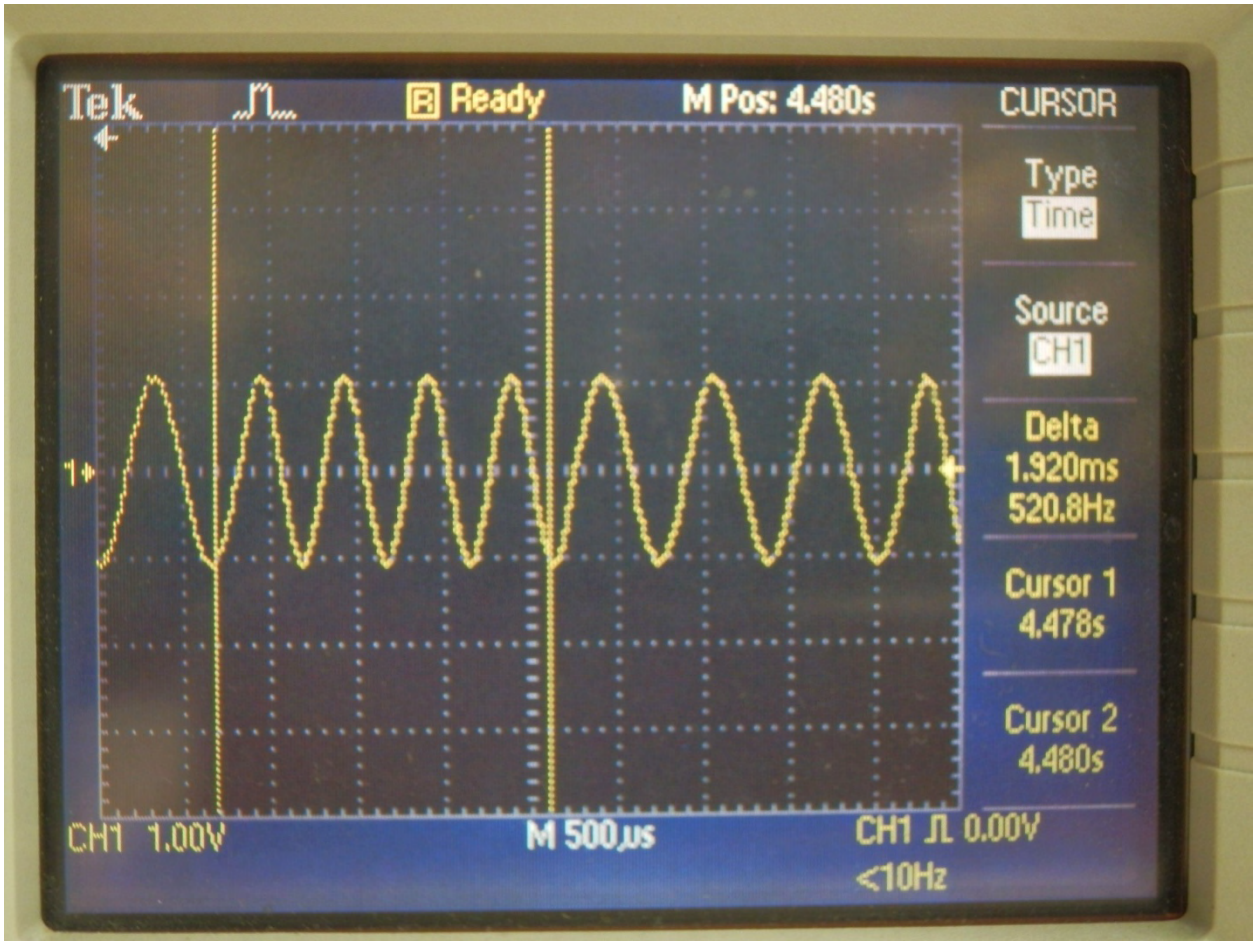
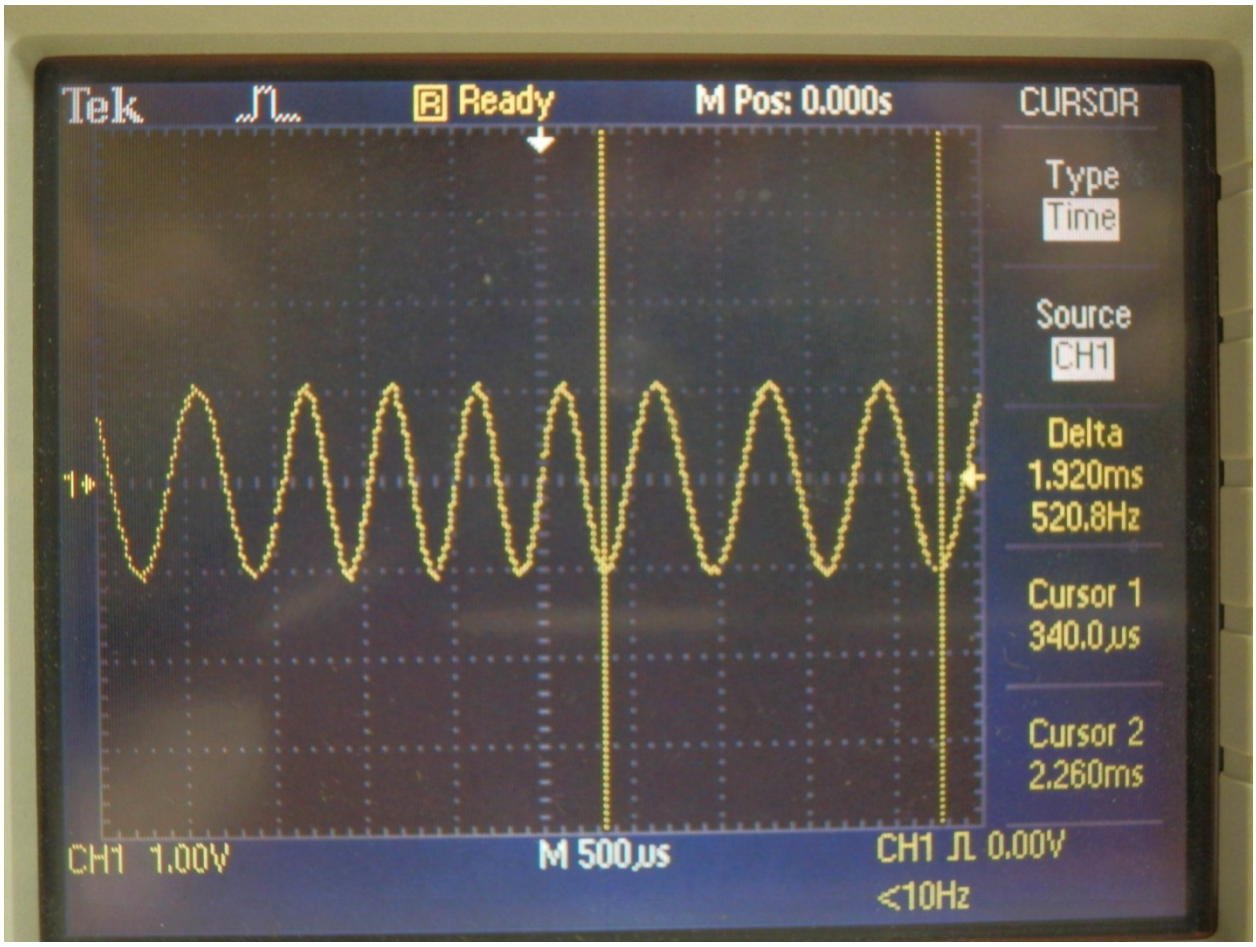


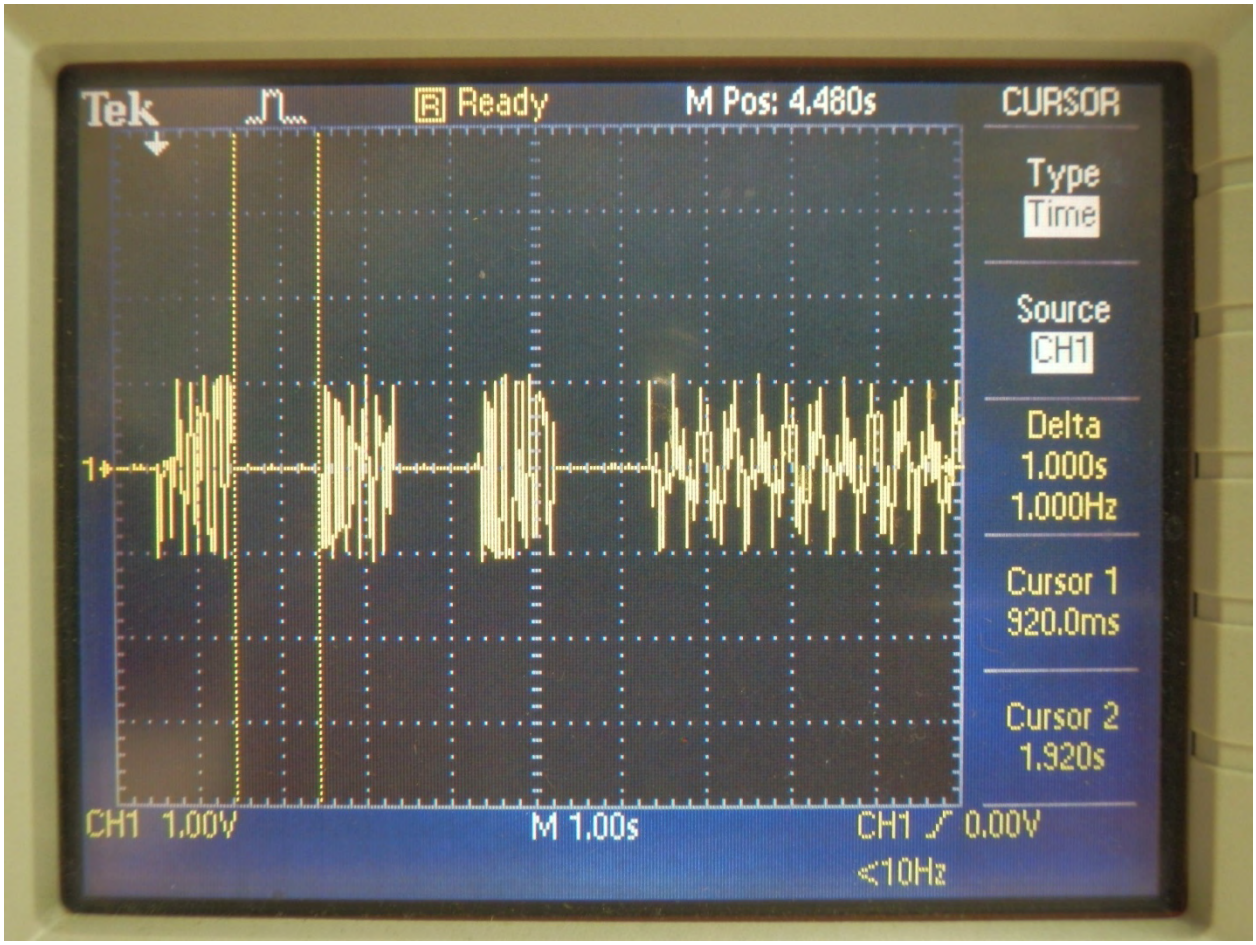
Mark Frequency 2083.2Hz (520.8Hz/cycle x4=2083.2Hz)

Bit Length = 1.92ms



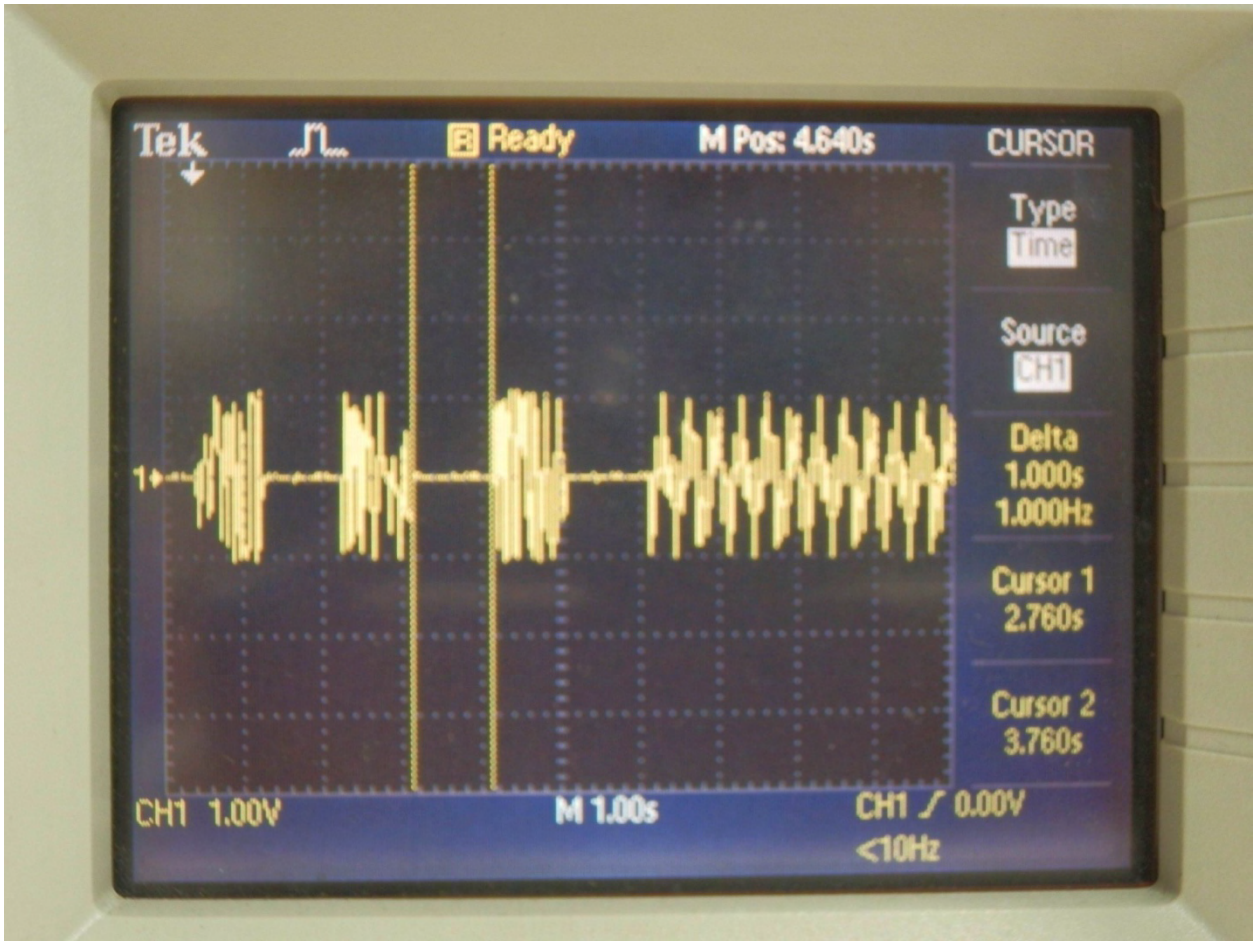
Space Frequency 1562.5 Hz (520.8Hz /cycle x3 cycles=1562.5Hz)

Bit Length = 1.92ms



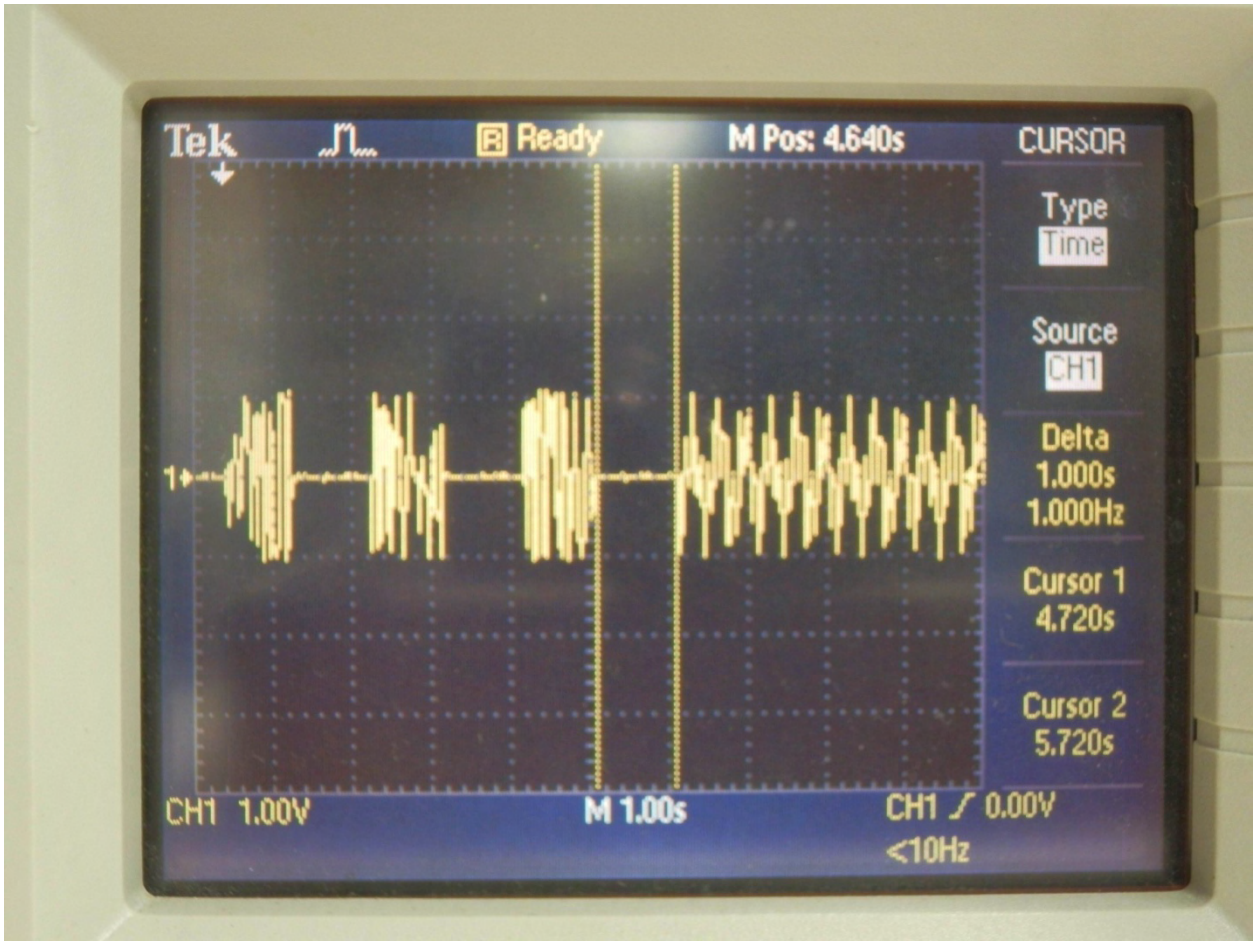
1ST Preamble Pause

1 Second Duration



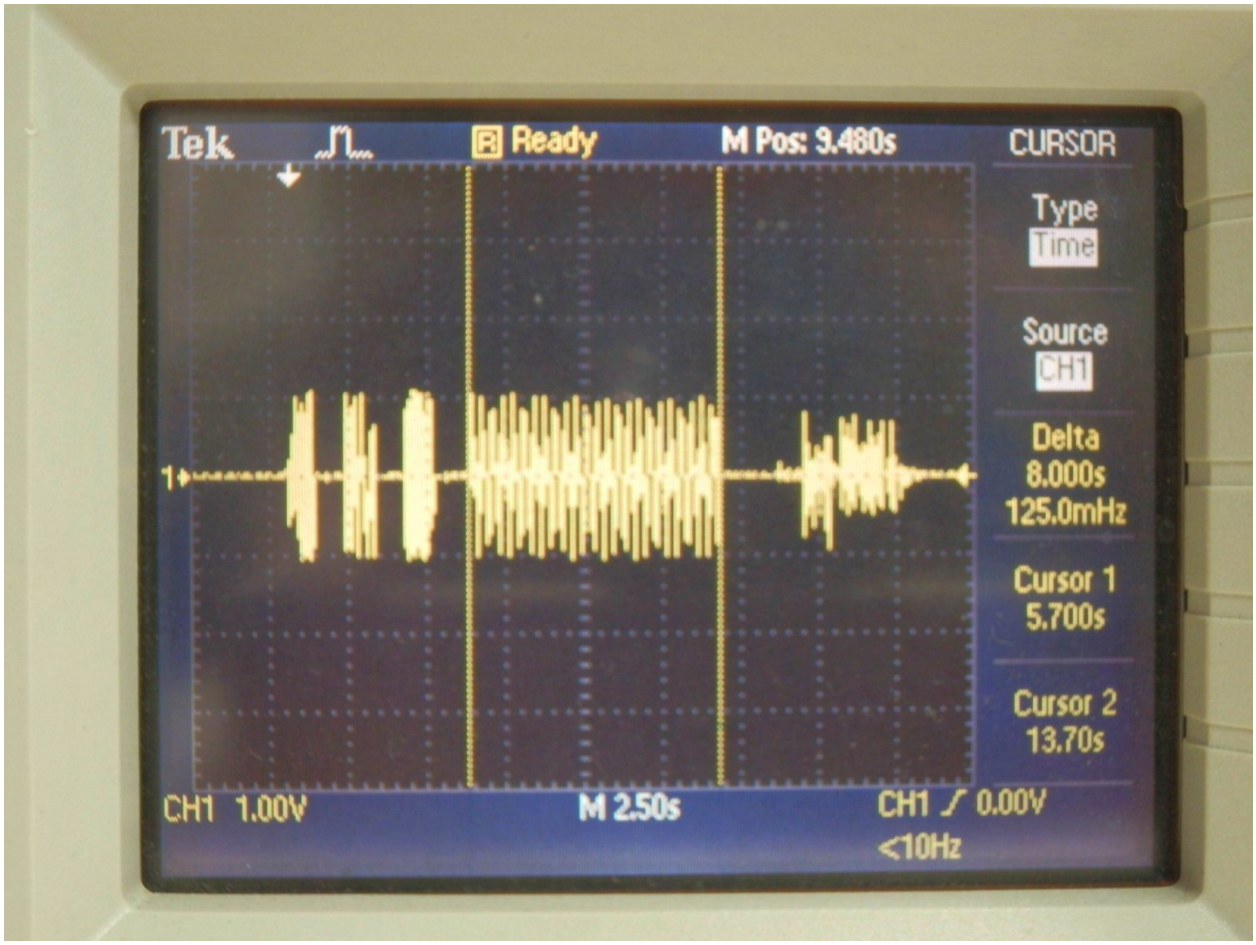
2nd Preamble Pause

1 second Duration



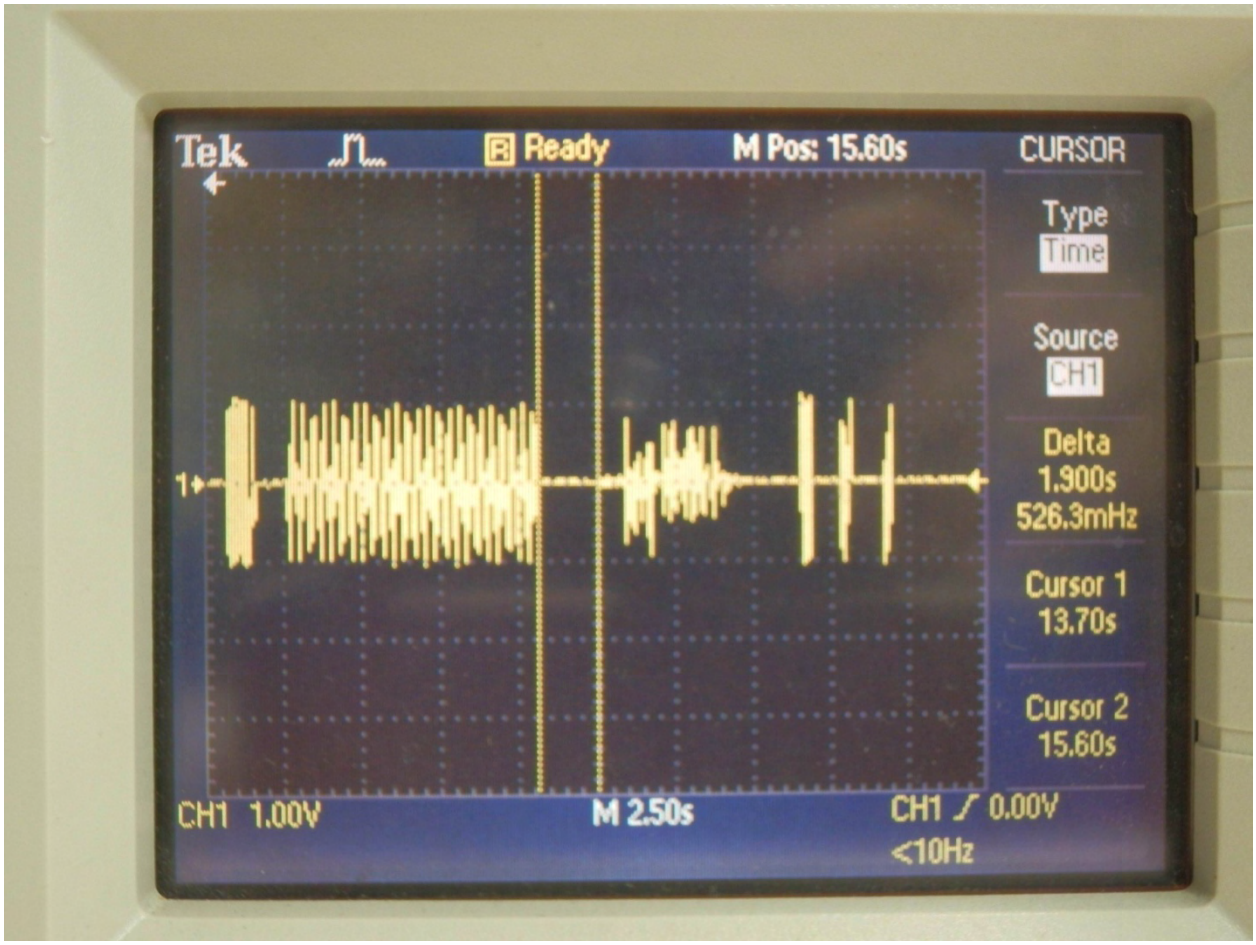
3rd Preamble Pause

1 Second Duration



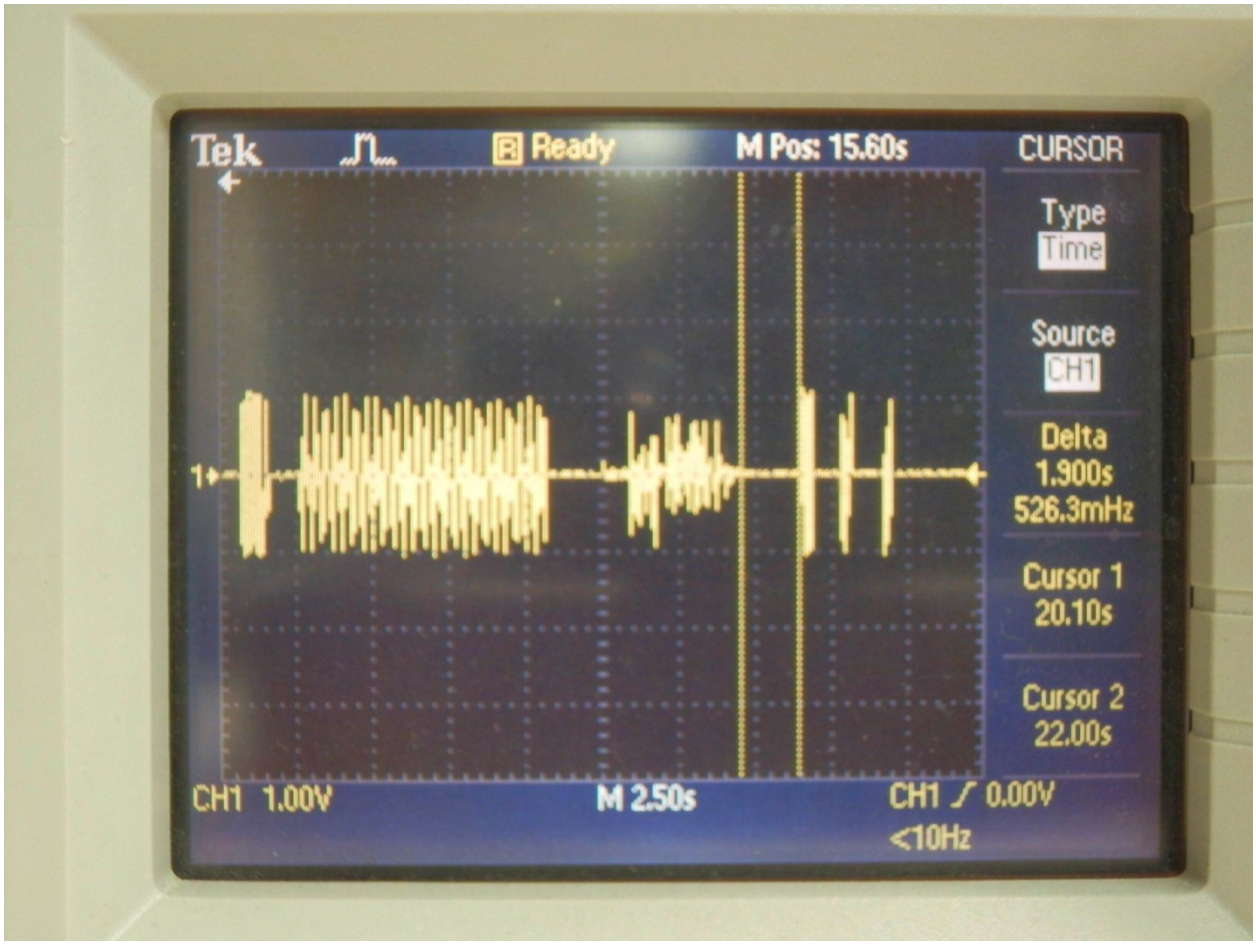
Attention Signal

8 Second Duration



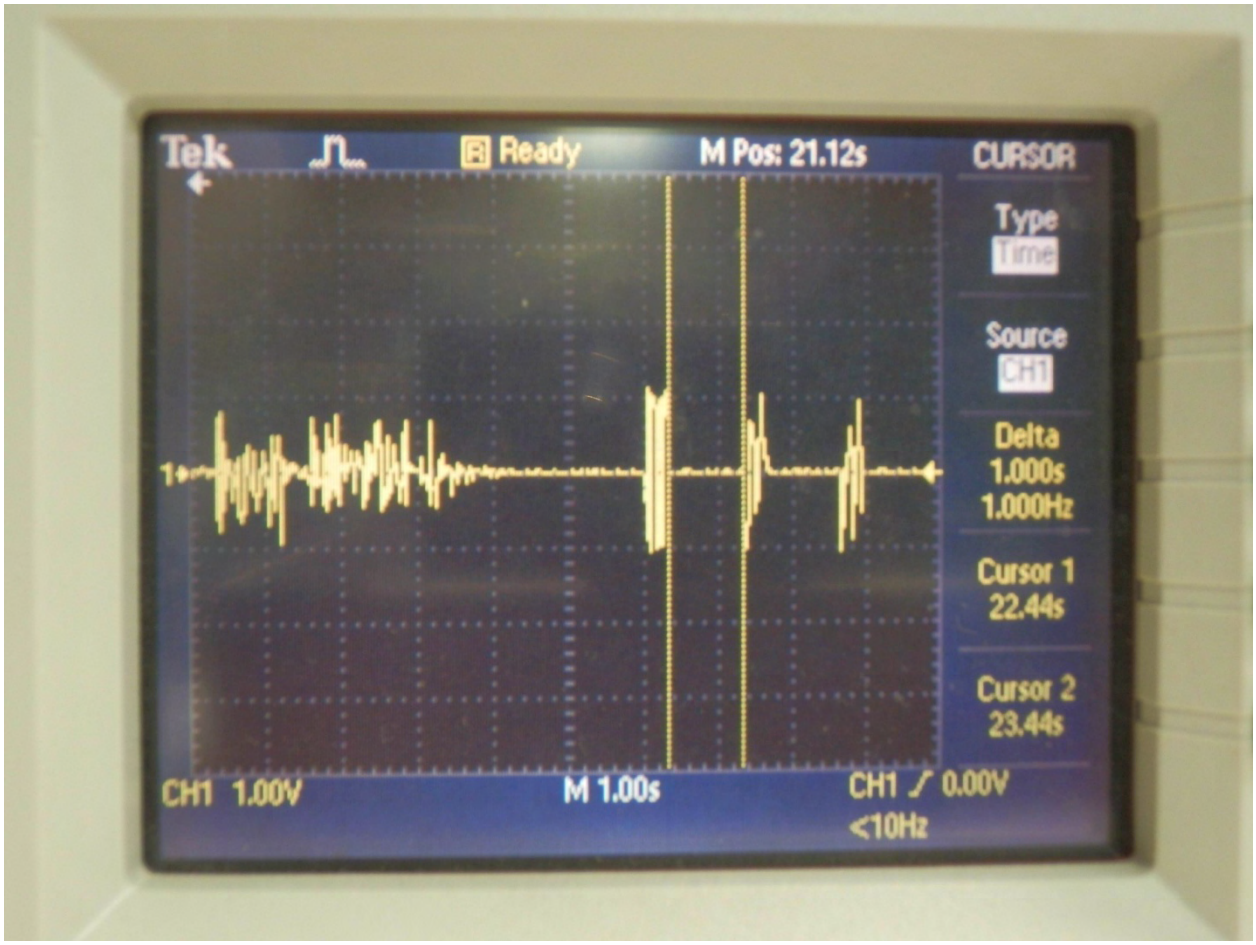
Post-Message Pause

1 Second Duration Minimum



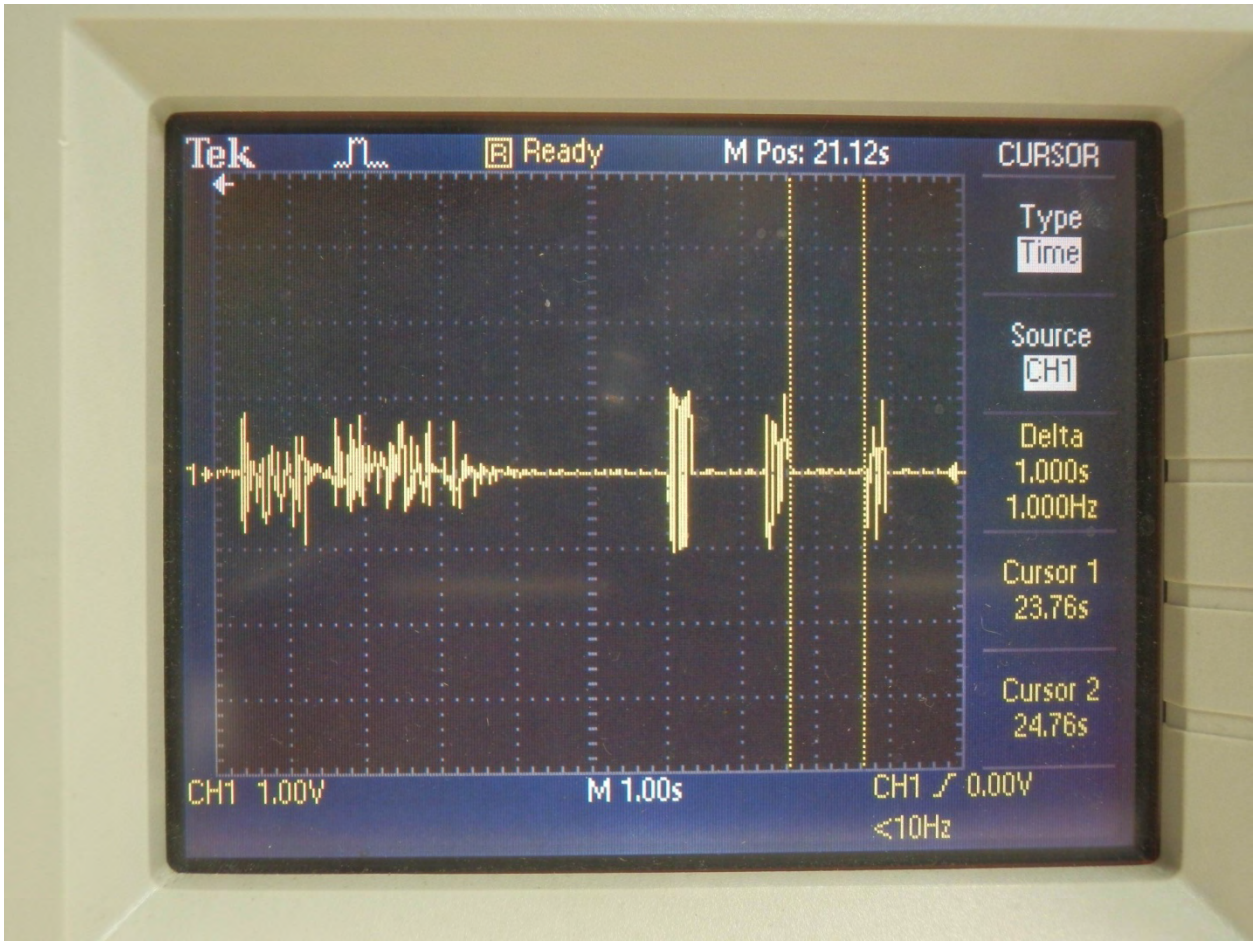
Post-Message before EOM

1 Second Duration Minimum



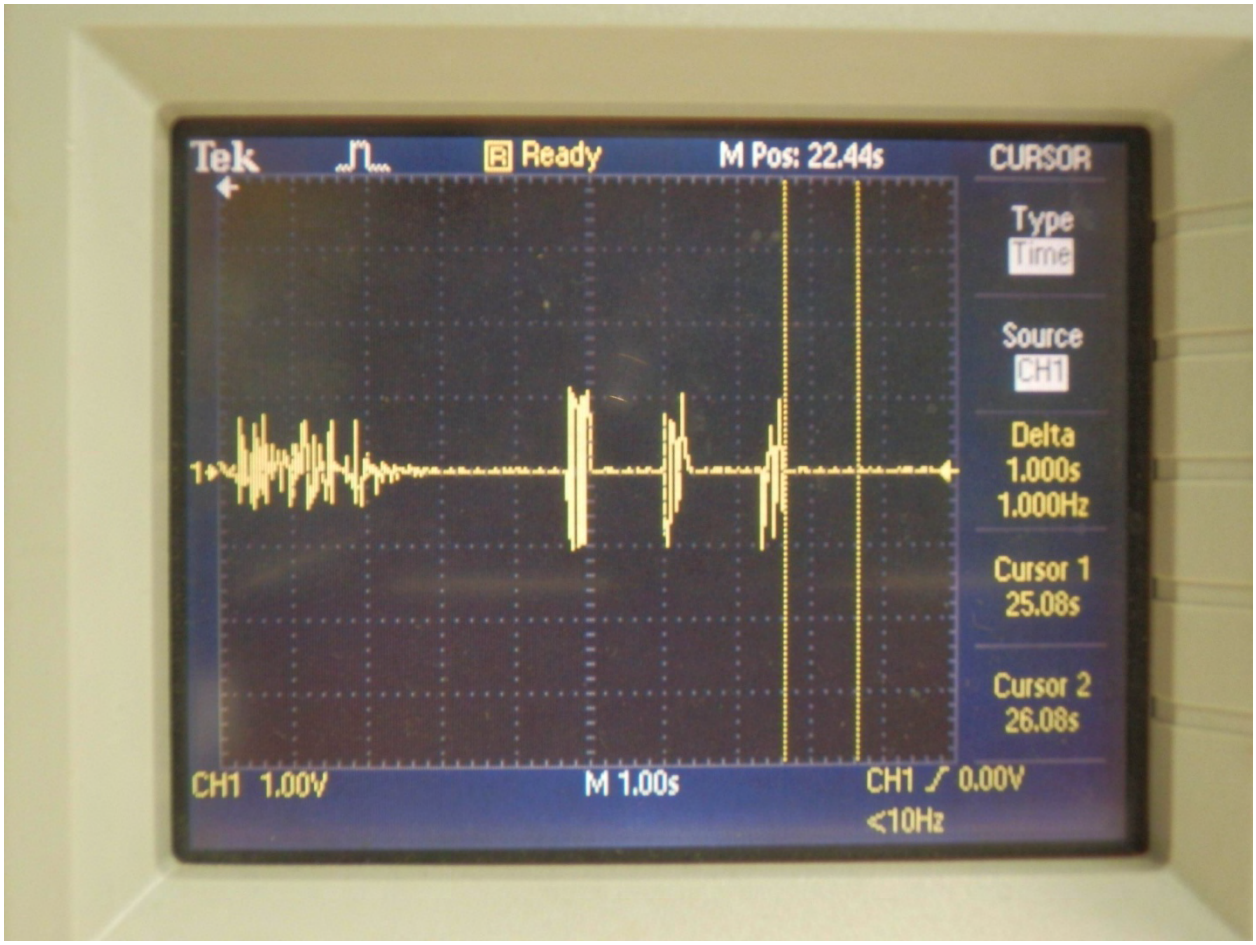
1st Post Message Preamble Pause

1 Second Duration



2nd Post Message Preamble Pause

1 Second Duration



3rd Post Message Preamble

1 Second Duration Minimum

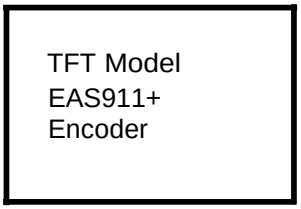
3.2 Encoder Programming Access Verification

3.2.1 Test Objective

The objective of this test is to verify encoder programming access:

> *§11.32(a)(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.*

3.2.2 Test Block Diagrams



3.2.3 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 changes require 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: 3.2

TEST DESCRIPTION: Encoder Programming Access Verification

DATE/TIME: 9/7/12 2:00pm

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

TEST SITE: TFT, San Jose CA

TEST EQUIPMENT: none

TEST METHODOLOGY: per 3.2.3 Verified "911" password to enter operation mode, and "912" password to enter setup mode which includes programming functions such as Originator, Event, and Location codes for encoding and decoder forwarding.

D.C.
9/7/12

3.3 Encoder Input Verification

3.3.1 Test Objective

The objective of this test is to verify encoder input compliance:

§11.32(a)(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).

3.3.2 Test Block Diagrams

3.3.3 Test Methodology

The test message ZCZC-PEP-EAN-WAAA/FM - is sent through from the encoder to decoder through audio channel 1. Successful decode is verified.

The test message ZCZC-PEP-EAN-WAAA/FM - is sent through from the encoder to decoder through audio channel 2. Successful decode is verified.

The test message ZCZC-PEP-EAN-WAAA/FM - is sent through from the encoder to decoder through the standard protocol data channel. Successful decode is verified.

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

COMPLIANCE TEST NUMBER: 33&34 Encoder Output Verification

COMPLIANCE TEST RESULTS - SEE THE FOLLOWING 9 PAGES.

D.C. 9/7/12

channel 1 Verification

encoder

STATION WAAA_FM TRANSMIT LOG MESSAGE:

A NATIONAL EMERGENCY ACTION NOTIFICATION HAS BEEN ISSUED FOR THE FOLLOWING COUNTIES/AREAS:
UNITED STATES
AT 8:00 AM
ON FEB 27, 2013
EFFECTIVE
UNTIL 8:15 AM.
MESSAGE FROM WAAA_FM.

MESSAGE ISSUED BY A PRIMARY ENTRY POINT AND TRANSMITTED
AT 8:00
ON FEB 27, 2013
BY WAAA_FM.

EAS PROTOCOL TEXT:
ZCZC-PEP-EAN-000000+0015-0581600-WAAA_FM -

PRINTED ON WEDNESDAY FEBRUARY 27, 2013 AT 08:01

channel 1 verification

decoder

STATION KAAA_AM RECEIVE LOG MESSAGE:

A NATIONAL EMERGENCY ACTION NOTIFICATION HAS BEEN ISSUED FOR THE FOLLOWING COUNTIES/AREAS:
UNITED STATES
AT 8:00 AM
ON FEB 27, 2013
EFFECTIVE
UNTIL 8:15 AM.
MESSAGE FROM WAAA_FM.

MESSAGE ISSUED BY A PRIMARY ENTRY POINT AND RECEIVED
AT 8:00
ON FEB 27, 2013
FROM WAAA_FM
ON CHANNEL 1.

EAS PROTOCOL TEXT:
ZCZC-PEP-EAN-000000+0015-0581600-WAAA_FM -

PRINTED ON WEDNESDAY FEBRUARY 27, 2013 AT 08:02

Channel 1 Verification

decoder

STATION KAAA_AM TRANSMIT LOG MESSAGE:

A NATIONAL EMERGENCY ACTION NOTIFICATION HAS BEEN ISSUED FOR THE FOLLOWING COUNTIES/AREAS:
UNITED STATES
AT 8:00 AM
ON FEB 27, 2013
EFFECTIVE
UNTIL 8:15 AM.
MESSAGE FROM KAAA_AM.

MESSAGE ISSUED BY A PRIMARY ENTRY POINT AND TRANSMITTED
AT 8:00
ON FEB 27, 2013
BY KAAA_AM.

EAS PROTOCOL TEXT:
ZCZC-PEP-EAN-000000+0015-0581600-KAAA_AM -

PRINTED ON WEDNESDAY FEBRUARY 27, 2013 AT 08:02

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Channel 2 Verification
Encoder

STATION WAAA_FM TRANSMIT LOG MESSAGE:

A NATIONAL EMERGENCY ACTION NOTIFICATION HAS BEEN ISSUED FOR THE FOLLOWING COUNTIES/AREAS:
UNITED STATES
AT 8:03 AM
ON FEB 27, 2013
EFFECTIVE
UNTIL 8:18 AM.
MESSAGE FROM WAAA_FM.

MESSAGE ISSUED BY A PRIMARY ENTRY POINT AND TRANSMITTED
AT 8:03
ON FEB 27, 2013
BY WAAA_FM.

EAS PROTOCOL TEXT:
ZCZC-PEP-EAN-000000+0015-0581603-WAAA_FM -

PRINTED ON WEDNESDAY FEBRUARY 27, 2013 AT 08:04

Channel 2 Verification

decoder

STATION KAAA_AM RECEIVE LOG MESSAGE:

A NATIONAL EMERGENCY ACTION NOTIFICATION HAS BEEN ISSUED FOR THE FOLLOWING
COUNTIES/AREAS:
UNITED STATES
AT 8:03 AM
ON FEB 27, 2013
EFFECTIVE
UNTIL 8:18 AM.
MESSAGE FROM WAAA_FM.

MESSAGE ISSUED BY A PRIMARY ENTRY POINT AND RECEIVED
AT 8:03
ON FEB 27, 2013
FROM WAAA_FM
ON CHANNEL 2.

EAS PROTOCOL TEXT:
ZCZC-PEP-EAN-000000+0015-0581603-WAAA_FM -
EOM RECEIVED

PRINTED ON WEDNESDAY FEBRUARY 27, 2013 AT 08:04

Channel 2 Verification decoder

STATION KAAA_AM TRANSMIT LOG MESSAGE:

A NATIONAL EMERGENCY ACTION NOTIFICATION HAS BEEN ISSUED FOR THE FOLLOWING COUNTIES/AREAS:
UNITED STATES
AT 8:03 AM
ON FEB 27, 2013
EFFECTIVE
UNTIL 8:18 AM.
MESSAGE FROM KAAA_AM.

MESSAGE ISSUED BY A PRIMARY ENTRY POINT AND TRANSMITTED
AT 8:03
ON FEB 27, 2013
BY KAAA_AM.

EAS PROTOCOL TEXT:
ZCZC-PEP-EAN-000000+0015-0581603-KAAA_AM -

PRINTED ON WEDNESDAY FEBRUARY 27, 2013 AT 08:04

Data Channel Verification
Encoders

RS232C 1200 Baud

STATION WAAA_FM TRANSMIT LOG MESSAGE:

A NATIONAL EMERGENCY ACTION NOTIFICATION HAS BEEN ISSUED FOR THE FOLLOWING
COUNTIES/AREAS:
UNITED STATES
AT 8:06 AM
ON FEB 27, 2013
EFFECTIVE
UNTIL 8:21 AM.
MESSAGE FROM WAAA_FM.

MESSAGE ISSUED BY A PRIMARY ENTRY POINT AND TRANSMITTED
AT 8:06
ON FEB 27, 2013
BY WAAA_FM.

EAS PROTOCOL TEXT:
ZCZC-PEP-EAN-000000+0015-0581606-WAAA_FM -

PRINTED ON WEDNESDAY, FEBRUARY 27, 2013 AT 08:07

62

Data Channel Verification Decoder) RS232 @ 1200 Baud

STATION KAAA_AM RECEIVE LOG MESSAGE:

A NATIONAL EMERGENCY ACTION NOTIFICATION HAS BEEN ISSUED FOR THE FOLLOWING
COUNTIES/AREAS:
UNITED STATES
AT 8:09 AM
ON FEB 27, 2013
EFFECTIVE
UNTIL 8:24 AM.
MESSAGE FROM WAAA_FM.

MESSAGE ISSUED BY A PRIMARY ENTRY POINT AND RECEIVED
AT 8:09
ON FEB 27, 2013
FROM WAAA_FM
ON CHANNEL D.

EAS PROTOCOL TEXT:
ZCZC-PEP-EAN-000000+0015-0581609-WAAA_FM -
EOM RECEIVED

PRINTED ON WEDNESDAY FEBRUARY 27, 2013 AT 08:07

Data channel verification
recorder RS232C 1200 Baud

STATION KAAA_AM TRANSMIT LOG MESSAGE:

A NATIONAL EMERGENCY ACTION NOTIFICATION HAS BEEN ISSUED FOR THE FOLLOWING
COUNTIES/AREAS:
UNITED STATES
AT 8:06 AM
ON FEB 27, 2013
EFFECTIVE
UNTIL 8:21 AM.
MESSAGE FROM KAAA_AM.

MESSAGE ISSUED BY A PRIMARY ENTRY POINT AND TRANSMITTED
AT 8:06
ON FEB 27, 2013
BY KAAA_AM.

EAS PROTOCOL TEXT:
ZCZC-PEP-EAN-000000+0015-0581606-KAAA_AM -

PRINTED ON WEDNESDAY FEBRUARY 27, 2013 AT 08:08

64

3.4 Encoder Output Verification

3.4.1 Test Objective

The objective of this test is to verify encoder output compliance:

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

3.4.2 Test Block Diagrams

3.4.3 Test Methodology

The test message ZCZC-PEP-EAN-WAAA/FM- is sent through from the encoder to decoder through audio channel 1. Successful decode is verified.

The test message ZCZC-PEP-EAN-WAAA/FM- is sent through from the encoder to decoder through audio channel 2. Successful decode is verified.

The test message ZCZC-PEP-EAN-WAAA/FM- is sent through from the encoder to decoder through the standard protocol data channel. Successful decode is verified.

Refer to Section 3.3 page 55 to page 64 for test data

3.5 Encoder Calibration Support Verification

3.5.1 Test Objective

The objective of this test is to verify encoder calibration support compliance:

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

§11.51(f):
. . . The minimum level of modulation for EAS codes, measured at peak modulation levels using the internal calibration output specified in §11.32(a)(4) of this part, shall modulate the transmitter at no less than 80% of full channel modulation limits. Measured at peak modulation levels, each of the Attention Signal tones shall be calibrated separately to modulate the transmitter at no less than 40%. These two calibrated modulation levels shall have values that are within 1 dB of each other.

3.5.2 Test Block Diagrams

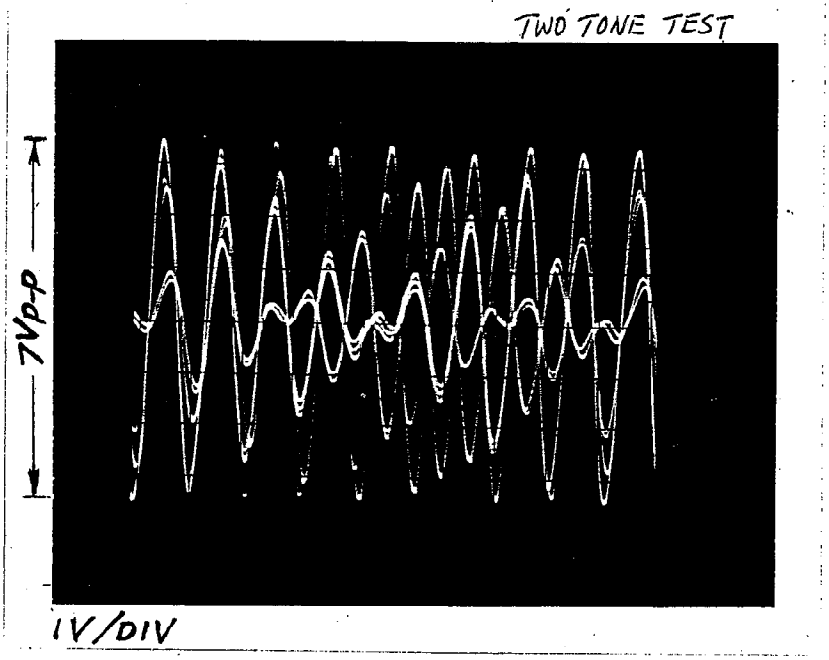
3.5.3 Test Methodology

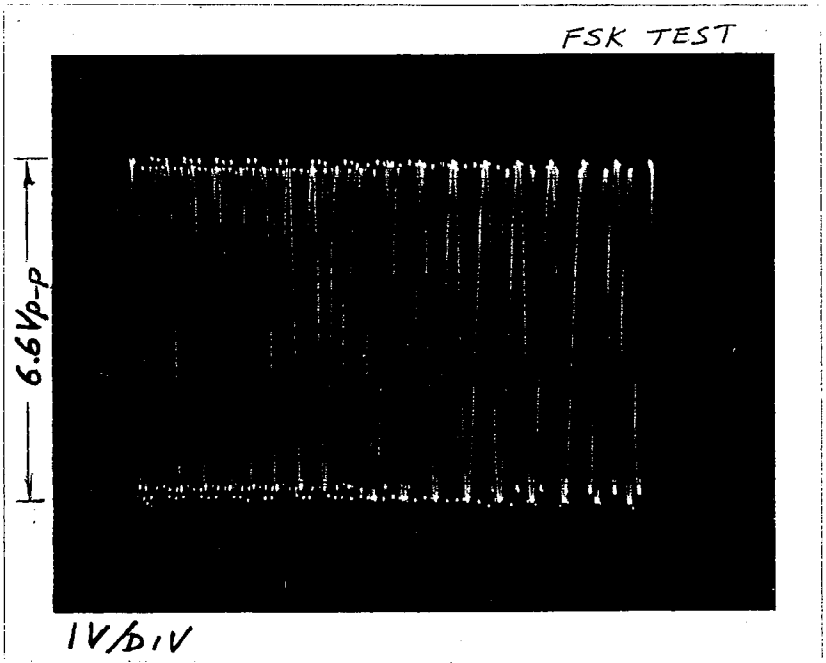
A steady two tone for system calibration is verified by accessing the test tone menu per the installation and operation manual.

Access to a steady alternating FSK mark-space pattern or a steady two tone for system calibration is verified by accessing the test tone menu per the installation and operation manual.

The peak to peak level of the FSK and two tone signals are verified to ge within 1 dB of each other using an oscilloscope.

3.5 Encoder calibration support verification





$20 \log \frac{7}{6.6} = 0.5\,dB$ Specification $\pm 1\,dB$

J.C. 9/11/12

3.6 Encoder Data Retention Verification

3.6.1 Test Objective

The objective of this test is to verify encoder data retention compliance:

§11.32(a)(6):
Program Data Retention. Program data and codes shall be retained even with the power removed.

3.6.2 Test Block Diagrams

3.6.3 Test Methodology

Data retention through power interruptions is verified by observing the last ten transmitted 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.

It is also verified that Event and Location definitions have not changed after 24 hours by inspection of the LCD.

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

COMPLIANCE TEST NUMBER: 3.6

TEST DESCRIPTION: Encoder Data Retention Verification

DATE/TIME: 8/28/2012

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

TEST SITE: TFT, San Jose CA

TEST EQUIPMENT: none

TEST METHODOLOGY: Prior EAS messages from 8/27/12 compared and matched per 3.6.3 method. Programmed locations all match. Time within one second of actual. Lithium battery backed clock. Receive and transmit logs stored in a solid state hard drive.

D.C. 8/28/12

3.7 Encoder Preamble Indicator Verification

3.7.1 Test Objective

The objective of this test is to verify encoder preamble indicator compliance:

> *§11.32(a)(7):*
> *Indicator. An aural or visible means that is activated when the Preamble is sent and deactivated at the End of Message code.*

3.7.2 Test Block Diagrams

3.7.3 Test Methodology

A preamble is entered and sent through the encoder. The SEND HDR button is touched. The speaker, the touch screen display and indicators are recorded. After the message is sent the SEND EOM button is touched and the same indicators response recorded.

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

COMPLIANCE TEST NUMBER: 3.7

TEST DESCRIPTION: Encoder Preamble 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: Performed methodology 3.7.3 and observed proper touch screen indicator response and speaker response.

J. C. 8/29/12

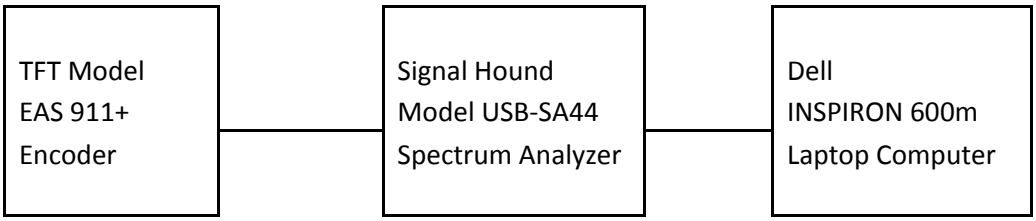
3.8 Encoder Spurious Response Verification

3.8.1 Test Objective

The objective of this test is to verify encoder spurious response compliance:

> *§11.32(a)(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.*

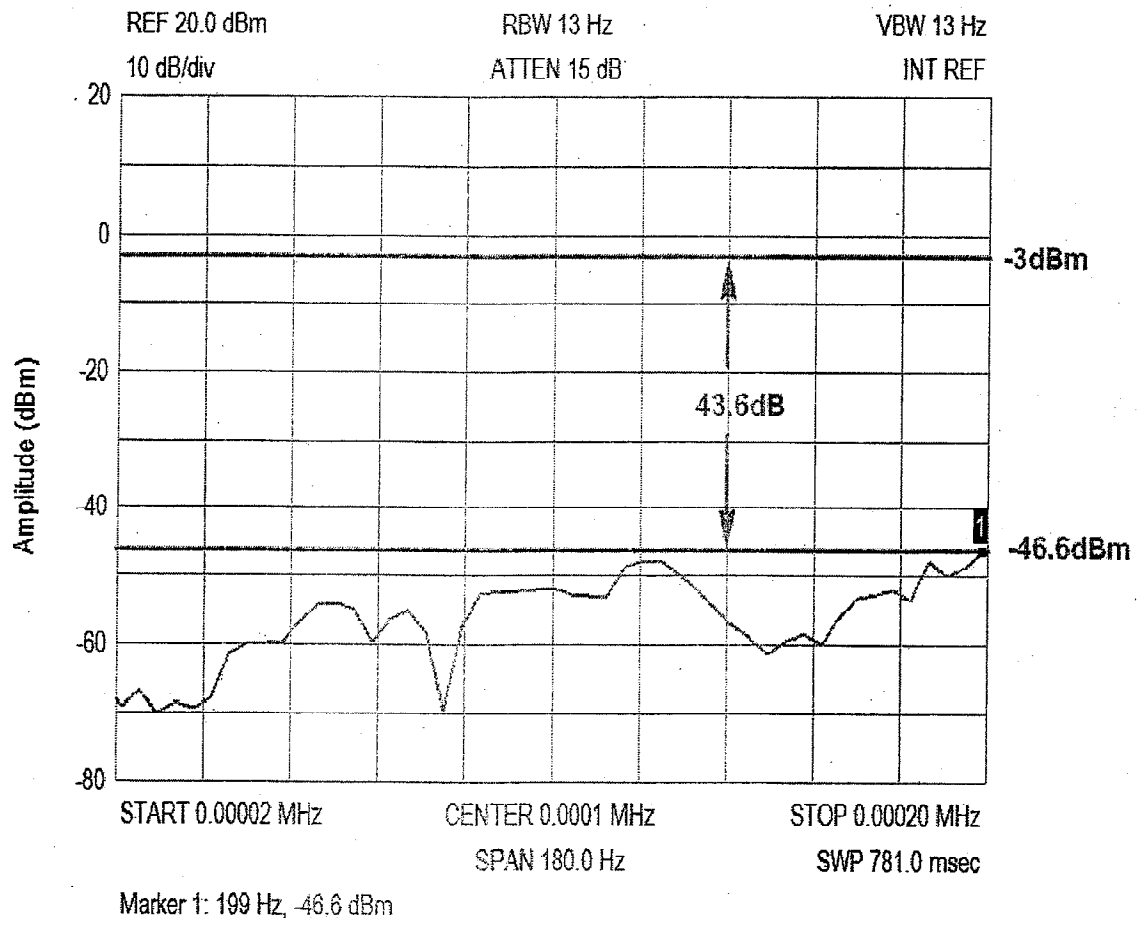
3.8.2 Test Block Diagrams



3.8.3 Test Methodology

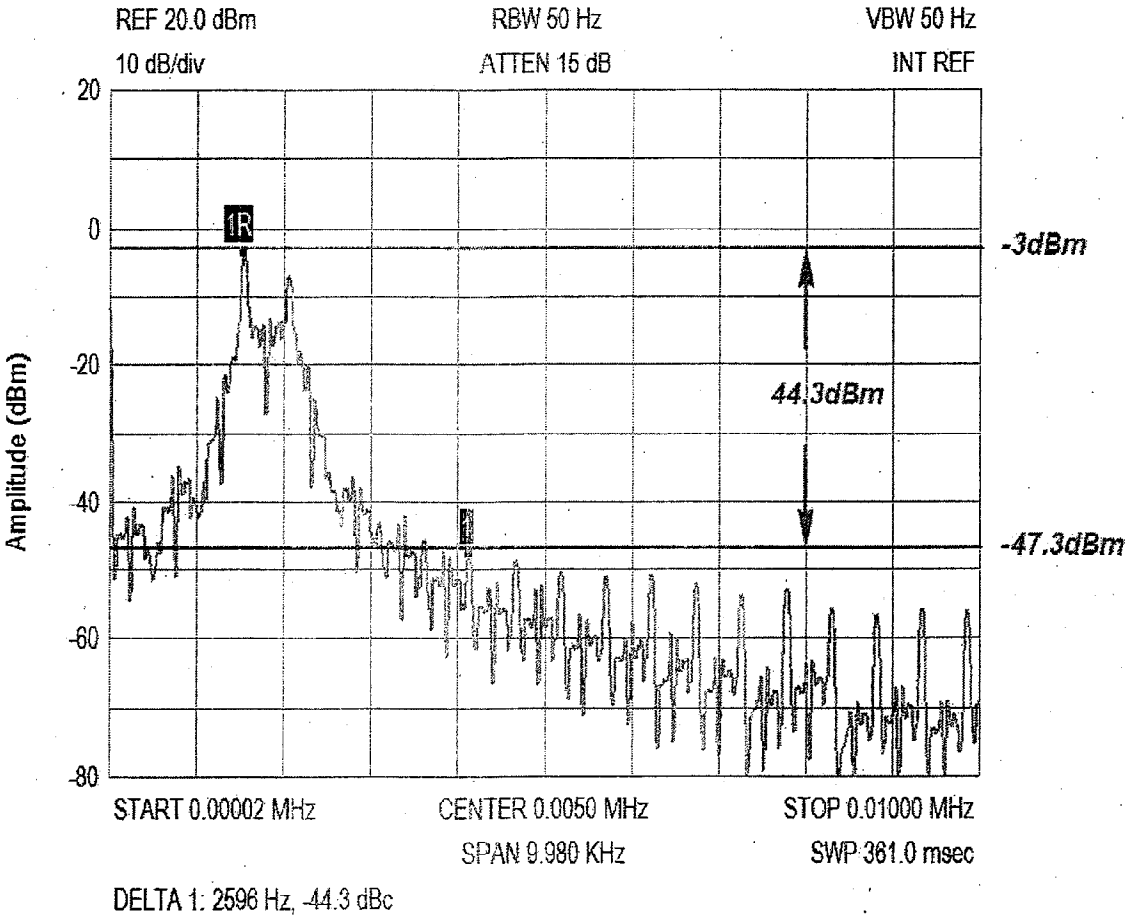
A Signal Hound Model USB-SA44 spectrum analyzer is connected to the audio output of the encoder. The spectrum analyzer is placed in the peak hold mode. The test message ZCZC-PEP-EAN-WAAA/FM - is sent and the final peak-hold spectrum is plotted and checked for compliance.

3.8 **Encoder Spurious Reponse Verification (*f < 200Hz)***



D.C. 2/15/13

3.8 **Encorder Spurius Response verification (f > 4000Hz)**



J.C. 2/15/13

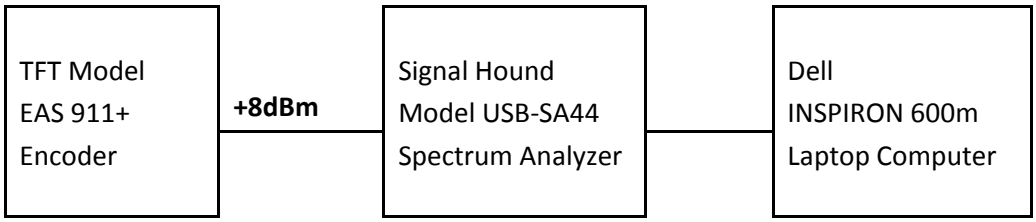
3.9 Encoder Attention Signal Verification

3.9.1 Test Objective

The objective of this test is to verify the encoder attention signal generator compliance:

§11.32(a)(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 960Hz 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 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.

3.9.2 Test Block Diagram



3.9.3 Test Methodology

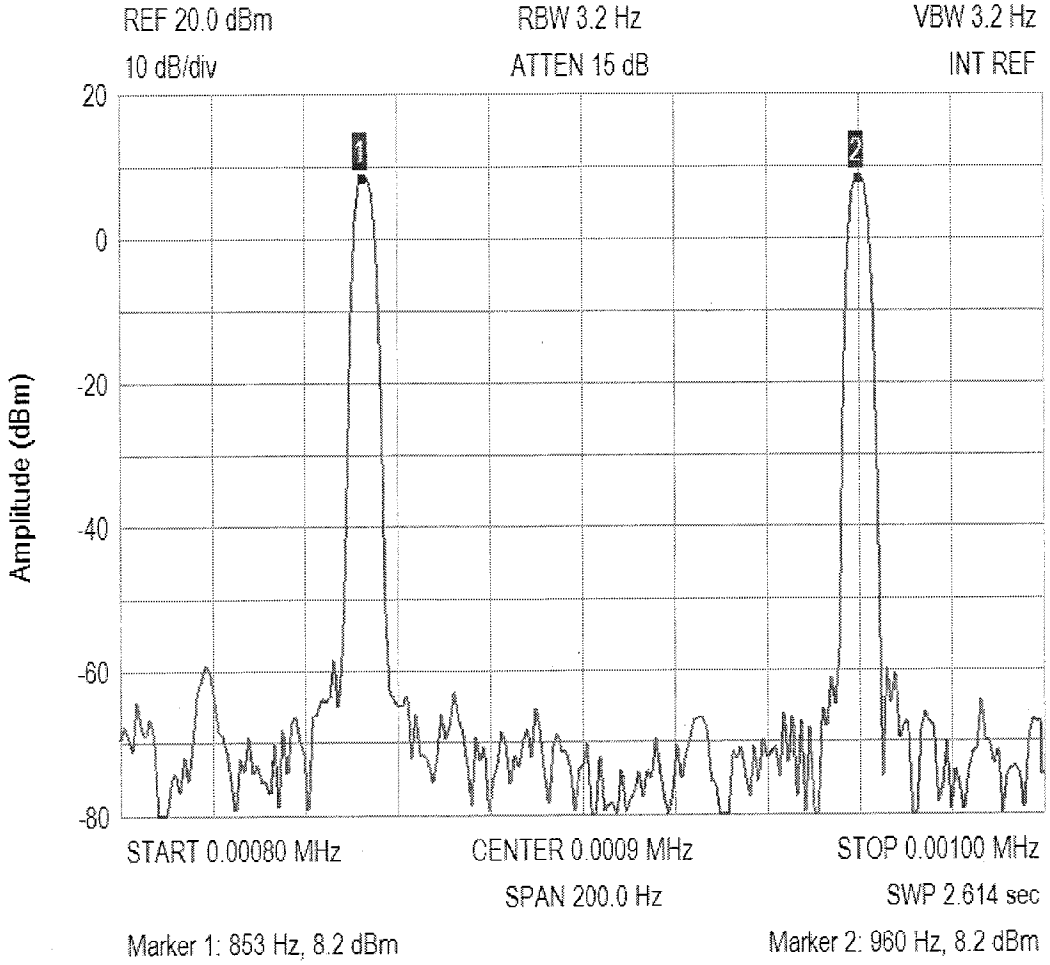
A Signal Hound Model USB-SD44 spectrum analyzer is connected to the audio output of the encoder. A Dell Laptop Model Inspiron 600M is connected to the spectrum analyzer to capture the audio output level, frequency accuracy and waveforms for distortion. The steady two tune signal is generated by access to the special test menu to generate test tones.

i. Frequency accuracy is **verified**.
ii. Harmonic distortion is **verified**.
iii. Minimum output level is **verified**.
iv. The time duration of two tone transmission in the header is verified by confirming the range of two tone duration selections as presented in the program menu. **verified**.
v. Inadvertent operation is verified by the use of password access in conjunction with a one minute inactivity timer that forces the re-entry of the password. **verified**.
vi. The yellow window in the bottom portion of the observed during the attention signal transmission for indication of two tone. **verified**.

3.9 Encoder attention signal Verification

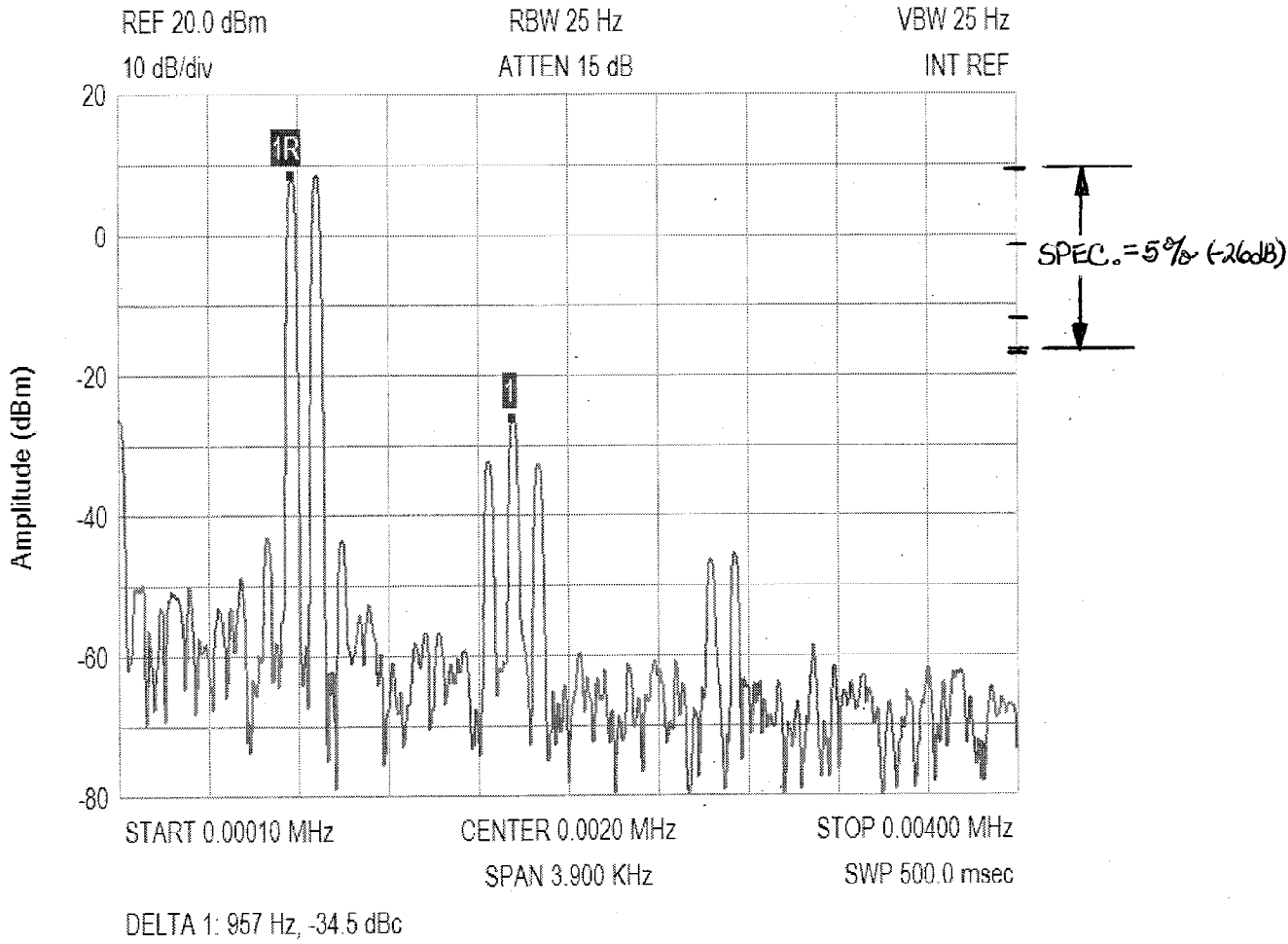
(i) ~~Frequency accuracy (853 ± 0.5 Hz, 960 ± 0.5 Hz)~~

(iii) Minimum Output level ≥ +8 dBm into 600 Ω load



3.9 Encoder Attention Signal Verification

(ii) Harmonic Distortion



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4.1 EAS Decoder Protocol Verification

4.1.1 Test Objective

The objective of this test is to verify decoding of the EAS protocol as described in §11.31as required in §11.33(a):

§11.33(a):
An EAS Decoder must at a minimum be capable of decoding the EAS protocol described in §11.31.

4.1.2 Test Block Diagrams

4.1.3 Test Methodology

This test consists of decoding the 10 example FCC EAS messages. The stimulus is on audio channel 1 using a TFT Model EAS911+ encoder. The response to a message is given in detail for all required devices as discussed in §11.33.

See 3.1 Test Results

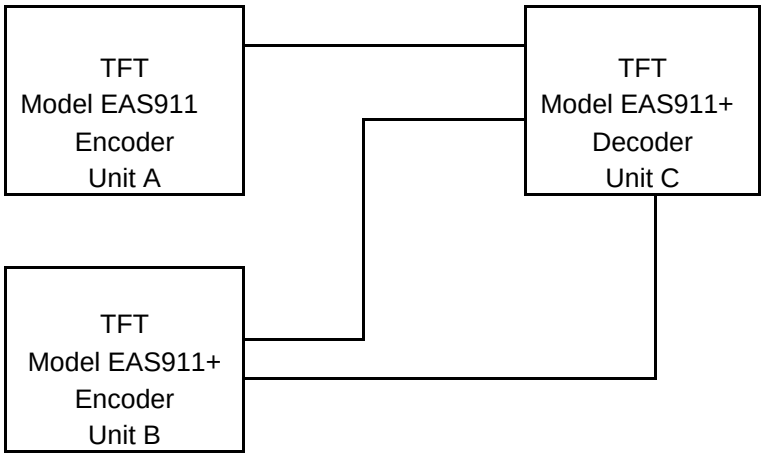
4.2 DECODER INPUT VERIFICATION

4.2.1. Test Objective

This test verifies the ability to decode three simultaneous incoming messages to demonstrate compliance with:

§ll.33(a)(l)
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 he 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.

4.2.2 Test Block Diagram



4.2.3 Test Methodology

Message are presented simultaneously on audio channel 1, audio channel 2; and the EAS protocol 1200 bps digital input channel. One EAS911 encoder sources audio channel 1 and one EAS911+ encoder sources the audio channel 2 and the EAS 1200 bps protocol RS-232C channel.

4.2. Verification of decode of three channel simultaneous input.

STIMULUS	EXPECTED RESPONSE	OBSERVED RESPONSE
Channel 1: [PREAMBLE] ZCZC-EAS-EAN-000000 +0015-2512217- WAAA/FM - (repeated two more times with 1 second pauses) 8 second two tone Channel 2: [PREAMBLE] ZCZC-WXR-TOR-000000 +0015-2512217- WBBB/FM - (repeated two more times with 1 second pauses) 8 second two tone Channel D: ZCZC-WXR-TOR-000000 +0015-2512217- WBBB/FM - (repeated two more times with 1 second pauses) 8 second two tone	Channel 1 indicator: ON while FSK transmitting. Channel 2 indicator: ON while data transmitting. Speaker: Open squelch to pass channel 1 after 2nd packet received and verified. Touch screen display: THE EMERGENCY ACTION NOTIFICATION NETWORK HAS ISSUED A NATIONAL EMERGENCY ACTION NOTIFICATION FOR THE FOLLOWING COUNTIES/AREAS: UNITED STATES AT 6:17 PM ON SEP 7, 2012 EFFECTIVE UNTIL 6:32 PM. MESSAGE RECEIVED AT 18:24 ON SEP 7, 2012 FROM WAAA/FM. ON CHANNEL 1. EAS PROTOCOL TEXT: ZCZC-EAN-EAN-000000+0015-2512217-WAAA/FM- MESSAGE WAITING key: Flashing. MESSAGE ALERT Relay: Activated after 2nd packet received and verified. ON-AIR Relay: Activated after 2nd packet received and verified. LEFT and RIGHT AUDIO OUTPUT: One second of silence after ON-AIR Relay activates, followed by: [PREAMBLE) ZCZC- EAN-EAN-000000+0015-2512217-KAAA/AM- (repeated two more times with 1 second pauses) 8 second two tone. Followed by patch through of CH1 audio.	Channel 1 indicator: √ Channel 2 indicator: √ Speaker: √ Touch screen display: √ MESSAGE WAITING key: Flashing MESSAGE ALERT Relay: √ ON-AIR Relay: √ LEFT and RIGHT PROGRAM AUDIO OUTPUT: √
Channel 1: [PREAMBLE]NNNN (repeated two more times with 1 second pauses) Channel 2: [PREAMBLE]NNNN Channel D: [PREAMBLE]NNNN	Channel 1 indicator: ON while FSK transmitting. Channel 2 indicator: ON while data transmitting. Speaker: Patch through of CH1 audio. OFF after first packet decoded. Touch screen display: Displays message and EOM RECEIVED. MESSAGE WAITING key: Remains Flashing. MESSAGE ALERT Relay: Deactivates after sending EOM. ON-AIR RELAY: Deactivates after sending EOM. LEFT and RIGHT PROGRAM AUDIO OUTPUT: Goes silent after sending EOM.	Channel 1 indicator: √ Channel 2 indicator: √ Speaker: √ Touch screen display: √ MESSAGE WAITING key LED: √ MESSAGE ALERT Relay: √ ON-AIR Relay: √ LEFT and RIGHT PROGRAM AUDIO OUTPUT: √

Note: 1. Local time is Eastern Standard Note 2. Local station is KAAA/AM.
Note: 3 Unit is in AUTO FORWARD mode

TESTED BY: J. C. DATE: 9/7/12

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

COMPLIANCE TEST NUMBER: 4.2 Decoder Input Verification

COMPLIANCE TEST RESULTS - SEE THE FOLLOWING 6 PAGES.

D.C. 9/7/12

Encoder Channel 1 Unit A

STATION TRANSMIT LOG:

A NATIONAL EMERGENCY
ACTION NOTIFICATION HAS
BEEN ISSUED FOR THE
FOLLOWING
COUNTIES/AREAS:
UNITED STATES
AT 12:55 PM
ON FEB 27, 2013
EFFECTIVE
UNTIL 1:10 PM.
MESSAGE FROM WAAA/FM.

MESSAGE ISSUED BY A
BROADCAST STATION OR
CABLE SYSTEM AND
TRANSMITTED
AT 12:55
ON FEB 27, 2013
BY WAAA/FM.

EAS PROTOCOL TEXT:
ZCZC-EAS-EAN-000000+0015
-0582055-WAAA/FM -

PRINTED ON WEDNESDAY
FEBRUARY 27, 2013 AT
12:55.

.....

decoder channel 1 unit C

STATION KAAA_AM RECEIVE LOG MESSAGE:

A NATIONAL EMERGENCY ACTION NOTIFICATION HAS BEEN ISSUED FOR THE FOLLOWING
COUNTIES/AREAS:
UNITED STATES
AT 12:55 PM
ON FEB 27, 2013
EFFECTIVE
UNTIL 1:10 PM.
MESSAGE FROM WAAA/FM.

MESSAGE ISSUED BY A BROADCAST STATION OR CABLE SYSTEM AND RECEIVED
AT 12:55
ON FEB 27, 2013
FROM WAAA/FM
ON CHANNEL 1.

EAS PROTOCOL TEXT:
ZCZC-EAS-EAN-000000+0015-0582055-WAAA/FM -
EOM RECEIVED

PRINTED ON WEDNESDAY FEBRUARY 27, 2013 AT 12:56

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Decoder Forward Unit C

STATION KAAA_AM TRANSMIT LOG MESSAGE:

A NATIONAL EMERGENCY ACTION NOTIFICATION HAS BEEN ISSUED FOR THE FOLLOWING COUNTIES/AREAS:
UNITED STATES
AT 12:55 PM
ON FEB 27, 2013
EFFECTIVE
UNTIL 1:10 PM.
MESSAGE FROM KAAA_AM.

MESSAGE ISSUED BY A BROADCAST STATION OR CABLE SYSTEM AND TRANSMITTED
AT 12:55
ON FEB 27, 2013
BY KAAA_AM.

EAS PROTOCOL TEXT:
ZCZC-EAS-EAN-000000+0015-0582055-KAAA_AM -

PRINTED ON WEDNESDAY FEBRUARY 27, 2013 AT 12:56

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Encoder Channel 2 Unit B

STATION WBBB_FM TRANSMIT LOG MESSAGE:

THE NATIONAL WEATHER SERVICE HAS ISSUED A TORNADO WARNING FOR THE FOLLOWING COUNTIES/AREAS:
UNITED STATES
AT 12:55 PM
ON FEB 27, 2013
EFFECTIVE
UNTIL 1:10 PM.

MESSAGE TRANSMITTED
AT 12:55
ON FEB 27, 2013
BY WBBB_FM.

EAS PROTOCOL TEXT:
ZCZC-WXR-TOR-000000+0015-0582055-WBBB_FM -

PRINTED ON WEDNESDAY FEBRUARY 27, 2013 AT 12:57

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Decoder Channel 2 Unit C

STATION KAAA_AM RECEIVE LOG MESSAGE:

THE NATIONAL WEATHER SERVICE HAS ISSUED A TORNADO WARNING FOR THE FOLLOWING COUNTIES/AREAS:
UNITED STATES
AT 12:55 PM
ON FEB 27, 2013
EFFECTIVE
UNTIL 1:10 PM.

MESSAGE RECEIVED
AT 12:55
ON FEB 27, 2013
FROM WBBB_FM
ON CHANNEL 2.

EAS PROTOCOL TEXT:
ZCZC-WXR-TOR-000000+0015-0582055-WBBB_FM -
EOM RECEIVED

PRINTED ON WEDNESDAY FEBRUARY 27, 2013 AT 12:57

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Decoder Data Channel Unit C

STATION KAAA_AM RECEIVE LOG MESSAGE:

DUPLICATE MESSAGE.

THE NATIONAL WEATHER SERVICE HAS ISSUED A TORNADO WARNING FOR THE FOLLOWING COUNTIES/AREAS:
UNITED STATES
AT 12:55 PM
ON FEB 27, 2013
EFFECTIVE
UNTIL 1:10 PM.

MESSAGE RECEIVED
AT 12:55
ON FEB 27, 2013
FROM WBBB_FM
ON CHANNEL D.

EAS PROTOCOL TEXT:
ZCZC-WXR-TOR-000000+0015-0582055-WBBB_FM -
EOM RECEIVED

PRINTED ON WEDNESDAY FEBRUARY 27, 2013 AT 12:57

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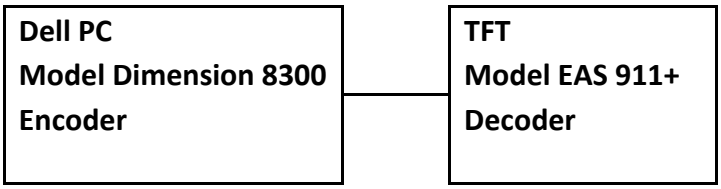
4.3A Decoder Valid Code Verification

4.3A.1 Test Objective

The objective of this test is to verify valid EAS header codes have been received in accordance with the following paragraphs:

> *§11.33(a)(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*
>
> *§11.33(a)(10)*
>
> *Message Validity. An EAS Decoder must provide error detection and validation of the header codes of each message to ascertain if the message is valid Header code comparisons may be accomplished through the use of a bit-by-bit compare or any other error detection and validation protocol. A header code must only be considered valid when two of the three headers match exactly.*

4.3A.2 Test Block Diagram



4.3A.3 Test Methodology

Eight special test headers are generated and sent from a Dell PC. These headers contain no errors, or single bit errors in one, two, or all three packets that compose an EAS header. One header containing 3 packets with no errors must pass, and three headers containing a single bit corruption must pass. Three headers containing two single bit corrupted packets should not pass, and one header containing three single bit corrupted packets should not pass.

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