

UNCLASSIFIED

AD 4 2 3 9 1 5

DEFENSE DOCUMENTATION CENTER

FOR

SCIENTIFIC AND TECHNICAL INFORMATION

CAMERON STATION, ALEXANDRIA, VIRGINIA



UNCLASSIFIED

NOTICE: When government or other drawings, specifications or other data are used for any purpose other than in connection with a definitely related government procurement operation, the U. S. Government thereby incurs no responsibility, nor any obligation whatsoever; and the fact that the Government may have formulated, furnished, or in any way supplied the said drawings, specifications, or other data is not to be regarded by implication or otherwise as in any manner licensing the holder or any other person or corporation, or conveying any rights or permission to manufacture, use or sell any patented invention that may in any way be related thereto.

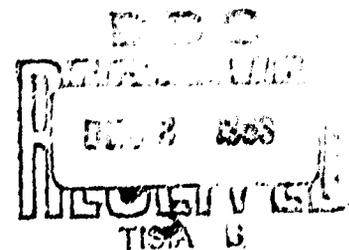
COPYRIGHT BY DDC

AS 1.3.1.1.1 423915.

CLASSIFICATION

Subclass TL
Aeronautics

Federal Aviation Agency
Library Services Division
Technical Processing Branch
Washington
1963



INTRODUCTION

This classification schedule, beginning with TL 500 and ending with TL 798, is used to classify material in Aeronautics in the FAA Library. It is essentially the schedule published by the Library of Congress in 1948 and reprinted in 1953 with additions and changes made by the FAA Library for its own use.

AERONAUTICS. AERIAL NAVIGATION

Cf. UG 630-635, Military aeronautics.
VG 90-95, Naval aeronautics.

Periodicals, organizations, & societies (500-504).

See also TL 521-530, Serial documents of special countries.

TL 568. U. S. National advisory committee for
aeronautics.

TL 526. G7A3-4 Gt. Brit. Air ministry. Aeronautical
research committee.

TL 512, Yearbooks.

- 500 International.
- .5 International Civil Aviation Organization.
- 501 American and English.
- 502 French and Belgian.
Including France. Ministère de la guerre. Section
technique de l'aéronautique militaire. Bulletins,
etc., TL 502. F6-7.
- 503 German and Austrian.
Including Germany (1918-).
Reichsverkehrsministerium. Nachrichten.
- 504 Other. (Non-technical studies; reports of Government
agencies, including monographs & serials of general
nature only--those which do not fit in any other
place).
- .5 Registre aeronautique (France).
- 505 Congresses and/or regulations resulting therefrom.
(International conferences. Limit to proceedings,
final acts, and conventions). See JX 5771 for
ratified agreements.
- 506 Exhibitions. Museums.
- 507 Collections.
- 508 Scrap-books; Art works.

509 Dictionaries. encyclopedias, etc. in English. Nomenclature. Symbols. Abbreviations. See TL 788 for dictionaries on Astronautics.

509.1

.A1 Polyglot

.A2

.A3 French

.A4 German

.A5 Italian

.A53 Japanese

.A6 Portuguese

.A7 Russian

.A8 Spanish

512 Directories. Registers. Yearbooks.

.5 Registers of aircraft.

.7 Registers of pilots.

.8 Directories.

.83 Manufacturing companies

.85 Airline companies

513 Patents.

514 Catalogs of materials and equipment (General).

History. (General aviation). For military aeronautics
See UG 630.

515 General. (includes collective flights).

516 Antiquities and legends.

TL

AERONAUTICS

TL

- 517 Freedom of the air (General).
- 518 History and organization of civil aviation agencies.
- 519 Other aviation agencies.
- 520 Awards, prizes, etc. Competitions.
- Special countries.
Cf. TL 552-553, Biography.
- 521 America. United States.
Annual reports, etc.)
- .5 Regions.
- 522 States, A-W.
- 523 Canada and Newfoundland.
- 524 Latin America, Central America and West Indies, A-Z.
- 525 South America, A-Z.
- 526 Europe, A-Z.
e.g. .G7 Great Britain.
- 527 Asia, A-Z.
e.g. .P4 Philippines.
- 528 Africa, A-Z.
- 529 Australia and New Zealand.
- 530 Pacific ocean and islands.
.A1 General.
.A5-Z Special islands.
- 531 Transoceanic (i. e. , Intercontinental and global).
- 532 Arctic and Antarctic regions.
Cf. G 575-890.

Biography. See TL 552-554.

Civil Aviation

- 533 General (U. S.) For other countries see TL515-532.
- .1 Policy (including industry, military, as well as civil).
 - .2 Government aid (including air mail, aid to private flying, airways). See also Government aid under Airports.
 - .4 Economic factors affecting aviation.
 - .5 Statistics (including forecasts). For terminal traffic statistics, etc.
 - .51 Aircraft statistics.
 - .56 Local forecast.
 - .58 Combined civil & military or military non-combat statistics on air traffic (For Military combat, see UG).
 - .6 Regulations (CAR's).
 - .61 CA manuals.
 - .62 New edition of manuals.
 - .66 Congressional documents regarding CAA Act, etc.
 - .8 Miscellaneous (by subject, etc., double cutter, i. e., .D3 Defense planning; .M3 Medical aspects; .N3 Negroes; .W6 Women in aviation).
 - .9 History.

Commercial Aviation (U. S.)

- 534 General (both scheduled and non-scheduled).
- .1 Policy (Commercial transportation).
 - .2 Finance, including government aid to carriers.
 - .3 Coordination with other forms of transportation.

TL

AERONAUTICS

TL

Civil Aviation

- 534.4 Labor relations (See also HD).
- .5 Statistics (including forecasts).
- .56 Local forecast.
- .6 Regulations, e. g., government regulations.
- .7
- .8 Miscellaneous (by subject, A-Z).
 - .C3 Certification
 - .C5 Competition (Industry-wide, including non-scheduled, government and charter flights).
 - .D5 Dispatcher (Airlines).
 - .E3 Economic aspects.
 - .F5 Flight crew (includes pilots, co-pilots, flight engineers of carriers, business planes, and all types.)
 - .F6 Flight attendants (includes stewards, stewardesses, etc.)
 - .I7 Inspectors and inspecting.
- .9 History
- 535 Airlines, Scheduled (Certificated, including Feeder).
 - .1 Traffic (all-inclusive - passenger and cargo).
 - .12 Traffic potential.
 - .2 Finance; economic aspects.
 - .21 Accounting.
 - .3 Operations (including traffic procedures).
 - .4 Equipment (including planes, electric equipment, etc.)

TL

AERONAUTICS

TL

Civil Aviation

- 535.5 Statistics.
- .6 Regulations.
- .7 Rates and fares. (Tables, statistics, etc. See also
TL 536, etc.)
- .8 Miscellaneous (by subject, A-Z).
 - .A8 Associations (ATA, etc.)
 - .C3 Certification.
 - .C5 Competition.
- .9 History.
- 536 Airline Services (U.S.)
 - .1 Mail (See also HE).
 - .15 Statistics.
 - .17 Rates (for mail only).
 - .3 Passengers (as a commercial service).
 - .31 Traffic (Forecasts, surveys, etc.) For passenger
data only. See also TL 533.5, TL 534.5, TL 535.5).
 - .35 Statistics.
 - .37 Fares (Airlines' own rate schedules, etc.)
 - .38 Time tables.
 - .5 Cargo; freight and express.
 - .53 Freight forwarders.
 - .55 Statistics.
 - .57 Rates (Freight and cargo rate schedule).
 - .8 Air coach.

Civil Aviation

- 537 Airlines - by companies (double Cutter)
- .1 Annual reports.
- 538 Non-scheduled and non-certificated (including ferry, taxi, charter).
- 539 Air Transport Operation - by specific type of aircraft.
- .1 Airship (commercial use) x TL 664.
 - .2 Helicopter x TL 716.
 - .3 Pick-up.
 - .4 Tow glider.
 - .5 Jet aircraft. See also TL 687-88, Jet aircraft; TL 709, Jet propulsion; TL 778.
- 540 Use of Aircraft (U. S.)
- .1 Exploration. Mountain climbing.
 - .2 Surveying and mapping.
 - .3 Aerial photography.
 - .5 Races. Air meets.
 - .6 Special races, A-Z.
 - .7 Emergency use, e. g., Civilian defense, etc.
 - .8 Records.
- 541 Use of Aircraft (in various industries).
- .1 Agriculture.
(Crop surveying, crop protection, dusting, spraying).
 - .2 Fisheries and whaling.
 - .3 Forestry.
(Fire patrol).

TL

AERONAUTICS

TL

Civil Aviation

- 541.4 Mining.
(Prospecting).
- .5 Use of airplanes for advertising.
Flying exhibits, flying signboard, voice of the
air. Sky writing. Distribution of literature.
- .6 Executive use.
- .8 Ambulances. Life saving at sea. Flying doctors.
- 543 Government uses of aircraft. x TL 723
War, See UG 630-635, VG 90-95.
Air mail, See HE 6238, HE 6496.
Customs and revenue service. Police.
Official travel.
- 544 Private Flying. (General, government policy, guides,
manuals) See also TL 725 .3 P7.
- .1 Use of personal planes, etc. (for own use).

- 545 Treatises.
- 546 Popular works.
- 547 Juvenile works.
- 548 Aeronautics in literature (except fiction, PZ).
- .5 Wit and humor.
- 549 Pictorial works (including aeronautics in art).
- 551 Handbooks, pocketbooks, tables, etc.
- Biography (changed from 539 - 540)
- 552 Collective. For biography of flight attendants, see
TL 534.8.F6
For biography in astronautics, see
TL 789.9
- 553 Individual (double Cutter; use .A for autobiography).
- 554 Special flights A-Z, e. g. , .B3 Balbo
- 555 Physiological, psychological, and medical.
Air-sickness, influence of altitude, physical
requirements for flying. Medical examina-
tions of pilots. Disinfection of planes.
- .9 Dictionaries.
- Meteorological
- 556 General
- 557 Special, A-Z.
e. g. , .A5 Air currents. Winds.
.A8 Atmospheric pressure. Standard
atmosphere.

- 557 Special, A-Z (continued)
 e. g., .C4 Charts
 .C6 Clouds.
 .C7 Condensation trails.
 .F6 Fog.
 .F7 Frost.
 .I3 Ice prevention.
 .R4 Reporting and forecasting.
 .V5 Visibility.
 Wind, see Air currents.
- 558 By country or region, A-Z.
 e. g., .A1 General.
 .A5 Antarctic regions and Arctic.
 .F8 France.
 .G4 Germany.
 .U5 United States.
- 559 Addresses, lectures, etc.
- 560 Study and teaching. General works. (Flight training, see TL 712; training on traffic control equipment, see TL 741.15). Cf. LB 1594.5 Elementary education.
- .1 United States.
- .2 Special schools, A-Z
- .25 Employee training in factories.
 .A1 General.
 .A2-Z By company.
- .27 FAA employee training program.
- .3 Foreign countries, A-Z.
- .4 Special schools, A-Z.
 Flying schools, see TL 713.
- 561 Aeronautics as a vocation.
- 565 Research
 Research equipment. Laboratory construction and layout.

TL

AERONAUTICS

TL

566 General. (About research laboratories and organizations).

567 Special, A-Z.
e. g., . B3 Balances.
. B4 Basins. Water channels.
. I6 Instruments.
. M6 Models for wind tunnel and water testing.
. P6 Plane tables.
. S4 Shock tubes.
. T6 Towing apparatus.
. W5 Wind tunnels.

568 Research series of special institutions, A-Z. Technical reports and studies conducted by governments, universities, etc. For non-technical research reports, transactions, and other serial publications of such institutions, see TL 500-504. Reports not numbered are classed in subject.

- .A1 NACA annual reports, including technical reports.
- .A1a NACA annual reports issued as separates.
- .A12 NACA aircraft circulars.
- .A13 NACA technical notes.
- .A14 NACA technical memoranda.
- .A15 NACA wartime reports (a, e, l, w).
- .A16 NASA semiannual report.
- .A17 NASA all numbered series. (Separates of TN's, TT's, and TR's in subject class).
- .A18 NASA miscellaneous reports and those about NASA.

- .A2 Civil Aeronautics Authority and Civil Aeronautics Administration.
- .A20 Technical development notes. (Notes are progress reports and were not issued as reports).
- .A21 Technical development reports.
- .A21a Technical development reports (advanced or preliminary.)
- .A22 Research Division reports.
- .A23 Research Division special series reports. (only 1 issued, Jan. 1949).
- .A24 Federal Airways Standardization Division. (OJT's).
- .A25 Flight engineering reports.
- .A28

- .A3 FAA official numbered series research reports by R & D.
- .A31 Unnumbered R & D reports by date, including progress reports.
- .A32 Projects, A-Z.
- .A33 GAO reports about R & D.

- .A4 Landing aids experiment station, Arcata, Calif.
- .A41 Progress or annual reports. (For preliminary reports, use "a" after number of report.
- .A42 Flight test reports.

568 (continued)

- . A43 Memorandum reports.
 - . A44 Final reports, A-Z.
 - . A45 Miscellaneous.

 - . A6 ANDB annual reports.
 - . A61 ANDB progress reports.
 - . A62 ANDB technical bulletins.
 - . A63 ANDB technical memos.
 - . A64 Final reports not related to progress or annual reports and miscellaneous publications.
 - . A65 Airways modernization board.

 - . C6 Cornell Aeronautical Laboratory, Inc., Buffalo, New York.
 - . C62 Cornell University. Daniel and Florence Guggenheim Safety Center.

 - . F8 Franklin Institute.

 - . G2 Garbell aeronautical series.

 - . N2 National Research Council. Committee on Training and Selection of Aircraft Pilots. Double Cutter for personal author.
- 569 FAA Contract Reports.
- RD Research and Development.
 - AT Air Traffic Control.

TL

AERONAUTICS

TL

- 570 **Mechanics of flight: Aerodynamics; Aeroelasticity.**
 General.
- 571 **Supersonic. (including transonic).**
- .5 **Hypersonic.**
- 573 **Miscellaneous.**
- 574 **Special topics, A-Z.**
 e. g., .A4 **Aerofoils, "Profils d'ails."**
- .A45 **Aerothermodynamics. Aero-**
 dynamic heating.
- .B6 **Boundary layer.**
- .C4 **Compressibility.**
- .C6 **Control.**
- .D6 **Downwash.**
- .D7 **Drag. Head resistance.**
- .F5 **Flow; visualization of airflow.**
- .F6 **Flutter.**
- .F7 **Friction.**
- .G7 **Ground cushion phenomenon.**
- .I5 **Interference.**
- .L5 **Lift. Thrust.**
- .M6 **Moments. Pitch, Yaw, Roll.**

- 574 Special topics, A-Z (continued).
 e. g., .P7 Pressure. Pressure distribution.
 Wing load.
 Resistance, see Drag.
 Air resistance, see TL 570.
 .S4 Shock waves.
 .S5 Sonic barrier; sonic boom.
 .S6 Spinning.
 .S7 Stability. Oscillations. Damping.
 .T8 Turbulence. Burbling.
 .V5 Vibration.
 .V6 Vortex theory.
 .W4 Wake.
 (. W5) Wing and tail flutter, see Flutter.
 Wind tunnels, see TL 567.
- 575 Natural flight.
 Cf. QL 698.
- 576 Soaring.
- 577 Hovering.
- 578 Aerostatics.
- Air navigation (astronomy and navigation for air pilots).
 Cf. VK 549-587; QB; TL 745.
- 586 General. (including dead reckoning, etc.)
- 587 Log books, maps, charts, tables, etc., manuals, problems.
- 588 Special methods. Latitude and longitude. For instrument
 flying, see TL 711 .B6. Cf. VK 565-567.
- . 5 Inertial navigation as applied to aircraft.
 Cf. VK 565 Latitude and longitude at sea
 (including tables).
 VK 567 Longitude and time at sea
 (including tables).
- Instruments
- 589 General.
- . 2 Special, A-Z.
 e. g., .A3 Accelerometer.
 .A5 Air speed indicator.

- 589.2 Special, A-Z (continued).
 e. g., .A6 Altimeter.
 Anemometer, see QC 932.
 .A7 Angle of attack indicator.
 .A8 Autosyn indicator.
 .B3 Barograph.
 .C3 Ceilometer.
 .C5 Cinémitrailleuse.
 .C58 Compass (Gyroscope).
 .C6 Compass (magnetic).
 .D7 Drift indicator.
 .E2 Earth inductor compass.
 .I7 Instrument panels.
 .P7 Pressure instruments.
 (.R2) Radio compass, see TL 696 .C7.
 .R3 Rate of climb indicator.
 .S4 Sextant.
 .T4 Tensionmeter.
 .T5 Theodolite.
 .T7 Transmissometer.
 .T8 Turn and bank indicator.
- .4 Guidance systems and automatic control.
- .5 Automatic pilots. Gyropilot.
- Engine instruments.
- .6 General.
- .7 Special, A-Z.
 e. g., .T3 Tachometer.
- Sailing directions. Pilot guides, see TL 726.
- Aircraft
- 600 General (including both lighter than air and heavier than air).
- 603 Identification marks and symbols.
- 605 Lighter than air. Aerostation.
- Balloons.
- 609 Periodicals and societies.

Aircraft

Lighter than air. Aerostation.
Balloons--continued.

- 610 General. Free spheric balloons.
- 615 Miscellaneous.
- History
- 616 General.
- 617 Invention and early history to 1800,
 including Montgolfiers.
- 618 After 1800.
- 620 Special ascensions. Special aeronauts. Personal
 narratives.
 e. g., .A1 Collections.
 . B6 Blanchard.
 . F6 Flammarion.
 . G6 Goddard, Eugene.
 . G7 Green, Charles.
 . L8 Lunardi.
 . O7 Orlandi.
 . P5 Piccard.
 . S55 Silberer.
 . T5 Tissandier.
 . T6 Tournachon.
- 621 Special balloons, A-Z.
- 622 Design and construction.
- 623 Rigging.
- 625 Parts and equipment, A-Z.
 e. g., .A6 Anchor.
 . B2 Ballast.
 . B3 Ballonet.
 . B4 Basket.
 . D7 Drag rope.
 . E6 Envelope.
 Instruments, see TL 589.

Aircraft

Lighter than air. Aerostation.
Balloons--continued.

- 625 Parts and equipment, A-Z.
 e. g. , . N4 Net
 . R5 Rip panel.
 . V3 Valves.
- Operations of free balloons.
- 626 Instructions and textbooks.
- . 5 Licensing of balloon pilots.
- 627 Use of free balloons.
- Exploration of the atmosphere.
 Cf. QC 879, Meteorology.
- Exploration of the earth.
 Cf. G 599, Polar exploration.
- Photography, see TR 810.
- War, see UG 630-635; VG 90-95.
- 628 Sport. Races
- 629 Special races, A-Z.
 e. g. , . G6 Gordon-Bennett races.
- 630 Pilot balloons.
- 631 Sounding balloons.
 Cf. QC 879, Meteorology.
- 632 Jumping balloons and balloon jumping.
- 633 Toy and propaganda balloons.
- Captive balloons.
- 634 General and spherical.
- 635 Kite balloons.

Aircraft

Lighter than air. Aerostation.
Balloons--continued.

Captive balloons.

636 Equipment for captive balloons.

637 Use of captive balloons.
Use in war, see UG 640-5.

638 Hot air balloons.
Early history, see TL 617.

639 Miscellaneous projects.
Balloon railways, etc.

Airships. See also special companies; e.g., TL 724. 5.

650 General.

651 Miscellaneous.
Discussions of the possibility of dirigibles,
Airships vs. airplanes, Controversial
material, Safety, etc.

654 Special projects to 1900, A-Z.
e.g., . D8 Dupuy de Lôme.
. G5 Giffard.
. M5 Meusnier.
. R4 Renard.
. T55 Tissandier.

655 Modern airships.
Pressure airships.

656 General.

. 2 Non-rigid. Blimps.

. 4 Semi-rigid.

. 6 Metal-clad.

657 Rigid airships.

658 Special makes, A-Z.
e.g., . Z4 Zeppelin.

Aircraft

Lighter than air. Aerostation.
Airships--continued.

- 659 Individual ships, A-Z. Special voyages. Personal narratives.
 e. g., .A4 Akron.
 .G7 Graf Zeppelin.
 .H5 Hindenberg.
 .L6 Los Angeles.
- 660 Design and construction.
- .1 Rigging.
- .2 Strains and stresses.
- .3 Performance. Performance calculation.
- .4 Testing.
- .5 Model testing.
- Details and parts.
- 661 General.
- 662 Special, A-Z.
 e. g., .B3 Ballast.
 .B7 Bow caps.
 .C3 Cars.
 .C6 Control compartment.
 .E6 Envelope.
 .F7 Frame.
 .G3 Gas cells.
 .K4 Keel.
 Motor, see TL 701-704.
 Propellers, see TL 705-708.
 .S7 Stabilizers.
 .S8 Steering apparatus.
- 663 Operation of airships.
- 664 Use of airships.
- .1 Transportation. See TL 539.

TL

AERONAUTICS

TL

Aircraft.

Lighter than air. Aerostation.
Airships--continued.

664.2

War.

.3

Other.

Cf. G 599, Polar exploration.

Materials and accessories for lighter than air craft.

665

General.

Special.

666

Gas, hydrogen, helium. Inflation machinery.

Other special, see TL 699, A-Z.

Lighter than air craft industry.

667

General.

668

Special companies, A-Z.

Heavier-than-air craft.

Airplanes

670

General.

.5

Development of heavier-than-air craft before 1900
(including models and gliders).

.7

Special projects before 1900, A-Z.

e. g., . L3 Langley.

. M3 Maxim.

671

General special. See also 685.3 for recognition
of military aircraft.

.1

Specifications. Standards. Airworthiness
requirements. See also 671.42 (Mechanical
dependability).

.2

Design and construction.

Aircraft**Heavier-than-air craft.****Airplanes****General special--continued.**

- 671.25 Drafting and blueprint reading.
- .28 Manufacturing. Factory equipment and methods.
- .3 Monoplane, biplane, multiplane characteristics
 (Comparative).
- .4 Performance. Performance calculation. Handling
 characteristics.
- .42 Mechanical dependability. See also 671.1
 (Airworthiness requirements).
- .5 Rigging, Bracing, Welding, etc. (Airplane
 mechanics).
- Stability, see TL 574.S7.
- .6 Strains and stresses.
- .7 Testing. Inspection.
- .8 Model testing.
- .85 Prototype and experimental plane.
- .9 Maintenance and repair.

Details and parts.**Supporting surfaces. (e. g., wings).**

672

General.

673

Special, A-Z.

e. g., .A6 Angle of incidence. Use
 TL 589.2 .A7 (Angle of
 attack).

.C3 Camber.

.C7 Cruciform wings.

Aircraft

Heavier-than-air craft.

Airplanes

Details and parts --continued.

- 673 Special, A-Z.
 e. g., . D4 Decalage.
 Delta wing. See . T7 Tri-
 angular wings.
 . D5 Dihedral angle.
 . D8 Duct inlets.
 . F6 Flaps.
 . G3 Gap.
 . L6 Loading.
 . O8 Overhang.
 . S4 Section.
 . S6 Slotted wings.
 . S7 Stagger.
 . S9 Sweep back.
 . T4 Tips of wings. Taper.
 Shielding.
 . T7 Triangular wings.
 . W3 Washin and washout.
- 674 Structural parts and details.
 e. g., Ribs, spars, struts, wires, etc.
- 675 Folding wings.
- Control and stabilizing surfaces.
- 676 General.
- 677 Special, A-Z.
 e. g., . A5 Ailerons.
 . E6 Elevators.
 . F5 Fins. Vertical stabilizer.
 . R8 Rudder.
 . S8 Stabilizer. Tail plane.
- 678 Control apparatus. Joy stick, etc.
- Fuselage.
- 680 General.

Aircraft**Heavier-than-air craft.****Airplanes.****Details and parts--continued.**

- 681 **Special, A-Z.**
 e. g., .A5 **Air conditioning. Cf. TL 681.H4**
 Heating.
 .C3 **Cabin.**
 .C6 **Cockpit.**
 .C7 **Cowling.**
 .F5 **Fire wall.**
 .H4 **Heating.**
 .I6 **Instrument board (Instruments,**
 see TL 589).
 .L6 **Longerons.**
 .S6 **Sound-proofing.**
 .W5 **Windshields.**
- .5 **Nacelles.**
- Landing gear. Undercarriage.**
- 682 **General. "Atterisage."**
- 683 **Special, A-Z.**
 e. g., .A8 **Axles.**
 .B7 **Brakes.**
 .R4 **Retractable landing gear.**
 .S4 **Shock absorbers.**
 .S5 **Skids. Wing and tail skids.**
 .S6 **Skis (landing gear for use on**
 snow).
 .T5 **Tires.**
 .W5 **Wheels.**
- 684 **Seaplanes.**
- .1 **Amphibians.**
- .2 **Flying boats. Hulls.**
- .3 **Seaplanes. Floats.**

Aircraft
 Heavier-than-air craft.
 Airplanes.

- 685 Airplanes (about planes themselves). See
 TL 540 for uses.
- . 1 Light (or sport). Private planes. (Not uses
 but descriptive, historical, etc.)
- . 2 Racing.
- . 3 Military. See also TL 671 (Recognition of
 general aircraft).
- . 4 Passenger.
- . 5 Special equipment, etc., A-Z.
 e. g., . C4 Chairs.
 . I6 Interior decoration.
 . R4 Restaurant.
 . S6 Sleeping accommodations.
- . 6 Mail.
- . 7 Cargo.
- 686 Special makes, A-Z.
 e. g., . B36 Beechcraft.
 . B68 Bréguet.
 . D4 DeHavilland.
 . D6 Douglas.
 . G5 Gloster. Meteor.
 . H3 Hawker aircraft.
 . L6 Lockheed (Electra, etc.)
 . R7 Rozhestvenskii.

Aircraft
Heavier-than-air craft.
Airplanes.

Jet Aircraft.

687 **General.**
 (For airworthiness, specifications,
 operations, maintenance, FAA studies, etc.)

688 **General special.**
 (Adapt subdivisions used in TL 671). See also
 TL 685.4; TL 539.5, Transport by type;
 TL 709, Jet propulsion; TJ 778, Turbines.

689 **Airplane materials and accessories.**

Electrical equipment of aircraft.

690 **General.**

691 **Special, A-Z.**
 e.g., .B3 **Batteries.**
 . G4 **Generators.**
 . L3 **Landing lights.**
 . N3 **Navigation lights.**
 . **Radio, See TL 693-696.**
 . S4 **Searchlights.**
 . W5 **Wiring.**

Communication methods and equipment. (For operators, see TL 740.7). Telegraph, Radio, Radar, Television, Telecommunication.

692 **General and miscellaneous, including flight information.**
 e.g., Signalling, Loud speakers, etc.

Radio. Wireless.

693 **General.**

694 **Special, A-Z.**
 e.g., .A6 **Antennae.**
 . C6 **Cipher and telegraph codes.**
 . I5 **Inspection.**
 . I6 **Interference. Bonding. Shielding.**

Aircraft.

Heavier-than-air craft.

Communication methods and equipment--continued.

694

Special, A-Z.

- e. g., .L2 Language.
- .R4 Receiving.
- .T35 Telemetry.
- .T4 Teletype.
- .T7 Transmitting.
- .V3 Vacuum-tubes.

Radio as navigation aid. Radar. Television.

695

General.

.5

Directories of radio stations.

Cf. TK 6555.

696

Special, A-Z.

- e. g., .A7 Antennas. See also TK 6553.
- .B4 Radar beacons.
- .B5 Radio beacons.
- .C6 Collision prevention.
- .C7 Radio compass.
- .C8 Course computers. Course-line computers, etc.
- .D5 Direction finder.
- .D6 Distance indicator.
- Field and runway localizer, see Landing aids.
- Glidepath systems, see Instrument landing systems.
- .H4 Height indicator. Altimeter.
- .L3 Landing aids.
- Localizer, see .L3 (Landing aids).
- .M3 Markers.
- .N3 Navigation aid (if only radio and not multipurpose).
- .O5 Omnirange.
- .R2 Radar. (Cf. TK 6575.)
- .R3 Range
- TACAN, see TL 745. T1.

For any multipurpose aid, e. g., DME, LORAN, use 740-745, also material on several navigation aids.

Cf. TL 725.3. L2 Landing aids (General)

Instrument landing systems, see TL 740, etc.

Aircraft.

Heavier-than-air craft.

- 697 Miscellaneous equipment and apparatus, A-Z.
 e. g., .A1 General.
 .C6 Clothing for pilots.
 .F5 Fire prevention. See TL 720.61.
 Cf. TL 730.1.
 .G6 Goggles.
 .H9 Hydraulic equipment.
 Ice prevention, see TL 557.13.
 .L3 Landing flares.
 .O8 Oxygen apparatus for altitude flights.
 Military equipment, see UG 630-635.
 Photographic equipment, see TR.
 .P5 Pilot ejection seats.
 .P6 Pneumatic equipment.
 .S3 Safety devices (General).
 Parachutes, see TL 752-8.
 .S8 Stabilizing devices.

Materials of construction.

- 698 General.
- 699 Special, A-Z.
 e. g., .A5 Aluminum (including alloys).
 .A8 Asbestos.
 .C4 Ceramics.
 .D6 Dopes.
 .D9 Duralumin.
 .F2 Fabrics.
 .F5 Finishes.
 .G6 Glue.
 .L3 Lual. Lautal.
 .M4 Metals.
 .P6 Plastics.
 .P65 Plexiglas.
 .S7 Spruce.
 .S8 Steel (including alloys).
 .T8 Tubes.
 .W5 Wire.
 .W6 Wood. Timbers.
 .W7 Plywood. Laminated wood.

Motors. Aircraft engines. (Not jet. See TL 709 for jet engines).

- 701 General.
- .1 General special. Miscellaneous.
 - .2 Influence of altitude.
 - .4 Installation.
 - .5 Maintenance and repair. Inspection.
 - .6 Performance.
 - .7 Specifications. Standards.
 - .8 Testing.
- 702 Details and parts, A-Z.
- e. g., .C3 Carburetor.
 - .C5 Connecting rods.
 - .C6 Cowling.
 - .C7 Crankshaft.
 - .C9 Cylinder.
 - .F8 Fuel feeding and tanks.
 - .G4 Gearing.
 - .I5 Ignition devices. Magneto.
 Spark plug.
 - .L8 Lubrication.
 - .M8 Mufflers.
 - .N6 Noise.
 - .P5 Piston.
 - .R3 Radiators. Cooling system.
 - .S7 Starting devices.
 - .S8 Supercharger.
 - .V3 Valves. Opening and closing
 system.
- 703 Special makes, A-Z.
- Cf., TL 724 for manufacturers.
 - e. g., .D4 De Havilland.
 - .H5 Hispano-Suiza.
 - .P7 Pratt and Whitney.
- For Great Britain handbooks prefer
TL 701.G8A-Z.

Motors. Aircraft engines--continued.

704 Engines other than gasoline.

- .1 Atomic engines.
- .2 Diesel engines.
- .4 Steam engines for aircraft.
- .6 Model engines.
- .7 Fuel for aircraft engines.

Propellers. Air-screws.

705 General.

706 Special, A-Z.

- e.g., .A2 Abrasion.
- .B3 Balancing. Flutter.
- .E8 Etching.
- .I6 Interference.
- .N6 Noise.
- .P4 Performance. Performance calculation.
- .P8 Pusher vs. tractor.
- .S4 Slip.
- .S5 Slip stream.
- .S6 Specifications. Standards.
- .S7 Strains and stresses.
- .T4 Testing.
- .T5 Thrust.
- .V4 Vibration.

707 Details and parts, A-Z.

- e.g., .B6 Blade section and form.
- .B7 Boss.
- .G4 Gear.
- .H8 Hub.
- .P5 Pitch, Adjustable and controllable pitch.
- .S6 Spinner.
- .T5 Tipping.

- 708 Nuclear powerplants. Nuclear propulsion for aircraft.
 Cf. TL 704.1 Atomic engines, propulsion engine systems.
See also TL 687-688 (Jet aircraft)
 TL 539.5 (Transports)
 Cf. TL 783.5 Nuclear rockets, propulsion systems.
- .A1 Periodicals.
- 709 Jet propulsion.
- Rocket propulsion, see TL 780-783.
- .3 Special types (A-Z)
 e. g., .A5 Aircraft.
 .M5 Missiles.
 .R3 Ramjet.
 .T8 Turbine, turbojet, turboprop.
- .5 Details and parts of jet engines, A-Z.
 e. g., Air intakes or inlets, see .15.
 .B4 Bearings.
 .C55 Combustion chamber.
 .C57 Controls.
 .C6 Cooling systems.
 .I5 Intakes or inlets for air.
 Roller bearings, see .B4.
 Supersonic intakes or inlets, see .15.
 .T5 Thrust reversers.
- Operation of airplanes. Flying.
- 710 General; textbooks and instruction books.
- .5 Examinations, questions, etc.
- .7 Popular works.

Operation of airplanes. Flying--continued.

- 711 **Special, A-Z.**
 e. g., .A5 Airspeed.
 .A6 Altitude flying.
 See also TL 555.
 .A7 Special altitude flights, by
 date.
 .B6 Blind flight and instrument
 flying. See also .L3 (Landing).
 .D7 Dropping of cargo.
 .E6 Endurance flights.
 .L3 Landing.
 See also TL 696. L3, Radio.
 .L6 Loading.
 Military maneuvers. Forma-
 tion flying, see UG 630-635.
 Navigation, see TL 586.
 .N5 Night flying.
 .N6 Noise measurement, reduc-
 tion, etc.
 .R4 Refuelling.
 .S8 Stunt flying. Aerobatics.
 .T3 Take-off.
 .T4 Special testing (operational).
- 712 **Flight training. Material on method of instruction;
 viewpoint of trainer.**
 e. g., .C5 Civil
 .M5 Military
 For study and teaching, see TL 560.
 For training in use of traffic control
 equipment, see TL 741.15.
- 713 **Flying schools, by place, A-Z.**
- Aircraft other than airplanes (includes hybrids).
 Including experimental models, but not toy models.**
- 714 **Rotor aircraft.**
- 715 **Autogiros.**
- 716 **Helicopters. Cf. TL 718. C7, Convertiplanes.**

Aircraft other than airplanes (includes hybrids)
Rotor aircraft.
Helicopters -- continued.

- 716.1 Societies, periodicals, etc.
- .2 Design and construction.
- .5 Operation (performance of engine, etc.).
- .6 Piloting and navigation.
- .9 History.

For use of helicopters for transport service, etc., see
TL 539.2
TL 740 for airways operation and traffic control.
TL 687 for jet helicopters.

- 717 Ornithopters. Winged flight.
- 718 Other, by type, A-Z.
 - e. g., .C6 Coleopter.
 - .C7 Convertiplane.
 - .S8 STOL.
 - .V8 VTOL.

Uses of airplanes (see TL 534)

- 720 Accidents; safety.
 - .1 Safety programs, codes, etc., rescue facilities.
 - .3 Collisions; near misses.
 - .4 Accident reports; statistics, etc.
 - .41 Scheduled.
 - .42 Non-scheduled.
 - .5 Accidents and their prevention; air safety;
investigations; hazards; safety devices (general)
Cf. TL 697. S3.
 - .6 Safety procedures, i. e., evacuation; training of
crews; search and rescue.

Accidents; safety--continued.

- 720.61 Firefighting.
- .7 Survival after accidents.
- .8 Adventures and narratives in rescue work.

723 Social effects of aircraft.

Aircraft industry and trade.

- 724 General.
 Trade directories, See TL 512.
- .1 Special topics, A-Z.
 e. g., (.A3) Advertising, see HF 6161. A8.
 .E7 Employment.
 .F3 Factories.
 .F5 Finance.
 .H5 History.
 .J6 Job analysis.
 .M3 Machinery.
 .O8 Organization.
 .P69 Procurement.
 .P7 Production methods.
 .P75 Production statistics.
 (.S4) Selling, see HF 5439. A35.
 .S7 Statistics.
 .S78 Subcontracting.
 .U8 Used.
- .5 Special companies, A-Z.
 e. g., .B6 Boeing.
 .D38 De Havilland.
 .D7 Douglas.

Airports and landing fields. Aero-
dromes. Communications centers, etc.

See also Military and Naval aeronautics, UG 630-635
and VG 90-95, TL 741.

725 General.

- .A1 Periodicals and societies. (Congresses,
 yearbooks, directories).

Airports and landing fields. Aero-
dromes--continued.

- 725.2 Specifications and contracts. (Airports).
- .3 Special topics, A-Z.
- e.g., .A1 Activities.
- .A6 Areas, Danger.
- .B8 Buildings.
Cf. TL 725.3.R4, Repair
shops.
- .B9 Business activities, including
concessions.
- .C6 Cold weather conditions.
- .D4 Dispatching of airplanes.
Cf. TL 740, etc.
- .D6 Design and construction.
- .D7 Drainage.
- .E6 Equipment.
- .F1 Facilities.
- .F5 Financing and finances.
- .L2 Landing aids (General).
Cf. TL 691. L3 Landing lights
(Aircraft).
Cf. TL 696. L3 Landing aids
(Electronic).
Cf. TL 725.3. L5 Lighting
(Airports).
Cf. TL 741.5 Traffic control.
- .L3 Landing fees.
- .L5 Lighting.
- .L6 Location.
- .M1 Maintenance and repair.
- .M2 Management and operation.
- .M3 Marking.
- .P3 Passenger accommodations.
- .P5 Planning.
- .P7 Private or personal flying.
See also TL 544.
- .R4 Repair shops.
- .R8 Runways.
- .S8 Surfacing, turfing, etc.
- .T3 Taxiways.
(Traffic control. Now TL 740-)
- .T8 Airports--ground traffic (not
statistics)
- .Z6 Zoning.

Airports and landing fields. Aero-
dromes--continued.

- 725.5 User charges.
- .6 Seaplane bases.
- .65 Floating airports.
- .7 Heliports.
- .8 Aircraft carriers.
- Special countries.
- 726 General.
- .15 General special.
e. g. , Plymouth to Basra.
Trans-Pacific routes, etc.
- .2 United States.
- .25 Regional studies.
- .3 States, A-W.
- .4 Cities, A-Z.
- Other Countries.
- Under each number:
- .A1 General.
- .A5-Z Individual countries.
- .5 America, except United States.
- .6 Europe, A-Z.
- .7 Asia, A-Z.
- .8 Africa, A-Z.
- .9 Australia and Pacific islands, A-Z.

TL

AERONAUTICS

TL

Airports and landing fields. Aero-
dromes--continued.

727

Beacons for aircraft.

Cf. TL 725.3.L5.

Radiobeacons, see TL 696.B4.

730

Hangars.

.1

Miscellaneous, Fire hazards, etc.

.2

For airships.

.3

For airplanes.

731

Mooring masts.

732

Launching machinery. Catapults, etc.

733

Apparatus for picking up and delivering goods, etc.
during flight.

740

Control of air traffic and air navigation.

.5

Statistics.

.7

Communications operators.

.8

Traffic controllers.

.81

Training; Examinations, ratings, etc. for traffic
controllers.

.9

History.

741

Airways (operations, systems, etc. enroute);
Control tower operation.

.1

Equipment.

.15

Instruction on equipment.

.2

Facilities, e.g., Traffic control centers, both
enroute and at terminals.

TL

AERONAUTICS

TL

Airways (operations, systems, etc. enroute); Control tower operations--continued.

741.4 Common systems (for both civilian and military).

.41 Air defense activities.

.5 All-weather flying (Operational viewpoint); ILS; Ground Control Approach. Cf. TL 711. B6 and TL 711. L3. See also TL 745. 1.

.51 Aviation weather service.

742

743

744 Special topics, A-Z.
e. g., .D5 Display systems.

745 Navigational aids and systems, e. g., LORAN, DME, VOR.
See also TL 741. 5

.1 Special aids and systems.
e. g., .D3 Decca.
.T1 TACAN.
.V6 VOLSCAN (volumetric scanning radar).
.V7 VORTAC.

Parachutes.

Historical and early works. Parachutes used from balloons for exhibition and other purposes.

750 General.

751 Special jumpers, A-Z.

Modern parachutes.

752 General.

753 Miscellaneous.

754 Special makes, A-Z.
e. g., .I7 Irvin.

755 Personal narratives.

758 Parachutes to carry airplanes.

Kites

- 759 General works.
.A1-5 Periodicals, societies, etc.
- .3 History.
- .4 Competitions. "Concours."
- .5 Juvenile works.
- .6 Special types of kites, A-Z.
e.g., .P3 Parakites.
- .7 Use of kites (General).
Cf. QC 879 Meteorology.
TR 810 Photography from kites.

Gliders. Modern gliders.

- 760 General.
- .A1 Periodicals and societies.
- .A2 Early works, before 1903.
- .5 Competitions. Air meets.
- 761 Miscellaneous.
- 762 Construction of gliders.
- 765 Operation of gliders. Launching. Gliding. Soaring.
- 766 Equipment.
- 769 Aviets, etc. (man-power airplanes).
- 770 Models.
Experimental models prior to 1900, see TL 670.5.
Model testing, see TL 671.7.
- .A1 Periodicals and societies.
- 774 Contests.
- 775 Model airships.

Models--continued.

777 **Details and parts of models.**
 e. g. Propellers.

Rocket propulsion. Rockets.

780 **Periodicals and societies. History. (List III).**

.5 **Dictionaries.**

781 **General.**

.5 **Special projects, A-Z.**

.8 **By country, A-Z.**

.85

.9 **Biography.**

.A1 **Collective.**

.A3-Z **Individual.**

782 **Treatises.**

.5 **Popular works. Juvenile works.**

.7 **Amateurs' manuals.**

.8 **Rocketry as a profession.**

Special types of rockets and propulsion.

783 **Chemical rockets. Chemical propulsion systems.**

.3 **Solid propellant rockets.**

.4 **Liquid propellant rockets.**

.5 **Nuclear rockets. Nuclear propulsion systems.**

.57 **Photon rockets.**

.6 **Plasma rockets. Plasma propulsion systems.**

.63 **Ion rockets. Ion propulsion systems.**

Special types of rockets and propulsion--continued.

- 784 Special topics, A-Z.
- .S7 Stability. Cf. TL 574.S7
 - .3 Manufacturing. Factory methods.
 - .5 Special topics, A-Z.
 - .W4 Welding.
 - .8 Materials.
- 785 Fuel.
- .8 Rockets for special uses, A-Z.
 - e. g., .S6 Sounding rockets.
 - Cf. QC 879, Meteorology.
 - Spaceships see TL 795.
- Astronautics. Space flight.
- 787 General including societies, periodicals and treatises.
- 788 Dictionaries and encyclopedias.
- History.
- 789 Historical and imaginary voyages.
- e. g., .F6 Flying saucers.
 - .5 General.
 - .8 By country, A-Z. Do not subdivide by country.
 - Subarrange like TL 796.5
 - e. g., .U6X5 X-15 program.
 - .9 Biography.
 - .A1 Collective.
 - .A3-2 Individual.
- 790 Directories. (LC uses 790 for treatises)
- 791 Textbooks, compends, etc.
- 792
- 793 Popular works. Juvenile works.

TL

AERONAUTICS

TL

Astronautics. Space flight.
History--continued.

- 794 Handbooks, pocket books, tables, etc.
- .5 Addresses, essays, etc.
- 795 Space ships.
- Artificial satellites and earth satellites.
- 796 General works.
 - .A1 Periodicals, societies, etc.
 - .5 By country, A-Z.
 - e.g., .R8 Russia.
 - .U7 U.S.
 - .6 By planet, etc., A-Z.
 - e.g., .E2 Earth.
 - .S8 Sun.
 - .8 Observers' handbooks.
- 797 Space stations.
- 798 Special types by use, A-Z.
 - .G4 Geodetic satellites.
 - .M4 Meteorological satellites.
 - Cf. QC 879.5; Meteorology.
 - .N3 Navigation satellites.
 - Cf. VK