# **ASM-2b Bat**

A/C Type: Self-guided Glide bomb

Engine(s): None Eng. Pwr: None

A/C Crew: Self-Guided: Radar-guided

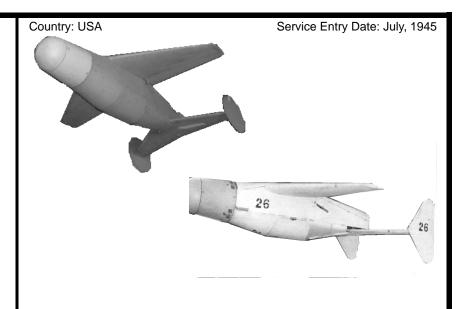
Maximum Speed: 650 mph at Sea Level

Maximum Ceiling: 22,200 ft.

Defense factor: 7 Size Modifier: -1
Damage Factor: 2/3 Endurance: -Dud Rate: 3 Guidance: SG/R

Protection: Cockpit +0 Fuel +0 Engine +0 Climb Dece/ Dive Accel: 3.0 / 1.5 Weight and Load Limit: None

Wpn Stations Weight Allowed Loads



Class: X Victory Points: 2-4

### AIRCRAFT PERFORMANCE CHART

| Altit  | ude   | Minimum | Maximum | Maximum  | Min   | Min   | Min   | Min   | Altitu | de    | Average       |
|--------|-------|---------|---------|----------|-------|-------|-------|-------|--------|-------|---------------|
| Levels | Bands | Speed   | Speed   | Dive Spd | TT(8) | HT(-) | BT(-) | ET(-) | Levels | Bands | Rate of Climb |
| 43+    | UH    |         |         |          |       |       |       |       | 43+    | UH    |               |
| 37-42  | EH    |         |         |          |       |       |       |       | 37-42  | EH    |               |
| 31-36  | VH    |         |         |          |       |       |       |       | 31-36  | VH    |               |
| 25-30  | HI    |         |         |          |       |       |       |       | 25-30  | HI    |               |
| 19-24  | MH    | 4.5     | 7.0     | 15.5     | 9.5   |       |       |       | 19-24  | MH    |               |
| 13-18  | ML    | 4.5     | 7.0     | 15.5     | 9.0   |       |       |       | 13-18  | ML    |               |
| 7-12   | LO    | 4.5     | 7.0     | 15.5     | 8.5   |       |       |       | 7-12   | LO    |               |
| 1-6    | VL    | 4.5     | 7.0     | 15.0     | 8.0   |       |       |       | 1-6    | VL    |               |

# **FLIGHT NOTES**

**Drop Requirement**: To drop, the parent aircraft minimum speed = 4.5, in non-turning flight. The parent aircraft must detect a target by radar before launching.

Flight profile: Weapon flies in a shallow dive, heading toward the detected target. Drops .1 alt per turn until target is more than 15 degrees vertical; then it transitions to steeper dive. See the Self-guided Weapon Rules.

Parent aircraft can climb or turn the turn after launch.

**Damage to weapon**: Any critical hit to destroys the weapon as follows: 1-7 explodes; 8-10 out of control; remove from play.

### **POWER VERSUS SPEED CHART**

| Levels | Bands   | 1.0 - 4.5 | 5.0 - 7.5 | 8.0 - 9.5 | 10.0+ | Band |
|--------|---------|-----------|-----------|-----------|-------|------|
| 43+    | UH      |           |           |           |       | UH   |
| 37-42  | EH      |           |           |           |       | EH   |
| 31-36  | VH      |           |           |           |       | VH   |
| 25-30  | HI      |           |           |           |       | HI   |
| 19-24  | MH      |           |           |           |       | MH   |
| 13-18  | ML      |           |           |           |       | ML   |
| 7-12   | LO      |           |           |           |       | LO   |
| 1-6    | VL      |           |           |           |       | VL   |
| Bankir | ng FPs  |           |           |           |       |      |
|        | lip FPs | 6         | 8         | 11        | 15    |      |

### **NOTES AND VARIANTS**

**ASM-2b Bat:** Available July 1945. The most sophisticated weapon of the period. The Bat was a planform glide bomb, guided by its own radar. The contact would be handed down from the parent aircraft before launch. First used against ships and bridges in Balipakan, Borneo

**Criticals**: Non-armor piercing warhead. Critical hits to naval targets are Internal criticals.

Parent Aircraft: PB4Y-2b

#### **WEAPON DAMAGE**

Wgt: 3100 lbs. Ld: 10.0 Sft/hd Att: 50/100

# Mitsubishi Ki.147 Igo-1-A

A/C Type: Anti-shipping RC Missile

Engine(s): rocket

Eng. Pwr: 240 kg rocket thrust

A/C Crew: Radio-controlled by Bombadier

Maximum Speed: 342 mph at 500 ft

Maximum Ceiling: 4,900 ft.

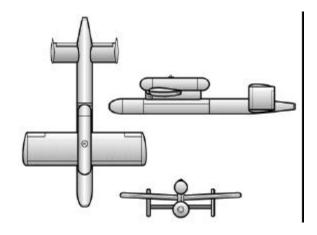
Defense factor: 8 Size Modifier: -1
Damage Factor: 2/3 Endurance: -Dud Rate: 6 Guidance: RG/R

Protection: Cockpit +0 Fuel +0 Engine -1
Climb Dece/ Dive Accel: 3.0 / 1.5
Weight and Load Limit: None

Wpn Stations Weight Allowed Loads

Country: Japan

Service Entry Date: Jan, 1945



Class: X Victory Points: 2-4

## AIRCRAFT PERFORMANCE CHART

| Altit<br>Levels | ude<br>Bands | Minimum<br>Speed | Maximum<br>Speed | Maximum<br>Dive Spd | Min<br>TT(7) | Min<br>HT(8) | Min<br>BT(-) | Min<br>ET(-) | Altitu<br>Levels | de<br>Bands | Average<br>Rate of Climb |
|-----------------|--------------|------------------|------------------|---------------------|--------------|--------------|--------------|--------------|------------------|-------------|--------------------------|
| 43+             | UH           |                  |                  |                     |              |              |              |              | 43+              | UH          |                          |
| 37-42           | EH           |                  |                  |                     |              |              |              |              | 37-42            | EH          |                          |
| 31-36           | VH           |                  |                  |                     |              |              |              |              | 31-36            | VH          |                          |
| 25-30           | HI           |                  |                  |                     |              |              |              |              | 25-30            | HI          |                          |
| 19-24           | MH           |                  |                  |                     |              |              |              |              | 19-24            | MH          |                          |
| 13-18           | ML           | 3.5              | 7.0              | 10.5                | 7.0          | 9.0          |              |              | 13-18            | ML          |                          |
| 7-12            | LO           | 3.5              | 7.0              | 10.5                | 7.0          | 9.0          |              |              | 7-12             | LO          |                          |
| 1-6             | VL           | 3.5              | 6.5              | 10.5                | 7.0          | 9.0          |              |              | 1-6              | VL          |                          |

#### **FLIGHT NOTES**

**Drop Requirement**: To drop, the parent aircraft minimum speed = 4.0.

Flight Profile: When dropped, the Igo-A begins a shallow dive until it reaches a preset altitude between 100 and 500 ft. Then it levels out until it is over the target - then the bombadier dives it onto the target. Weapons must be kept in the parent aircraft's front arc. 1st turn the engine supplies only half thrust. For the next 17 turns, the engine fires normally, then the engine shuts down.

At the time of the attack, apply the following modifier for range from parent aircraft to target:

| Range | Mod | <u>Range</u> | Mod |
|-------|-----|--------------|-----|
| 1-5   | 0   | 13-20        | +1  |
| 6-12  | +1  | 21+          | +3  |

**Damage to weapon**: Any engine, cockpit, or fuel critical hit to the missile destroys it as follows:

1-8 explodes;

9-10 out of control; remove from play.

Treat other criticals normally. If the radio is destroyed, treat as out of control.

#### **WEAPON DAMAGE**

Wgt: 3087 lbs Ld:12.0 Sft/Hd Att: 120/90

## **POWER VERSUS SPEED CHART**

| Levels | Bands   | 1.0 - 4.5 | 5.0 - 7.5 | 8.0 - 9.5 | 10.0+ | Band |
|--------|---------|-----------|-----------|-----------|-------|------|
| 43+    | UH      |           |           |           |       | UH   |
| 37-42  | EH      |           |           |           |       | EH   |
| 31-36  | VH      |           |           |           |       | VH   |
| 25-30  | HI      |           |           |           |       | HI   |
| 19-24  | MH      | 3         | 1         |           |       | MH   |
| 13-18  | ML      | 3         | 1         |           |       | ML   |
| 7-12   | LO      | 3         | 1         |           |       | LO   |
| 1-6    | VL      | 3         | 1         |           |       | VL   |
| Bankir | ng FPs  | 5         | 7         | 10        | 13    |      |
| Side S | lip FPs | 6         | 8         | 12        | 15    |      |

## **NOTES AND VARIANTS**

**Ki.147 Igo -A**: First guided missile development program for Japan. Large weapon (800 kg warhead). Range 6.5 miles. However, the rocket engine was not powerful enough, and the controls were weak. The remote control worked reliably. However, the rocket had no visual aides to help the bombadier keep it in sight. Guided flight testing started in Oct-44. Development ended in favor Igo-2-B. About 15 built and tested during development.

Criticals: Critical damage done to naval targets are Surface criticals.

Parent Aircraft: Ki.67 I

# Kawasaki Ki.148 Igo-2-B

A/C Type: Anti-shipping RC Missile

Engine(s): rockets

Eng. Pwr: 150 kg rocket thrust

A/C Crew: Radio-controlled by Bombadier

Maximum Speed: 342 mph

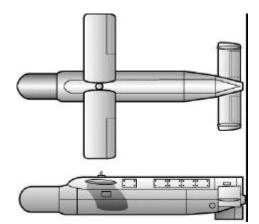
Maximum Ceiling: 20,100 ft. / 22,500 ft

Defense factor: 8 Size Modifier: +0
Damage Factor: 2/3 Endurance: 3
Dud Rate: 5 Guidance: RG/R

Protection: Cockpit +0 Fuel +0 Engine -1
Climb Dece/ Dive Accel: 3.0 / 1.5
Weight and Load Limit: None

Wpn Stations Weight Allowed Loads

Country: Japan



Service Entry Date: Sep-44

Class: X Victory Points: 2-3

### AIRCRAFT PERFORMANCE CHART

| Altit  | ude   | Minimum | Maximum | Maximum  | Min   | Min   | Min   | Min    | Altitu | de    | Average       |
|--------|-------|---------|---------|----------|-------|-------|-------|--------|--------|-------|---------------|
| Levels | Bands | Speed   | Speed   | Dive Spd | TT(6) | HT(-) | BT(-) | ET(10) | Levels | Bands | Rate of Climb |
| 43+    | UH    |         |         |          |       |       |       |        | 43+    | UH    |               |
| 37-42  | EH    |         |         |          |       |       |       |        | 37-42  | EH    |               |
| 31-36  | VH    |         |         |          |       |       |       |        | 31-36  | VH    |               |
| 25-30  | HI    |         |         |          |       |       |       |        | 25-30  | HI    |               |
| 19-24  | MH    |         |         |          |       |       |       |        | 19-24  | MH    |               |
| 13-18  | ML    | 4.0     | 7.0     | 10.5     | 6.0   |       |       |        | 13-18  | ML    |               |
| 7-12   | LO    | 4.0     | 7.0     | 10.5     | 6.0   |       |       |        | 7-12   | LO    |               |
| 1-6    | VL    | 4.0     | 6.5     | 10.5     | 5.5   |       |       |        | 1-6    | VL    |               |

#### **FLIGHT NOTES**

**Drop Requirement**: To drop, the parent aircraft minimum speed = 4.0.

Flight Profile: When dropped, the Igo-2-B begins a shallow dive until it reaches a preset altitude between 100 and 500 ft. Then it levels out until it is over the target - then the bombadier dives it onto the target. Weapons must be kept in the parent aircraft's front arc. 1st turn the engine supplies only half thrust. For the next 19 turns, the engine fires normally, then the engine shuts down.

| Range | <u>Mod</u> | <u>Range</u> | Mod |
|-------|------------|--------------|-----|
| 1-5   | 0          | 13-20        | +1  |
| 6-12  | +1         | 21+          | +3  |

**Damage to weapon**: Any engine, cockpit, or fuel critical hit to the missile destroys it as follows:

1-8 explodes;

9-10 out of control; remove from play.

Treat other criticals normally. If the radio is destroyed, treat as out of control.

#### **WEAPON DAMAGE**

Wgt: 1500 lbs Ld: 6.0 Sft/Hd Att: 100/50

### **POWER VERSUS SPEED CHART**

| Levels | Bands   | 1.0 - 4.5 | 5.0 - 7.5 | 8.0 - 9.5 | 10.0+ | Band |
|--------|---------|-----------|-----------|-----------|-------|------|
| 43+    | UH      |           |           |           |       | UH   |
| 37-42  | EH      |           |           |           |       | EH   |
| 31-36  | VH      |           |           |           |       | VH   |
| 25-30  | HI      |           |           |           |       | HI   |
| 19-24  | MH      | 4         | 2         | -         |       | MH   |
| 13-18  | ML      | 4         | 2         | -         | -     | ML   |
| 7-12   | LO      | 4         | 2         | -         | -     | LO   |
| 1-6    | VL      | 4         | 2         | -         | -     | VL   |
| Bankir | ng FPs  | 4         | 5         | 7         | 9     |      |
| Side S | lip FPs | 5         | 6         | 9         | 13    |      |

### **NOTES AND VARIANTS**

**Ki.148 Igo-2-B**: Smaller weapon of the same type of radio-controlled antishipping weapon as Hs293 and Igo-1-A. 300 kg warhead. Range 4.0 miles. The remote control worked reliably. However, the rocket had no visual aides to help the bombadier keep it in sight. More successful development and was allocated for production. However, this weapon was dropped to low priority (fighters had a higher priority) and little effort was made toward actual production. About 30 actually built.

**Criticals**: Critical damage done to naval targets are Surface criticals.

Parent Aircraft: Ki.102b Randy ground attack fighter. (Ki.48 II Lily for testing)