

SHAVROV SH-2

version 1.7 for
X-PLANE 9.50 RC-3



OWNER'S MANUAL

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HISTORY



The Sh-1 remained a prototype, being developed into the slightly larger and refined Sh-2, whose first test flight, made from land, was on 11 November 1930. The type later met severe requirements both for operation from water and land and was built in quantity, production being quoted from 300 to 700 according to source. The Sh-2 served throughout the Soviet Union as a utility transport, for liaison, and as a trainer, and for many years was used on fishery protection duties and frontier patrol work. They supported Arctic operations and 16 were built under the designation Sh-2S as air ambulances carrying one or two stretcher patients. In 1939 Aeroflot built additional Sh-2s from available spares and later the type was reinstated in production. As well as use for the civil roles indicated, the Sh-2 was flown by the V-VS as a general-purpose aircraft. A number of later machines had a glazed crew cabin and other refinements, becoming redesigned Sh-2bis most had improved M-11L engines.



SPECIFICATION

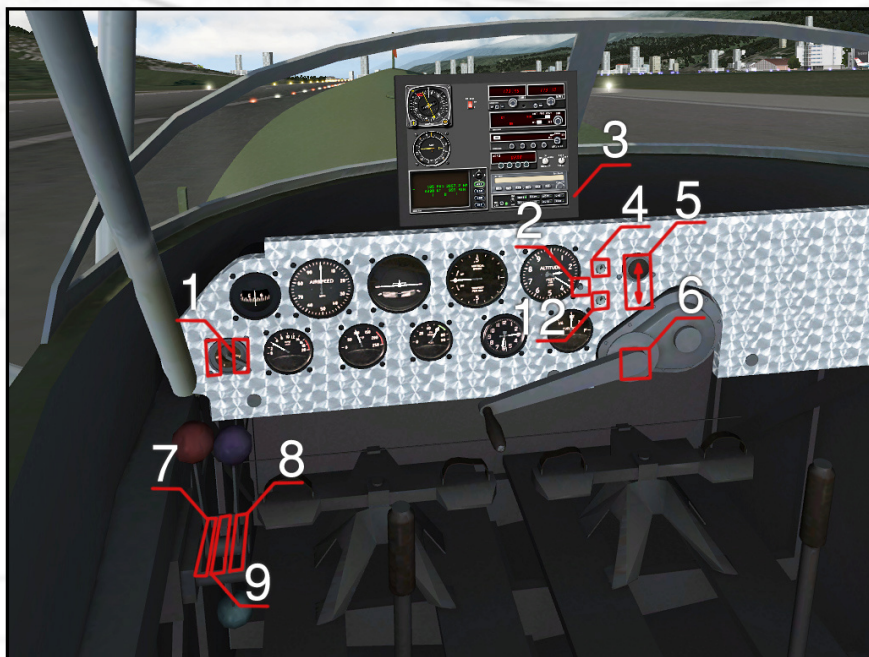


WEIGHTS		
Take-off weight	937 kg	2066 lb
Loaded weight	660 kg	1455 lb
Fuel weight	225 kg	496 lb
DIMENSIONS		
Wingspan	13 m	43 ft 8 in
Length	8.2 m	27 ft 11 in
Wing area	24.7 m ²	265.87 sq ft
PERFORMANCE		
Max speed	145 km/h	90
Ceiling	3500 m	11 500 ft
Range	1200 km	745 miles
Rate of climb	2.5 m/s	500 fpm
Stall speed	77 km/h	48 mph
Take-off speed	85 km/h	52.8 mph



Редкий снимок Ш-2 авиации военно-морского флота с красными звездами.

CONTROLS



1 – ignition switch; 2 – altimeter setting knob; 3 – touch screen (includes HSI, ADF, GPS, autopilot, Nav/Com, DME, audio panel. You can use it to make you own instruments' set in the Plane Maker); 4 – touch screen switch; 5 – mixture knob; 6 – gears handle; 7 – throttle handle; 8 – cowl flaps handle; 9 – carb heat handle; 10 - unfold wings; 11 – fold up wings; 12 – pop-up switches panel.



PLUGIN FEATURES

The model includes SASL plugin (more info here – <http://forums.x-plane.org/index.php?showtopic=38827&st=0>), written by Alexander 'asso' Babichev, and specially created scripts. Components located in the /plugins/ and /Custom Avionics/ directories are free under the GPL license, and can be used in every way you want. The main plugin page is <http://code.google.com/p/sasl/>

ATTENTION SASL plug-in don't works on PPC MAC, but PPC users can use SH-2 as regular x-plane's plane with no plugin.

The scripts provide next functions:

1. Engines RPM limit. Exceeding 1655 RPM for more than 1 minute will break the engines.
2. Engines OIL temperature limit. Engines will be broken after exceeding oil temperature in 100°C
3. Engines OIL pressure limit. Engines will be broken after exceeding oil pressure in 75 P.S.I
4. Engines CHT temperature limit. Engines will be broken after exceeding cylinder head temperature in 363 °C
5. Wheels will be broken when you hit the ground too hard
6. **Position Saving** function provides ability to save plane position even if you close x-plane. If this function is ON, after selecting plane in x-plane you will see you plane in the same place and position where you left you plane during last flight. If the engines was running plug-in will start them automatically. Fuel tanks will save last fuel quantity.

!!! If you want to start new flight in the new airport simply set position saving switch OFF and then select new airport.

7. Post effect provides vignetting effect (more info here – <http://en.wikipedia.org/wiki/Vignetting>). Works only in outside views.
8. Wave limits system. The plugin automatically limits maximum wave height to 0.5 feet. You can turn the system off by pressing "wave limit" button on the switches panel.
9. Plane automatically will save heading and position when anchor is ON (default x-plane's key "V"), imitating docking the plane.
10. Graphic feature – white smoke is ON when ctrl+1 and ctrl+2 is pressed to engage starters
11. Switches panel

The panel was created for an easier control of all animations, switches, and control switches. You can show/hide the animation panel by pressing shift+F1, or using the switch on the plane's panel (position 12 on page 5). You can move and resize the panel as you like.



LIVERIES



The model includes 2 liveries – default СССР-Е 1986 livery (you can see one of the version of Sh-2 with this livery at the Historic Aircraft Restoration Museum, St Louis); and Red Cross livery of СССР К8.



SPECIAL THANKS

Thanks to all who helped me with this project, to Russian X-Plane's community <http://x-plane.su/forum/> , especially to Gonch (Igor Goncharov), popedit and Saturn.

Thanks all who bought my payware planes, the Republic RC-3 Seabee (<http://store01.prostores.com/servlet/x-planestore/Detail?no=168>) and the Grumman Goose G-21(<http://store01.prostores.com/servlet/x-planestore/Detail?no=187>), you help me to make this free update.

Thanks to all x-plane.org community for manuals and a lot of information about X-Plane.

If you have any suggestion please feel free to write me at den.dndesign@gmail.com



2010, by Denis 'ddenn' Krupin