TIROS
Television Infrared Observation Satellite

TIROS spacecraft were the beginning of a long series of polar-orbiting meteorological satellites. TIROS was followed by the TOS (TIROS Operational System) series, and then the ITOS (Improved TIROS) series, and later the NOAA series. TIROS spacecraft were developed by GSFC and managed by ESSA (Environmental Science Services Administration). The objective was to establish a global weather satellite system.

Spacecraft Power System
Body mounted solar cells.

Payload
Low resolution television and infrared cameras.

Country of Origin United States
Customer/User ESSA, NASA, GSFC, NOAA
Manufacturer(s) RCA
Size Cylinder: 42 inch diameter, 19 inch height
Orbit approx. 600 km, polar, circular
BUILDING TIROS I
1. Align ‘X’ on parts 1, 2 and glue together. Align ‘X’ on parts 5, 6 and glue together. Place under book or boards to keep parts flat while drying.
2. Cut out part 3 with fold lines. Fold on red lines and trim.
3. Cut, fold and glue part 4 to part 3 at ends. Cut out parts 3a and 3b. Fold tabs and corners. Glue both to part #3.
4. Glue assembly 1/2 to tabs of part 3a and carefully align edges.
5. Cut, fold and glue (6) parts 5a to form interior support structure. Glue structure 5a to alignment marks inside body cylinder. When dry, glue assembly 5/6 to bottom edges and supports structure.
6. Glue parts 7, and 8 - fold the tabs. Part 9 over either end. Glue assembly to part 6, center.
7. Cut and fold glue tabs for parts 10-15 - glue assembly to bottom.
8. Carefully cut out parts 16-31. Fold tabs at base and top. Glue in order, matching alignment marks on part #6. When all supports are in place, glue cross tabs to adjacent part.
9. Assemble parts 32, 33 and 34 into camera lenses and glue to part #6.
10. Cut out part 35 (10 total) and roll as shown. Glue tab to spaces on part #6.
11. Using brush bristles, wire or stretched sprue, cut parts 36 (4) and glue to part #9 at angle. Similarly cut parts 37 and glue to top center of part #1.

BUILDING BOOSTER
1. Cut out and glue parts 38-41 to form adapter section.
2. Using tabs, cut out and form booster body, creating a cylinder.
3. Form parts 42 and 42a into a cylinder. Glue parts 43, 44 and 45 into a cone, with white side of part #44 on the outside. Glue assembly 43 into assembly 42. Glue tabs on end of cylinder to nozzle assembly.
4. Trim end of booster nozzle so booster stands straight.
5. Place (balance) Tiros model on top of booster stage.

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RCA TIROS I
Launched 1 April 1960

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