# JAPANESE PHANTOMS





# A fading beauty

The closing down of 302nd squadron at Hyakuri Air Base, Japan, in December 2018 made it clear that the Japan Air Self-Defense Force (JASDF) is decreasing the operations with one of the most beautiful fighters of its inventory. Currently, 301st Hikotai is the sole active air defense operator within the JASDF flying the F-4EJ Kai.

The F-4 operations now have returned to the same situation as in 1974, when the JASDF started operating the F-4EJ Phantom. The 301st was the first squadron to fly with the F-4EJ in the JASDF. And now, fittingly, is the last one: first in, last out. During almost 50 years of use in the JASDF, a total of seven squadrons flew Phantoms.

In 1971 four F-4Es arrived at Komatsu Air Base, Japan. They came straight out of the McDonnell Douglas plant in St. Louis, Missouri. McDonnell Douglas supplied Mitsubishi with 11 kits of parts and fuselages. The Phantoms for the JASDF were assembled at the Mitsubishi plant in Nagoya. The first one was delivered in 1972, the last one in 1981.

A total of 138 airframes were produced. The models, which were delivered to the JASDF, were similar to the United States Air Force F-4E models, but missed the in-flight air refueling possibility and the ground attack systems. These were not needed because of the 'Peace Constitution' that went into effect after World War II in 1947.

This constitution allows the people of Japan the right of having a self-defense force, but prohibits that force from possessing nuclear weapons or other offensive arms. The JASDF Phantoms are interceptors and have the Westinghouse AN/APQ120 radar fire control system, the 20mm 640 round M61A 1 Vulcan cannon and AIM 7-9 missile capability. Avionics were not as advanced as those used in USAF's F-4Es, but a CNI (Communications, Navigation and Identification) suite, a Japanese designed RHAW (Radar Homing And Warning)-system and a gun camera were added to the F-4EJ.

The inflight refueling hardware was delivered and stored, and was later fitted to some models for practicing inflight refueling with USAF KC-135s.



















#### The Kai models

In 1984, a Service Life Extension Program (SLEP) upgrade was initiated, in which 96 models of the F-4EJ Phantoms received ground attack capabilities. A lightweight, improved Westinghouse AN/APG66J pulse-Doppler radar and J/APR-4 Kai radar warning system, an INS (inertial navigation system), HUD (head-up display) and new central computer were installed.

The airframes were also improved to extend their lifetime from 3,000 hours to 5,000 hours. This gave the F-4EJ Phantom designation the addition 'Kai', meaning 'Plus'. The program concluded in 1992. Since then, the JASDF has Phantoms which are able to fire the latest AIM-7F Sparrow and AIM-9L Sidewinder air-to-air missiles. Furthermore, the Mitsubishi ASM-1C anti-ship missile can be launched from the improved F-4EJ Kai airframes.

The Kai models were the first that were fitted with a F-15 fuel tank. These tanks can be stressed to a higher G-level. In total 47 new items were added to the improved Kai model. One of the most eyecatching changes is the large UHF blade antenna in the middle on the back of the airframe, behind the cockpit and in front of the tail. Also the use of the AN/ALQ131 Electronic Counter Measures pod became possible with the upgraded Phantoms.

Japan also received 14 RF-4Es built by McDonnell Douglas as a reconnaissance aircraft. These models were almost identical to the Luftwaffe RF-4Es, with just a few differences. For instance, no RHAW (Radar Homing And Warning system) suite was installed on the JASDF's RF-4EJs.

#### The recce models

Fitting an APR-3 system compensated this. In 1974 the first aircraft was delivered. These 14 RF-4Es, together with 17 F-4EJs modified during the Service Life Extension Program (SLEP) to the RF-4EJ Kai standard (while remaining their original F-4E nose type and gun), can carry a mix reconnaissance pods.

The RF-4EJs were improved with the new APQ 172 radar and a Head Up Display. Also an ELINT (Electronics Intelligence) pod built by Mitsubishi-Melco from Thomson CFR ASTAC can be carried. This pod was also used by French Mirage F-1CR reconnaissance planes.

Another pod in use by the RF-4EJ Kai is the SLAR 2000 sideways-looking radar. Both recce models -the McDonnell Douglas delivered ones and the modified F-4EJs as mentioned above - are called RF-4EJ Kai and fly with these reconnaissance pods. The 14 original RF-4EJs were delivered in standard JASDF grey, like the F-4EJs. Later different camouflage patterns were adapted.

All the improved Kai models are operated by 501st Hikotai, based at Hyakuri Airbase near Tokyo, which is the sole unit in the Teisatsu Kokutai (Reconnaissance Wing) of the JASDF. They are scheduled to fly until 2020.

The oldest F-4EJ, # 17-8301 delivered in 1971 and now 48 years old, came directly from McDonnell Douglas and is still flying in the test unit of the JASDF at Gifu Air Base; the Hiko Kaihatsu Jikken Dan. This test and development unit is the third unit flying the F-4EJ. It has seven F-4EJ Kai in its inventory.





# The squadrons - 301st Hikotai

The squadron was formed on 16 October 1973 at Hyakuri. It was established out of an operational conversion unit the year before. It was part of the Central Air Defense Force: 7th Kokudan (Air Wing) and responsible for the air defense of the Tokyo region. In 1985 it moved to Nyautabaru and became part of the 5th Kokudan, responsible for the air defense in the western part of Japan.

The updated F-4EJ Kai version was received in 1991. The squadron moved back to Hyakuri in October 2016. Now it is the last air defense squadron equipped with the Phantom within the JASDF. Together with the already disbanded 302nd Hikotai, the 301st will move to Misawa to receive the F-35.

#### 302nd Hikotai

Formed 1 October 1974 at Chitose, being part of the 2nd Kokudan of the Northern ADF. The squadron moved to Naha in November 1985 where it became part of the Southwest Composite Air Wing. When Victor Belenko defected to Japan from the USSR in September 1976 with his MiG-25, two F-4EJs scrambled from Naha to intercept him.

They were unable to catch up with the MiG, and that led to changes in the Japanese defense system. On 9 December 1987 a 302nd Phantom opened a warning shot at a Russian intruding Tu-16 Bear. This was the first time after WWII a JASDF fighter fired warning shots at an intruder. The Kai version was welcomed in 1995. In March 2007, the 302nd went to Hyakuri.

The squadron disbanded in December 2018. Two Phantoms underwent a special paint job for the closing down ceremony of the squadron. The 302nd flew the Phantom for 44 years. The squadron is scheduled to be re-activated with the F-35 at Misawa in the North of Japan's main island Honshu.

#### 303rd Hikotai

Activated in October 1976 at Komatsu where it flew the F-4E until November 1986 when it received the F-15J Eagle, which is still in use today.

## 304th Hikotai

Received the first Phantoms in 1977 at Tsuiki, being part of the 8th Air Wing Western Region. The unit converted to the F-15J Eagle in 1989.

#### 305th Hikotai

Became active on 1 December 1978 at Hyakuri and switched to the F-15J in 1993. The squadron is nowadays based at Nyutabaru, flying the F-15 Eagle.

#### 306th Hikotai

Formed on 30 June 1981 at Komatsu and attached to the 6th Kokudan for Central Air Defense. The 306th received their Kais in 1989. The first F-15J Eagles came to the 306th in 1997. The squadron is still at Komatsu and was the seventh, and last squadron, to receive the F-15J.

#### 501st Hikotai

This is the only squadron within the JASDF that fulfills the reconnaissance role. Aircraft used: 14 RF-4EJ Kai and 17 F-4EJ Kai. After the transition from Sabres to Phantoms at Iruma in 1974, the 501st moved to Hyakuri in 1975. The squadron is still present there. The RF-4EJ Kai can be equipped with an array of reconnaissance pods.

### Hiko Kaihatsu Jikken Dan

Based at Gifu, this unit operates a variety of aircraft including seven F-4EJ Phantoms. The unit received its first Phantoms in 1971. It then relocated to Hyakuri and formed the 301st Hikotai. The unit moved to Gifu for development and testing of the F-4EJ Kai Phantom.

It also carries out tests with the new TEREC (Tactical Electronic REConnaissance sensor) and other reconnaissance pods like the ASTAC and the SLAR 2000 for the RF-4EJ Kai at Hyakuri's based 501st Hikotai.

