

CERTIFIED REPORT OF MEASUREMENT FOR TFT, INC.
FCC PART 11 TESTING
TFT MODEL EAS911+
EAS-CAP
FCC ID: BIOEAS911PLUS

COMPLIANCE TEST NUMBER: 4.3

TEST DESCRIPTION: Decoder Valid Code Verification

DATE/TIME: 2/26/13 9:41 am

PERSON(S) PERFORMING TEST: Todd Cachopo, Ken Daniel and Ken Crandall

TEST SITE: TFT, San Jose CA

TEST EQUIPMENT: PC

TEST METHODOLOGY: Per 4.3A.3 observed test out of 8 headers sent, only headers with none or one corrupted packet passed and printed.

MATLAB program generated unerrored and errored messages. MATLAB program output (MATLAB Command Window) printout provided.

O.C. 2/26/13

Begin test 4.3: 26-Feb-2013 09:41:21

FIP sequence: 0 0 0 no packet errors

message1: ZCZC-PEP-EAN-000000+0130-0571741-WAAA/FM -
message2: ZCZC-PEP-EAN-000000+0130-0571741-WAAA/FM -
message3: ZCZC-PEP-EAN-000000+0130-0571741-WAAA/FM -
eom: NNNN
eom: NNNN
eom: NNNN

decoded

FIP sequence: 1 0 0 1st packet 1 bit error

decoded

message1: ZCZC-PEP-EAN-000001+0130-0571742-WAAA/FM -
message2: ZCZC-PEP-EAN-000000+0130-0571742-WAAA/FM -
message3: ZCZC-PEP-EAN-000000+0130-0571742-WAAA/FM -
eom: NNNN
eom: NNNN
eom: NNNN

FIP sequence: 0 1 0 2nd packet 1 bit error

decoded

message1: ZCZC-PEP-EAN-000000+0130-0571743-WAAA/FM -
message2: ZCZC-PEP-EAN-000001+0130-0571743-WAAA/FM -
message3: ZCZC-PEP-EAN-000000+0130-0571743-WAAA/FM -
eom: NNNN
eom: NNNN
eom: NNNN

FIP sequence: 0 0 1 3rd packet 1 bit error

decoded

message1: ZCZC-PEP-EAN-000000+0130-0571745-WAAA/FM -
message2: ZCZC-PEP-EAN-000000+0130-0571745-WAAA/FM -
message3: ZCZC-PEP-EAN-000001+0130-0571745-WAAA/FM -
eom: NNNN
eom: NNNN
eom: NNNN

FIP sequence: 0 1 2 2nd packet 1 bit error; 3rd packet 1 bit error

did not decode

message1: ZCZC-PEP-EAN-000000+0130-0571746-WAAA/FM -
message2: ZCZC-PEP-EAN-000001+0130-0571746-WAAA/FM -
message3: ZCZC-PEP-EAN-000002+0130-0571746-WAAA/FM -
eom: NNNN
eom: NNNN
eom: NNNN

FIP sequence: 1 0 2 1st packet 1 bit error; 3rd packet 1 bit error

did not decode

message1: ZCZC-PEP-EAN-000001+0130-0571747-WAAA/FM -
message2: ZCZC-PEP-EAN-000000+0130-0571747-WAAA/FM -
message3: ZCZC-PEP-EAN-000002+0130-0571747-WAAA/FM -
eom: NNNN
eom: NNNN
eom: NNNN

FIP sequence: 0 1 2 2nd packet 1 bit error; 3rd packet 1 bit error

did not decode

message1: ZCZC-PEP-EAN-000000+0130-0571749-WAAA/FM -
message2: ZCZC-PEP-EAN-000001+0130-0571749-WAAA/FM -
message3: ZCZC-PEP-EAN-000002+0130-0571749-WAAA/FM -
eom: NNNN
eom: NNNN
eom: NNNN

FIP sequence: 1 2 3 *all three packets 1 bit error*

message1: ZCZC-PEP-EAN-000001+0130-0571750-WAAA/FM -
message2: ZCZC-PEP-EAN-000002+0130-0571750-WAAA/FM - *did not decode.*
message3: ZCZC-PEP-EAN-000003+0130-0571750-WAAA/FM -
eom: NNNN
eom: NNNN
eom: NNNN

End of test 4.3: 26-Feb-2013 09:51:44

>>

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no packet errors

STATION WAAA_FM RECEIVE LOG MESSAGE:

A NATIONAL EMERGENCY ACTION NOTIFICATION HAS BEEN ISSUED FOR THE FOLLOWING COUNTIES/AREAS:

UNITED STATES

AT 9:41 AM

ON FEB 26, 2013

EFFECTIVE

UNTIL 11:11 AM.

MESSAGE FROM WAAA/FM.

MESSAGE ISSUED BY A PRIMARY ENTRY POINT AND RECEIVED

AT 9:40

ON FEB 26, 2013

FROM WAAA/FM

ON CHANNEL D.

EAS PROTOCOL TEXT:

ZCZC-PEP-EAN-000000+0130-0571741-WAAA/FM -

EOM RECEIVED

PRINTED ON TUESDAY FEBRUARY 26, 2013 AT 09:56

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1st packet 1 lit error

STATION WAAA_FM RECEIVE LOG MESSAGE:

A NATIONAL EMERGENCY ACTION NOTIFICATION HAS BEEN ISSUED FOR THE FOLLOWING COUNTIES/AREAS:
UNITED STATES
AT 9:42 AM
ON FEB 26, 2013
EFFECTIVE
UNTIL 11:12 AM.
MESSAGE FROM WAAA/FM.

MESSAGE ISSUED BY A PRIMARY ENTRY POINT AND RECEIVED
AT 9:42
ON FEB 26, 2013
FROM WAAA/FM
ON CHANNEL D.

EAS PROTOCOL TEXT:
ZCZC-PEP-EAN-000000+0130-0571742-WAAA/FM -
EOM RECEIVED

PRINTED ON TUESDAY FEBRUARY 26, 2013 AT 09:55

86-5

2nd packet 1 edit error

STATION WAAA_FM RECEIVE LOG MESSAGE:

A NATIONAL EMERGENCY ACTION NOTIFICATION HAS BEEN ISSUED FOR THE FOLLOWING COUNTIES/AREAS:

UNITED STATES

AT 9:43 AM

ON FEB 26, 2013

EFFECTIVE

UNTIL 11:13 AM.

MESSAGE FROM WAAA/FM.

MESSAGE ISSUED BY A PRIMARY ENTRY POINT AND RECEIVED

AT 9:43

ON FEB 26, 2013

FROM WAAA/FM

ON CHANNEL D.

EAS PROTOCOL TEXT:

ZCZC-PEP-EAN-000000+0130-0571743-WAAA/FM -

EOM RECEIVED

PRINTED ON TUESDAY FEBRUARY 26, 2013 AT 09:55

3rd packet 1 edit errors

STATION WAAA_FM RECEIVE LOG MESSAGE:

A NATIONAL EMERGENCY ACTION NOTIFICATION HAS BEEN ISSUED FOR THE FOLLOWING COUNTIES/AREAS:

UNITED STATES

AT 9:45 AM

ON FEB 26, 2013

EFFECTIVE

UNTIL 11:15 AM.

MESSAGE FROM WAAA/FM.

MESSAGE ISSUED BY A PRIMARY ENTRY POINT AND RECEIVED

AT 9:44

ON FEB 26, 2013

FROM WAAA/FM

ON CHANNEL D.

EAS PROTOCOL TEXT:.

ZCZC-PEP-EAN-000000+0130-0571745-WAAA/FM -

EOM RECEIVED

PRINTED ON TUESDAY FEBRUARY 26, 2013 AT 09:55

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4.3B Decoder Storage Verification

4.3B.1 Test Objective

The objective of this test is to verify that means for message storage are provided in accordance with:

§11.33(a)(3)

Storage. Decoders must provide the means to:

- (i) *Record and store at least two minutes of audio or text messages.*
- (ii) *Store at least 10 preselected header 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 of later messages. The header codes will be deleted from storage as their valid time periods expire.*

4.3B.2 Test Block Diagram



4.3B.3 Test Methodology

Verification of two minutes or more of audio or text transmission storage is performed in conjunction with an external tape recorder. The message alert relay is observed to activate upon successful decode and verification of an EAS message which in turn activates a remote tape recorder. A two minutes voice message id produced that is followed by an EOM transmission. The EOM causes the message alert relay to deactivate and thereby stop the recorder.

The verification of message storage is accomplished by placing the decoder in automatic forward mode and sending a sequence of ten different messages that are all set to expire at the same time. Each message is observed to automatically forward. Before expiration the same group of ten messages is again sent. This time the messages are received but observed to not be forwarded since each message is found duplicated in the last ten transmitted messages.

A manually generated message on the encoder is also sent and looped back to the decoder. The message is received but observed to not be forwarded since it is duplicated in the last ten transmitted messages.

CERTIFIED REPORT OF MEASUREMENT FOR TFT, INC.
FCC PART 11 TESTING
TFT MODEL EAS911+
EAS-CAP
FCC ID: BIOEAS911PLUS

COMPLIANCE TEST NUMBER: 4.3B

TEST DESCRIPTION: Decoder Storage Verification

DATE/TIME: 8/29/12

PERSON(S) PERFORMING TEST: Todd Cachopo, Ken Daniel

TEST SITE: TFT, San Jose CA

TEST EQUIPMENT: Stop watch

TEST METHODOLOGY: Verified two minutes of
audio transmission storage.

Header tag tables prevent automatic
forwarding of all messages except
those programmed in the Auto Forward
events list. EAN is forced to
forward per regulation 11.2(a),
11.33 (a)(9), 11.33(a) (11), 11.51 (m) (2),
11.54. (a)

S.C. 8/29/12

4.4 Decoder Display Verification

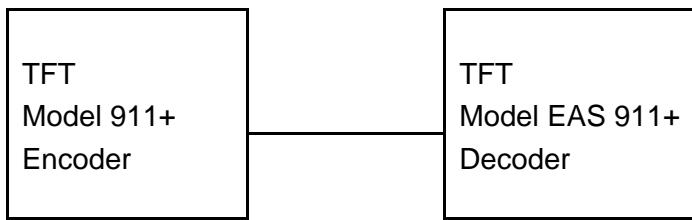
4.4.1 Test Objective

This test verifies the requirement to produce a visible display of valid EAS messages in compliance with §11.33(a)(4):

§11.33(a)(4):

Display. A visual message shall be developed from any valid EAS header codes received. The message will 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 broadcast station or cable system and be fully displayed on the decoder and readable in normal light and darkness.

4.4.2 Test Block Diagram



4.4.3 Test Methodology

This test follows the same procedure as described in section 4.1 "EAS Decoder Protocol Verification" with attention given to the touch screen display.

Observed in all EAS messages in 3.1 and 4.1

4.5 Decoder Indicator Verification

4.5.1 Test Objective

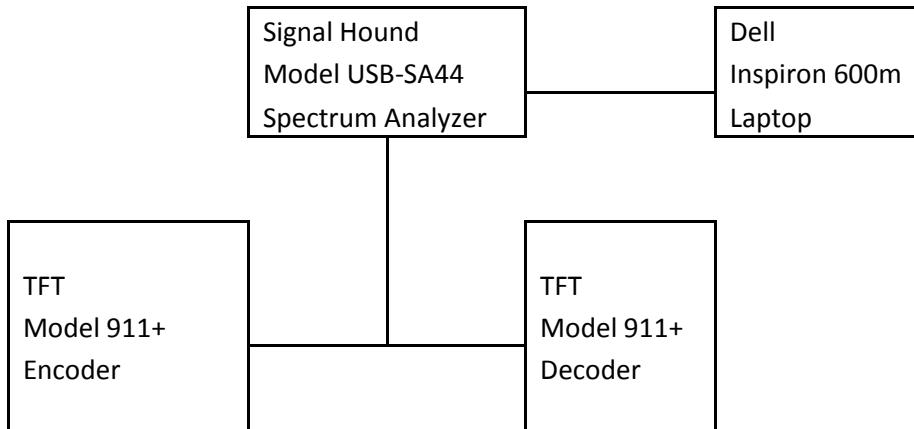
This test verifies the requirement to produce aural and visible indicators of EAS messages in compliance with §11.33(a)(5):

§11.33(a)(5)

Indicators. EAS Decoders must have a distinct aural or visible means to show that it is activated when:

- (i) *any valid EAS header codes are received as specified in §11.33(a)(10).*
- (ii) *preprogrammed header codes, such as those selected in accordance with §11.52(d) are received.*
- (iii) *a signal is present at each audio input that is specified in §11.33(a)(1).*

4.5.2 Test Block Diagram



4.5.3 Test Methodology

The first test follows the same procedure as described in section 4.1 "EAS Decoder Protocol Verification" with attention given to the touch screen display.

A second test is also performed on audio channel 1 and 2 to determine that signal energy present that is greater than -20 dBm causes the corresponding front panel indicator to illuminate. An alternating MARK-SPACE pattern is applied as the test tone. The corresponding indicator must be extinguished when less than -30 dBm.

CERTIFIED REPORT OF MEASUREMENT FOR TFT, INC.
FCC PART 11 TESTING
TFT MODEL EAS911+
EAS-CAP
FCC ID: BIOEAS911PLUS

COMPLIANCE TEST NUMBER: 4,5

TEST DESCRIPTION: Decoder Indicator Verification

DATE/TIME: 8/29/12

PERSON(S) PERFORMING TEST: Todd Cachopo, Ken Daniel

TEST SITE: TFT, San Jose CA

TEST EQUIPMENT: HP 3589A Spectrum Analyzer

TEST METHODOLOGY: First test verified unit displayed the RX LOG window and the MESSAGE WAITING key flashed.

Second test verified indicator response to alternating mark/space test.

J.C. 8/29/12

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4.6 Decoder Data Retention Verification

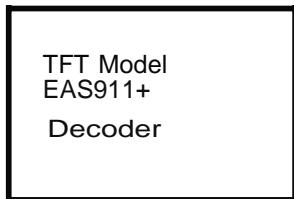
4.6.1 Test Objective

This test verifies the requirement to retain program data when power is removed:

§11.33(a)(6)

Program Data Retention. The program data must be retained even with power removed.

4.6.2 Test Block Diagram



4.6.3 Test Methodology

Data retention through power interruptions is verified by observing the last ten transmitted and received EAS messages as recorded on the printer. The indicated time is also calibrated with local time and recorded. Power is then removed for 24 hours. When power is reapplied the last ten transmitted and received EAS messages are again printed. The time is also recorded and compared with local time. The messages must match before and after power is removed and the time agrees within 5 seconds of the correct time.

CERTIFIED REPORT OF MEASUREMENT FOR TFT, INC.
FCC PART 11 TESTING
TFT MODEL EAS911+
EAS-CAP
FCC ID: BIOEAS911PLUS

COMPLIANCE TEST NUMBER: 4.6

TEST DESCRIPTION: Encoder Data Retention Verification

DATE/TIME: 8/29/12

PERSON(S) PERFORMING TEST: Todd Cachopo, Ken Daniel

TEST SITE: TFT, San Jose CA

TEST EQUIPMENT: none

TEST METHODOLOGY: per 4.6.3

As with test 3.6, transmit and receive logs matched after 24 hours of no power. Lithium battery backed clock. Receive and transmit logs stored in a solid state hard drive.

I.C. 8/29/12

4.7 Decoder Output Verification

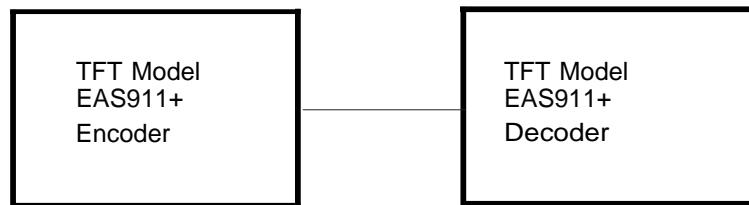
4.7.1 Test Objective

The objective of this test is to verify the required outputs of the decoder:

§11.33(a)(7)

Outputs. Decoders shall have the following outputs: a data port or ports (RS-232C with standard protocol and 1200 baud rate) where received valid EAS header codes and received preselected header codes are available; one audio port that is capable of monitoring each decoder audio input; and, an internal speaker to enable personnel to hear audio from each input.

4.7.2 Test Block Diagram



4.7.3 Test Methodology

This test follows the same procedure as described in section 4.1 "EAS Decoder Protocol Verification". Observations are made to confirm output on the EAS Standard Protocol Interface and speaker.

Verified in all EAS transmissions in tests 3.1 & 4.1

4.8 Decoder Programming Verification

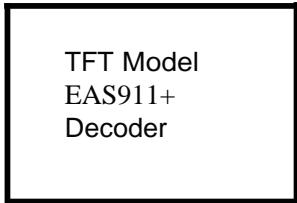
4.8.1 Test Objective

The objective of this test is to verify protected access to decoder programming:

§11.33(a)(8)

Decoder Programming. Access to decoder 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 Decoder with preselected Originator, Event and Location Codes for either manual or automatic operation.

4.8.2 Test Block Diagram



4.8.3 Test Methodology

Password entry is verified for access to the encoder.

A setup password is also verified for the user to gain access to both encoder and decoder programming functions.

Password change requires initial password entry, and this is also verified.

CERTIFIED REPORT OF MEASUREMENT FOR TFT, INC.

FCC PART 11 TESTING

TFT MODEL EAS911+

EAS-CAP

FCC ID: BIOEAS911PLUS

COMPLIANCE TEST NUMBER: 4.8TEST DESCRIPTION: Decoder Programming VerificationDATE/TIME: 8/29/12PERSON(S) PERFORMING TEST: Todd Cachopo, Ken DanielTEST SITE: TFT, San Jose CATEST EQUIPMENT: none

TEST METHODOLOGY: per 4.8.3 methodology
Verified "912" password to gain
access to the setup mode and all
programming functions dealing with
the encoder and decoder.

S.C. 8/29/12

4.9 Decoder Reset Verification

4.9.1 Test Objective

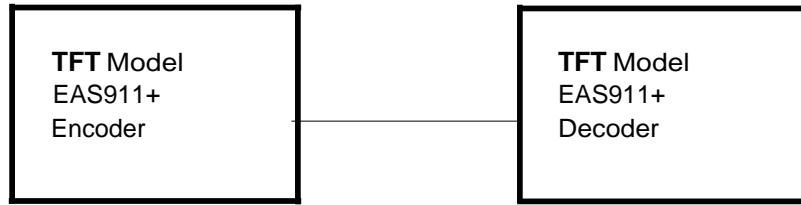
This objective of this test is to verify automatic and manual reset:

§11.33(a)(9)

Reset. There shall be a method to automatically or manually reset the decoder to the normal monitoring condition. If an end of message code (EOM) is not received for an EAS message, operators shall be able to select an automatic reset time which may not be less than two minutes.

Messages received with the EAN Event codes shall disable the reset function so that lengthy audio messages can be handled. The last message received with valid header codes shall be displayed as required by §11.33(a)(4) of this section before the decoder is reset.

4.9.2 Test Block Diagram



4.9.3 Test Methodology

An EAN message is transmitted to the decoder on channel 1 that is then followed by a 24 hour delay before the EOM is sent. During this 24 hour time other non EAN messages are sent to the decoder on channel 2. It is verified that these messages are buffered but do not affect the automatic forwarding of the EAN message. The ON-AIR and MESSAGE ALERT relays are confirmed to stay active until the EOM is received.

Manual reset on any received message in progress is verified by touching the CANCEL button.

Automatic delayed reset of non EAN messages is confirmed by sending a message with no following EOM. The decoder times out in the preprogrammed interval. The 120 second delay is verified to observe automatic reset.

CERTIFIED REPORT OF MEASUREMENT FOR TFT, INC.
FCC PART 11 TESTING
TFT MODEL EAS911+
EAS-CAP
FCC ID: BIOEAS911PLUS

COMPLIANCE TEST NUMBER: 4.9

TEST DESCRIPTION: Decoder Reset Verification

DATE/TIME: 8/29/12

PERSON(S) PERFORMING TEST: Todd Cachopo, Ken Daniel

TEST SITE: TFT, San Jose CA

TEST EQUIPMENT: none

TEST METHODOLOGY: per 4.9.3

Programmable, 2 minutes to 15 minute
reset occurs for all messages
that are without EOM following.

Exceptions to this are the EAN
event code, that has no time-out
as seen in the overnight test.

S.C. 8/29/12

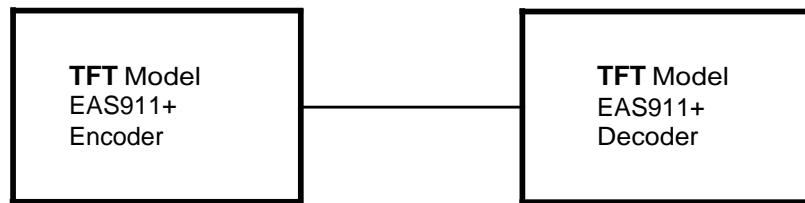
4.10 Decoder Programming Verification

4.10.1 Test Objective

This test verifies duplicate message checking as specified in §11.33(a)(10):

§11.33(a)(10)
. . . *Duplicate messages must not be relayed automatically.*

4.10.2 Test Block Diagram



4.10.3 Test Methodology

A forwardable message (pretagged for automatic forwarding) is sent to the decoder three times. It is confirmed that only the first transmission is automatically forwarded. The second two transmissions are received, but not forwarded.

CERTIFIED REPORT OF MEASUREMENT FOR TFT, INC.

FCC PART 11 TESTING

TFT MODEL EAS911+

EAS-CAP

FCC ID: BIOEAS911PLUS

COMPLIANCE TEST NUMBER: 4,10 Decoder Programming Verification

COMPLIANCE TEST RESULTS - SEE THE FOLLOWING 7 PAGES.

S.C. 9/4/12

Encoder

STATION WAAA_FM TRANSMIT LOG MESSAGE:

A CHILD ABDUCTION EMERGENCY HAS BEEN ISSUED FOR THE FOLLOWING COUNTIES/AREAS:

UNITED STATES

AT 6:31 PM

ON SEP 4, 2012

EFFECTIVE

UNTIL 6:46 PM.

MESSAGE FROM WAAA_FM.

MESSAGE ISSUED BY A BROADCAST STATION OR CABLE SYSTEM AND TRANSMITTED

AT 18:31

ON SEP 4, 2012

BY WAAA_FM.

EAS PROTOCOL TEXT:

ZCZC-EAS-CAE-000000+0015-2482231-WAAA_FM -

PRINTED ON TUESDAY SEPTEMBER 04, 2012 AT 18:42

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Duplicate Message Text
Encoder

STATION WAAA_FM TRANSMIT LOG MESSAGE:

A CHILD ABDUCTION EMERGENCY HAS BEEN ISSUED FOR THE FOLLOWING COUNTIES/AREAS:
UNITED STATES
AT 6:31 PM
ON SEP 4, 2012
EFFECTIVE
UNTIL 6:46 PM.
MESSAGE FROM WAAA_FM.

MESSAGE ISSUED BY A BROADCAST STATION OR CABLE SYSTEM AND TRANSMITTED
AT 18:31
ON SEP 4, 2012
BY WAAA_FM.

EAS PROTOCOL TEXT:
ZCZC-EAS-CAE-000000+0015-2482231-WAAA_FM -

PRINTED ON TUESDAY SEPTEMBER 04, 2012 AT 18:42

duplicate message sent
Encoder

STATION WAAA_FM TRANSMIT LOG MESSAGE:

A CHILD ABDUCTION EMERGENCY HAS BEEN ISSUED FOR THE FOLLOWING COUNTIES/AREAS:
UNITED STATES
AT 6:31 PM
ON SEP 4, 2012
EFFECTIVE
UNTIL 6:46 PM.
MESSAGE FROM WAAA_FM.

MESSAGE ISSUED BY A BROADCAST STATION OR CABLE SYSTEM AND TRANSMITTED
AT 18:31
ON SEP 4, 2012
BY WAAA_FM.

EAS PROTOCOL TEXT:
ZCZC-EAS-CAE-000000+0015-2482231-WAAA_FM -

PRINTED ON TUESDAY SEPTEMBER 04, 2012 AT 18:36

104

Valid message decoded
Decodes

STATION KAAA_AM RECEIVE LOG MESSAGE:

A CHILD ABDUCTION EMERGENCY HAS BEEN ISSUED FOR THE FOLLOWING COUNTIES/AREAS:
UNITED STATES
AT 6:31 PM
ON SEP 4, 2012
EFFECTIVE
UNTIL 6:46 PM.
MESSAGE FROM WAAA_FM.

MESSAGE ISSUED BY A BROADCAST STATION OR CABLE SYSTEM AND RECEIVED
AT 18:30
ON SEP 4, 2012
FROM WAAA_FM
ON CHANNEL 1.

EAS PROTOCOL TEXT:
ZCZC-EAS-CAE-000000+0015-2482231-WAAA_FM -
EOM RECEIVED

PRINTED ON TUESDAY SEPTEMBER 04, 2012 AT 18:37

Valid message forwarded
decoder

STATION KAAA_AM TRANSMIT LOG MESSAGE:

A CHILD ABDUCTION EMERGENCY HAS BEEN ISSUED FOR THE FOLLOWING COUNTIES/AREAS:
UNITED STATES
AT 6:31 PM
ON SEP 4, 2012
EFFECTIVE
UNTIL 6:46 PM.
MESSAGE FROM KAAA_AM.

MESSAGE ISSUED BY A BROADCAST STATION OR CABLE SYSTEM AND TRANSMITTED
AT 18:31
ON SEP 4, 2012
BY KAAA_AM.

EAS PROTOCOL TEXT:
ZCZC-EAS-CAE-000000+0015-2482231-KAAA_AM -

PRINTED ON TUESDAY SEPTEMBER 04, 2012 AT 18:42

DUPLICATE MESSAGE NOT FORWARDED

Decoder

STATION KAAA_AM RECEIVE LOG MESSAGE:

DUPLICATE MESSAGE.

A CHILD ABDUCTION EMERGENCY HAS BEEN ISSUED FOR THE FOLLOWING COUNTIES/AREAS:

UNITED STATES

AT 6:31 PM

ON SEP 4, 2012

EFFECTIVE

UNTIL 6:46 PM.

MESSAGE FROM WAAA/FM.

MESSAGE ISSUED BY A BROADCAST STATION OR CABLE SYSTEM AND RECEIVED

AT 18:33

ON SEP 4, 2012

FROM WAAA/FM

ON CHANNEL 3.

EAS PROTOCOL TEXT:

ZCZC-EAS-CAE-000000+0015-2482231-WAAA/FM -

EOM RECEIVED

PRINTED ON TUESDAY SEPTEMBER 04, 2012 AT 18:40

DUPLICATE MESSAGE NOT FORWARDED

Decoder

STATION KAAA_AM RECEIVE LOG MESSAGE:

DUPLICATE MESSAGE.

A CHILD ABDUCTION EMERGENCY HAS BEEN ISSUED FOR THE FOLLOWING COUNTIES/AREAS:

UNITED STATES

AT 6:31 PM

ON SEP 4, 2012

EFFECTIVE

UNTIL 6:46 PM.

MESSAGE FROM WAAA/FM.

MESSAGE ISSUED BY A BROADCAST STATION OR CABLE SYSTEM AND RECEIVED

AT 18:32

ON SEP 4, 2012

FROM WAAA/FM

ON CHANNEL 2.

EAS PROTOCOL TEXT:

ZCZC-EAS-CAE-000000+0015-2482231-WAAA/FM -

EOM RECEIVED

PRINTED ON TUESDAY SEPTEMBER 04, 2012 AT 18:40

4.11 Decoder EAN Event Override Verification

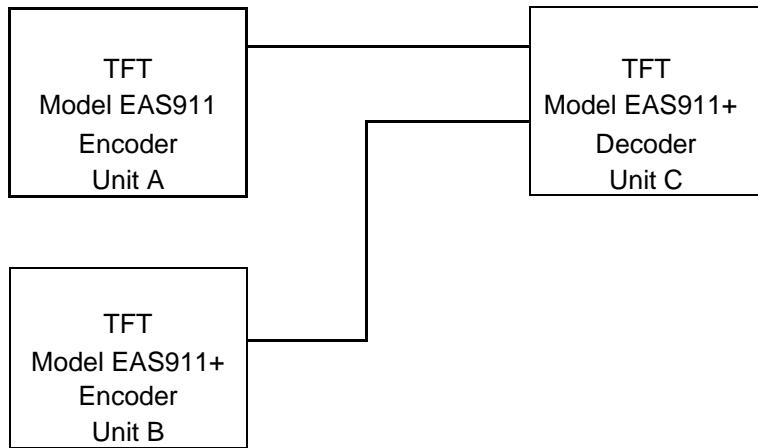
4.11.1 Test Objective

The objective of this test is to verify that EAN event override:

§11.33(a)(11)

A header code with the EAN Event code specified in §11.31(c) of this part that is received through either of the two audio inputs must override all other EAS messages.

4.11.2 Test Block Diagram



4.11.3 Test Methodology

The test message ZCZC-PEP-EAN-WAAA/FM- is sent on channel 1 three seconds after a non EAN message is sent on channel 2. It is confirmed that the channel 2 message is pre-empted and the EAN overrides and automatically engages forwarding. The channel 2 message is buffered and printed after the EAN has terminated with an EOM.

CERTIFIED REPORT OF MEASUREMENT FOR TFT, INC.
FCC PART 11 TESTING
TFT MODEL EAS911+
EAS-CAP
FCC ID: BIOEAS911PLUS

COMPLIANCE TEST NUMBER: 4.11

TEST DESCRIPTION: Decoder EAN Override Verification

DATE/TIME: 2/15/13

PERSON(S) PERFORMING TEST: Todd Cachopo, Ken Daniel

TEST SITE: TFT, San Jose CA

TEST EQUIPMENT: HP54602 Oscilloscope Multimeter

TEST METHODOLOGY: send EAN to Ch 1 3 seconds
after TOR on Ch 2 per test methodology
4.11.3.

I.C. 2/15/13

CERTIFIED REPORT OF MEASUREMENT FOR TFT, INC.
FCC PART 11 TESTING
TFT MODEL EAS911+
EAS-CAP
FCC ID: BIOEAS911PLUS

COMPLIANCE TEST NUMBER: 4.11 Decoder EAN Event Override Verification

COMPLIANCE TEST RESULTS - SEE THE FOLLOWING 4 PAGES.

J.C. 2/15/13

Encoder

Unit B

STATION WAAA_FM TRANSMIT LOG MESSAGE:

THE NATIONAL WEATHER SERVICE HAS ISSUED A TORNADO WARNING FOR THE FOLLOWING COUNTIES/AREAS:

UNITED STATES

AT 12:53 PM

ON FEB 15, 2013

EFFECTIVE

UNTIL 1:08 PM.

MESSAGE TRANSMITTED

AT 12:53

ON FEB 15, 2013

BY WAAA_FM.

EAS PROTOCOL TEXT:

ZCZC-WXR-TOR-000000+0015-0462053-WAAA_FM -

PRINTED ON FRIDAY FEBRUARY 15, 2013 AT 12:54

Encoder

Unit A

STATION TRANSMIT LOG:

A NATIONAL EMERGENCY
ACTION NOTIFICATION HAS
BEEN ISSUED FOR THE
FOLLOWING
COUNTIES/AREAS:
UNITED STATES
AT 12:53 PM
ON FEB 15, 2013
EFFECTIVE
UNTIL 1:09 PM.
MESSAGE FROM WAAA/FM.

MESSAGE ISSUED BY A
PRIMARY ENTRY POINT AND
TRANSMITTED
AT 12:54
ON FEB 15, 2013
BY WAAA/FM.

EAS PROTOCOL TEXT:
ZCZC-PEP-EAN-000000+0015
-0462053-WAAA/FM -

PRINTED ON FRIDAY
FEBRUARY 15, 2013 AT
12:54.

Decoder

Unit C

STATION KAAA_AM RECEIVE LOG MESSAGE:

A NATIONAL EMERGENCY ACTION NOTIFICATION HAS BEEN ISSUED FOR THE FOLLOWING COUNTIES/AREAS:

UNITED STATES

AT 12:53 PM

ON FEB 15, 2013

EFFECTIVE

UNTIL 1:08 PM.

MESSAGE FROM WAAA/FM.

MESSAGE ISSUED BY A PRIMARY ENTRY POINT AND RECEIVED

AT 12:54

ON FEB 15, 2013

FROM WAAA/FM

ON CHANNEL 1.

EAS PROTOCOL TEXT:

ZCZC-PEP-EAN-000000+0015-0462053-WAAA/FM -

EOM RECEIVED

PRINTED ON FRIDAY FEBRUARY 15, 2013 AT 12:56

114

Decoder

Unit C

STATION KAAA_AM TRANSMIT LOG MESSAGE:

A NATIONAL EMERGENCY ACTION NOTIFICATION HAS BEEN ISSUED FOR THE FOLLOWING COUNTIES/AREAS:

UNITED STATES

AT 12:53 PM

ON FEB 15, 2013

EFFECTIVE

UNTIL 1:08 PM.

MESSAGE FROM KAAA_AM.

MESSAGE ISSUED BY A PRIMARY ENTRY POINT AND TRANSMITTED

AT 12:54

ON FEB 15, 2013

BY KAAA_AM.

EAS PROTOCOL TEXT:

ZCZC-PEP-EAN-000000+0015-0462053-KAAA_AM -

PRINTED ON FRIDAY FEBRUARY 15, 2013 AT 12:56

5. EAS ENCODER/DECODER ENVIRONMENTAL COMPLIANCE TESTS

5.1 Encoder/Decoder Primary Supply Voltage Variation Verification

5.1.1 Test Objective

The objective of this test is to verify that both the encoder and decoder meet primary supply voltage variation requirements:

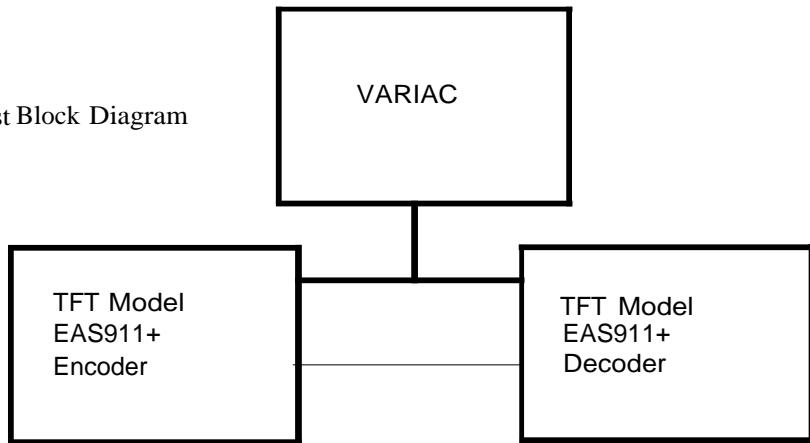
§11.32(c)

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.

§11.33(b)

Decoders shall be capable of operation within the tolerances specified in this section as well as those in §§ 11.32(b), (c), and (d).

5.1.2 Test Block Diagram



5.1.3 Test Methodology

The test message ZCZC-PEP-EAN-000000+0015-2491535-WAAA/FM- is sent through from the encoder to decoder through audio channel 1. Successful decode is verified at 102 VAC and 138 VAC.

The test message ZCZC -PEP-EAN-000000+0015-2491535-WAAA/FM - is sent through from the encoder to decoder through the standard protocol data channel. Successful decode is verified at 102 VAC, and 138 VAC.

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CERTIFIED REPORT OF MEASUREMENT FOR TFT, INC.

FCC PART 11 TESTING

TFT MODEL EAS911+

EAS-CAP

FCC ID: BIOEAS911PLUS

COMPLIANCE TEST NUMBER: 5.1 *Encoder/Decoder Primary Supply
Voltage Variation Verification*
COMPLIANCE TEST RESULTS - SEE THE FOLLOWING 6 PAGES.

audio Channel Test

S.C. 2/15/13

VAC = 102 VAC, 60 Hz

encoder audio channel

STATION WAAA_FM TRANSMIT LOG MESSAGE:

A NATIONAL EMERGENCY ACTION NOTIFICATION HAS BEEN ISSUED FOR THE FOLLOWING COUNTIES/AREAS:

UNITED STATES

AT 1:14 PM

ON FEB 15, 2013

EFFECTIVE

UNTIL 1:29 PM.

MESSAGE FROM WAAA_FM.

MESSAGE ISSUED BY A PRIMARY ENTRY POINT AND TRANSMITTED

AT 13:14

ON FEB 15, 2013

BY WAAA_FM.

EAS PROTOCOL TEXT:

ZCZC-PEP-EAN-000000+0015-0462114-WAAA_FM -

PRINTED ON FRIDAY FEBRUARY 15, 2013 AT 13:14

102 VAC, 60 Hz
Decoder audio channel

STATION KAAA_AM RECEIVE LOG MESSAGE:

A NATIONAL EMERGENCY ACTION NOTIFICATION HAS BEEN ISSUED FOR THE FOLLOWING COUNTIES/AREAS:
UNITED STATES
AT 1:14 PM
ON FEB 15, 2013
EFFECTIVE
UNTIL 1:29 PM.
MESSAGE FROM WAAA_FM.

MESSAGE ISSUED BY A PRIMARY ENTRY POINT AND RECEIVED
AT 13:15
ON FEB 15, 2013
FROM WAAA_FM
ON CHANNEL 1.

EAS PROTOCOL TEXT:
ZCZC-PEP-EAN-000000+0015-0462114-WAAA_FM -
EOM RECEIVED

PRINTED ON FRIDAY FEBRUARY 15, 2013 AT 13:15

VAC = 102 VAC, 60Hz
decoder audio channel

STATION KAAA_AM TRANSMIT LOG MESSAGE:

A NATIONAL EMERGENCY ACTION NOTIFICATION HAS BEEN ISSUED FOR THE FOLLOWING COUNTIES/AREAS:

UNITED STATES

AT 1:14 PM

ON FEB 15, 2013

EFFECTIVE

UNTIL 1:29 PM.

MESSAGE FROM KAAA_AM.

MESSAGE ISSUED BY A PRIMARY ENTRY POINT AND TRANSMITTED

AT 13:15

ON FEB 15, 2013

BY KAAA_AM.

EAS PROTOCOL TEXT:

ZCZC-PEP-EAN-000000+0015-0462114-KAAA_AM -

PRINTED ON FRIDAY FEBRUARY 15, 2013 AT 13:16

120

VAC = 138 VAC, 60 Hz
encoder audio channels

STATION WAAA_FM TRANSMIT LOG MESSAGE:

A NATIONAL EMERGENCY ACTION NOTIFICATION HAS BEEN ISSUED FOR THE FOLLOWING COUNTIES/AREAS:

UNITED STATES

AT 1:17 PM

ON FEB 15, 2013

EFFECTIVE

UNTIL 1:32 PM.

MESSAGE FROM WAAA_FM.

MESSAGE ISSUED BY A PRIMARY ENTRY POINT AND TRANSMITTED

AT 13:17

ON FEB 15, 2013

BY WAAA_FM.

EAS PROTOCOL TEXT:

ZCZC-PEP-EAN-000000+0015-0462117-WAAA_FM -

PRINTED ON FRIDAY FEBRUARY 15, 2013 AT 13:17

VAC = 138 VAC, 60 Hz
Encoder audio channel

STATION KAAA_AM RECEIVE LOG MESSAGE:

A NATIONAL EMERGENCY ACTION NOTIFICATION HAS BEEN ISSUED FOR THE FOLLOWING COUNTIES/AREAS:

UNITED STATES

AT 1:17 PM

ON FEB 15, 2013

EFFECTIVE

UNTIL 1:32 PM.

MESSAGE FROM WAAA_FM.

MESSAGE ISSUED BY A PRIMARY ENTRY POINT AND RECEIVED

AT 13:18

ON FEB 15, 2013

FROM WAAA_FM

ON CHANNEL 1.

EAS PROTOCOL TEXT:

ZCZC-PEP-EAN-000000+0015-0462117-WAAA_FM -

EOM RECEIVED

PRINTED ON FRIDAY FEBRUARY 15, 2013 AT 13:19

122

VAC = 138 VAC, 60 Hz

encoder, audio channel

STATION KAAA_AM TRANSMIT LOG MESSAGE:

A NATIONAL EMERGENCY ACTION NOTIFICATION HAS BEEN ISSUED FOR THE FOLLOWING COUNTIES/AREAS:

UNITED STATES

AT 1:17 PM

ON FEB 15, 2013

EFFECTIVE

UNTIL 1:32 PM.

MESSAGE FROM KAAA_AM.

MESSAGE ISSUED BY A PRIMARY ENTRY POINT AND TRANSMITTED

AT 13:18

ON FEB 15, 2013

BY KAAA_AM.

EAS PROTOCOL TEXT:

ZCZC-PEP-EAN-000000+0015-0462117-KAAA_AM -

PRINTED ON FRIDAY FEBRUARY 15, 2013 AT 13:19

123

CERTIFIED REPORT OF MEASUREMENT FOR TFT, INC.

FCC PART 11 TESTING

TFT MODEL EAS911+

EAS-CAP

FCC ID: BIOEAS911PLUS

COMPLIANCE TEST NUMBER: 5.1 Encoder/Decoder Primary Supply
Voltage Variation Verified

COMPLIANCE TEST RESULTS - SEE THE FOLLOWING 6 PAGES.

Data channel test

I. C. 9/19/12

124

VAC = 102 VAC, 60 Hz

Encoder Data channel test

STATION WAAA_FM TRANSMIT LOG MESSAGE:

A NATIONAL EMERGENCY ACTION NOTIFICATION HAS BEEN ISSUED FOR THE FOLLOWING COUNTIES/AREAS:

UNITED STATES

AT 1:20 PM

ON FEB 15, 2013

EFFECTIVE

UNTIL 1:35 PM.

MESSAGE FROM WAAA_FM.

MESSAGE ISSUED BY A PRIMARY ENTRY POINT AND TRANSMITTED

AT 13:20

ON FEB 15, 2013

BY WAAA_FM.

EAS PROTOCOL TEXT:

ZCZC-PEP-EAN-000000+0015-0462120-WAAA_FM -

PRINTED ON FRIDAY FEBRUARY 15, 2013 AT 13:20

125

VAC = 102 VAC, 60 HZ

Decoder Data channel test

STATION KAAA_AM RECEIVE LOG MESSAGE:

A NATIONAL EMERGENCY ACTION NOTIFICATION HAS BEEN ISSUED FOR THE FOLLOWING COUNTIES/AREAS:

UNITED STATES

AT 1:20 PM

ON FEB 15, 2013

EFFECTIVE

UNTIL 1:35 PM.

MESSAGE FROM WAAA_FM.

MESSAGE ISSUED BY A PRIMARY ENTRY POINT AND RECEIVED

AT 13:21

ON FEB 15, 2013

FROM WAAA_FM

ON CHANNEL D.

EAS PROTOCOL TEXT:

ZCZC-PEP-EAN-000000+0015-0462120-WAAA_FM -

EOM RECEIVED

PRINTED ON FRIDAY FEBRUARY 15, 2013 AT 13:22

126

VAC = 102 VAC, 60 Hz

Decoder Data Channel Test

STATION KAAA_AM TRANSMIT LOG MESSAGE:

A NATIONAL EMERGENCY ACTION NOTIFICATION HAS BEEN ISSUED FOR THE FOLLOWING COUNTIES/AREAS:

UNITED STATES

AT 1:20 PM

ON FEB 15, 2013

EFFECTIVE

UNTIL 1:35 PM.

MESSAGE FROM KAAA_AM.

MESSAGE ISSUED BY A PRIMARY ENTRY POINT AND TRANSMITTED

AT 13:21

ON FEB 15, 2013

BY KAAA_AM.

EAS PROTOCOL TEXT:

ZCZC-PEP-EAN-000000+0015-0462120-KAAA_AM -

PRINTED ON FRIDAY FEBRUARY 15, 2013 AT 13:22

127

VAC = 138 VAC, 60 Hz

Encoder. Data channel test

STATION WAAA_FM TRANSMIT LOG MESSAGE:

A NATIONAL EMERGENCY ACTION NOTIFICATION HAS BEEN ISSUED FOR THE FOLLOWING COUNTIES/AREAS:

UNITED STATES

AT 1:27 PM

ON FEB 15, 2013

EFFECTIVE

UNTIL 1:42 PM.

MESSAGE FROM WAAA_FM.

MESSAGE ISSUED BY A PRIMARY ENTRY POINT AND TRANSMITTED

AT 13:27

ON FEB 15, 2013

BY WAAA_FM.

EAS PROTOCOL TEXT:

ZCZC-PEP-EAN-000000+0015-0462127-WAAA_FM -

PRINTED ON FRIDAY FEBRUARY 15, 2013 AT 13:27

128

VAC = 138 VAC, 60 Hz

Decoder Data Channel Test

STATION KAAA_AM RECEIVE LOG MESSAGE:

A NATIONAL EMERGENCY ACTION NOTIFICATION HAS BEEN ISSUED FOR THE FOLLOWING COUNTIES/AREAS:

UNITED STATES

AT 1:27 PM

ON FEB 15, 2013

EFFECTIVE

UNTIL 1:42 PM.

MESSAGE FROM WAAA_FM.

MESSAGE ISSUED BY A PRIMARY ENTRY POINT AND RECEIVED

AT 13:28

ON FEB 15, 2013

FROM WAAA_FM

ON CHANNEL D.

EAS PROTOCOL TEXT:

ZCZC-PEP-EAN-000000+0015-0462127-WAAA_FM -

EOM RECEIVED

PRINTED ON FRIDAY FEBRUARY 15, 2013 AT 13:29

129