

VAC = 138 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 1:27 PM

ON FEB 15, 2013

EFFECTIVE

UNTIL 1:42 PM.

MESSAGE FROM KAAA_AM.

MESSAGE ISSUED BY A PRIMARY ENTRY POINT AND TRANSMITTED

AT 13:28

ON FEB 15, 2013

BY KAAA_AM.

EAS PROTOCOL TEXT:

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

PRINTED ON FRIDAY FEBRUARY 15, 2013 AT 13:29

130

5.2 Encoder/Decoder Operating Temperature and Humidity Verification

5.2.1 Test Objective

The objective of this test is to verify that both the encoder and decoder meet operating temperature and humidity requirements:

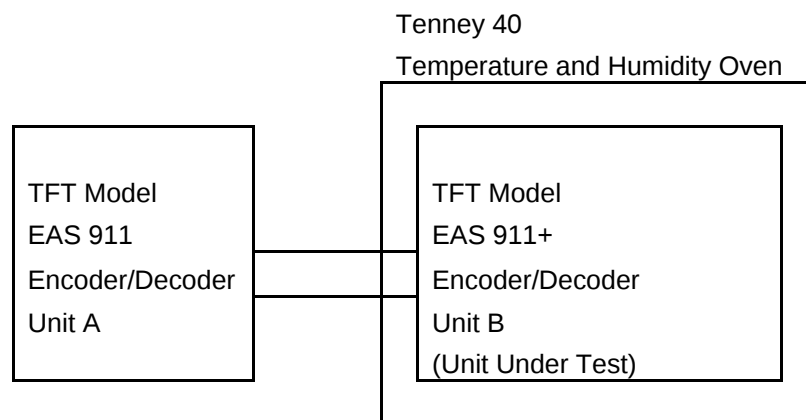
§11.32(b)

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%.

§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-EAN-EAN-000000+0015-2491518-WAAA/FM- is sent through from the encoder to decoder through audio channel 1. Successful decode is verified at 0 and 50 degrees C. Each test temperature is stabilized for 1 hour prior to running message transfer. Humidity was increased to 95% during 50 degree C test.

The test message ZCZC-EAN-EAN-000000+0015-2491518-WAAA/FM- is sent through from the encoder to decoder through the standard protocol data channel. Successful decode is verified at 0 and 50 degrees C. Each test temperature is stabilized for 1 hour prior to running message transfer. Humidity was increased to 95% during 50 degree C test.

Note: The purpose of the temperature and Humidity tests are to verify the Unit Under Test can actually operate normally under the test conditions. Although the originator code of EAN was used for the tests, it clearly demonstrated the 911+ can encode and decode properly. The use of another originator code would not affect the results of the temperature and humidity tests. Therefore we used the original data as tested.

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Temperature and Humidity oven
Test set up



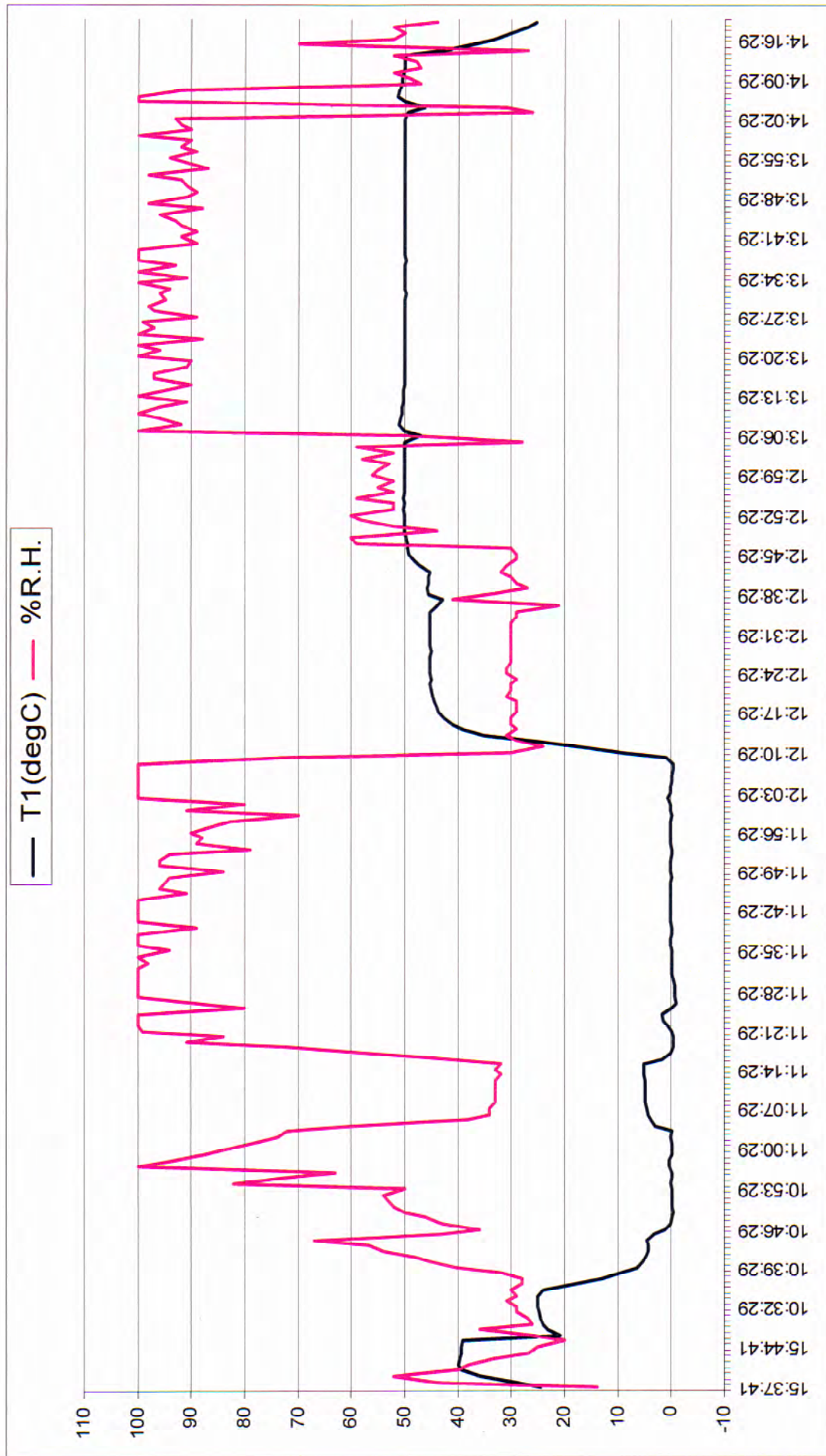
Temperature = 0°C
Relative Humidity = 98%



Temperature = 50.3°C
Relative Humidity = 95%



TEMPERATURE HUMIDITY TEST



JOB NO. : QL-13-0105

TEST IN THE CHAMBER 30

02-04-13

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

COMPLIANCE TEST NUMBER: 5.2 Encoder/Decoder Operating Temperature
and Humidity Verification
COMPLIANCE TEST RESULTS - SEE THE FOLLOWING 8 PAGES.

S.C.

0°C 98% Rel. Humid.

encoder Unit A

STATION TRANSMIT LOG:

THE EMERGENCY ACTION
NOTIFICATION NETWORK HAS
ISSUED A NATIONAL
EMERGENCY ACTION
NOTIFICATION FOR THE
FOLLOWING
COUNTRIES/AREAS:
UNITED STATES
AT 11:58 AM
ON FEB 4, 2013
EFFECTIVE
UNTIL 12:13 PM.

MESSAGE TRANSMITTED
AT 11:58
ON FEB 4, 2013
BY WAAA/FM.

EAS PROTOCOL TEXT:
ZCZC-EAN-EAN-000000+0015
-0351958-WAAA/FM -

PRINTED ON MONDAY
FEBRUARY 04, 2013 AT
11:58.

.....

0°C 98% Rel. Humid.
Decoder Unit B EAS 911+ (UUT)

STATION KAAA_AM RECEIVE LOG MESSAGE:

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

UNITED STATES

AT 11:58 AM

ON FEB 4, 2013

EFFECTIVE

UNTIL 12:13 PM.

MESSAGE RECEIVED

AT 11:58

ON FEB 4, 2013

FROM WAAA/FM

ON CHANNEL 1.

EAS PROTOCOL TEXT:

ZCZC-EAN-EAN-000000+0015-0351958-WAAA/FM -

PRINTED ON MONDAY FEBRUARY 04, 2013 AT 12:01

0°C 98% Rel. Humid.
Encoder Unit B EAS911+ (NUT)

STATION KAAA_AM TRANSMIT LOG MESSAGE:

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

UNITED STATES

AT 12:01 PM

ON FEB 4, 2013

EFFECTIVE

UNTIL 12:16 PM.

MESSAGE FROM KAAA_AM.

MESSAGE ISSUED BY A BROADCAST STATION OR CABLE SYSTEM AND TRANSMITTED

AT 12:01

ON FEB 4, 2013

BY KAAA_AM.

EAS PROTOCOL TEXT:

ZCZC-EAS-EAN-000000+0015-0352001-KAAA_AM -

PRINTED ON MONDAY FEBRUARY 04, 2013 AT 12:01

0°C 98% Rel. Humid.
Decoder Unit A

STATION RECEIVE LOG:

A NATIONAL EMERGENCY
ACTION NOTIFICATION HAS
BEEN ISSUED FOR THE
FOLLOWING

COUNTIES/AREAS:

UNITED STATES

AT 12:01 PM

ON FEB 4, 2013

EFFECTIVE

UNTIL 12:16 PM.

MESSAGE FROM KAAA-AM.

MESSAGE ISSUED BY A
BROADCAST STATION OR
CABLE SYSTEM AND
RECEIVED

AT 12:01

ON FEB 4, 2013

FROM KAAA-AM

ON CHANNEL 2.

EAS PROTOCOL TEXT:

ZCZC-EAS-EAN-000000+0015

-0352001-KAAA-AM -

PRINTED ON MONDAY
FEBRUARY 04, 2013 AT
12:01.

.....

50°C 95% Rel. Humid.

Encoder

Unit A

STATION TRANSMIT LOG:

THE EMERGENCY ACTION
NOTIFICATION NETWORK HAS
ISSUED A NATIONAL
EMERGENCY ACTION
NOTIFICATION FOR THE
FOLLOWING
COUNTIES/AREAS:
UNITED STATES
AT 2:01 PM
ON FEB 4, 2013
EFFECTIVE
UNTIL 2:16 PM.

MESSAGE TRANSMITTED
AT 14:01
ON FEB 4, 2013
BY WAAW/FM.

EAS PROTOCOL TEXT:
CC2C-EAN-EAN-000000-0015
--0352201-WAAW/FM -

PRINTED ON MONDAY
FEBRUARY 04, 2013 AT
14:21.

50°C 95% Rel. Humid.

decoder Unit B EAS 911 + (LUT)

STATION KAAA_AM RECEIVE LOG MESSAGE:

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

UNITED STATES

AT 2:01 PM

ON FEB 4, 2013

EFFECTIVE

UNTIL 2:16 PM.

MESSAGE RECEIVED

AT 14:01

ON FEB 4, 2013

FROM WAAA/FM

ON CHANNEL 1.

EAS PROTOCOL TEXT:

ZCZC-EAN-EAN-000000+0015-0352201-WAAA/FM -

PRINTED ON MONDAY FEBRUARY 04, 2013 AT 14:02

50°C 95% Rel. Humidity
Encoder Unit B EAS 911+ (LUT)

STATION KAAA_AM TRANSMIT LOG MESSAGE:

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

UNITED STATES

AT 2:02 PM

ON FEB 4, 2013

EFFECTIVE

UNTIL 2:17 PM.

MESSAGE FROM KAAA_AM.

MESSAGE ISSUED BY A BROADCAST STATION OR CABLE SYSTEM AND TRANSMITTED

AT 14:02

ON FEB 4, 2013

BY KAAA_AM.

EAS PROTOCOL TEXT:

ZCZC-EAS-EAN-000000+0015-0352202-KAAA_AM -

PRINTED ON MONDAY FEBRUARY 04, 2013 AT 14:03

50°C 95% Rel. Humid.

Decoder Unit A

STATION RECEIVE LOG:

A NATIONAL EMERGENCY
ACTION NOTIFICATION HAS
BEEN ISSUED FOR THE
FOLLOWING
COUNTIES/AREAS:
UNITED STATES
AT 2:02 PM
ON FEB 4, 2013
EFFECTIVE
UNTIL 2:17 PM.
MESSAGE FROM KRAALAM.

MESSAGE ISSUED BY A
BROADCAST STATION OR
CABLE SYSTEM AND
RECEIVED
AT 14:02
ON FEB 4, 2013
FROM KRAALAM
ON CHANNEL 2.

EAS PROTOCOL TEXT:
ZCZC-EAS-EAN-030000-0015
-030202-KRAALAM -

PRINTED ON MONDAY
FEBRUARY 04, 2013 AT
14:02.

5.3 Encoder/Decoder Electromagnetic Field Susceptibility Verification

5.3.1 Test Objective

The objective of this test is to verify that both the encoder and decoder meet electromagnetic field susceptibility requirements:

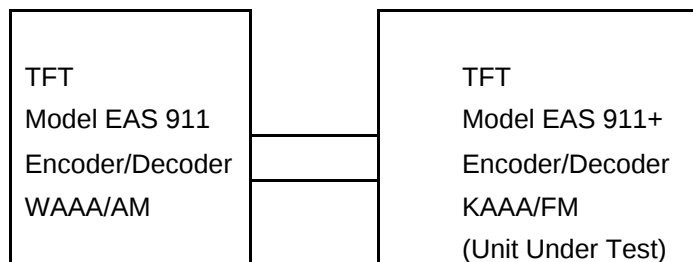
§11.32(d)

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(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).

5.3.2 Test Block Diagram



5.3.3 Test Methodology

The test message ZCZC-EAN-EAN-000000+0015-2941518-WAAA/FM - is sent through from the encoder to decoder through audio channel 1 using each device alternately as encoder or decoder for two sets of tests. Successful decode is verified at an AM broadcast transmission field site with RF field levels at or exceeding 10 V/m.

The test message ZCZC-EAN-EAN-000000+0015-2941518-WAAA/FM — is sent through from the encoder to decoder through audio channel 1 using each device alternately as encoder or decoder for two sets of tests. Successful decode is verified at an FM broadcast transmission field site with RF field levels at or exceeding 0.5 V/m.

The EAS911+ (unit under test) is identified as KAAA/AM. The EAS911 is identified as WAAA/FM.

Note: The purpose of the RF field tests are to verify the Unit Under Test can actually operate normally under the different RF environments. Although the originator code of EAN was used for the test, it clearly demonstrated the 911+ can encode and decode properly. The use of another originator code would not affect the results of the RF field tests. Therefore we used the original data as tested.

5.3.4 Test supporting documentation

5.3.4.1 Equipment Used

<u>Model Number & Description</u>	<u>Manufacturer</u>	<u>Serial Number</u>
EAS911+ Encoder/Decoder	TFT, Inc.	S/N E201 (unit under test)
EAS911 Encoder/Decoder	TFT, Inc.	S/N 10103709
FIM-41 AM Field Set	Potomac Instruments	411 (calibrated 8/16/10)
FIM-71 FM Field Set	Potomac Instruments	529 (calibrated 4/9/91)

5.3.4.2 AM Site

5.3.4.2.1 Site Data

KFAX 1100 kHz 50 kW DA1 U
 KTRB 860 kHz 50 kW DA
 Hayward CA
 37° 37' 56.00" N x 122° 07' 49.000W (NAD27)

5.3.4.2.2 AM Site Tower (1 of 4)



5.3.4.2.3 AM Site Doghouse Tower #1



5.3.4.2.4 AM Site Equipment Setup



5.3.4.2.5 AM Site FIM Close-Up (10 V/m/m field 1100 kHz)



5.3.4.2.6 AM Site Test Logs

5.3.4.2.6.1 EAS911 Encoder/EAS911+ Decoder

5.3.4.2.6.1.1 EAS911 Transmit Log of EAN

STATION TRANSMIT LOG:

THE EMERGENCY ACTION
NOTIFICATION NETWORK HAS
ISSUED A NATIONAL
EMERGENCY ACTION
NOTIFICATION FOR THE
FOLLOWING
COUNTIES/AREAS:
UNITED STATES
AT 2:51 PM
ON OCT 24, 2012
EFFECTIVE
UNTIL 3:06 PM.

MESSAGE TRANSMITTED
AT 14:51
ON OCT 24, 2012
BY WAAA/FM.

EAS PROTOCOL TEXT:
ZCZC-EAN-EAN-000000+0015
-2982151-WAAA/FM -

PRINTED ON WEDNESDAY
OCTOBER 24, 2012 AT
14:51.

5.3.4.2.6.1.2 EAS911+ Receipt Log of EAN

STATION KAAA_AM RECEIVE LOG MESSAGE:

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

UNITED STATES
AT 2:51 PM
ON OCT 24, 2012
EFFECTIVE
UNTIL 3:06 PM.

MESSAGE RECEIVED

AT 14:51
ON OCT 24, 2012
FROM WAAA/FM
ON CHANNEL 1.

EAS PROTOCOL TEXT:

ZCZC-EAN-EAN-000000+0015-2982151-WAAA/FM -

PRINTED ON WEDNESDAY OCTOBER 24, 2012 AT 14:52

5.3.4.2.6.1.3 EAS911+ Forward Log of EAN

STATION KAAA_AM TRANSMIT LOG MESSAGE:

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

UNITED STATES
AT 2:51 PM
ON OCT 24, 2012
EFFECTIVE
UNTIL 3:06 PM.

MESSAGE TRANSMITTED

AT 14:51
ON OCT 24, 2012
BY KAAA_AM.

EAS PROTOCOL TEXT:

ZCZC-EAN-EAN-000000+0015-2982151-KAAA_AM -

PRINTED ON WEDNESDAY OCTOBER 24, 2012 AT 14:52

5.3.4.2.6.1.4 EAS911+ Transmit Log of EAN

STATION KAAA_AM TRANSMIT LOG MESSAGE:

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

UNITED STATES
AT 2:53 PM
ON OCT 24, 2012
EFFECTIVE
UNTIL 3:08 PM.
MESSAGE FROM KAAA_AM.

MESSAGE ISSUED BY A BROADCAST STATION OR CABLE SYSTEM AND TRANSMITTED

AT 14:53
ON OCT 24, 2012
BY KAAA_AM.

EAS PROTOCOL TEXT:

ZCZC-EAS-EAN-000000+0015-2982153-KAAA_AM -

PRINTED ON WEDNESDAY OCTOBER 24, 2012 AT 14:54

5.3.4.2.6.1.5 EAS911 Receipt and Forward of EAN

STATION RECEIVE LOG:

A NATIONAL EMERGENCY
ACTION NOTIFICATION HAS
BEEN ISSUED FOR THE
FOLLOWING
COUNTIES/AREAS:
UNITED STATES
AT 2:53 PM
ON OCT 24, 2012
EFFECTIVE
UNTIL 3:00 PM.
MESSAGE FROM KAAA_AM.

MESSAGE ISSUED BY A
BROADCAST STATION OR
CABLE SYSTEM AND
RECEIVED
AT 14:53
ON OCT 24, 2012
FROM KAAA_AM
ON CHANNEL 2.

EAS PROTOCOL TEXT:
ZCZC-EAS-EAN-000000+0015
-2982153-KAAA_AM -

PRINTED ON WEDNESDAY
OCTOBER 24, 2012 AT
14:53.

.....

STATION TRANSMIT LOG:

A NATIONAL EMERGENCY
ACTION NOTIFICATION HAS
BEEN ISSUED FOR THE
FOLLOWING
COUNTIES/AREAS:
UNITED STATES
AT 2:53 PM
ON OCT 24, 2012
EFFECTIVE
UNTIL 3:00 PM.
MESSAGE FROM WAAA/FM.

MESSAGE ISSUED BY A
BROADCAST STATION OR
CABLE SYSTEM AND
TRANSMITTED
AT 14:53
ON OCT 24, 2012
BY WAAA/FM.

EAS PROTOCOL TEXT:
ZCZC-EAS-EAN-000000+0015
-2982153-WAAA/FM -

PRINTED ON WEDNESDAY
OCTOBER 24, 2012 AT
14:53.

.....

EOM RECEIVED
AT 14:54
ON OCT 24, 2012
ON CHANNEL 2.

PRINTED ON WEDNESDAY
OCTOBER 24, 2012 AT
14:54.

.....

5.3.4.3 FM Site

5.3.4.3.1 Site Data

KXSC 104.9 MHz 6.7 kW TPO 6.0 kW ERP
3903 Aborn Road, San Jose CA 95135
37° 19' 22.00"N x 121° 45' 15"W (NAD27)

5.3.4.3.2 Tower at FM Site



5.3.4.3.3 FM Site Equipment Setup



5.3.4.3.4 FM Site FIM-71 Meter Close-Up 104.9 MHz 0.5V/m/m



5.3.4.3.4.1 FM Site Logs

5.3.4.3.4.1.1 EAS911 Transmit Log of EAN

STATION TRANSMIT LOG:

THE EMERGENCY ACTION
NOTIFICATION NETWORK HAS
ISSUED A NATIONAL
EMERGENCY ACTION
NOTIFICATION FOR THE
FOLLOWING
COUNTIES/AREAS:
UNITED STATES
AT 12:22 PM
ON OCT 24, 2012
EFFECTIVE
UNTIL 12:37 PM.

MESSAGE TRANSMITTED
AT 12:22
ON OCT 24, 2012
BY WAAA/FM.

EAS PROTOCOL TEXT:
ZCZC-EAN-EAN-000000+0015
-2981922-WAAA/FM -

PRINTED ON WEDNESDAY
OCTOBER 24, 2012 AT
12:22.

.....

5.3.4.3.4.1.2 EAS911+ Receipt of EAN

STATION KAAA_AM RECEIVE LOG MESSAGE:

THE EMERGENCY ACTION NOTIFICATION NETWORK HAS ISSUED A NATIONAL EMERGENCY ACTION
NOTIFICATION FOR THE FOLLOWING COUNTIES/AREAS:
UNITED STATES
AT 12:22 PM
ON OCT 24, 2012
EFFECTIVE
UNTIL 12:37 PM.

MESSAGE RECEIVED
AT 12:22
ON OCT 24, 2012
FROM WAAA/FM
ON CHANNEL 1.

EAS PROTOCOL TEXT:
ZCZC-EAN-EAN-000000+0015-2981922-WAAA/FM -

PRINTED ON WEDNESDAY OCTOBER 24, 2012 AT 12:24

5.3.4.3.4.1.3 EAS911+ Forward of EAN

STATION KAAA_AM TRANSMIT LOG MESSAGE:

THE EMERGENCY ACTION NOTIFICATION NETWORK HAS ISSUED A NATIONAL EMERGENCY ACTION
NOTIFICATION FOR THE FOLLOWING COUNTIES/AREAS:
UNITED STATES
AT 12:22 PM
ON OCT 24, 2012
EFFECTIVE
UNTIL 12:37 PM.

MESSAGE TRANSMITTED
AT 12:22
ON OCT 24, 2012
BY KAAA_AM.

EAS PROTOCOL TEXT:
ZCZC-EAN-EAN-000000+0015-2981922-KAAA_AM -

PRINTED ON WEDNESDAY OCTOBER 24, 2012 AT 12:24

5.3.4.3.4.1.4 EAS911+ Transmit of EAN

STATION KAAA_AM TRANSMIT LOG MESSAGE:

A NATIONAL EMERGENCY ACTION NOTIFICATION HAS BEEN ISSUED FOR THE FOLLOWING
COUNTIES/AREAS:
UNITED STATES
AT 12:25 PM
ON OCT 24, 2012
EFFECTIVE
UNTIL 12:40 PM.
MESSAGE FROM KAAA_AM.

MESSAGE ISSUED BY A BROADCAST STATION OR CABLE SYSTEM AND TRANSMITTED
AT 12:25
ON OCT 24, 2012
BY KAAA_AM.

EAS PROTOCOL TEXT:
ZCZC-EAS-EAN-000000+0015-2981925-KAAA_AM -

PRINTED ON WEDNESDAY OCTOBER 24, 2012 AT 12:25

5.3.4.3.4.1.5 EAS911 Receipt and Forward of EAN

STATION RECEIVE LOG:

A NATIONAL EMERGENCY
ACTION NOTIFICATION HAS
BEEN ISSUED FOR THE
FOLLOWING
COUNTIES/AREAS:
UNITED STATES
AT 12:25 PM
ON OCT 24, 2012
EFFECTIVE
UNTIL 12:40 PM.
MESSAGE FROM KAAA_AM.

MESSAGE ISSUED BY A
BROADCAST STATION OR
CABLE SYSTEM AND
RECEIVED
AT 12:25
ON OCT 24, 2012
FROM KAAA_AM
ON CHANNEL 2.

EAS PROTOCOL TEXT:
ZCZC-EAS-EAN-000000+0015
-2981925-KAAA_AM -

PRINTED ON WEDNESDAY
OCTOBER 24, 2012 AT
12:25.

STATION TRANSMIT LOG:

A NATIONAL EMERGENCY
ACTION NOTIFICATION HAS
BEEN ISSUED FOR THE
FOLLOWING
COUNTIES/AREAS:
UNITED STATES
AT 12:25 PM
ON OCT 24, 2012
EFFECTIVE
UNTIL 12:40 PM.
MESSAGE FROM WAAA/FM.

MESSAGE ISSUED BY A
BROADCAST STATION OR
CABLE SYSTEM AND
TRANSMITTED
AT 12:25
ON OCT 24, 2012
BY WAAA/FM.

EAS PROTOCOL TEXT:
ZCZC-EAS-EAN-000000+0015
-2981925-WAAA/FM -

PRINTED ON WEDNESDAY
OCTOBER 24, 2012 AT
12:25.

EOM RECEIVED
AT 12:25
ON OCT 24, 2012
ON CHANNEL 2.

PRINTED ON WEDNESDAY
OCTOBER 24, 2012 AT
12:25.
