

### 1151. cont'd.

- c. 1. Equipment using "fixed" band scrambling not exceeding 8 bands and in which the transpositions change not more frequently than once every second;
2. Equipment using "fixed" band scrambling exceeding 8 bands and in which the transpositions change not more frequently than once every ten seconds;
3. Equipment using "fixed" frequency inversion and in which the transpositions change not more frequently than once every second;
4. Facsimile equipment;
5. Restricted audience broadcast equipment;
6. Civil television equipment;
- d. Designed or modified to suppress the compromising emanations of information-bearing signals;

#### Note:

1151.d. does not embargo equipment specially designed to suppress emanations for health or safety reasons.

- e. Designed or modified to use cryptographic techniques to generate the spreading code for "spread spectrum" or the hopping code for "frequency agility" systems;
- f. Designed or modified to provide certified or certifiable "multilevel security" or user isolation at a level exceeding Class B2 of the Trusted Computer System Evaluation Criteria (TCSEC) or equivalent;
- g. Communications cable systems designed or modified using mechanical, electrical or electronic means to detect surreptitious intrusion.

#### Note:

1151. does not embargo:

- a. "Personalized smart cards" using "cryptography";
- b. Equipment containing "fixed" data compression or coding techniques;
- c. Receiving equipment for radio broadcast, pay television or similar restricted audience television of the consumer type, without digital encryption and where digital decryption is limited to the video, audio or management functions;
- d. Portable (personal) or mobile radiotelephones for civil use, e.g. for use with commercial civil cellular radiocommunications systems, containing encryption, when accompanying their users;
- e. Decryption functions specially designed to allow the execution of copy-protected "software", provided the decryption functions are not user-accessible.

### 1152. Test, Inspection and Production Equipment

- a. Equipment specially designed for:
  1. The development of equipment or functions embargoed by 1151., 1152., 1154. or 1155., including measuring or test equipment;
  2. The production of equipment or functions embargoed by 1151., 1152., 1154. or 1155., including measuring, test, repair or production equipment;
- b. Measuring equipment specially designed to evaluate and validate the "information security" functions embargoed by 1151. or 1154.

### 1153. Materials

None

### 1154. Software

- a. "Software" specially designed or modified for the "development", "production" or "use" of equipment or "software" embargoed by 1151., 1152. or 1154.;
- b. "Software" specially designed or modified to support technology embargoed by 1155.;
- c. Specific "software" as follows:
  1. "Software" having the characteristics, or performing or simulating the functions of the equipment embargoed by 1151. or 1152.;
  2. "Software" to certify "software" embargoed by 1154.c.1.;
  3. "Software" designed or modified to protect against malicious computer damage, e.g. viruses.

#### Note:

1154. does not embargo:

- a. "Software" required for the "use" of equipment excluded from embargo under the Note to 1151.;
- b. "Software" providing any of the functions of equipment excluded from embargo under the Note to 1151.

### 1155. Technology

Technology according to the General Technology Note for the "development", "production" or "use" of equipment or "software" embargoed by 1151., 1152 or 1154.

## 1060. Sensors and Lasers

### 1061. Equipment, Assemblies and Components

#### 1. Acoustics

- a. Marine acoustic systems, equipment and specially designed components therefor, as follows:

1. Active (transmitting or transmitting-and-receiving) systems, equipment and specially designed components therefor, as follows:

#### Note:

1061.1.a.1. does not embargo:

- a. Depth sounders operating vertically below the apparatus, not including a scanning function exceeding  $\pm 10^\circ$ , and limited to measuring the depth of water, the distance of submerged or buried objects or fish finding;
- b. Acoustic beacons, as follows:
  1. Acoustic emergency beacons; or
  2. Pingers specially designed for relocating or returning to an underwater position.

1. a. Wide-swath bathymetric survey systems for sea bed topographic mapping:

1. Designed:

- a. To take measurements at an angle exceeding  $10^\circ$  from the vertical; and
- b. To measure depths exceeding 600 m below the water surface; and

2. Designed:

- a. To incorporate multiple beams any of which is less than  $2^\circ$ ; or
- b. To provide data accuracies of better than 0.5% of water depth across the swath averaged over the individual measurements within the swath;

- b. Object detection or location systems having any of the following:

1. A transmitting frequency below 10 kHz;
2. Sound pressure level exceeding 224 dB (reference  $1 \mu\text{Pa}$  at 1 m) for equipment with an operating frequency in the band from 10 kHz to 24 kHz inclusive;
3. Sound pressure level exceeding 235 dB (reference  $1 \mu\text{Pa}$  at 1 m) for equipment with an operating frequency in the band between 24 kHz and 30 kHz;
4. Forming beams of less than  $1^\circ$  on any axis and having an operating frequency of less than 100 kHz;
5. Designed to withstand pressure during normal operation at depths exceeding 1,000 m and having transducers:
  - a. Dynamically compensated for pressure; or
  - b. Incorporating other than lead zirconate titanate as the transduction element; or
6. Designed to operate with an unambiguous display range exceeding 5,120 m;

- c. Acoustic projectors, including transducers, incorporating piezoelectric, magnetostrictive, electrostrictive, electrodynamic or hydraulic elements operating individually or in a designed combination, having any of the following characteristics:

#### Notes:

1. The embargo status of acoustic projectors, including transducers, specially designed for other equipment is determined by the embargo status of the other equipment.

2. 1061.1.a.1.c. does not embargo electronic sources which direct the sound vertically only, or mechanical (e.g. air gun or vapour-shock gun) or chemical (e.g. explosive) sources.

- c. 1. An instantaneous radiated acoustic power density exceeding  $0.01 \text{ mW/mm}^2/\text{Hz}$  for devices operating at frequencies below 10 kHz;