

The Syncom Publicity Image and the Early Syncom Satellites

By Don Hillger and Garry Toth

The Syncom (SYNchronous COMmunications) satellites were among the first geostationary satellites and were the forerunners of the Early Bird/Intelsat system that continues to this day. The Syncom spacecraft were built by the Hughes Space and Communications Company and launched by NASA. They provided the first communications via satellite between the USA and Africa.

Syncom-1, 2, and 3 were launched between 1963 and 1964.

Syncom-2 was the world's first geosynchronous

communications satellite: it had an orbital period of 24 hours, the same as the rotation period of the Earth. Syncom-3 was the world's first geostationary satellite. To be geostationary, a satellite must be geosynchronous *and* orbit above the equator, so that it has no apparent motion with respect to the Earth. This allows ground-based antennas to remain stationary as they point to the satellite.

(The later Syncom-4 series, also known as Leasat (LEAsed SATellite), were launched via the Space Shuttle in the 1980s. Those Shuttle-deployed satellites are not covered in this article, however).

While collecting Syncom postal items, the authors noted that there seemed to be two different types of depictions. One group matched closely the available reference images of the Syncom satellites, while a second group showed some identifiable differences from the first group. Those differences were not great but were consistent enough that it seemed possible that in fact two different satellites were being depicted. This was a mystery until it was discovered that the second group had an unexpected common source: a Syncom mockup that was the source of photographs used for publicity purposes.

The Syncom publicity image

The publicity image of Syncom was produced to accompany the first Syncom launch on 14 February 1963. Many renditions of this image are found on postal items not only for Syncom, but also for the similar Early Bird (also known as Intelsat-1) which was the first of the follow-on Intelsat series.

NASA's Syncom photo (below) was created by Bob Special, a NASA technician at Cape Kennedy. The mockup was expertly put together from everyday materials to look like Syncom, and as already mentioned was photographed for publicity purposes.

The first figure compares the publicity image (on the left) with a Syncom reference image (on the right). One striking difference is the actual cone-shaped nozzle extending outward from the apogee motor, which is larger than the one in the publicity photo. Postal items with the publicity

image always show the "bottom" of the satellite and so reproduce many of the details found there, whereas in the other group the Syncom satellites are generally viewed from the side.

The publicity photo shows a flame coming out of Syncom's apogee motor. This was probably to make the image more dramatic.

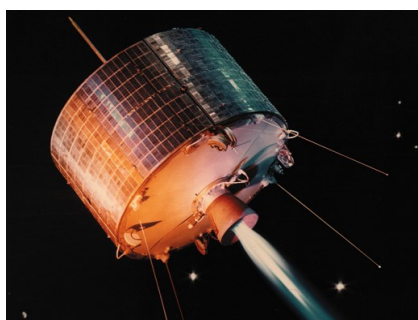
To enhance the publicity image with the apogee motor flame, a double exposure was used, adding a flame from an acetylene torch to the area beneath the spacecraft. Most philatelic items with the publicity photo contain this flame, though a few have eliminated it, as will be noted below.

Finally, a third exposure was used to add stars to the background of the publicity image. The light spots were holes in a piece of cardboard painted appropriately dark. The stars simulate a view of the satellite in space, something not captured in real photographs of satellites, which are taken on Earth before their launch.

Examples of more-realistic images of Syncom on postal items

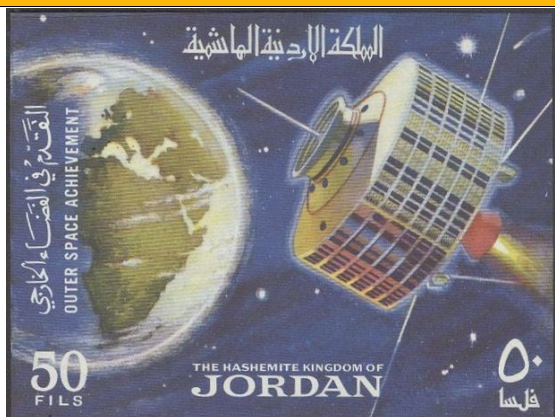
In this section are presented a few of the more realistic non-publicity representations of Syncom, for comparison with the examples of postal items with the publicity image that will follow.

A good non-publicity image is shown on a stamp from Guinea Republic (Scott 604, Michel 622) issued in 1972 for World Telecom's Day (WTD). Note the lower profile (thinner cylinder) and the much larger apogee motor nozzle than in the publicity image. Also, the bottom of the



NASA publicity image for the first Syncom launch (at left); reference image of Syncom, with a noticeably larger apogee motor nozzle (at right).





spacecraft is “cleaner”, with fewer small attachments. Another example is an imperforate souvenir sheet issued by Jordan in 1965 (*Scott 521E, Michel B27*, above). In this image, the motor flame is present, unlike most non-publicity versions of Syncom. Also, the top of the satellite can be seen, something not shown in the publicity image. Finally, the radial antennas on the bottom of the spacecraft appear to be more perpendicular to the spacecraft spin axis, as opposed to more in line with the satellite axis on the publicity and Syncom reference images. Philatelic reproductions of artificial satellites are sometimes done with a certain degree of artistic license.

As already mentioned, the Syncom publicity image was at times used to represent the Early Bird satellite as well. Two examples of more-realistic depictions of Early Bird follow.



A nice drawing of Early Bird is seen on stamp from Guinea Republic (*Scott 606, Michel 624*) issued as part of the same 1972 WTD set as the Guinea Republic stamp showing Syncom presented above. Early Bird was taller

(0.6 m) than Syncom (0.4 m), but had a diameter (0.7 m) similar to Syncom. The smaller aspect ratio (width to height) of the Syncom can often be used to distinguish Early Bird from Syncom. Early Bird is also seen on a stamp from Panama (*Scott C366, Michel 1143*) issued in 1969. Both items appear to have a smaller apogee motor nozzle than Syncom, at least with respect to the overall satellite size.



For many other examples of non-publicity images of Syncom and Early Bird on postal items, see the authors' website (URL at the end of this article). It highlights the postal items that reproduce the Syncom publicity photo. All other items contain the more realistic, non-publicity images of Syncom.

The Syncom publicity image on postage stamp and sheets

Some postal items with the most detailed images of the Syncom publicity image will be shown next. For other items containing smaller versions of the Syncom publicity image, see the authors' website.



Two reproductions of the Syncom publicity image are found on similar items from Ajman (*Michel 257*) and Manama (*Michel 87*), both from 1968. Text on the stamps indicates that these were supposed to represent Early Bird, but the image is clearly a reproduction of the Syncom publicity image complete with the flame from the apogee motor.

A centenary of the International Telecommunications Union (ITU) stamp from Cameroun (*Scott C54, Michel 427*), issued in 1965, has a Syncom publicity image, but without all the detail on the bottom of the spacecraft. Nor does it have the flame from the apogee motor.



However, several souvenir sheets issued by Comoro Islands in 1976 for the centenary of the telephone have the Syncom publicity image complete with flame bottom details in their upper margins. Only one of those sheets (*Scott 200a, Michel BL42*) is shown, as all the others have identical margin images.





Common design stamps: Comoro Islands (Scott C14, Michel 67); French Polynesia (Scott C33, Michel 44); French Southern and Antarctic Territories (Scott C8, Michel 32); New Caledonia (Scott C40, Michel 412); New Hebrides (French) (Scott 124-125, Michel 210-211); St. Pierre and Miquelon (Scott C29, Michel 412); Somali Coast (Scott C36, Michel 365); Wallis and Futuna Islands (Scott C20, Michel 207), all from 1965

Next, an entire set of common design stamps from 1965 is shown, all with the Syncom publicity image. These stamps were issued by 8 countries for the ITU centenary; the two from New Hebrides (French) (Scott 124-125, Michel 210-211) have a slightly elevated image of the satellite to incorporate additional text at the bottom of the stamps. All 8 of these items incorporate the Syncom publicity image, using a variety of colours not only for the satellite, but also for the starry background. None of the images have a flame from the apogee motor.



A stamp issued by Equatorial Guinea (Michel 835) in 1976 for the telephone centenary has the Syncom publicity image with a flame. A block of 4 of this item is shown.



Malagasy Republic issued a stamp (Scott 1539b, Michel 2492) with the Syncom publicity image in 2000, many years after most of the other stamps in this article. A stamp issued by Mauritania (Scott C35, Michel 230) in 1964 does not have an explicit flame, but rather a long curved trail leading away from the satellite. A similar trail will be found on another postal item to follow.



The Syncom publicity image on a 1965 stamp from Niger (Scott 214, Michel 380) has no flame, but a 1967 stamp from Paraguay (Scott 1046, Michel 1762) has the flame.



In 1966, Kathiri State of Seiyun issued two stamps (Michel 85 and 88) from a set of stamps showing several early communications satellites. The image of Syncom is the publicity version with the usual apogee motor flame. The satellite base is "clean".





In 1966 Paraguay issued two stamps (Scott 997-998, Michel 1653-1654) with similar design, supposedly showing not only Syncom-1, 2, and 3, but also Early Bird. All satellites are represented by the same Syncom publicity image (though the Early Bird is drawn with a higher aspect ratio than the three Syncoms), and all with the same orientation, with the bottom slightly tilted up, unlike most uses of the publicity image. No flames were used in these reproductions.



A stamp from St. Thomas and Prince Islands (Scott 511, Michel 577) issued in 1979 for WTD has the Syncom publicity image with the bottom tilted up and a flame from the apogee motor.



Senegal's contribution (Scott C39, Michel 290) from 1964 has a vertical format that is similar to the large group of common design stamps already mentioned. And like those stamps, the Syncom publicity image on the Senegal stamp has no flame.

A set of 5 stamps from Togo (Scott 516-520, Michel 457-461) issued in 1965 for the ITU centenary has a smaller rendition of the full-featured Syncom publicity image, in various colours.

Finally, a 1979 stamp from Wallis and Futuna Islands (Scott C90, Michel 342) has a large multi-colour version of the Syncom publicity image with a flame. However, "Eole" (like Aiolos, the Greek god of the winds) is in the text of the stamp. In addition to referring to wind, Eole is the name of a different satellite from the early 1970s, as well as the name for a system of high-altitude balloons from that same time period, so the reason for the use of the word "Eole" on this item is not clear. Possibly the designers simply misidentified the satellite in the stamp as the satellite from the early 1970s.



Syncom publicity image on other postal items

A couple First Day Covers (FDCs) also show the Syncom publicity image, even though their stamps do not show Syncom. The first item is a cachet on an ITU centenary FDC from Gabon (Scott 180, Michel 221) from 1965.



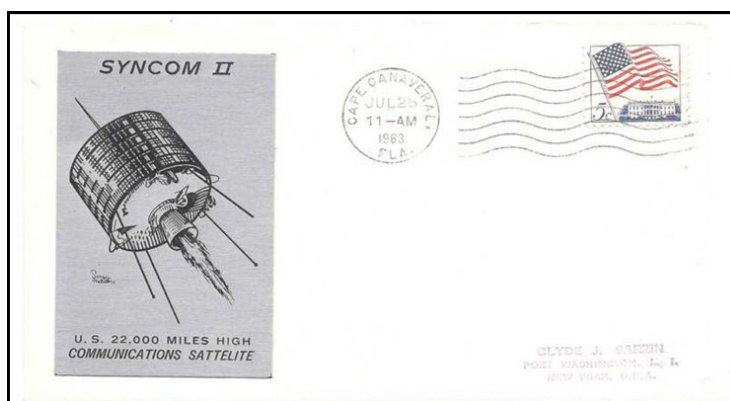
For this image the flame is replaced with a long curved trail, similar to one that was observed on the stamp from Mauritania already mentioned.

A second item is a cachet (possibly by Sarzin) on another ITU centenary FDC, this time from New Zealand (*Scott 370, Michel 439*) from 1965. The image is the Syncom publicity image complete with the apogee motor flame.



Syncom publicity image on launch covers

Two launch covers have been found that show the Syncom publicity image. The first one has a Sarzin metallic cachet and was issued for the launch of Syncom-2. The cachet design is very similar to that on the last FDC that was mentioned.



Another satellite launch cover, this time for Lani Bird (or Intelsat 2-2), has a full-featured Syncom publicity image in the cachet. Lani Bird was the third satellite in the Intelsat series that grew out of the early Syncom series.



All other known launch covers that show Syncom or Intelsat have cachets with images other than the publicity image.

Additional online information

A checklist of postal items showing Syncom is available at <http://rammb.cira.colostate.edu/dev/hillger/Syncom.htm>. The authors would like to hear from anyone who knows of additional postal items that may have been missed. The online information will be updated whenever new details are provided. E-mail correspondence with the authors is welcomed.

Biographical notes

The authors have researched and written extensively on the subjects of weather, climate, and un-manned satellites on stamps and covers. See <http://rammb.cira.colostate.edu/dev/hillger/stamp-articles.htm>

Don Hillger, PhD, is a research meteorologist with the National Oceanic and Atmospheric Administration (NOAA) and holds a cooperative position at Colorado State University. Send correspondence to don.hillger@colostate.edu

Garry Toth, MSc, now retired, worked many years at the Meteorological Service of Canada. Send correspondence to gmt.varia@gmail.com

ASTEROIDS

Some Bits and Pieces

This beautiful card of Griffith Observatory in USA was sent to me by Eleanor Coker from Kent, England who used to translate in the past my stories for *Orbit*, earlier published in Dutch magazines, and since that time we have become pen friends, writes Bert van Eijk.

Griffith Observatory has been a major Los Angeles landmark since 1935. Visited by nearly two million people each year it ranks as one of the top tourist attractions of Southern California, tells us the reverse of the card. It sits on the southern slope of Mount Hollywood where it commands a stunning view of the Los Angeles basin below. The Griffith Observatory provides information on astronomy and related sciences to the public. The name of the observatory comes from Colonel Griffith J. Griffith who donated 3015 acres of land to the City of Los Angeles in 1896 to build on it an observatory and planetarium for the public.

