## **SO114417** 1/144 R-60 (AA-8 Aphid)



Assembly scheme

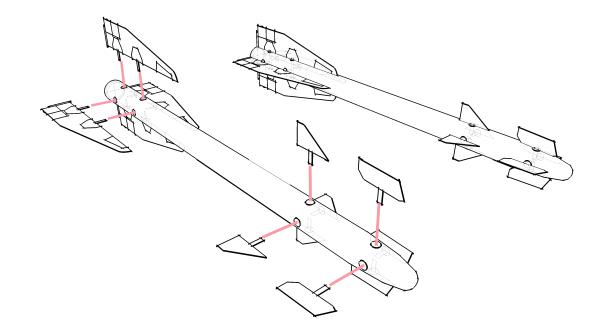


This is a set for an experienced modeller. We provide you with really small parts, so try not to swallow it, this is carpet crawlers' business after all.

The construction of the missile is pretty basic - have your end result looking as on photo above and you're there. We trust you can handle it. Just remember to keep fin attachment pins on the proper side of the blade while cutting out photoetched parts. Those pins are only 0.2mm long, but should make your job fitting fins to body much easier.

Missile body has two additional slots for attaching to pylon/launcher, a template to get those slots aligned on launcher is provided on the edge of photoetched fret.

As for painting and markings - use your reference photos for desired scheme and exact colors. Actually, always use your reference photos!



## **SO114417** 1/144 R-60 (AA-8 Aphid)

#### Brief history and description of missile

Vietnam War proved air-to-air IR guided missiles still had a long way to go before they become truly effective weapon. Obstacles on the way were: narrow zone of intercept, poor maneuverability, and g limit for launch sequence.

At the end of 1960s Russia, France and USA proceeded simultaneously with development of a missile that would overcome those problems. Common knowledge has it France got there first with their R550 Magic in 1975. In reality, Soviet engineers beat all the others by 2 years. Strela-1 (9M31) handheld surface-to-air missile general arangement was a starting point. But final R-60 was 1.5x larger and heavier. This means it is still a very small missile, but also shows how little of Strela-1 concept is left.

This missile takes full advantage of novel aerodynamics features - employing small control surfaces augmented by additional fins that decrease stability and thus increase maneuverability.

Dimunitive size dictated a rather non-muscular, 3kg warhead. To get most of it, the detonation should occure inside the target (as much as possible). Therefore R-60's warhead is located well forward missile fuselage. Modified R-60M increased warhead weight to 3.5kg.

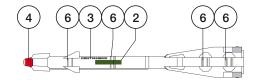
The range is a not very impressive 7km at 35000ft (with minimal launch distance as low as 200-250m), but small size means aircraft can be armed with more missiles. Dual launchers were developed (APU-60-II) and widely used.

R-60 is easily adaptable to various platforms. It can be seen under wings of MiG-21, -23, -25, -27, -29s, -31, Su -15, -17s, -24, -25, -27s, but also Ka-50/52 and Mi-28 helicopters.

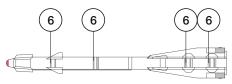
Your average Aphid missile will most probably be satin white, with very little stenciling. There might be some red bands around front section indicating live warhead. Training missiles can be easily distinguished by three black stripes at the back of otherwise white body, as well as lack of wings and control surfaces.



Default R-60 in 45° rotated view presenting serial no location ~in axis of fins



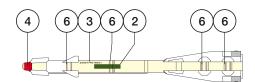
Default R-60 in satin white, with silver rolleron tabs and pale orange seeker head



R-60 with inert warhead



Training R-60, notable lack of fins and wings



Slight tonal variations between sections possibly due to storage conditions, pale yellow ~FS33798

Colors and markings

# **SO114417** 1/144 R-60 (AA-8 Aphid)

### Note

Missile bodies are produced using CNC lathe. Lathe blade has a certain, finite edge radius. Working toward tip of the missile, where radius of body decreases, we arrive at a point when the blade is unable to reach the very tip of round-nosed missile. This leaves a tiny mark.

We guess it is not a big deal for an advanced modeller to sand this scar smooth with few swipes of 1000-grit sandpaper. Worse things happen on daily basis on our workbenches. In return for this slight inconvenience we are able to machine a recessed exhaust nozzle, which we believe will be more appreciated.

