

SEF-2A 'Rantou' Specifications

SEF-2A 'Rantou'
[Real Designation : SF-42]
Next Generation Interdictor Program



General Characteristics

Crew	1	N/A
Length	19.92m	N/A
Span	14.55m	N/A
Height	3.53m	2.47m (Gears up)
Wing Area	91.87m ²	N/A
Empty Weight	17.5t	N/A
Gross Weight	25.68t	N/A
MTOW	35t	N/A
Fuel Capacity	8180kg	Possible 2 x 1850kg Drop Tanks
Power Plant	2 x Kibana MM-940-21 Afterburning Turbofan	117kN (Dry) 148kN (AB)

Stealth Multirole Example

-	-	-	-	7-IIR	2 x 5D-40	AGM-21 E-15	AGM-21 E-15	2 x 5D-40	7-IIR	-	-	-	-
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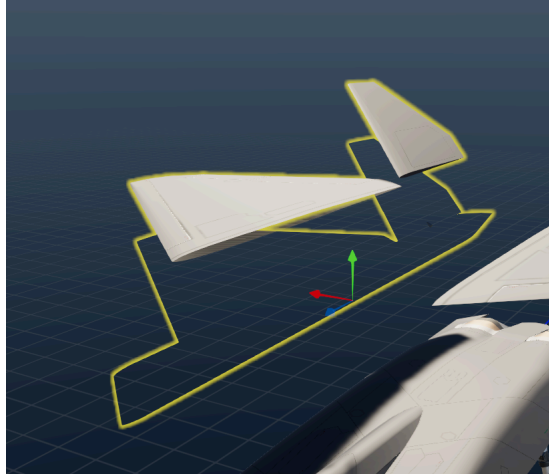
+ M-21B 25mm Revolver Cannon (400 rounds)

Avionics

A-STR-76A	Multimission AESA Radar
A-RMD-21	Radar Warning Receiver
A-STC-56	Electro Optical Targeting System
A-IRC-54	Distributed Aperture System
A-AEE-90v4 Basilisk	Electronic Warfare System
A-RTE-81	Integrated Communication System
A-MDE-102v6	Flares and Chaff Countermeasures [240 Total]
A-MDE-106	Active Towed Decoy Countermeasure [4 Total]

Stealth Capabilities

**Disclaimer : Measured with the hidden parts removed to visualize the “real”
RCS value of the plane.**



- Flyout Values - (Clean)

Front : -150.22 dBsm

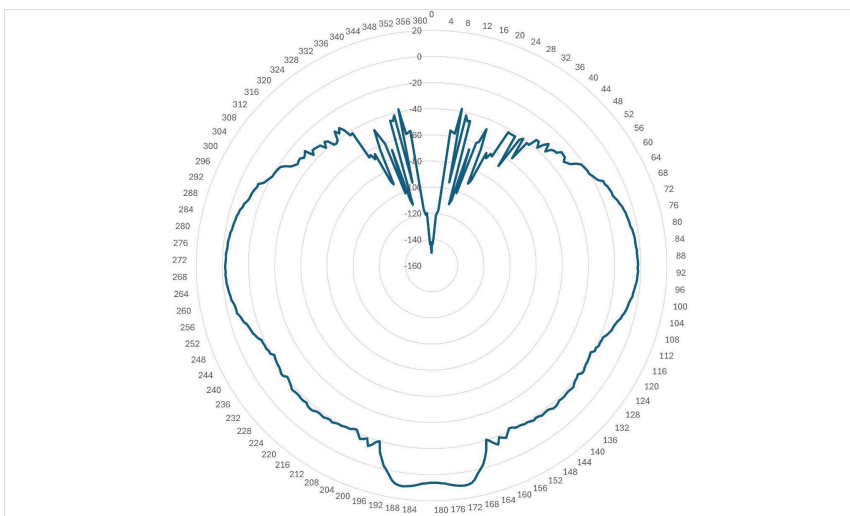
Side : -2.14 dBsm

Rear : 6.12 dBsm

Top : 48 dBsm

Botton : 48.77

- Polar Graph Value - (Slightly more accurate)



A-A Armament Specifications

A-A Armament Specifications

- **AAM-4C-1 [Short Range Defensive IR]**
 - A short range IR guided missile with high maneuverability and sensitive seeker. Can be used to target incoming enemy air-to-air or surface-to-air missiles in the event where it can't be evaded.

Mass	83kg
Diameter	130mm
Length	2.48m
Warhead	8kg
Detonation Mechanism	Laser Proximity and Impact Fuze
Operational Range	<8km head-on against aircraft
Maximum Speed	Mach 3.3
Guidance System	Conical Scan Infrared Homing
Maximum G-Overload	50G
Time Before Maximum Control Surface Deflection	0.2s
Booster Burn Time	4s
Engine	Himeno Type 32 High Impulse Solid Rocket Motor



- AAM-5 | B-5, D-40, ER |
 - A medium to long range active radar homing missile with maneuverability depending on the variants. While B-5 and ER relies solely on their fins for control, the D-40 was also equipped with thrust vectoring to improve performance at closer ranges.

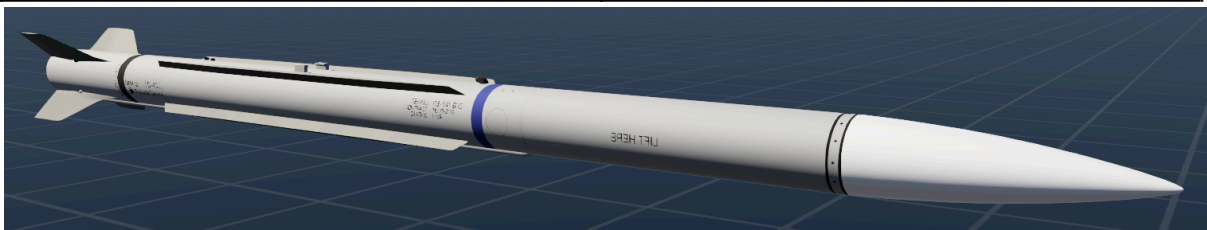
AAM-5B-5	
Mass	171kg
Diameter	175mm
Length	3.72m
Warhead	18kg
Detonation Mechanism	Laser Proximity and Impact Fuze
Operational Range	5-80km
Maximum Speed	Mach 4
Guidance System	ARH-IOG-DL
Maximum G-Overload	32G
Time Before Maximum Control Surface Deflection	0.75s
Booster Burn Time	9s
Engine	Himeno Type 34 Mod 2 Solid Rocket Motor



AAM-5D-ER	
Mass	193kg
Diameter	175mm
Length	3.72m
Warhead	18kg
Detonation Mechanism	Laser Proximity and Impact Fuze
Operational Range	15 - 250 km
Maximum Speed	Mach 4.5
Guidance System	ARH (AESA)-PRH-IOG-GPS-DL
Maximum G-Overload	40G
Time Before Maximum Control Surface Deflection	2s
Booster Burn Time	3s + 20s Sustainer
Engine	Tsubaki G-1200 Throttleable Ductor Rocket Motor



AAM-5D-40	
Mass	182kg
Diameter	175mm
Length	3.72m
Warhead	18kg
Detonation Mechanism	Laser Proximity and Impact Fuze
Operational Range	2.5 - 150 km
Maximum Speed	Mach 4.5
Guidance System	ARH (AESA)-PRH-IOG-GPS-DL
Maximum G-Overload	45G
Time Before Maximum Control Surface Deflection	0.2s
Booster Burn Time	7s + 7s
Engine	Himeno Type 99 Mod 3, 2-Stage Programmable Pulsed Rocket Motor



- AAM-6A-1
 - A long range air-to-air missile developed from a surface-to-air missile (SAM-14A MADM). Switching out the old solid rocket booster to a 2 stage pulsed rocket motor. The decision was made to implement this missile for A-A usage due to increasing need for longer range missiles with enhanced destructive capabilities.

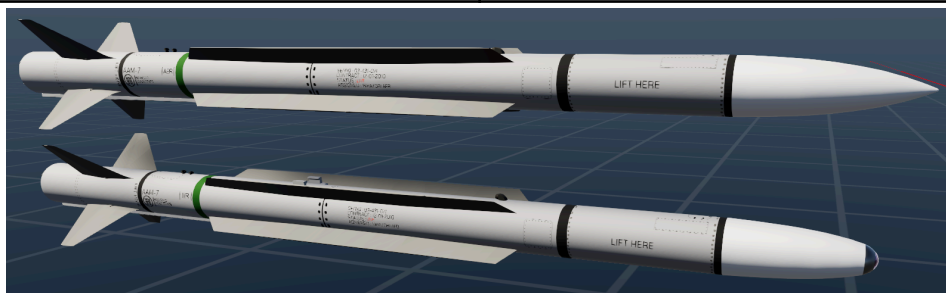
Mass	590kg
Diameter	250mm
Length	6.34m
Warhead	30kg
Detonation Mechanism	Laser Proximity and Impact Fuze
Operational Range	30 - 400 km
Maximum Speed	Mach 7
Guidance System	ARH-IOG-DL
Maximum G-Overload	23G
Time Before Maximum Control Surface Deflection	4s
Booster Burn Time	20s + 10s
Engine	Himeno Type 98, 2-Stage Pulsed Rocket Motor



- AAM-7 | IIR and AER |

- The AAM-7 is a short to medium range multirole missile developed to reduce the types of missile required to be carried by aircrafts. The IIR seeker variant can target both ground and air targets using its advanced dual purpose seeker. Dubbed “All in one missile”.

Mass	130kg
Diameter	150mm
Length	2.85m (IIR) 2.93m (AER)
Warhead	15kg (Tandem HEAT + Blast Frag on IIR) 10kg (Blast Frag on AER)
Detonation Mechanism	Laser Proximity and Impact Fuze
Operational Range	800m - 16km head-on against aircraft (IIR) 1.5 - 40km head-on against aircraft (AER)
Maximum Speed	Mach 3.5
Guidance System	Imaging Infrared Seeker ARH (AESA) - IOG - DL
Maximum G-Overload	55G
Time Before Maximum Control Surface Deflection	0.12s
Booster Burn Time	6s
Engine	Himeno Type 32 Mod 6, High Impulse Solid Rocket Motor

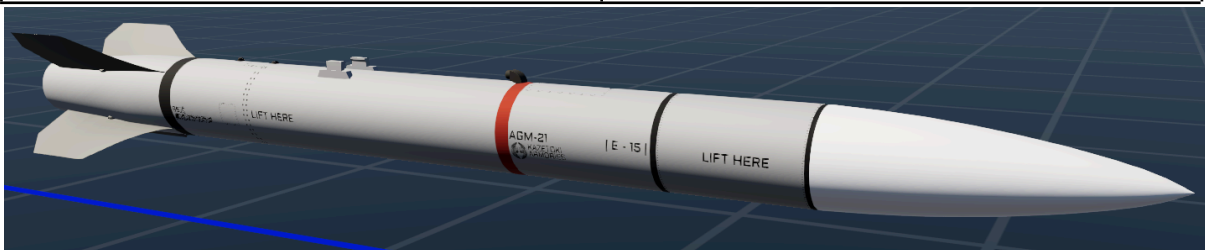


A-G Armament Specifications

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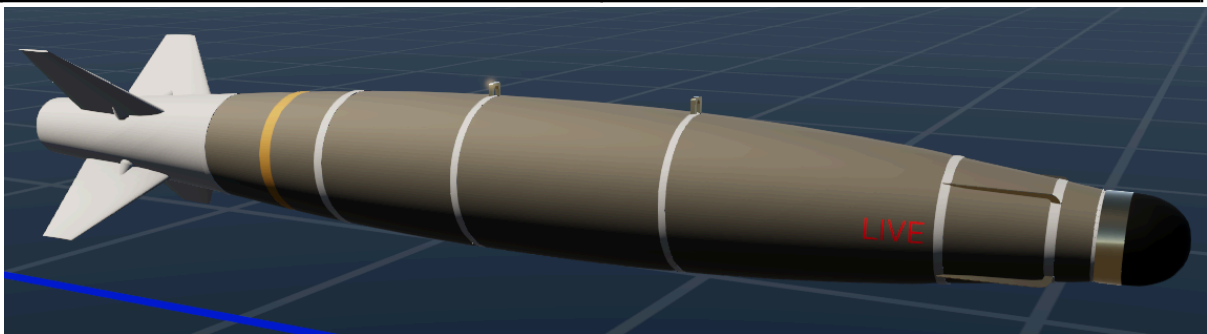
- AGM-21E-15
 - Originally developed as a dedicated anti-radiation missile, the design eventually evolved to integrate a seeker that can target other things as well. Combining both speed and firepower, the missile is exceptionally suited for targeting SAM sites.

Mass	525kg
Diameter	300mm
Length	4.21m
Warhead	95kg Blast Frag
Detonation Mechanism	Programmable Fuze
Operational Range	4 - 300km
Maximum Speed	Mach 2.8
Guidance System	Millimeter Wave Radar-IOG-GPS-PRH
Maximum G-Overload	14G
Time Before Maximum Control Surface Deflection	3s
Booster Burn Time	12s
Engine	Himeno Type 66, Dual Thrust Rocket Motor



- AGB-14 'ALLPO'
 - A dual mode guided bomb with both laser guidance and GPS guidance to increase versatility.

Mass	525kg
Diameter	365mm
Length	3.01m
Warhead	240kg Blast Frag
Detonation Mechanism	Programmable Fuze
Guidance System	GPS-IOG-Laser
Time Before Maximum Control Surface Deflection	0.1s



- AGB-15 'LABB'
 - A GPS guided bunker buster bomb assisted with laser guidance to ensure maximum precision on target.

Mass	1015kg
Diameter	600mm
Length	5.13m
Warhead	540kg Blast Frag
Detonation Mechanism	Delayed Impact Fuze
Guidance System	GPS-IOG-Laser
Time Before Maximum Control Surface Deflection	0.1s

