

	FIPS#
NM .....	35
NY .....	36
NC .....	37
ND .....	38
OH .....	39
OK .....	40
OR .....	41
PA .....	42
RI .....	44
SC .....	45
SD .....	46
TN .....	47
TX .....	48
UT .....	49
VT .....	50
VA .....	51
WA .....	53
WV .....	54
WI .....	55
WY .....	56
Terr.:	
AS .....	60
FM .....	64
GU .....	66
MH .....	68
PR .....	68
PW .....	72
UM .....	70
VI .....	74
Offshore (Marine Areas) <sup>1</sup> :	
Eastern North Pacific Ocean, and along U.S. West Coast from Canadian border to Mexican border .....	57
North Pacific Ocean near Alaska, and along Alas- ka coastline, including the Bering Sea and the Gulf of Alaska .....	58
Central Pacific Ocean, including Hawaiian waters .....	59
South Central Pacific Ocean, including American Samoa waters .....	61
Western Pacific Ocean, including Mariana Island waters .....	65
Western North Atlantic Ocean, and along U.S. East Coast, from Canadian border south to Currituck Beach Light, N.C. ....	73
Western North Atlantic Ocean, and along U.S. East Coast, south of Currituck Beach Light, N.C., following the coastline into Gulf of Mexico to Bonita Beach, FL., including the Caribbean ..	75
Gulf of Mexico, and along the U.S. Gulf Coast from the Mexican border to Bonita Beach, FL ...	77
Lake Superior .....	91
Lake Michigan .....	92
Lake Huron .....	93
Lake St. Clair .....	94
Lake Erie .....	96
Lake Ontario .....	97
St. Lawrence River above St. Regis .....	98

<sup>1</sup> Effective May 16, 2002, analog radio and television broadcast stations, analog cable systems and wireless cable systems may upgrade their existing EAS equipment to add these marine area location codes on a voluntary basis until the equipment is replaced. All models of EAS equipment manufactured after August 1, 2003, must be capable of receiving and transmitting these marine area location codes. EAS Participants that install or replace their EAS equipment after February 1, 2004, must install equipment that is capable of receiving and transmitting these location codes.

[59 FR 67092, Dec. 28, 1994, as amended at 60 FR 55999, Nov. 6, 1995; 61 FR 54952, Oct. 23, 1996; 63 FR 29663, June 1, 1998; 67 FR 18508, Apr. 16, 2002; 67 FR 77174, Dec. 17, 2002; 69 FR 72031, Dec. 10, 2004; 70 FR 71033, Nov. 25, 2005]

### § 11.32 EAS Encoder.

(a) EAS Encoders must at a minimum be capable of encoding the EAS protocol described in § 11.31 and providing the EAS code transmission requirements described in § 11.51. EAS encoders must additionally provide the following minimum specifications:

(1) *Encoder programming.* Access to encoder programming shall be protected by a lock or other security measures and be configured so that authorized personnel can readily select and program the EAS Encoder with Originator, Event and Location codes for either manual or automatic operation.

(2) *Inputs.* The encoder shall have two inputs, one for audio messages and one for data messages (RS-232C with standard protocol and 1200 baud rate).

(3) *Outputs.* The encoder shall have two outputs, one audio port and one data port (RS-232C with standard protocol and 1200 baud rate).

(4) *Calibration.* EAS Encoders must provide a means to comply with the modulation levels required in § 11.51(f).

(5) *Day-Hour-Minute and Identification Stamps.* The encoder shall affix the JJJHHMM and LLLLLLLL codes automatically to all initial messages.

(6) *Program Data Retention.* Program data and codes shall be retained even with the power removed.

(7) *Indicator.* An aural or visible means that it activated when the Preamble is sent and deactivated at the End of Message code.

(8) *Spurious Response.* All frequency components outside 200 to 4000 Hz shall be attenuated by 40 dB or more with respect to the output levels of the mark or space frequencies.

(9) *Attention Signal generator.* The encoder must provide an attention signal that complies with the following:

(i) *Tone Frequencies.* The audio tones shall have fundamental frequencies of 853 and 960 Hz and not vary over  $\pm 0.5$  Hz.

(ii) *Harmonic Distortion.* The total harmonic distortion of each of the audio tones may not exceed 5% at the encoder output terminals.

(iii) *Minimum Level of Output.* The encoder shall have an output level capability of at least +8 dBm into a 600 Ohm load impedance at each audio

tone. A means shall be provided to permit individual activation of the two tones for calibration of associated systems.

(iv) *Time Period for Transmission of Tones.* The encoder shall have timing circuitry that automatically generates the two tones simultaneously for a time period of not less than 8 nor longer than 25 seconds. NOTE: Prior to July 1, 1995, the Attention Signal must be at least 20 and not more than 25 seconds.

(v) *Inadvertent activation.* The switch used for initiating the automatic generation of the simultaneous tones shall be protected to prevent accidental operation.

(vi) *Indicator Display.* The encoder shall be provided with a visual and/or aural indicator which clearly shows that the Attention Signal is activated.

(b) *Operating Temperature and Humidity.* Encoders shall have the ability to operate with the above specifications within an ambient temperature range of 0 to +50 degrees C and a range of relative humidity of up to 95%.

(c) *Primary Supply Voltage Variation.* Encoders shall be capable of complying with the requirements of this section during a variation in primary supply voltage of 85 percent to 115 percent of its rated value.

(d) *Testing Encoder Units.* Encoders not covered by § 11.34(e) of this part shall be tested in a 10 V/m minimum RF field at an AM broadcast frequency and a 0.5 V/m minimum RF field at an FM or TV broadcast frequency to simulate actual working conditions.

#### § 11.33 EAS Decoder.

(a) An EAS Decoder must at a minimum be capable of decoding the EAS protocol described in § 11.31, provide the EAS monitoring functions described in § 11.52, and the following minimum specifications:

(1) *Inputs.* Decoders must have the capability to receive at least 2 audio inputs from EAS monitoring assignments, and one data input (RS-232C with standard protocol and 1200 baud rate). The data input may be used to monitor other communications modes such as Radio Broadcast Data System (RBDS), NWR, satellite, public switched telephone network, or any

other source that uses the EAS protocol.

(2) *Valid codes.* There must be a means to determine if valid EAS header codes are received and to determine if preselected header codes are received.

(3) *Storage.* Decoders must provide the means to:

(i) Record and store, either internally or externally, at least two minutes of audio or text messages. A decoder manufactured without an internal means to record and store audio or text must be equipped with a means (such as an audio or digital jack connection) to couple to an external recording and storing device.

(ii) Store at least ten preselected event and originator header codes, in addition to the seven mandatory event/originator codes for tests and national activations, and store any preselected location codes for comparison with incoming header codes. A non-preselected header code that is manually transmitted must be stored for comparison with later incoming header codes. The header codes of the last ten received valid messages which still have valid time periods must be stored for comparison with the incoming valid header codes for later messages. These last received header codes will be deleted from storage as their valid time periods expire.

(4) *Display and logging.* A visual message shall be developed from any valid header codes for tests and national activations and any preselected header codes received. The message shall include the Originator, Event, Location, the valid time period of the message and the local time the message was transmitted. The message shall be in the primary language of the EAS Participant and be fully displayed on the decoder and readable in normal light and darkness. All existing and new models of EAS decoders manufactured after August 1, 2003 must provide a means to permit the selective display and logging of EAS messages containing header codes for state and local EAS events. Effective May 16, 2002, analog radio and television broadcast stations, analog cable systems and wireless cable systems may upgrade their decoders on an optional basis to