Designation: F 1491 - 93 (Reapproved 2002)

# Standard Specification for An Avalanche Beacon Frequency<sup>1</sup>

This standard is issued under the fixed designation F 1491; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon  $(\epsilon)$  indicates an editorial change since the last revision or reapproval.

#### 1. Scope

1.1 This specification establishes a National Avalanche Beacon Frequency.

# 2. Terminology

- 2.1 Definitions of Terms Specific to This Standard:
- 2.1.1 avalanche beacon—an electronic device for radio location of persons buried or trapped, usually by snow, and employing radio frequency electromagnetic induction.

#### 3. Requirements

- 3.1 Standard Frequency—The avalanche beacon shall operate on a frequency of 457.0 kHz.
- 3.2 Additional Interim Frequency—The avalanche beacon may also operate on a frequency of 2.275 kHz.
  - 3.3 Frequency Priorities—The standard frequency (457.0

kHz) is mandatory in all devices. Use of the interim frequency (2.275 kHz) shall not impair or disable effective operation with the standard frequency.

3.4 Transition to Standard Frequency—Both frequencies should be employed during the interim period. Incorporation of the interim frequency is intended to provide temporary backward interoperability with older beacons, until such devices can be replaced or retired. Beacons incorporating both frequencies should be employed until December 31, 1995. After this date, only single frequency (457.0 kHz) beacons should be employed and the use of 2.275 (kHz) should be discontinued.

### 4. Significance and Use

4.1 Avalanche beacons are used for the location of persons who are buried by avalanches. In operation, users wear the beacons, which are all set to transmit. After an incident, the rescuers switch their units to receive and search for the subject, whose units are still in transmit.

## 5. Keywords

5.1 avalanche; beacon; frequency; snow; transceiver

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee F32 on Search and Rescue and is the direct responsibility of Subcommittee F32.01 on Equipment, Testing, and Maintenance.

Current edition approved August 15, 1993. Published October 1993.

ASTM International takes no position respecting the validity of any patent rights asserted in connection with any item mentioned in this standard. Users of this standard are expressly advised that determination of the validity of any such patent rights, and the risk of infringement of such rights, are entirely their own responsibility.

This standard is subject to revision at any time by the responsible technical committee and must be reviewed every five years and if not revised, either reapproved or withdrawn. Your comments are invited either for revision of this standard or for additional standards and should be addressed to ASTM International Headquarters. Your comments will receive careful consideration at a meeting of the responsible technical committee, which you may attend. If you feel that your comments have not received a fair hearing you should make your views known to the ASTM Committee on Standards, at the address shown below.

This standard is copyrighted by ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959, United States. Individual reprints (single or multiple copies) of this standard may be obtained by contacting ASTM at the above address or at 610-832-9585 (phone), 610-832-9555 (fax), or service@astm.org (e-mail); or through the ASTM website (www.astm.org).