

## § 11.19

or Local Area messages. The EAS transmissions of PN sources are intended for direct public reception.

(f) Non-participating National (NN) sources have elected not to participate in the National level EAS and hold an authorization letter to that effect. Upon activation of the national level EAS, NN sources are required to broadcast the EAS codes, Attention Signal, the sign-off announcement in the EAS Operating Handbook and then stop operating. All NN sources are required to comply with §11.51, 11.52 and 11.61. They may transmit EAS State or Local Area messages at any time without prior notice.

### § 11.19 EAS Non-participating National Authorization Letter.

This authorization letter is issued by the FCC to broadcast station licensees and cable systems and wireless cable systems. It states that the licensee, cable operator or wireless cable operator has agreed to go off the air or in the case of cable discontinue programming on all channels during a national level EAS message. For Broadcast licensees this authorization will remain in effect through the period of the initial license and subsequent renewals from the time of issuance unless returned by the holder or suspended, modified or withdrawn by the Commission.

[63 FR 29663, June 1, 1998]

### § 11.20 State Relay Network.

This network is composed of State Relay (SR) sources, leased common carrier communications facilities or any other available communication facilities. The network distributes State EAS messages originated by the Governor or designated official. In addition to EAS monitoring, satellites, microwave, FM subcarrier or any other communications technology may be used to distribute State emergency messages.

### § 11.21 State and Local Area Plans and FCC Mapbook.

EAS plans contain guidelines which must be followed by broadcast and cable personnel, emergency officials and National Weather Service (NWS) personnel to activate the EAS. The

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plans include the EAS header codes and messages that will be transmitted by key EAS sources (NP, LP, SP and SR). State and local plans contain unique methods of EAS message distribution such as the use of RBDS. The plans must be reviewed and approved by the Chief, Technical and Public Safety Division, Enforcement Bureau, prior to implementation to ensure that they are consistent with national plans, FCC regulations, and EAS operation.

(a) The State plan contains procedures for State emergency management and other State officials, the NWS, and broadcast and cable personnel to transmit emergency information to the public during a State emergency using the EAS.

(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 above plans. It organizes all broadcast stations and cable systems according to their State, EAS Local Area and EAS designation.

[59 FR 67092, Dec. 28, 1994, as amended at 60 FR 55999, Nov. 6, 1995; 63 FR 29663, June 1, 1998; 65 FR 21658, Apr. 24, 2000]

## 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.

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(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. 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 - JJJHHMM - LLLLLLLL -  
(one second pause)

[PREAMBLE] ZCZC - ORG - EEE - PSSCCC  
+ TTTT - JJJHHMM - LLLLLLLL -  
(one second pause)

[PREAMBLE] ZCZC - ORG - EEE - PSSCCC  
+ TTTT - JJJHHMM - LLLLLLLL -  
(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 Federal Information Processing Standard (FIPS) numbers as described by the U.S. Department of Commerce in National Institute of Standards and Technology publication FIPS PUB 6-4. 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 Central, 3 = Northeast, 4 = West Central, 5 = Central, 6 = East Central, 7 = Southwest, 8 = South Central, 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.

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 broadcast station, cable system, MDS/MMDS/ITFS station, 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
Broadcast station or cable system .....	EAS
Civil authorities .....	CIV
Emergency Action Notification Network .....	EAN
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:	
Emergency Action Notification (National only) .....	EAN
Emergency Action Termination (National only) .....	EAT
National Information Center .....	NIC
National Periodic Test .....	NPT

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Nature of activation	Event codes
Required Monthly Test .....	RMT
Required Weekly Test .....	RWT
Local Codes:	
Administrative Message .....	ADR
Blizzard Warning .....	BZW
Civil Emergency Message .....	CEM
Evacuation Immediate .....	EVI
Flash Flood Statement .....	FFS
Flash Flood Warning .....	FFW
Flash Flood Watch .....	FFA
Flood Statement .....	FLS
Flood Warning .....	FLW
Flood Watch .....	FLA
High Wind Warning .....	HWW
High Wind Watch .....	HWA
Hurricane Statement .....	HLS
Hurricane Warning .....	HUW
Hurricane Watch .....	HUA
Practice/Demo Warning .....	DMO
Severe Thunderstorm Warning .....	SVR
Severe Thunderstorm Watch .....	SVA
Severe Weather Statement .....	SVS
Special Weather Statement .....	SPS
Tornado Warning .....	TOR
Tornado Watch .....	TOA
Tsunami Warning .....	TSW
Tsunami Watch .....	TSA
Winter Storm Warning .....	WSW
Winter Storm Watch .....	WSA

State	FIPS #
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

District of Columbia—11

Terr.	FIPS #
AS .....	60
PR .....	72
FM .....	64
PW .....	70
GU .....	66
UM .....	74
MH .....	68
VI .....	78
MP .....	69

(f) The State and Territory FIPS number codes (SS) are as follows. County FIPS numbers (CCC) are contained in the State EAS Mapbook.

State	FIPS #
AL .....	01
AK .....	02
AZ .....	04
AR .....	05
CA .....	06
CO .....	08
CT .....	09
DE .....	10
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

[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]

§ 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