

1061.6.h.1. con't.

1. Being designed for operation at temperatures below the "critical temperature" of at least one of their "superconductive" constituents (including Josephson effect devices or "superconductive" quantum interference devices (SQUIDS));
2. Being designed for sensing electromagnetic field variations at frequencies of 1 kHz or less; **and**
3. Having any of the following characteristics:
 - a. Incorporating thin-film SQUIDS with a minimum feature size of less than 2 μm and with associated input and output coupling circuits;
 - b. Designed to operate with a magnetic field slew rate exceeding 1×10^6 magnetic flux quanta per second;
 - c. Designed to function without magnetic shielding in the earth's ambient magnetic field; **or**
 - d. Having a temperature coefficient less (smaller) than 0.1 magnetic flux quantum/K.

7. Gravimeters

Gravity meters (gravimeters) and gravity gradiometers, as follows:

7. a. Gravity meters designed or modified for ground use having a static accuracy of less (better) than 10 μgal ;

Note:

1061.7.a. does not control ground gravity meters of the quartz element (Worden) type.

- b. Gravity meters designed for mobile platforms having all of the following:
 1. A static accuracy of less (better) than 0.7 mgal; **and**
 2. An in-service (operational) accuracy of less (better) than 0.7 mgal having a time-to- steady-state registration of less than 2 minutes under any combination of attendant corrective compensations and motional influences;
- c. Gravity gradiometers.

8. Radar

Radar systems, equipment and assemblies having any of the following characteristics, and specially designed components therefore:

Note:

1061.8. does not control:

- a. Secondary surveillance radar (SSR);
- b. Car radar designed for collision prevention;
- c. Displays or monitors used for air traffic control (ATC) having no more than 12 resolvable elements per mm;
- d. Meteorological (weather) radar.

- a. Operating at frequencies from 40 GHz to 230 GHz and having an average output power exceeding 100 mW;
- b. Having a tunable bandwidth exceeding $\pm 6.25\%$ of the centre operating frequency;

Technical Note:

The centre operating frequency equals one half of the sum of the highest plus the lowest specified operating frequencies.

- c. Capable of operating simultaneously on more than two carrier frequencies;
- d. Capable of operating in synthetic aperture (SAR), inverse synthetic aperture (ISAR) radar mode or sidelooking airborne (SLAR) radar mode;
- e. Incorporating "electronically steerable phased array antennae";

- f. Capable of heightfinding non-cooperative targets;

Note:

1061.8.f. does not control precision approach radar (PAR) equipment conforming to ICAO standards.

- g. Specially designed for airborne (balloon or airframe mounted) operation and having Doppler signal processing for the detection of moving targets;
- h. Employing processing of radar signals using any of the following:
 1. "Radar spread spectrum" techniques; **or**
 2. "Radar frequency agility" techniques;
- i. Providing ground-based operation with a maximum "instrumented range" exceeding 185 km;

Note:

1061.8.i. does not control:

- a. Fishing ground surveillance radar;
- b. Ground radar equipment specially designed for enroute air traffic control, provided that all the following conditions are met:
 1. It has a maximum "instrumented range" of 500 km or less;
 2. It is configured so that radar target data can be transmitted only one way from the radar site to one or more civil ATC centres;
 3. It contains no provisions for remote control of the radar scan rate from the enroute ATC centre; and
 4. It is to be permanently installed.
- c. Weather balloon tracking radars.

- j. Being "laser" radar or Light Detection and Ranging (LIDAR) equipment, having any of the following:
 1. "Space-qualified"; **or**
 2. Employing coherent heterodyne or homodyne detection techniques and having an angular resolution of less (better) than 20 μr (microradians);

Note:

1061.8.j. does not control LIDAR equipment specially designed for surveying or for meteorological observation.

- k. Having signal processing sub-systems using "pulse compression", with any of the following:
 1. A "pulse compression" ratio exceeding 150; **or**
 2. A pulse width of less than 200 ns; **or**
- l. Having data processing sub-systems with any of the following:

1. "Automatic target tracking" providing, at any antenna rotation, the predicted target position beyond the time of the next antenna beam passage;

Note:

1061.8.l.1. does not control conflict alert capability in ATC systems, or marine or harbour radar.

2. Calculation of target velocity from primary radar having non-periodic (variable) scanning rates;
3. Processing for automatic pattern recognition (feature extraction) and comparison with target characteristic data bases (waveforms or imagery) to identify or classify targets; **or**
4. Superposition and correlation, or fusion, of target data from two or more "geographically dispersed" and "interconnected radar sensors" to enhance and discriminate targets.

Note:

1061.8.l.4. does not control systems, equipment and assemblies used for marine traffic control.