

## AIRFRAME

### TAIWANESE HIAC-1 LOROP SYSTEM.

As mentioned before the Taiwanese Air Force Recce unit 12SMS at Hsinchu (formerly based at Taoyuan) uses a very exotic "longer" nose radome which can be mounted on their "Stargazers" (being a nickname of recce-Starfighters in Taiwan). In fact this nose is completely interchangeable with the normal radome.

Not only the radome is removed. Also the fuselage-ring right behind this radome.

Only three "Stargazers" have been noticed wearing this special so-called LOROP-radome being RF-104G 7015/67-14889 "4397" and F-104G 2021/63-13238 "4365" and 8204/67-14890 "4398". The first aircraft, being "4365" was seen with this nose in 1988.

The system was developed during the early eighties and a special nose-cone was developed in which this system could be housed. It is very likely that they used some former German (design) idea's from the RTF-104G-1 project, late 60s. The nose radome looks very similar to that developed by the German AF.

Inside modern electronics and camera's can be found which are also used inside the Lockheed TR-1 aircraft being the "HIAC-1". This equipment is called LOROP system in Taiwan which means Long Range Oblique Photography. The HIAC-1 camera-equipment was developed by General Dynamics for use inside the RF-4C and F-4ES (Israel).

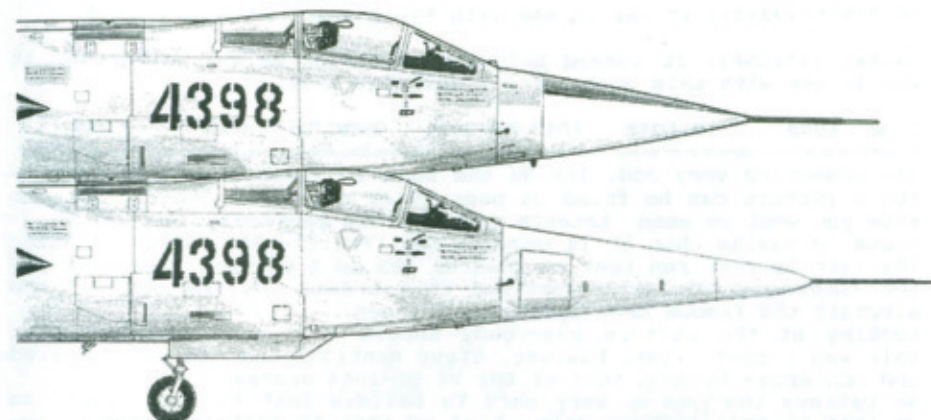
It is a high resolution camera with an "f" (focal distance) of 1700 mm and a range of 89km on a height of 9144m during daylight. During normal routine missions the aircraft use their normal radomes. However when flying a specific mission, the normal radome is removed and a LOROP nose is retrieved out of a special climate room and mounted on the aircraft, just before the mission. After the landing the radome is removed immediately and brought over again to this special climate room. This is done because of the very sensitive (also infra-red) components of the recce-equipment.

The camera is mounted in an angle and this system is of course very valuable when examining mainland China from sea. During the big Chinese exercises in March, the Taiwanese Air Force probably used these LOROP armed Stargazers a lot.

It is very likely that this camera can be positioned in flight to the left or to the right because the nose has window-shutters on both sides. These shutters can be opened and closed in flight. Most of the time the Stargazers land with closed shutters but sometimes they are still opened and then the camera-system can be seen very clearly.

The LOROP nose radomes are painted light-grey, which means that when it is carried by a 2-tone grey camouflaged Starfighter the border between the nose and the fuselage can be clearly seen. On top of the next page some drawings showing Stargazer "4398" with normal nose radome and with the LOROP nose radome to show the differences.

From now on we will no longer designate this LOROP wearing Stargazers as RF-104GEV but as F-104G/LOROP or RF-104G/LOROP....



Detailed drawing of the forward part of F-104G/LOROP "4398" showing normal and LOROP-system nose to show the differences. (H.Prins)



RF-104G/LOROP 67-14890 "4398" landing at TaoYuan with LOROP system nose and camera-shutters opened. (Taoyuan, July 90, IFS-collection)