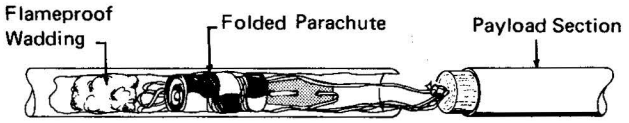
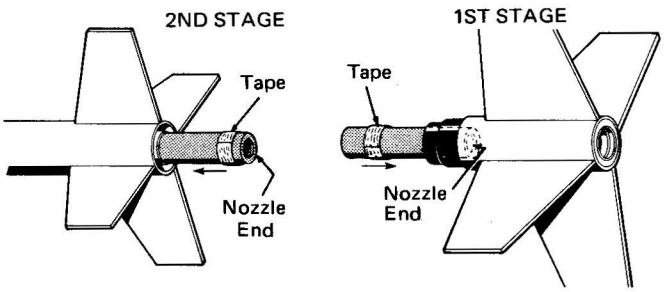
25 Prepare the upper stage by inserting flame proof wadding into the top of the main body. Roll and pack the parachute and shock cord into the body and set the payload capsule in place, (while the parachute is new, it is best to sprinkle it with chute powder to faciliate chute deployment). Insert payload if desired. Do not use more than 1/2 oz. of payload for the first three engine combinations, or more than 1 oz. for the last two (see recommended engines above).

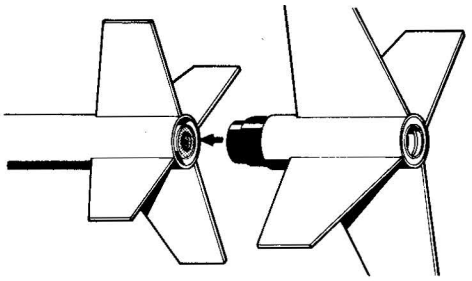


26 Wrap the sustainer (upper stage) engine with masking tape and friction fit into the second stage body. Note, the engine must fit tightly to avoid "kickout" when the parachute ejection charge fires. Friction fit the booster engine into the first stage in the same manner. Make sure you insert the nozzle end first.



27 "Couple" the first and second stages together.

NOTE: When fully prepared, stages must couple together smoothly and snugly. Fit should be tight enough so that 1st stage does not fall out of upper stage by its own weight.



28 After each flight, wipe the exhaust residue off the coupling region with a dry cloth. Look for frayed edges around the forward mounting tube and both coupling tubes. Trim and correct any defects before the next launch.

NOTE: REFER TO THE ENCLOSED TECHNICAL REPORT FOR FURTHER TIPS, BEFORE LAUNCHING.

Launch over soft dirt or grassy area to minimize damage to the tumbling booster.

Launch the Arcon Hi from any standard model rocket launcher having a 1/8" diameter x 36" long steel launch rod.

Referring to the specific instructions which accompany Centuri launchers and firing panels, mount the rocket on the launcher and prepare for ignition. Avoid eye injury by capping the exposed tip of the launch rod when not actually launching! Follow instructions and the Safety Code and have many happy hours with Model Rocketry!

Expended engine makes a handy launch rod cap

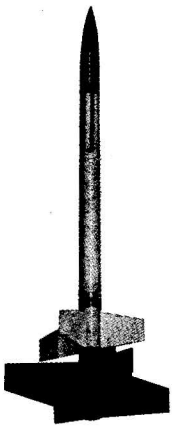
ARCON®-HI

Catalog No. KC-3

The Arcon Hi† is a two stage semi-scaled version of the booster equipped sounding rocket built in 1958 by the Atlantic Research Corp. The rocket was capable of reaching sixty mile altitudes, carrying a forty pound payload.

Centuri's 1/16th semi-scale model can attain 1900 feet carrying 1/2 oz. of payload – a pretty good scale power ratio. Booster tumbles back gently. Put back together and launch many times. Easy-to-assemble kit features big payload capsule and Pass-Port Staging System.*

This rocket is designed to be launched only from standard remote controlled electrical launch systems. Always use the recommened engines and recovery wadding. Comply with all Federal, State and local laws concerning Model Rocketry.



Centuri

MODEL ROCKETEER'S SAFETY CODE

CONSTRUCTION
My model rockets will be made of only lightweight materials such as paper, wood, plastic, and thin metallic foils, with the exception of payloads and engine holders made of wirelike material.

ENGINES
I will use only pre-loaded factory made model rocket engines in the manner recommended by the manufacturer. I will not change in any way nor attempt to reload these engines.

RECOVERY
I will always use a recovery system in my model rockets that will return them safely to the ground so that they may be flown again.

WEIGHT LIMITS
My model rocket will weigh no more than 453 grams (16 oz.) at liftoff, and the engines will contain no more than 113 (4 oz.) of propellant, as prescribed by Federal Regulations.

STABILITY
I will check the stability of my model rockets before their first flight except when launching models of already proven stability.

LAUNCHING SYSTEM
The system I use to launch my rockets will be remotely controlled and electrically operated, and will contain a switch that will return to "off" when released. I will remain at least 10 feet away from any rocket that is being launched.

LAUNCH SAFETY
I will not let anyone approach a model rocket on a launcher until I have made sure that either the safety interlock key has been removed or the battery has been disconnected from my launcher.

LAUNCH AREA
My model rockets will always be launched from a cleared area, free of any easy-to-burn materials, and I will only use non-flammable recovery wadding in my rockets.

BLAST DEFLECTOR
My launcher will have a blast deflector device to prevent the engine exhaust from hitting the ground directly.

LAUNCH ROD
To prevent accidental eye injury I will always place the launcher so the end of the rod is above eye level or cap the end of the rod with my hand when approaching it. I will never place my head or body over the launching rod. When my launcher is not in use I will always store it so that the launch rod is not in an upright position.

POWER LINES
I will never attempt to recover my rocket from a power line or other dangerous places.

LAUNCH TARGETS AND ANGLE
I will not launch rockets so their flight path will carry them against targets on the ground, and will never use an explosive warhead nor a payload that is intended to be flammable. My launching device will always be pointed within 30 degrees of vertical.

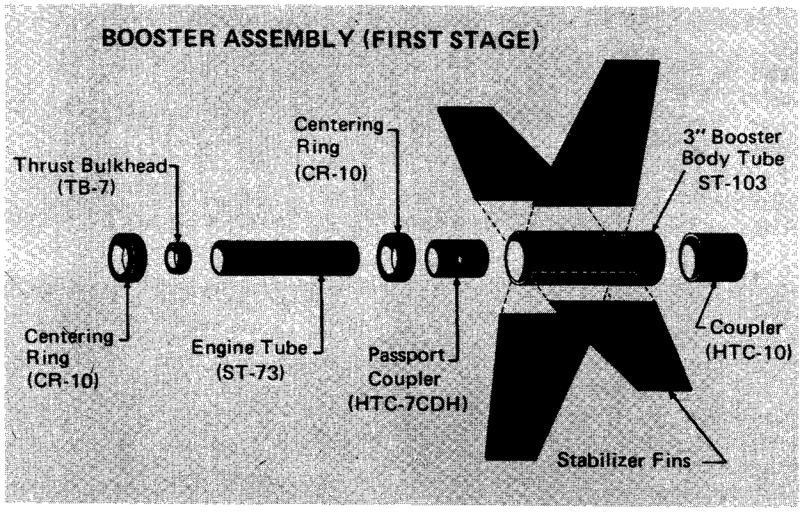
PRE-LAUNCH TEST
When conducting research activities with unproven designs or methods, I will, when possible, determine their reliability through pre-launch tests. I will conduct launchings of unproven designs in complete isolation from persons not participating in the actual launching.

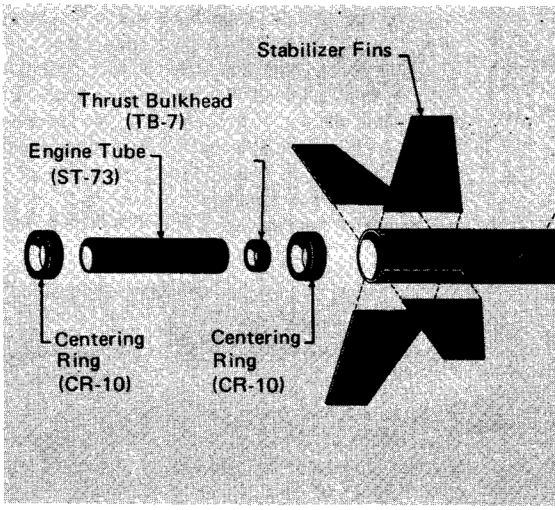
FLYING CONDITIONS
I will not launch my model rocket in high winds, near buildings, power lines, tall trees, low flying aircraft or under any conditions which might be dangerous to people or property.

†Registered Trademark of Atlantic Research Corporation of Alexandria, Va.

*Pat. Pending

IP-8-572

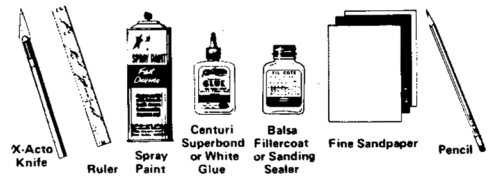




ASSEMBLY INSTRUCTIONS

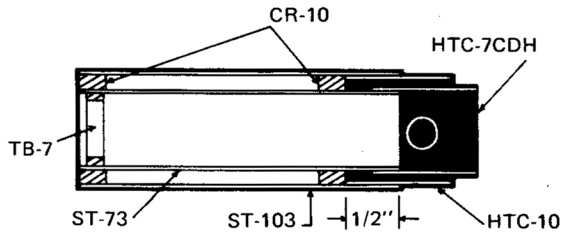
READ BEFORE STARTING ASSEMBLY!

TOOLS: You will need the following standard model rocket tools to assemble and finish this kit. DO NOT use model airplane glue for building flying model rockets.

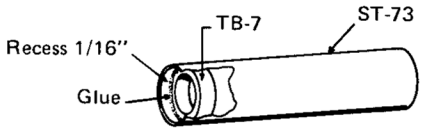


1 Refer to parts exploded view for easy identification of parts used. To eliminate errors, parts are referred to by both name and number.

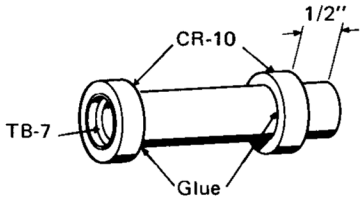
Refer to this diagram for clarification of the following booster assembly steps.



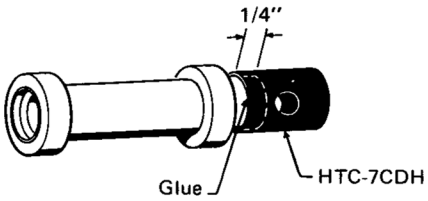
2 Place glue on the edges of one thrust ring (TB-7) and insert into the end of the ST-73, recessing it 1/16". For added strength, run a bead of glue around the top of the thrust ring.



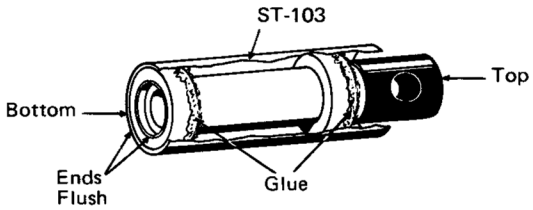
3 Glue one centering ring (CR-10) onto the engine tube, flush with the end in which the thrust ring was fastened. Cement another CR-10 in place 1/2" from the opposite end of the engine tube.



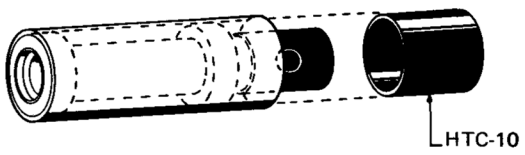
4 Glue the passport coupler (HTC-7CDH) onto the end of the engine tube, overlapping it 1/4".



5 Place a generous amount of glue on the outside faces of the centering rings. Slip this assembly into the ST-103 booster body tube, positioning as shown. Rotate the tube to allow the glue to flow around the centering ring - body tube joints.

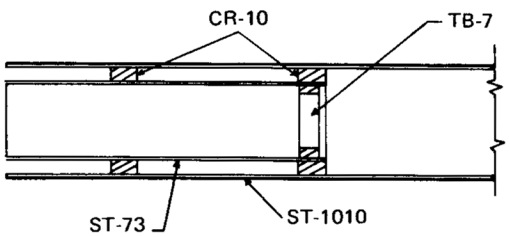


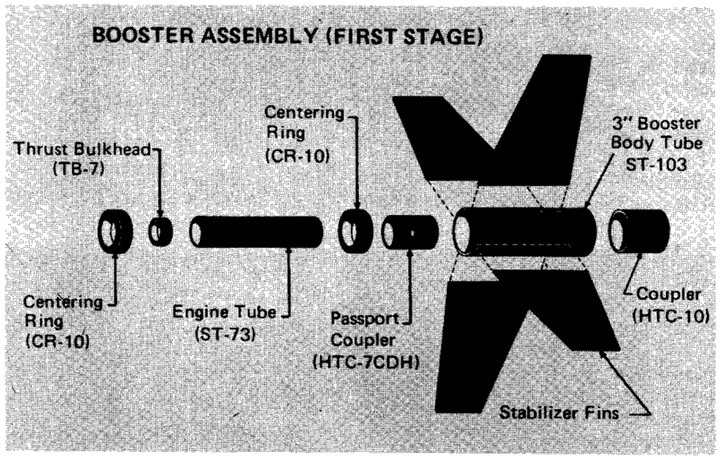
6 When the assembly has dried, run glue around the inside top of the body tube and slip the HTC-10 tube coupler into place. Push the coupler down until it rests against the top centering ring.

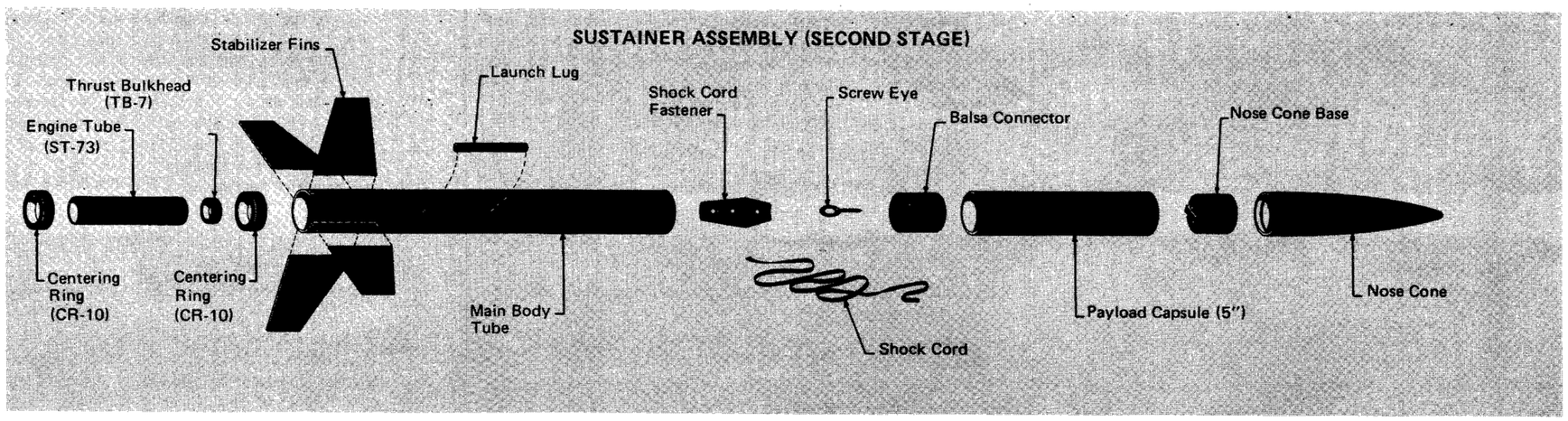


SUSTAINER ASSEMBLY

7 Refer to this diagram for clarification of following 2nd stage engine mount assembly steps.



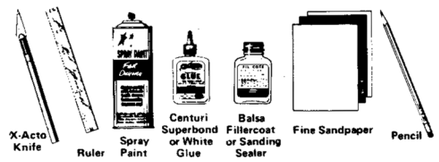




ASSEMBLY INSTRUCTIONS

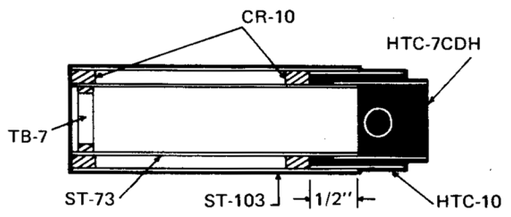
READ BEFORE STARTING ASSEMBLY!

TOOLS: You will need the following standard model rocket tools to assemble and finish this kit. DO NOT use model airplane glue for building flying model rockets.

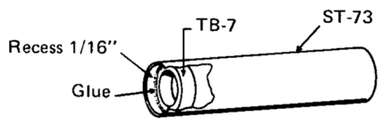


1 Refer to parts exploded view for easy identification of parts used. To eliminate errors, parts are referred to by both name and number.

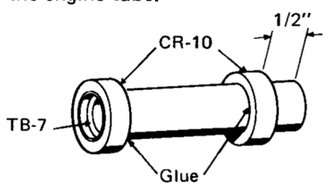
Refer to this diagram for clarification of the following booster assembly steps.



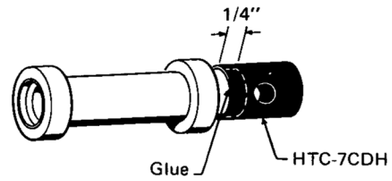
2 Place glue on the edges of one thrust ring (TB-7) and insert into the end of the ST-73, recessing it 1/16". For added strength, run a bead of glue around the top of the thrust ring.



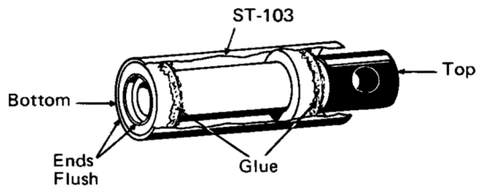
3 Glue one centering ring (CR-10) onto the engine tube, flush with the end in which the thrust ring was fastened. Cement another CR-10 in place 1/2" from the opposite end of the engine tube.



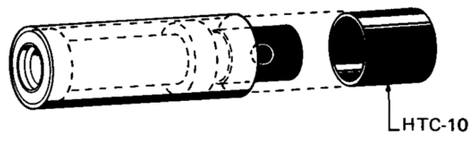
4 Glue the passport coupler (HTC-7CDH) onto the end of the engine tube, overlapping it 1/4".



5 Place a generous amount of glue on the outside faces of the centering rings. Slip this assembly into the ST-103 booster body tube, positioning as shown. Rotate the tube to allow the glue to flow around the centering ring - body tube joints.

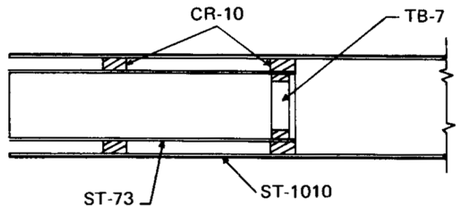


6 When the assembly has dried, run glue around the inside top of the body tube and slip the HTC-10 tube coupler into place. Push the coupler down until it rests against the top centering ring.

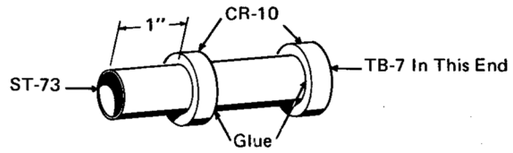


SUSTAINER ASSEMBLY

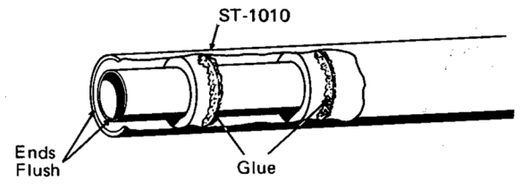
7 Refer to this diagram for clarification of following 2nd stage engine mount assembly steps.



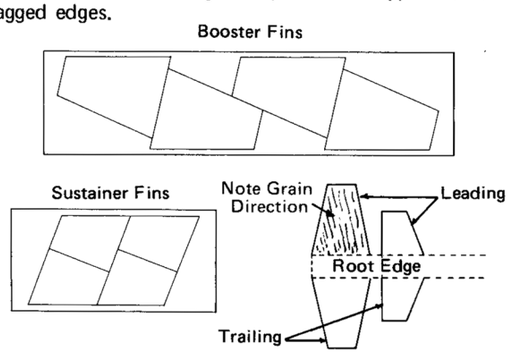
8 Glue the TB-7 thrust ring into the ST-73 engine tube in the same manner you did on the first stage (see step 2). Glue one CR-10 centering ring flush with the front end of the engine tube (thrust ring end). Glue the other CR-10 in place 1" from the opposite end of the engine tube.



9 Flow glue onto the outside faces of the centering rings and insert assembly into the ST-1010 main body tube. Rotate the tube to allow glue to flow into the joints.

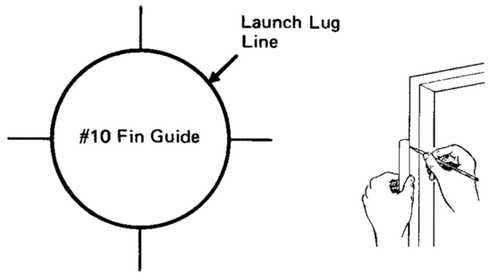


10 Carefully remove the die-cut balsa fins from their sheets. Use a modeling knife, if necessary, to avoid ragged edges.

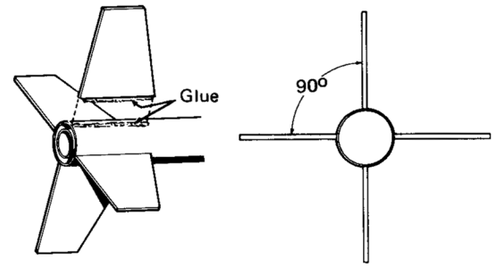


11 Square up the fin edges by running over a piece of fine sandpaper. Round the leading and trailing edges and lightly sand the faces of the fins. Do not round the fin root edges.

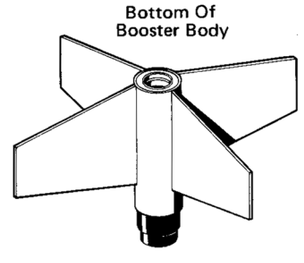
12 Stand the booster body tube on the fin guide to mark locations. Find a convenient channel or groove, such as a door jamb, partially open drawer, or molding. Extend the marks the full length of the tube. Repeat with the main body tube, being sure to include the launch lug line.

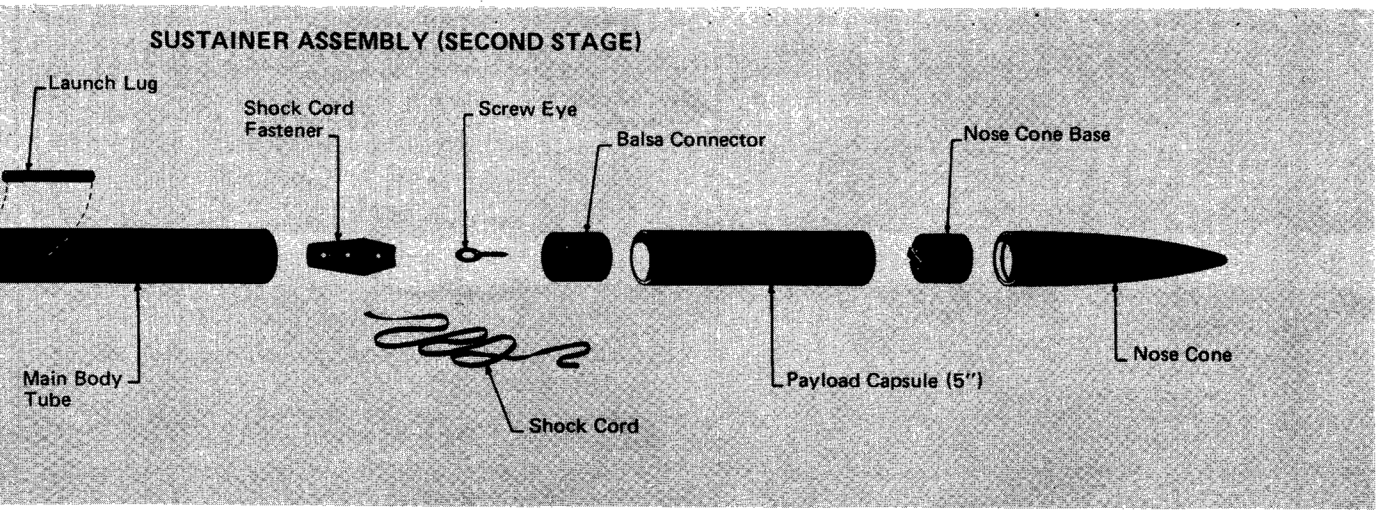


13 Apply a bead of glue to one sustainer fin's root edge and press onto the main body tube along a drawn line. Remove, allow it to become tacky. Add fresh glue to fin, and reposition. Repeat with remaining fins. Check alignment visually, and allow assembly to dry standing upright, avoiding glue runs.

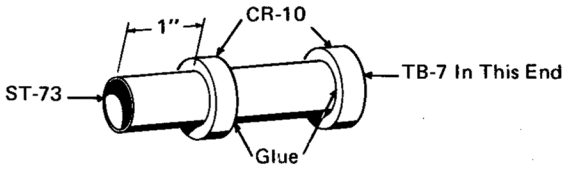


14 Glue the booster fins in place in the manner outlined above. The bottom of the fins should be even with the bottom of the booster body.

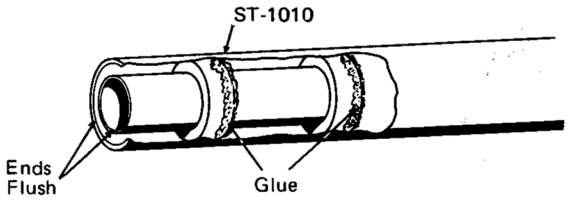




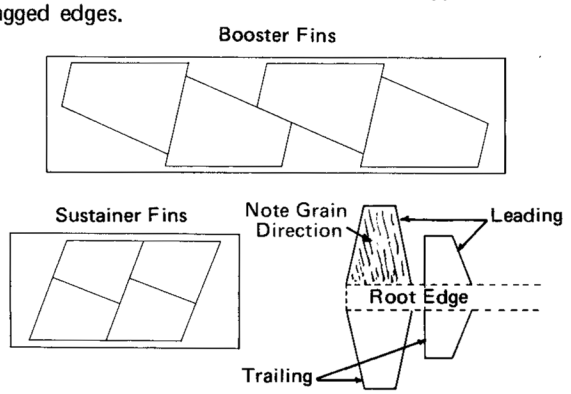
8 Glue the TB-7 thrust ring into the ST-73 engine tube in the same manner you did on the first stage (see step 2). Glue one CR-10 centering ring flush with the front end of the engine tube (thrust ring end). Glue the other CR-10 in place 1" from the opposite end of the engine tube.



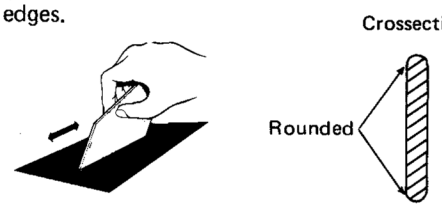
9 Flow glue onto the outside faces of the centering rings and insert assembly into the ST-1010 main body tube. Rotate the tube to allow glue to flow into the joints.



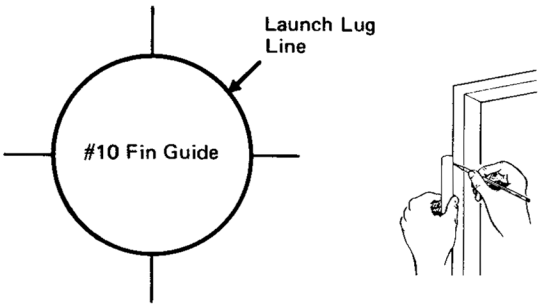
10 Carefully remove the die-cut balsa fins from their sheets. Use a modeling knife, if necessary, to avoid ragged edges.



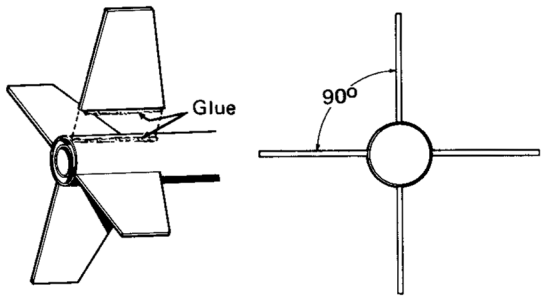
11 Square up the fin edges by running over a piece of fine sandpaper. Round the leading and trailing edges and lightly sand the faces of the fins. Do not round the fin root edges.



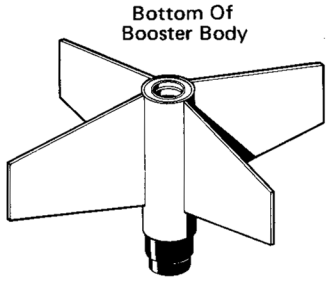
12 Stand the booster body tube on the fin guide to mark locations. Find a convenient channel or groove, such as a door jamb, partially open drawer, or molding. Extend the marks the full length of the tube. Repeat with the main body tube, being sure to include the launch lug line.



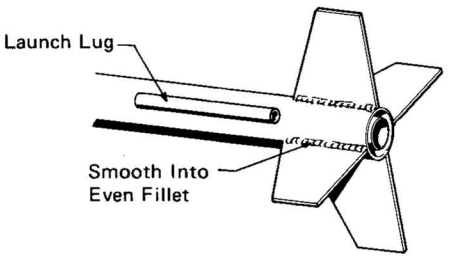
13 Apply a bead of glue to one sustainer fin's root edge and press onto the main body tube along a drawn line. Remove, allow it to become tacky. Add fresh glue to fin, and reposition. Repeat with remaining fins. Check alignment visually, and allow assembly to dry standing upright, avoiding glue runs.



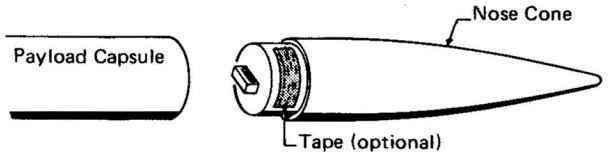
14 Glue the booster fins in place in the manner outlined above. The bottom of the fins should be even with the bottom of the booster body.



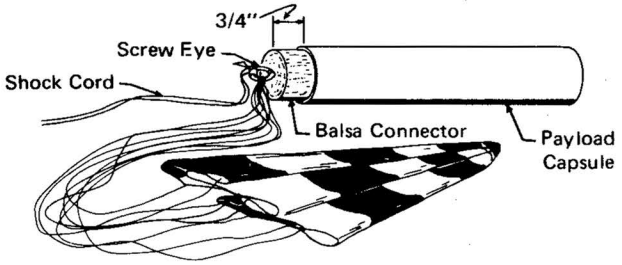
15 After the glue has completely dried on both assemblies, run a bead of glue along both sides of all fin-to-body tube joints. Using your finger, smooth the glue into even fillets. Glue the launch lug onto the 2nd stage body along the drawn line in the position shown. Allow the assemblies to dry upright, avoiding glue sags.



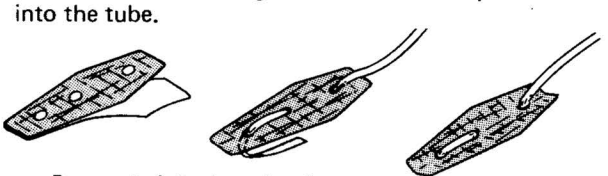
16 Insert the nose cone into the top of the payload body. The nose cone should fit snugly into the tube. If the fit is loose, apply a short piece of tape on the base of the nose cone.



17 Apply a bead of glue inside the bottom end of the 5 inch payload capsule. Glue the balsa connector into the base of the capsule, insert screw eye, remove, squirt glue into the hole and rethread the screw eye. Tie one end of the shock cord to screw eye. Tie the assembled parachute onto the screw eye.

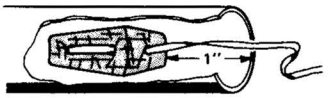


18 Peel the backing from the shock cord fastener. Thread the other end of the elastic shock cord through the fastener as shown. Take care not to touch the adhesive backing any more than absolutely necessary. Slightly crease the fastener lengthwise to allow easy insertion into the tube.



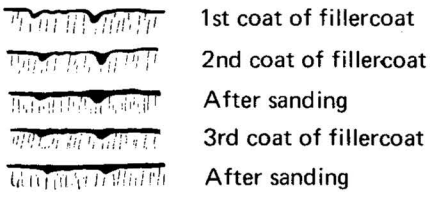
Press end of shock cord against adhesive back of fastener

19 Insert the fastener 1" past the top of the body tube. Press firmly against the inside wall of the tube with eraser end of a pencil. NOTE: All edges of the fastener must be firmly contacted to the tube to insure a permanent bond, and allow room for the parachute to slip past.



20 Fold the chute and insert chute and shock cord into the main body tube. Set the payload compartment in place and you're ready to seal the wood surfaces.

21 Paint the fins with balsa fillercoat or sanding sealer and allow to dry. Sand lightly with fine sandpaper. Paint and sand again, repeating the process until all grain line is filled.



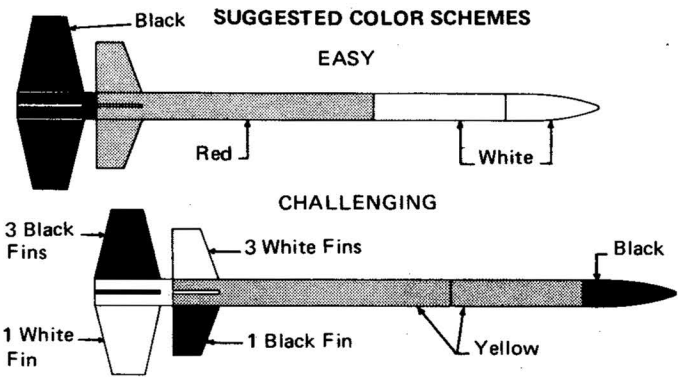
NOTE: Be careful not to sand body tubes as this may make them rough!

22 When painting plastic parts, never use dope or laquer!

Spray painting your finished model with fast-drying enamel will produce the best results . . . IF IT IS DONE PROPERLY!!

For best results, spray first with enamel primer. Most important is the number of coats of paint. DO NOT try to paint your model with one heavy coat! Instead, give it a couple of quick, light coats first, THEN a finish coat. Let each dry before applying the next.

Paint your model with bright colors that will be visible at high altitudes. The booster, sustainer, and payload capsule may be painted separately, but mask off the exposed coupler in the booster.



23 When paint is dry, apply decal according to these instructions:

1. Clean surface free of oil or grease.
2. Dip decal in water approx. 10 sec.
3. Have surface very wet for easy sliding into position.
4. Slide decal from paper to proper location.
5. With squeege or rag remove all air bubbles.
6. Wash decal to remove excess adhesive.

ENGINES:

24 Igniters and complete engine installation instructions are included in "Engine Operating Instructions" which accompany all Centuri engines.

The Arcon Hi can be launched with any of the following engine combinations:

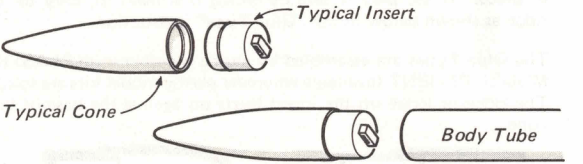
BOOSTER (1st Stage)	SUSTAINER (2nd Stage)	OPTIMUM ALTITUDE FEET	PURPOSE
1/2A6-0 A8-0	1/2A6-4 A8-5	400 600	Use these combinations for first test flights and medium sized launch areas.
B6-0	B4-6	1200	Medium to High Altitudes - for general flying and large launch areas.
B14-0 C6-0	B6-6 C6-7	1700 1900	Extremely High Altitudes - and very large launch areas.

If your launch area is limited, do not use the last two engine combinations - they could carry the 2nd stage out of your recovery area.

TIPS FOR PLASTIC NOSE CONES

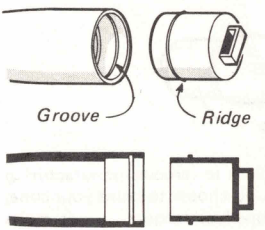
This kit contains a plastic nose cone for the forward end of your rocket. While a few other kits still use balsa cones, plastic is now the preferred choice of many rocketeers. It requires no sanding, sealing or painting to have a smooth attractive finish. Plastic is also more durable than balsa . . . it does not dent or "crunch" as easily.

Your nose cone will be assembled from two parts: the cone itself, and an insert which firmly attaches to the cone, holding it inside the body tube.

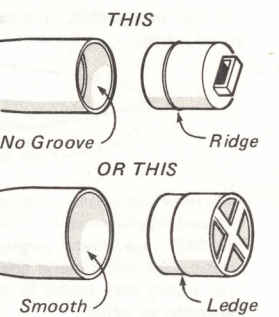


Your cone is one of these two types. Look at the drawings below to see which type you have.

SNAP TYPE



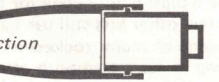
GLUE TYPE



(Cont. on other side)

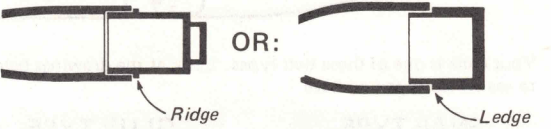
(Cont. from other side)

The Snap Type is assembled by pushing into the cone until the ridge snaps into the groove.

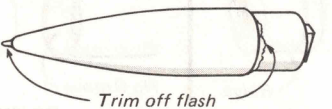


IMPORTANT: The snap type cones should be assembled with care and good judgement, to avoid breaking the cone . . . especially with the shorter #7 and #8 series (.76" and .91" diameter). Your insert may seem to be too tight a fit as you try to snap it in place. If so, play it safe by gluing the insert in, only to its ridge as shown below in the "Glue-Type" instruction.

The Glue Types are assembled by gluing together with PLASTIC MODEL CEMENT (available wherever plastic model kits are sold). The ridge or ledge on the insert butts up against the base of the cone.



For best appearance, trim away any plastic "flash" that may be on your cone.



Rub the cone briskly with a soft cloth to remove manufacturing oils, and produce a shiny finish. If you choose to paint your cone, DO NOT use model airplane "dope" or lacquer . . . it melts plastic. We recommend enamel, preferably a fast drying aerosol type (spray can) found in most stores which carry hobby items, hardware, or paint.

Centuri

Centuri Engineering Co.
P.O. Box 1988
Phoenix, Arizona 85001

Centuri **TIR-123**

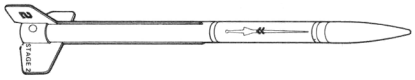
TECHNICAL INFORMATION REPORT

MULTI-STAGING PRINCIPLES

INTRODUCTION

Multi-staging is an excellent way to attain high altitudes with a model. An understanding of basic staging principles is needed to fly any 2 or 3 stage "bird" successfully. The following information can be useful in building, prepping and flying Centuri multi-stage models, or "own-designs" constructed from Centuri custom parts. Staged models require extra care in assembly and handling as they are about twice as challenging as standard model rockets.

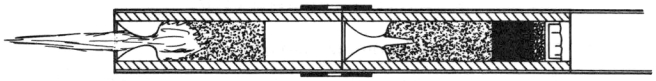
Staging is a concept where one engine's velocity is added to an already existing velocity of another engine. To illustrate, we will use a typical 2-stage design based on a #7 body tube diameter. A variety of terms are used to name the main parts of a multi-stage rocket.



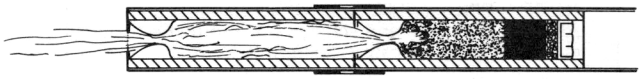
1st Stage	2nd Stage
Lower Stage	Upper Stage
Booster	Sustainer

HOW PASS-PORT STAGING* WORKS:

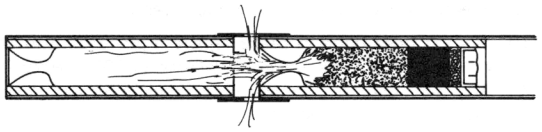
The booster (or 1st stage engine) is ignited by a standard electrical model rocket launch system.



This engine contains propellant, but no delay or ejection material, and is designated with a code ending in zero (example: A8-0). As the intense flame burns forward, it breaks through the top of the propellant grain. Hot particles of still-burning propellant shoot forward into the nozzle of the second stage engine, igniting its propellant. (Ordinary flame, such as from a match, will not ignite model rocket engines.)



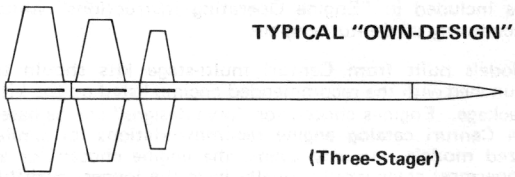
In the Centuri Pass-Port Staging System*, some of the rapidly expanding gases are allowed to escape through the 2 ports in the coupler joining the stages. This allows just enough time (a split second) to ignite the next stage before the first stage blows away completely.



The first stage alone is an aerodynamically unstable body that will tumble or glide safely to Earth. Meanwhile, the second stage climbs, the thrust of the second stage being added to the already existing velocity created by the first stage. The upper stage contains a recovery system and an engine with the standard configuration of propellant, delay and ejection material.

DESIGN & CONSTRUCTION

The number of stages possible is limited only by the available boost power of the first stage engine (the first stage engine must be able to lift the weight of all the stages and their engines). Four stages is probably the maximum and this would require extreme care in design and construction. For instance, each section's fins must be larger than those above it, and must be glued on extra securely.

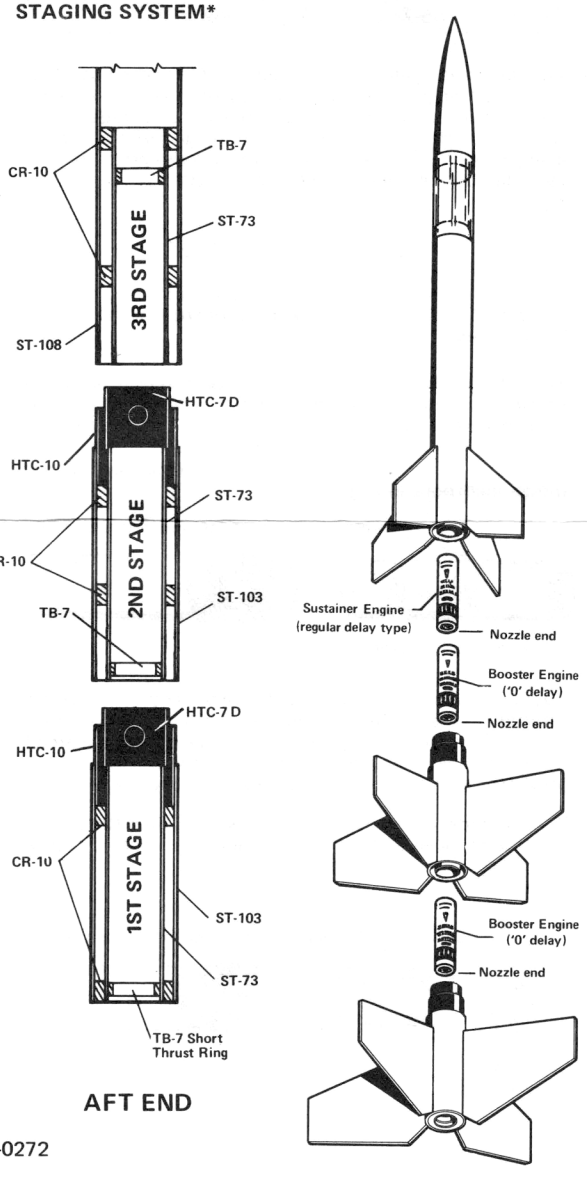


TYPICAL "OWN-DESIGN"

(Three-Stager)

The uppermost stage of a well designed multi-stage bird usually may also be flown by itself as a single-stage rocket. For best results, booster stages may be kept to no more than 3" in length. Large fins are required for adequate stability and to slow the "tumble" speed during recovery. Staging coupling is important and Centuri's Pass-Port Staging System* is a must for effective auto-ignition. Best all around results are obtained from rockets using a #10 series body tube. One feature of multi-staging rockets (especially 3 stages) is the tendency to "weathercock". Because of the large amount of fin area, the rocket tends to be over-stable. When flown in a breeze, this over-stable condition causes the rocket to turn into the wind. The harder the wind, the more the tendency to "weathercock". For this reason it is advisable to fly multi-stages only in calm weather.

TYPICAL THREE STAGE CONSTRUCTION EMPLOYING CENTURI'S "PASS-PORT" STAGING SYSTEM*



AFT END

PREPPING AND LAUNCHING

Altitudes achieved will depend on engines chosen and on model workmanship. Remember that extremely high flights are usually unable to be "tracked" by inexperienced observers. Do not launch on overcast days as the model may be lost to sight forever.

ENGINES

Igniters and complete engine installation instructions are included in "Engine Operating Instructions" which accompany all Centuri engines.

Models built from Centuri multi-stage kits should be launched with the recommended engines listed on the kit's package. Engines chosen for "own designs" can be based on Centuri catalog engine recommendations for similar sized models. In any event, the engine chosen for an uppermost stage would usually have the longest available delay time in its' class. (Example: ½A6-4, A5-4, B4-6, B6-6, B14-7, or C6-7.)

B-14 engines, with their high initial thrust, are generally used to "lift-off" the larger and heavier staged "birds".

The typical #7 two-stager discussed in the introduction could be flown with any of the following engine combinations.

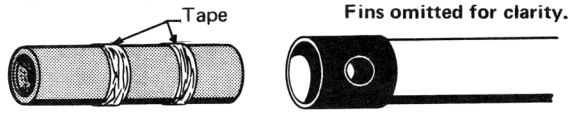
Booster (1st stage	Upper Stage (2nd stage)	Optimum Altitude in Feet	Purpose
A8-0	A5-4	800	Use this combination for first test flights and medium sized launch areas.
B6-0 B6-0	B4-6 C6-7	1200 1800	Medium to High Altitude — for general flying and moderately large launch areas.
C6-0 C6-0	B4-6 C6-7	2000 2400	Extremely High Altitudes — and very large launch areas.

This chart is only a rough guide. You may note that while "C" engines are twice as powerful as "B" engines, the "C"s do not necessarily give twice the altitude. Likewise, a two-stage rocket will not quite go twice as high as a single stage. This is because some aerodynamic efficiency is lost through drag at higher air speeds.

MOUNTING ENGINES

Engines must be held firmly in place to withstand forward movement while thrusting, and rearward motion during burn-through.

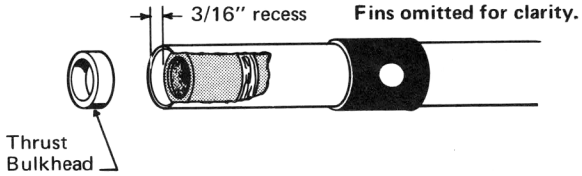
Test-fit the recommended upper stage engine into the upper stage vehicle to see how far up it must go. Remove, wrap engine with masking tape and insert again. Enough tape must be used to insure a firm, tight fit. When properly taped, leave engine in place. No tape necessary if model incorporates engine lock.



2nd Stage Engine

Couple the upper stage and booster sections together carefully. Insert the recommended booster engine into place. Many multi-stage kits are designed with a small thrust bulkhead at the rear of the lowest stage. This prevents rearward engine movement at booster ejection.

If your model does not have the bulkhead, then the engine must be wrapped with tape, as in the upper stage, to secure it in place.

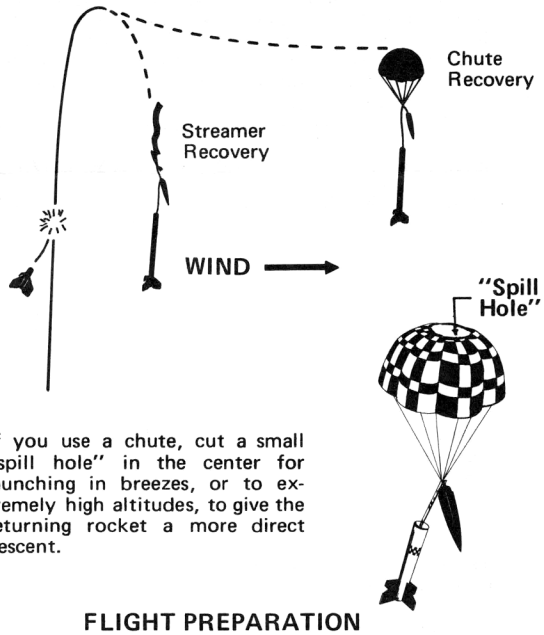


RECOVERY SYSTEMS

Staged model rockets are capable of reaching altitudes over 2000 feet. At extreme altitudes the wind speed is often greater than at surface level. A staged rocket equipped with a standard parachute may be caught in a breeze, and drift as much as several miles before returning to earth.

Here are several ways to avoid drift:

1. Never launch in winds over 15 or 20 mph.
2. Tilt launcher slightly into wind to compensate for distance. Returning rocket will then drift back closer to launch area.
3. Some stage rockets are intentionally supplied with a streamer rather than a parachute. The drogue recovery streamer will allow the rocket to descend nearer to the launch site.



If you use a chute, cut a small "spill hole" in the center for launching in breezes, or to extremely high altitudes, to give the returning rocket a more direct descent.

FLIGHT PREPARATION

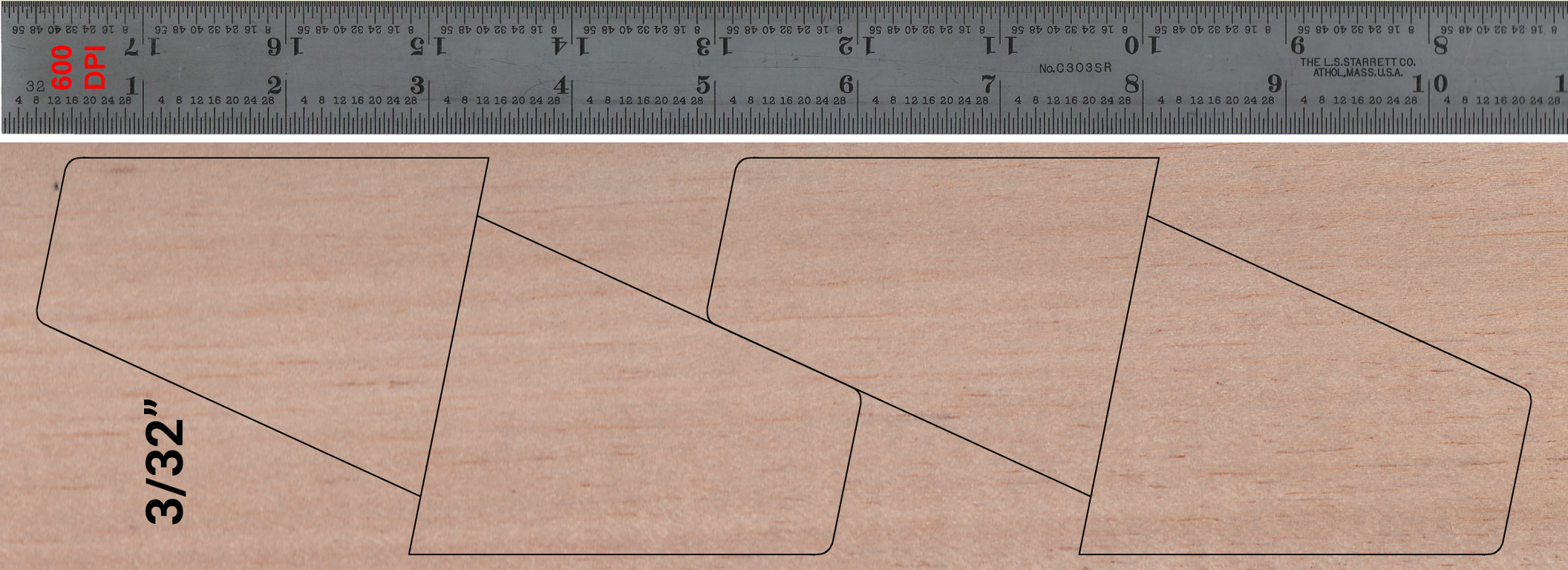
1. Tape and insert recommended engines.
2. Be sure booster type engine is in 1st stage, and standard type engine in the uppermost stage.
3. Be sure all engines have their nozzles pointing rearward.
4. Never use a standard engine in a booster because this will almost certainly cause a crash.
5. Clean any exhaust residue from coupler area to insure a good fit.

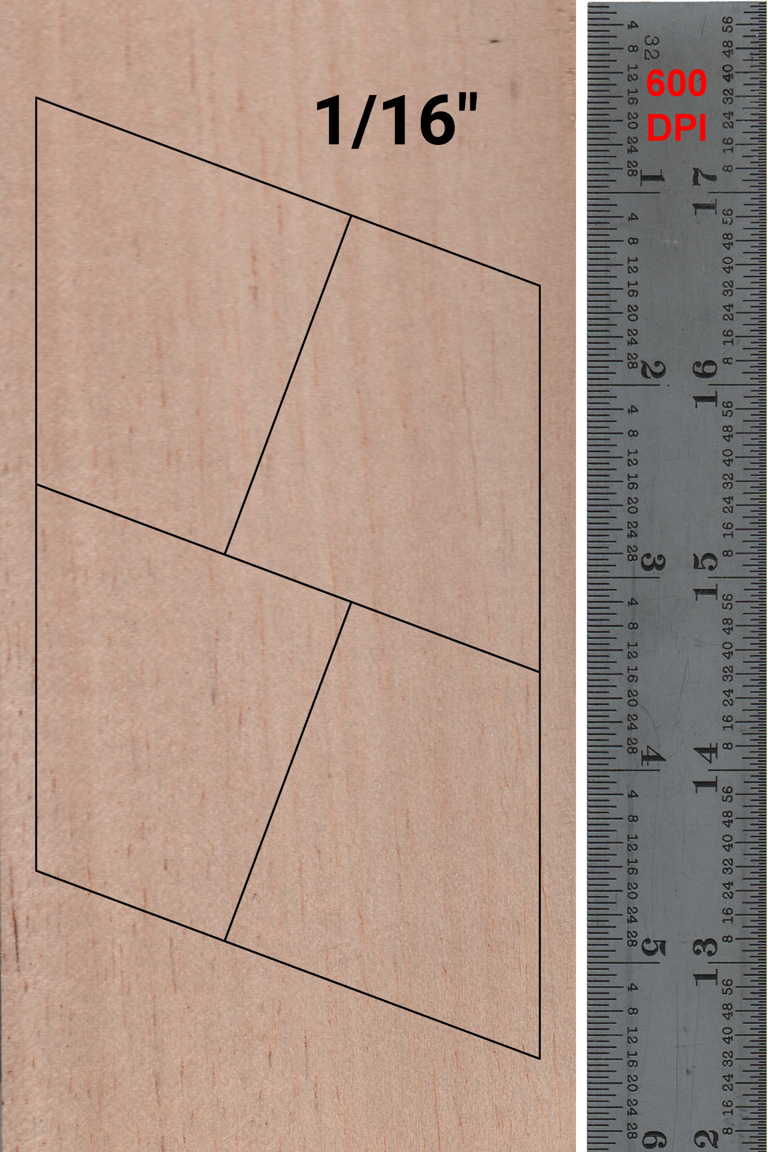
NOTE: When fully prepared, stages must couple together smoothly and snugly. Fit should be tight enough so that boosters do not fall out of upper stage by their own weight.

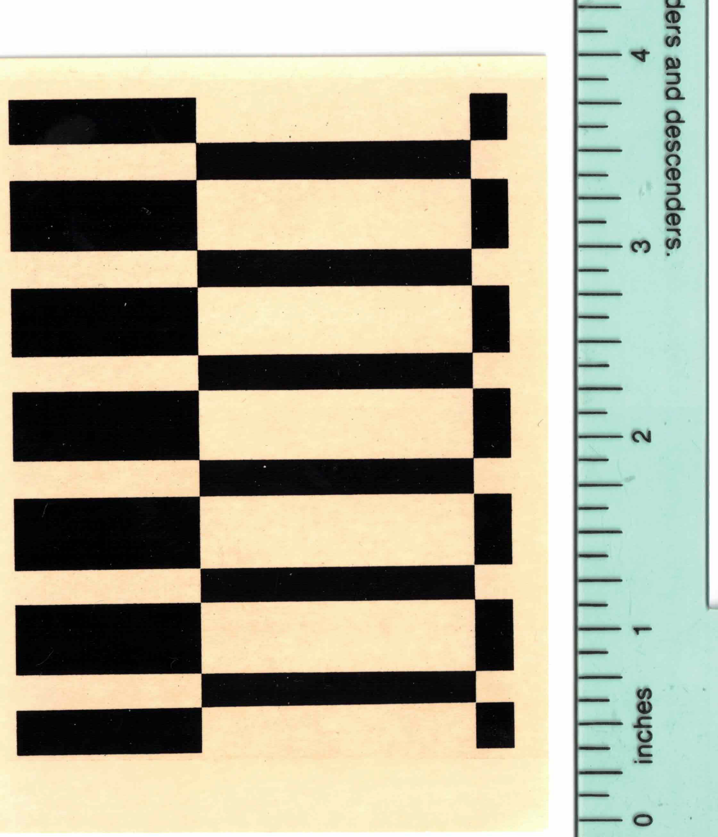
6. Inspect shock cord and fastener for firm bond.
7. Insert Flameproof Parachute Wadding according to its directions.
8. Tuck in shock cord.
9. Neatly roll streamer tightly and insert.
10. Socket nose cone in place (apply a piece of thin tape on the nose cone base, if necessary, for a snug fit).
11. Fly over soft dirt or grassy areas to minimize damage to the tumbling booster.

PASS-PORT STAGING*

*Patent pending. Any individual who wishes to construct a Pass-Port Staging assembly incorporating the invention covered by this pending application and any patent which issues thereon on a non-profit, non-commercial basis is hereby granted a royalty-free, non-exclusive license to practice this invention. Such license is not granted to persons or firms which practice this invention or induce the practice of this invention for profit or on a commercial basis.


600 DPI
No. C303SR
THE L.S.STARRETT CO.
ATHOL, MASS. U.S.A.
3/32”


1/16"
600
DPI



600 dpi

Centuri Arcon-Hi parts list

ST-1010 Sustainer airframe 10.5" long
ST-105 Payload section 5.0"
ST-103 Booster airframe 3.0"

Note: Series 10 tubing had an O.D. of 1.04"

PNC-106 Plastic nose cone 4.5:1 ogive

BTC-10 Balsa tube coupler (solid bulkhead)
HTC-10A paper tube coupler
HTC-7CDH Passport staging coupler, slides over motor mount tubing

ST-73 motor mount tubing 3" long, equivalent to BT-20
2 thrust rings for motor mounts
4 centering rings for motor mounts

2.25" x 0.125" launch lug

1/16" sheet balsa for fins

screw eye for balsa tube coupler
1/8" elastic shock cord
12" parachute


SEMI-SCALE
ARCON-HI
TWO-STAGE SOUNDING ROCKET
FEATURES
PASS-PORT STAGING® SYSTEM
TECHNICAL REPORT ON STAGING!
LARGE PAYLOAD COMPARTMENT!
FLIGHTS UP TO 1000 FEET!
COLORFUL DECAL!
DIE-CUT FINS!
Centuri
FLYING MODEL ROCKET KIT
Mfg. by Centuri Engineering Co. Phoenix, Arizona
ARCON-HI
MODEL ROCKETEER'S SAFETY CODE
TIPS FOR PLASTIC NOSE CONES
SNAP TYPE
GLUE TYPE
Centuri
TECHNICAL INFORMATION REPORT
TIR-123
MULTI-STAGING PRINCIPLES
AFT END

SEMI-SCALE

ARCON®-HI

TWO-STAGE SOUNDING ROCKET

FEATURES, PASS-PORT STAGING* SYSTEM

TECHNICAL REPORT ON STAGING!

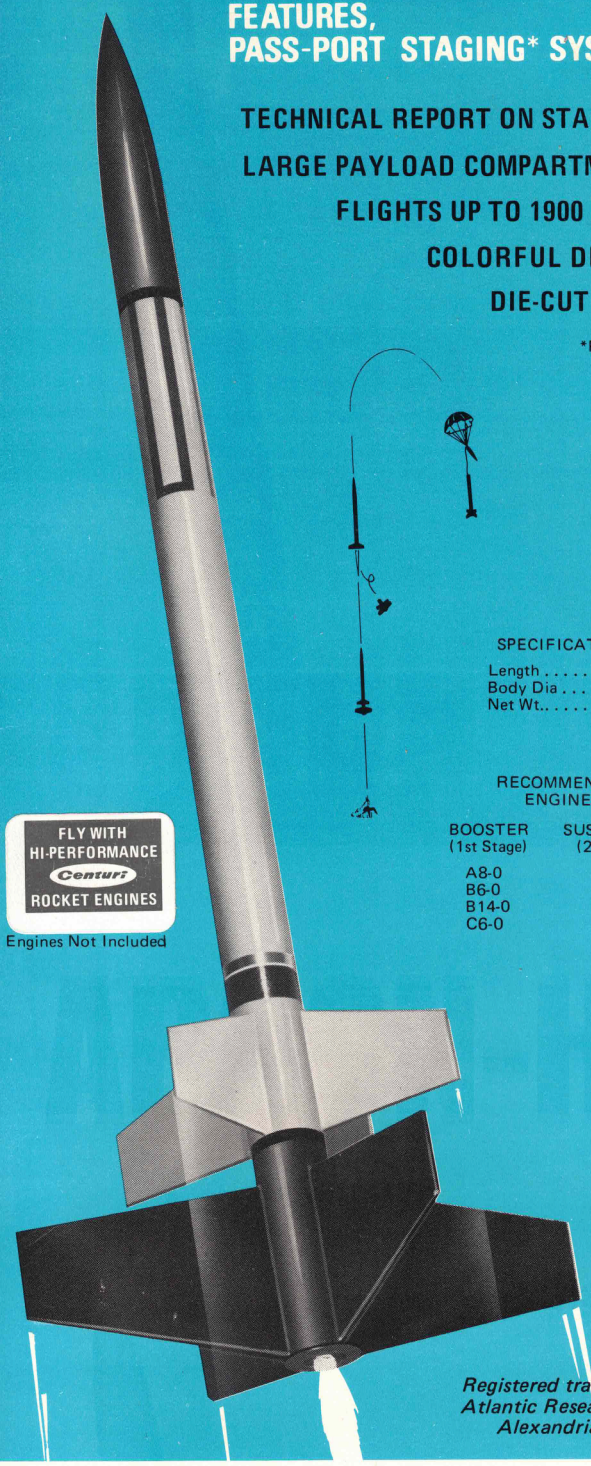
LARGE PAYLOAD COMPARTMENT!

FLIGHTS UP TO 1900 FEET!

COLORFUL DECAL!

DIE-CUT FINS!

*Pat. Pend.



FLY WITH HI-PERFORMANCE Centuri ROCKET ENGINES

Engines Not Included

SPECIFICATIONS

Length . . . . . 23.5"
Body Dia . . . 1.04"
Net Wt. . . . . 1.75 oz.

RECOMMENDED ENGINES

BOOSTER (1st Stage)	SUSTAINER (2nd Stage)
A8-0	A8-5
B6-0	B4-6
B14-0	B6-6
C6-0	C6-7

Registered trademark of Atlantic Research Corp., Alexandria, Va.

IP-235

Centuri

FLYING MODEL ROCKET KIT

Mfg. by Centuri Engineering Co. Phoenix, Arizona