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its EAS State Plan must include specific and detailed information describing how such messages will be aggregated and distributed to EAS Participants within the state, including the monitoring requirements associated with distributing such messages;

(5) State procedures for conducting special EAS tests and Required Monthly Tests (RMTs);

(6) A list of satellite-based communications resources that are used as alternate monitoring assignments and present a reliable source of EAS messages; and

(7) The SECC governance structure utilized by the state in order to organize state and local resources to ensure the efficient and effective delivery of a Presidential Alert, including the duties of the SECC, the membership selection process utilized by the SECC, and the administrative structure of the SECC.

(b) The Local Area plan contains procedures for local officials or the NWS to transmit emergency information to the public during a local emergency using the EAS. Local plans may be a part of the State plan. A Local Area is a geographical area of contiguous communities or counties that may include more than one state.

(c) The FCC Mapbook is based on the consolidation of the monitoring assignment matrices required in each State EAS Plan with the identifying data contained in the ETRS. The Mapbook organizes all EAS Participants according to their State, EAS Local Area, and EAS designation. EAS Participant monitoring assignments and EAS operations must be implemented in a manner consistent with guidelines established in a State EAS Plan submitted to the Commission in order for the Mapbook to accurately reflect actual alert distribution.

(d) EAS Participants are required to provide the following information to their respective State Emergency Communications Committees (SECC) within one year from the publication in the FEDERAL REGISTER of a notice announcing the approval by the Office of Management and Budget of the modified information collection requirements under the Paperwork Reduction Act of 1995 and an effective date of the rule amendment:

(1) A description of any actions taken by the EAS Participant (acting individually, in conjunction with other EAS Participants in the geographic area, and/or in consultation with state and local emergency authorities), to make EAS alert content available in languages other than English to its non-English speaking audience(s),

(2) A description of any future actions planned by the EAS Participant, in consultation with state and local emergency authorities, to provide EAS alert content available in languages other than English to its non-English speaking audience(s), along with an explanation for the Participant's decision to plan or not plan such actions, and

(3) Any other relevant information that the EAS Participant may wish to provide, including state-specific demographics on languages other than English spoken within the state, and identification of resources used or necessary to originate current or proposed multilingual EAS alert content.

(e) Within six months of the expiration of the one-year period referred to in subsection (d) of this section, SECCs shall, as determined by the Commission's Public Safety and Homeland Security Bureau, provide a summary of such information as an amendment to or as otherwise included as part of the State EAS Plan filed by the SECC pursuant to this section 11.21.

(f) EAS Participants shall, within 60 days of any material change to the information they have reported pursuant to paragraphs (d)(1) and (2) of this section, submit letters describing such change to both their respective SECCs and the Chief, Public Safety and Homeland Security Bureau. SECCs shall incorporate the information in such letters as amendments to the State EAS Plans on file with the Bureau under this section 11.21.

[72 FR 62134, Nov. 2, 2007, as amended at 77 FR 16700, Mar. 22, 2012; 80 FR 37174, June 30, 2015; 81 FR 27351, May 6, 2016; 83 FR 37759, Aug. 2, 2018]

Subpart B—Equipment Requirements

§ 11.31 EAS protocol.

(a) The EAS uses a four part message for an emergency activation of the

EAS. The four parts are: Preamble and EAS Header Codes; audio Attention Signal; message; and, Preamble and EAS End Of Message (EOM) Codes.

(1) The Preamble and EAS Codes must use Audio Frequency Shift Keying at a rate of 520.83 bits per second to transmit the codes. Mark frequency is 2083.3 Hz and space frequency is 1562.5 Hz. Mark and space time must be 1.92 milliseconds. Characters are ASCII seven bit characters as defined in ANSI X3.4-1977 ending with an eighth null bit (either 0 or 1) to constitute a full eight-bit byte.

(2) The Attention Signal must be made up of the fundamental frequencies of 853 and 960 Hz. The two tones must be transmitted simultaneously. The Attention Signal must be transmitted after the EAS header codes.

(3) The message may be audio, video or text.

(b) The ASCII dash and plus symbols are required and may not be used for any other purpose. Unused characters must be ASCII space characters. FM or TV call signs must use a slash ASCII character number 47 (/) in lieu of a dash.

(c) The EAS protocol, including any codes, must not be amended, extended or abridged without FCC authorization. The EAS protocol and message format are specified in the following representation.

Examples are provided in FCC Public Notices.

[PREAMBLE]ZCZC-ORG-EEE-PSSCCC
+ TTTT-JJHHMM-LLLLLLLLL-(one second pause)

[PREAMBLE]ZCZC-ORG-EEE-PSSCCC
+ TTTTpJJHHMM-LLLLLLLLL-(one second pause)

[PREAMBLE]ZCZC-ORG-EEE-PSSCCC
+ TTTT-JJHHMM-LLLLLLLLL-(at least a one second pause)

(transmission of 8 to 25 seconds of Attention Signal)

(transmission of audio, video or text messages)

(at least a one second pause)

[PREAMBLE]NNNN (one second pause)

[PREAMBLE]NNNN (one second pause)

[PREAMBLE]NNNN (at least one second pause)

[PREAMBLE] This is a consecutive string of bits (sixteen bytes of AB

hexadecimal [8 bit byte 10101011]) sent to clear the system, set AGC and set asynchronous decoder clocking cycles. The preamble must be transmitted before each header and End of Message code.

ZCZC—This is the identifier, sent as ASCII characters ZCZC to indicate the start of ASCII code.

ORG—This is the Originator code and indicates who originally initiated the activation of the EAS. These codes are specified in paragraph (d) of this section.

EEE—This is the Event code and indicates the nature of the EAS activation. The codes are specified in paragraph (e) of this section. The Event codes must be compatible with the codes used by the NWS Weather Radio Specific Area Message Encoder (WRSAME).

PSSCCC—This is the Location code and indicates the geographic area affected by the EAS alert. There may be 31 Location codes in an EAS alert. The Location code uses the codes described in the American National Standards Institute (ANSI) standard, ANSI INCITS 31-2009 (“Information technology—Codes for the Identification of Counties and Equivalent Areas of the United States, Puerto Rico, and the Insular Areas”). Each state is assigned an SS number as specified in paragraph (f) of this section. Each county and some cities are assigned a CCC number. A CCC number of 000 refers to an entire State or Territory. P defines county subdivisions as follows: 0 = all or an unspecified portion of a county, 1 = Northwest, 2 = North, 3 = Northeast, 4 = West, 5 = Central, 6 = East, 7 = Southwest, 8 = South, 9 = Southeast. Other numbers may be designated later for special applications. The use of county subdivisions will probably be rare and generally for oddly shaped or unusually large counties. Any subdivisions must be defined and agreed to by the local officials prior to use.

+ TTTT—This indicates the valid time period of a message in 15 minute segments up to one hour and then in 30 minute segments beyond one hour; i.e., + 0015, + 0030, + 0045, + 0100, + 0430 and + 0600.

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JJJHHMM—This is the day in Julian Calendar days (JJJ) of the year and the time in hours and minutes (HHMM) when the message was initially released by the originator using 24 hour Universal Coordinated Time (UTC).

LLLLLLLL—This is the identification of the EAS Participant, NWS office, etc., transmitting or retransmitting the message. These codes will be automatically affixed to all outgoing messages by the EAS encoder.

NNNN—This is the End of Message (EOM) code sent as a string of four ASCII N characters.

(d) The only originator codes are:

Originator	ORG code
EAS Participant	EAS
Civil authorities	CIV
National Weather Service	WXR
Primary Entry Point System	PEP

(e) The following Event (EEE) codes are presently authorized:

Nature of activation	Event codes
National Codes (Required):	
Emergency Action Notification (National only)	EAN.
National Information Center	NIC
National Periodic Test	NPT.
Required Monthly Test	RMT.
Required Weekly Test	RWT.
State and Local Codes (Optional):	
Administrative Message	ADR.
Avalanche Warning	AVW.
Avalanche Watch	AVA.
Blizzard Warning	BZW.
Blue Alert	BLU.
Child Abduction Emergency	CAE.
Civil Danger Warning	CDW.
Civil Emergency Message	CEM.
Coastal Flood Warning	CFW.
Coastal Flood Watch	CFA.
Dust Storm Warning	DSW.
Earthquake Warning	EQW.
Evacuation Immediate	EVI.
Extreme Wind Warning	EWW.
Fire Warning	FRW.
Flash Flood Warning	FFW.
Flash Flood Watch	FFA.
Flash Flood Statement	FFS.
Flood Warning	FLW.
Flood Watch	FLA.
Flood Statement	FLS.
Hazardous Materials Warning	HMW.
High Wind Warning	HWW.
High Wind Watch	HWA.
Hurricane Warning	HUW.
Hurricane Watch	HUA.
Hurricane Statement	HLS.
Law Enforcement Warning	LEW.
Local Area Emergency	LAE.
Network Message Notification	NMN.
911 Telephone Outage Emergency	TOE.
Nuclear Power Plant Warning	NUW.
Practice/Demo Warning	DMO.
Radiological Hazard Warning	RHW.
Severe Thunderstorm Warning	SVR.
Severe Thunderstorm Watch	SVA.
Severe Weather Statement	SVS.
Shelter in Place Warning	SPW.
Special Marine Warning	SMW.
Special Weather Statement	SPS.
Storm Surge Watch	SSA.
Storm Surge Warning	SSW.
Tornado Warning	TOR.
Tornado Watch	TOA.
Tropical Storm Warning	TRW.
Tropical Storm Watch	TRA.
Tsunami Warning	TSW.
Tsunami Watch	TSA.
Volcano Warning	VOW.
Winter Storm Warning	WSW.

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Nature of activation	Event codes
Winter Storm Watch	WSA.

(f) The All U.S., State, Territory and Offshore (Marine Area) ANSI numbers (CCC) are contained in the State EAS Mapbook. codes (SS) are as follows. County ANSI

	ANSI No.
All U.S.	00
State:	
AL	01
AK	02
AZ	04
AR	05
CA	06
CO	08
CT	09
DE	10
DC	11
FL	12
GA	13
HI	15
ID	16
IL	17
IN	18
IA	19
KS	20
KY	21
LA	22
ME	23
MD	24
MA	25
MI	26
MN	27
MS	28
MO	29
MT	30
NE	31
NV	32
NH	33
NJ	34
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	72
PW	70
UM	74
VI	78
Offshore (Marine Areas) ¹	

	ANSI No.
Eastern North Pacific Ocean, and along U.S. West Coast from Canadian border to Mexican border	57
North Pacific Ocean near Alaska, and along Alaska 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, NC, following the coastline to Ocean Reef, FL, including the Caribbean	75
Gulf of Mexico, and along the U.S. Gulf Coast from the Mexican border to Ocean Reef, 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

¹ The numbers assigned to the offshore marine areas listed in this table are not described under the ANSI standard, but rather are numeric codes that were assigned by the National Weather Service.

[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; 77 FR 16701, Mar. 22, 2012; 80 FR 37174, June 30, 2015; 81 FR 53043, Aug. 11, 2016; 83 FR 2563, Jan. 18, 2018]

§ 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 at least one input port used for audio messages and at least one input port used for data messages.

(3) *Outputs.* The encoder shall have at least one audio output port and at least one data output port.

(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 ±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 8 seconds.

(v) *Inadvertent activation.* The switch used for initiating the automatic generation of the simultaneous tones shall