SECTION 4.06

AIRSPACE AND NAVIGATION

PILOT RESPONSIBILITIES

CAOs 95.12 and 95.12.1 assume that all pilots can keep within the operating limitations specified, however cross country operations require more preparation before flight. Knowing where controlled or restricted airspace is located is only one of the many considerations. The following section is a synopsis of some of the basic information that should have available.

AIRSPACE CHARTS

ENROUTE CHART LOW (ERC-LOW): Essential for any VFR pilot planning a cross-country flight outside the areas depicted on a VTC. The ERC-LOW covers a large area with some airfields and geographical features shown. Its purpose is to show the relationship between those features and the various types of airspace, aeronautical aids and facilities, which are also shown. ERC-LOWs are not navigation charts and should not be used for plotting tracks.

EN ROUTE SUPPLEMENT (ERSA): Issued to list specific airspace limitations in more detail than that provided on the ERC or the VTC. Designed to be used in conjunction with the VTC and/or ERC

VISUAL TERMINAL CHART (VTC): Issued to show the area surrounding a Controlled Aerodrome in greater detail than is possible on a VEC. When operating in the vicinity of any Control Zone, the VTC should be used for navigation, and pilots must be completely familiar with the features on the VTC.

VISUAL NAVIGATION CHART (VNC): Scale 1:500,000 – wider coverage than VTC.

WORLD AERONAUTICAL CHART (WAC): Standard plotting and navigation chart for General Aviation. The scale is 1:1,000,000, ie ONE millimetre on the chart represents ONE kilometre on the ground. When navigating at relatively low speeds at 500 feet above the ground, WACs are not particularly useful, BUT for planning a flight, they are.

LEGENDS: Are the DECODE of symbols used on the respective Maps and Charts. Each ERC, VNC and WAC has a legend printed on the chart.

IMPORTANT SYMBOLS: On ERC and VTCs several RED symbols are used to indicate aeronautical activity. These are:

DOUBLE CROSS	Gliding activity, including aero-towing and winch launching of gliders.
W	Winch or auto-tow sport aviation operation. Launching cables may extend to 3000ft AGL.
PARACHUTE	Parachute Area. Avoid the areas if you are not familiar with the Drop Zones and the operation. Drop Zones often look like airfields. If you need to use a parachuting field, telephone first and take great care.
HANG GLIDER	Hang Glider Area. Shows approved operating height(AGL) or band of altitude (AMSL).
ULTRALIGHT	Significant ultralight area. Usually for ultralight flying training areas. Presently uses a hang glider symbol with “U” letter underneath.

AREAS TO BE AVOIDED

Airspace in which a potential hazard to aircraft operations may exist, and all areas over which the operations of civil aircraft may be restricted are promulgated as follows:

a. **Prohibited Area.** Airspace within which the flight of aircraft is prohibited.

b. **Restricted Area.** Airspace within which flight of aircraft is restricted in accordance with special conditions.

c. **Danger Area.** Airspace within which activities dangerous to the flight of aircraft may exist at specified times.

These areas are shown on AIP aeronautical charts by boundaries outlined in red and containing the identification of the area as a letter and a number.

The letters allocated are:

P = Prohibited area

R = Restricted area

D = Danger area

and the number identifies the area.

Unless otherwise specified, vertical limits are promulgated as AMSL. The abbreviation “SFC” means the surface of the ground or water. “NOTAM” indicates that the vertical limits or hours of activation will be notified by NOTAM.

Flight within a prohibited area is not permitted in any circumstances.

Approval for an aircraft to fly within an active restricted area or airspace depends on the location of the airspace and the type of activity being conducted in that area or airspace, at the time. Pilots desiring access to a restricted area or airspace should request clearance from ATC. When clearance is granted, the flight must be conducted in accordance with the conditions and instructions specified by the ATC unit.

Approval for a flight within a danger area outside controlled airspace is not required.

CONTROL ZONE (CTR): A control zone is defined as “a controlled airspace extending upwards from the surface of the earth to a specified upper limit”. CTRs surround controlled aerodromes and are designated as Civil CTRs, GAAP CTRs or Military CTRs. Civil CTRs are operative only during the hours of the operation of the control tower, however, pilots should plan their operations on the basis that CTRs are active unless advised to the contrary.

CONTROL AREAS (CTA): Other than in Control Zones, controlled airspace is called a Control Area. Control Areas all have a LOWER limit (LL), which is shown as a height ABOVE MEAN SEA LEVEL (AMSL). A marking ‘LL3000’ means aircraft operating at an altitude of 3000ft AMSL are OUTSIDE controlled airspace. On ERC-LOW, controlled airspace is shown as blue tint, and the vertical ‘steps’ are shown as blue lines.

CERTIFIED AND REGISTERED AERODROMES: Formerly known as Government or Licenced aerodromes are shown on ERC-LOW and VNCs as a sun-shaped symbol. On VTCs, they are shown with a purple runway outline.

MANDATORY BROADCAST ZONE (MBZ): An area surrounding a busy aerodrome or group of aerodromes – either non-controlled or when a control tower is not in operation – to a defined height and distance (usually 5,000FT AGL and 15 NM, or the dimensions of the controlled airspace that is deactivated). Shown on charts as a ring of blue circles. Aircraft may NOT operate in an MBZ without a radio.

COMMON TRAFFIC ADVISORY FREQUENCY (CTAF): CTAFs are used within a 5 NM radius of a designated aerodrome up to and including 3,000FT AGL, unless otherwise specified. At CTAF aerodromes, the carriage and use of radio is not mandatory, but pilots of radio equipped aircraft are required to make broadcasts on the CTAF.

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