



Soviet Minishuttles

The Soviet Spiral mini-shuttle has a long history. Originally begun to counter the American X-20 Dyna-Soar, the Spiral was not cancelled when the X-20 was. It did, however, suffer from cutbacks and technical difficulties. Delayed and nearly cancelled multiple times, the Spiral finally progressed to a drop-test article. A several "BOR" sub-scale flight test articles were launched in support of the Buran shuttle program.

The larger Uragan minishuttle has a shorter history; Russian sources today still claim that it never existed. If it DID exist, it was intended as a larger, armed version intended for launch into a polar orbit...where it would intercept and destroy a U.S. space shuttle! This "combat shuttle" employed a recoilless rifle for a weapon, and was to be launched atop the then-new Zenit launcher.

The minishuttle was also known as the "Lapot" or shoe, for its flat bottom and upturned nose. The bottom was not broken by any panels; landing gear panels were on top. Outer winglets folded down for landing only.

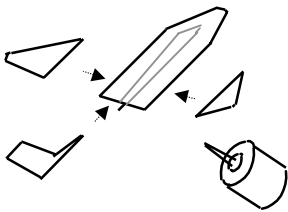
Included are the Spiral, Uragan, and adapter sections for each. The Uragan adaptor is for a Rho Models Zenit-2; the Spiral has a complete upper stage to convert an Apex kit to a Spiral launcher.

This kit is a resin kit. It is not up to the standards of professional mass-produced injection-molded kits; on the other hand, there are no kits of this subject. You will need to trim flash off of parts, sand parts to fit, and fill gaps and holes with plastic putty.

Before beginning, take inventory of your parts. Compare them with the kit instructions, and familiarize yourself with both. Now would be a good time to wash all resin parts in soap and lukewarm water, as this will wash off any "weeping" that may have come off the resin during shipping.

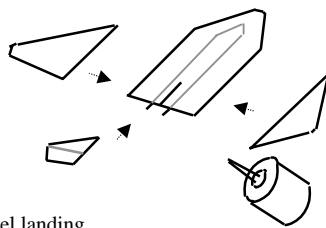
Use of a cyanoacrylate glue (Super Glue) or a fast-setting epoxy is recommended.

1. Spiral

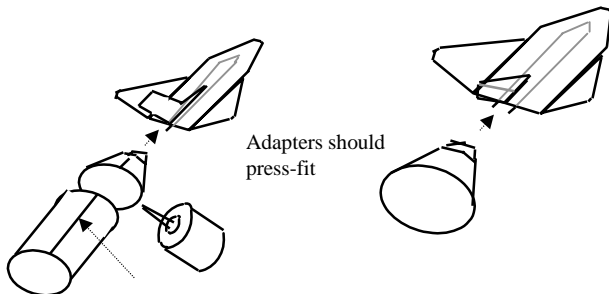


Glue wings at 45-deg angle...or flat to model landing
Note that Spiral vertical fin is LARGER than Uragan's

2. Uragan



3. Add optional adapters



Adapters should press-fit
This tunnel cover goes all the way from front to back.
Line it up with the tunnel cover on transition section;
it's the one on top, just right of center.

Painting Guide

Colors:

Off-white
Graphite

Gold
Silver
Red

Overall color
Bottom of shuttle, nose,
leading edges
Windows
Maneuvering Rocket motors
RCS nozzles, gun exhaust ports.
Draw red hashes on the panel
above the ejection seats for a
warning label.

Decals: One red star and CCCP on each side of fin
Optional: MiG meatball just aft of landing gear
doors (as shown).

