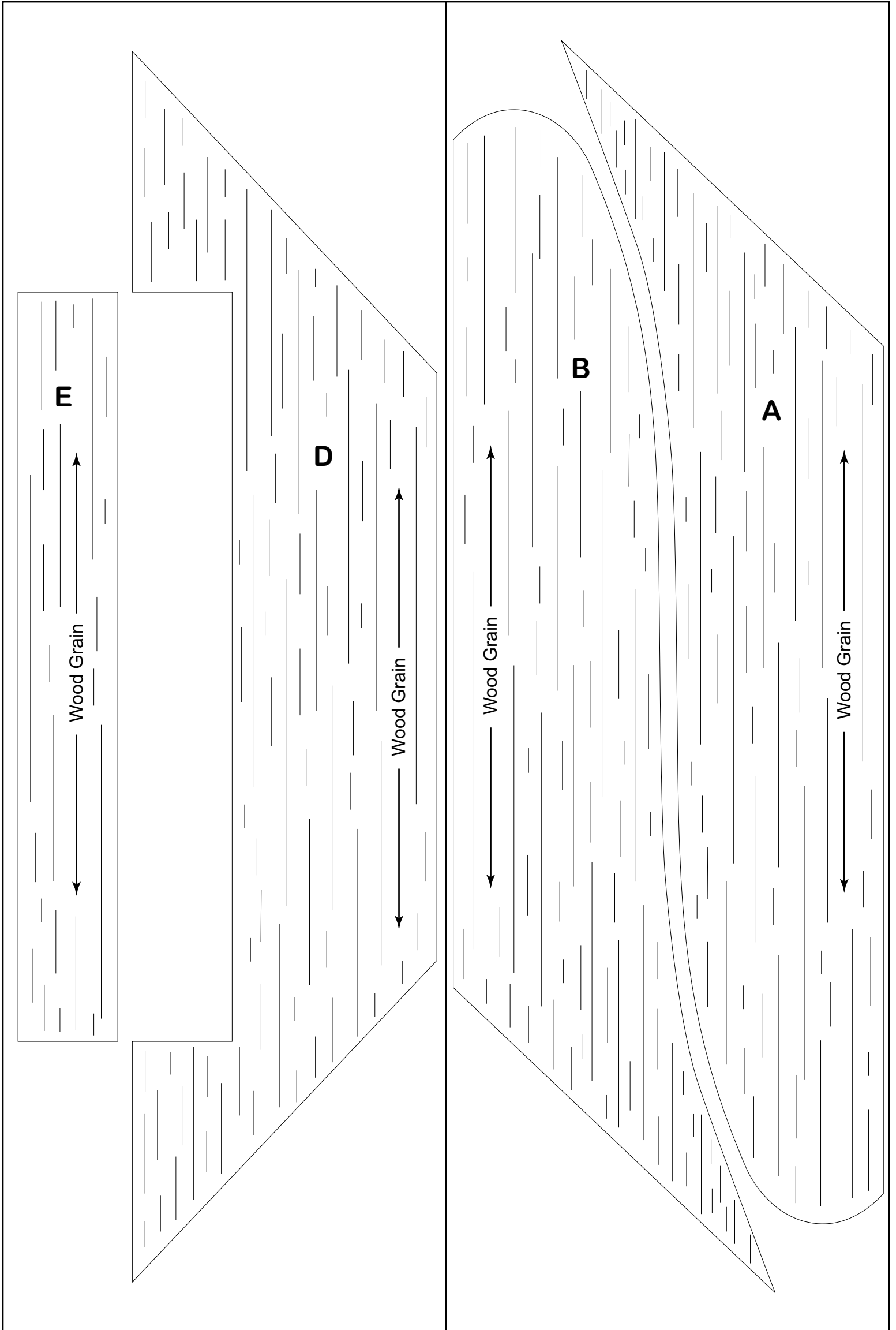
The sleek delta wing gives great stability in boost, and un-critical adjustment for glide.

Use of an internal rear ejection power pod leaves the model in a clean configuration at all times while reducing the glide weight drastically, and allows positive stability control.

This glider is capable of competitive performance when the nacelles are left off and a minimum clear dope finish is used.

**NOTE:**  
Canopy decal may be most easily applied in three pieces. Heat from a lamp will aid in forming it to the nose contour.





# K-57 SkyDart

Wing Template 2  
Cut from 3/32" Balsa

## Tube Marking Guide

