KLEIN BROADCAST ENGINEERING, L.L.C.

dedicated to improving the science and technology of radio & television communications

ENGINEERING / EVALUATION
REPORT

EQUIPMENT PERFORMANCE MEASUREMENTS
FM RF PROOF OF PERFORMANCE

K O A S – F M 1
FM CHANNEL 289 C / 105.7 mHz.
HENDERSON, NEVADA
BOOSTER TRANSMISSION FACILITY
(FCC Facility ID# 132721)

INTRODUCTION and ENGINEERING STATEMENT

This Engineering Evaluation Report, RF Proof of Performance Measurements, was prepared in support of certification of the operations of the specified transmitting systems herein as being in compliance with 47 C.F.R. Section 73.1590 of the Rules and Regulations of the Federal Communications Commission and in compliance with 47 C.F.R. 73.317 of the Rules and Regulations of the Federal Communications Commission.

In the case of the KOAS-FM1 Transmission System, the measurement equipment was set up according to Good Engineering Practice. The calibration of the Tektronix 3408A Spectrum Analyzer was checked according to the manufacturer's instructions. The point of measurement in the system was a Shively Laboratories directional coupler at the output port of an Shively Labs 3/6, six section, Tee-Combiner.

The measurements were made with combined Station KVGS-FM1 operating into the combiner and common antenna at the same time as these measurements were taken.

EXHIBIT B

INTRODUCTION and ENGINEERING STATEMENT cont'd page two: KOAS-FM1

Measurements were made on the station's carrier frequency for reference purposes and to look at occupied bandwidth for any unusual spurious emission. The assigned carrier frequency reference level was recorded and photographed. All other harmonic, intermodulation product or spurious emission levels were referenced to this initial carrier frequency reference level. The radio spectrum from 50mHz. up to this station's 10^{th} carrier frequency harmonic was tuned to look for any unusual emissions. Any deviation from the FCC prescribed limits will be noted in this report.

The intermodulation products measured in this report were calculated as the common 2 X A –B = Intermodulation product. As in the case herein the carrier frequency of the station under test was multiplied times 2 and then the carrier frequency of each of the combined individual stations was subtracted one at a time from the 2X sum to find the common intermodulation product.

No unusual spurious emissions, carrier frequency harmonics or intermodulation products were noted on the Booster Station Transmission System for Station KOAS-FM1. Harmonic products were measured up to and including the 10^{th} order. The spectrum analyzer measurements were adjusted by a factor of -6dB per octave as prescribed by Good Engineering Practice. The measurement levels found in this report have been adjusted by this octave factor.

The input amplifiers of the spectrum analyzer were protected from overload by using a calibrated set of tunable band-pass filters that cover the radio spectrum from 50mHz to 1.4gHz. This practice prevents level compression and false readings from occurring by keeping the input amplifiers of the spectrum analyzer in their linear range of operation. This measurement set up is common to Good Engineering Standards and Practice. All cables used in the test set up were RG-223 or RG-400 double shielded coaxial cables to insure no stray fields were induced into the measurement cables.

Unless otherwise noted the FM transmission system under test and documented in this report complied with all the provisions of 47 C.F.R. Section 73.317 of the Rules and Regulations of the Federal Communications Commission.

The measurements found herein were made on August 3, 2009 between the hours of 7:50pm P.D.T. and 10:45pm P.D.T.

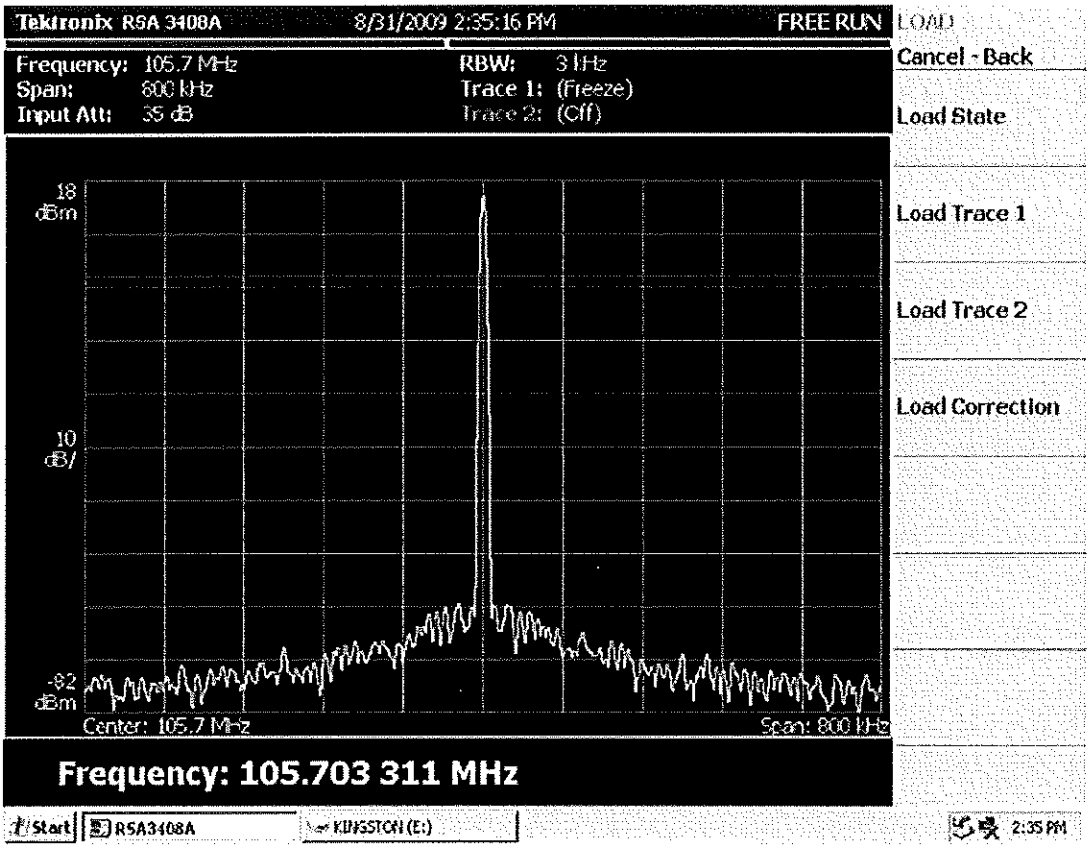
Respectfully submitted,

Elliott Kurt Klein,
Consulting Broadcast Engineer

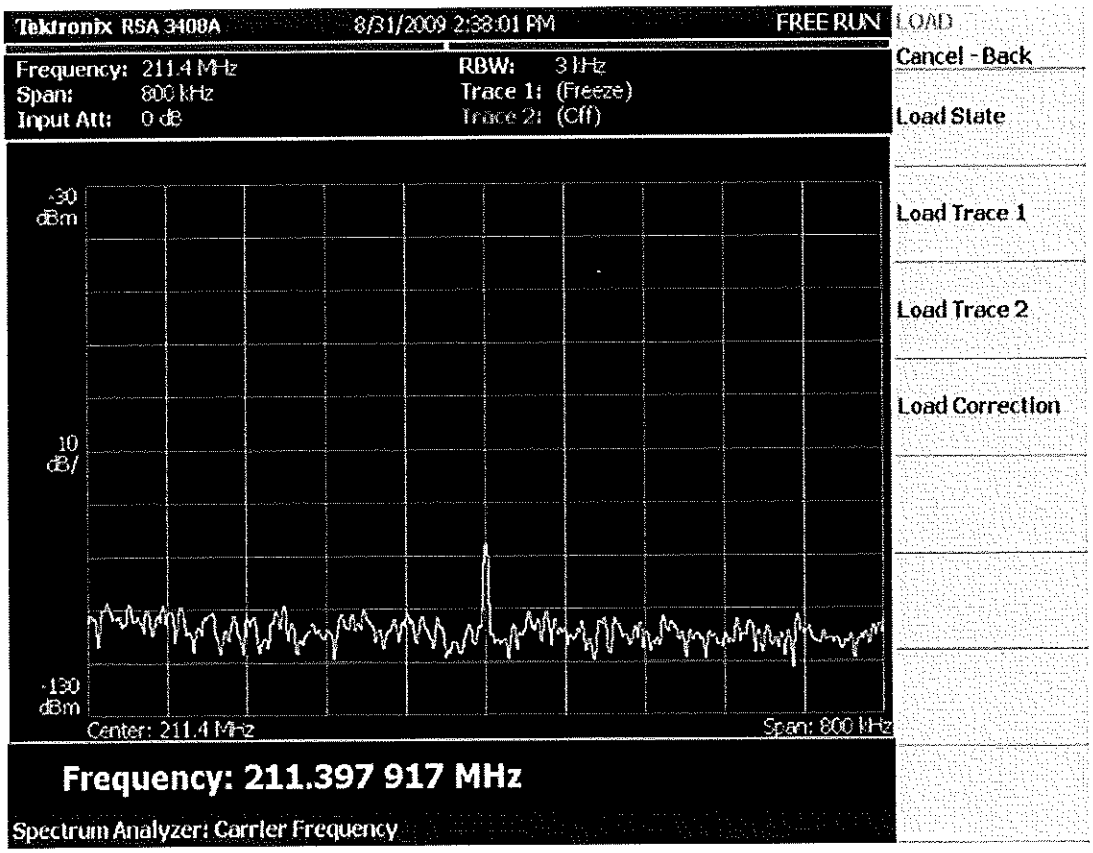
01 September 2009

TABLE of READINGS and SPECTRUM ANALYZER PHOTOGRAPHS

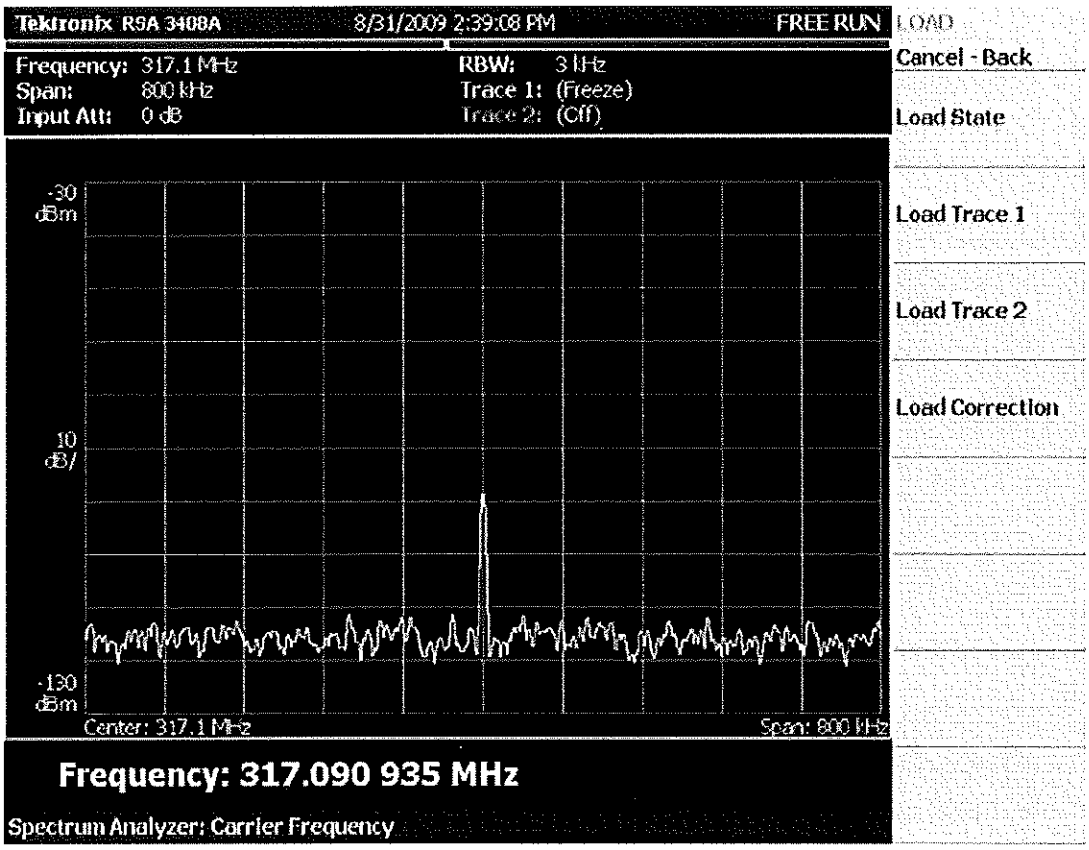
Booster Station Transmission System Reference Level 105.7mHz. +16.0dBm



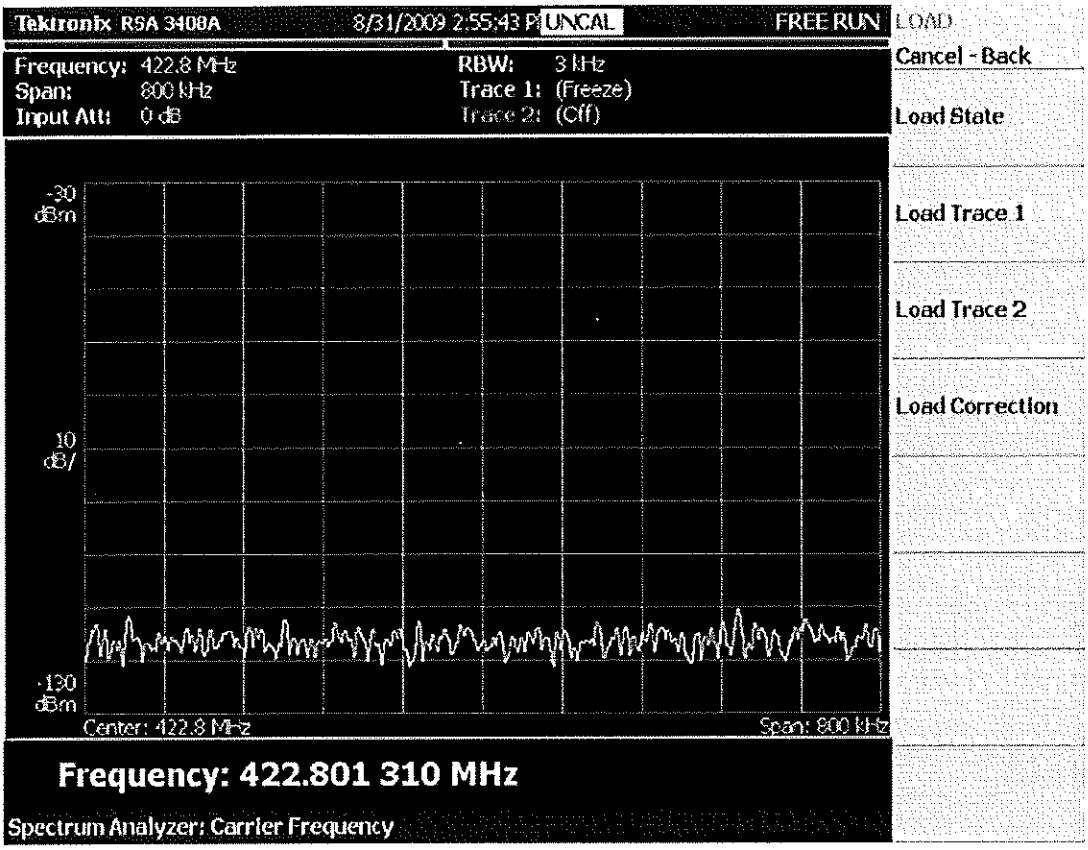
Booster Station Transmission System 2nd Harmonic 211.4mHz. -120.0dBc



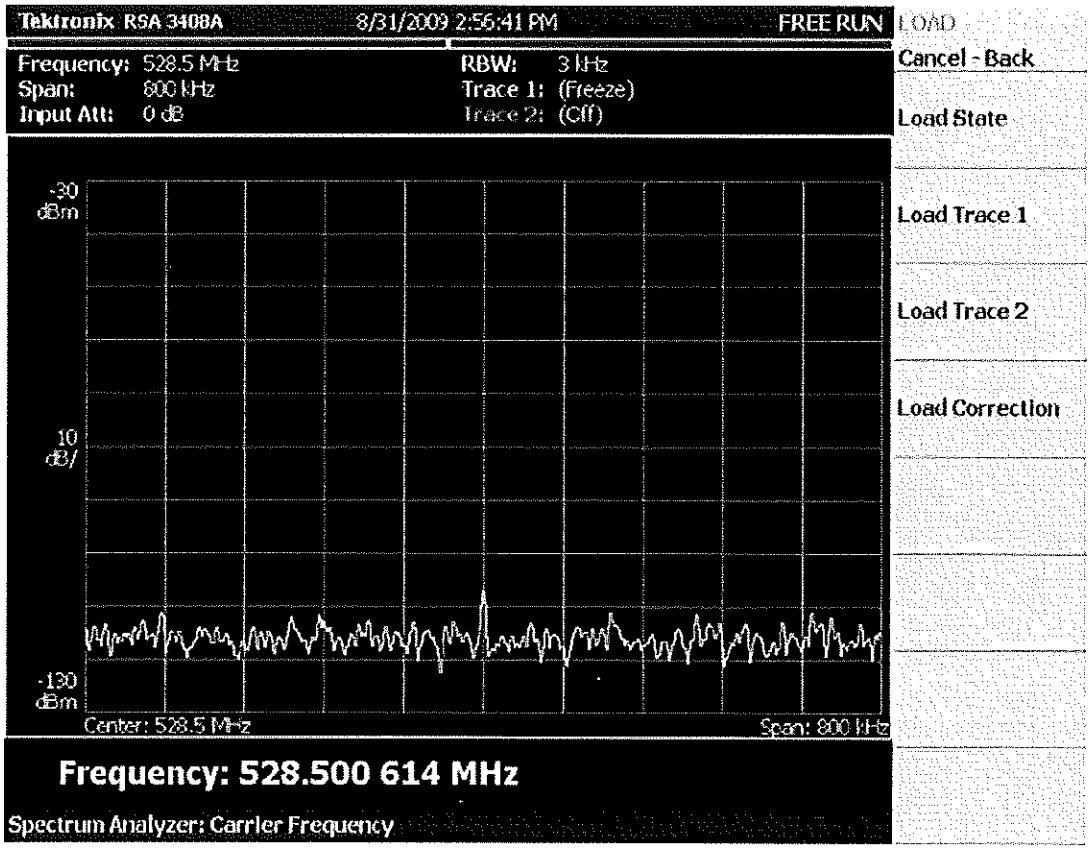
Booster Station Transmission System 3rd Harmonic 317.1 mHz. -114.5dBc



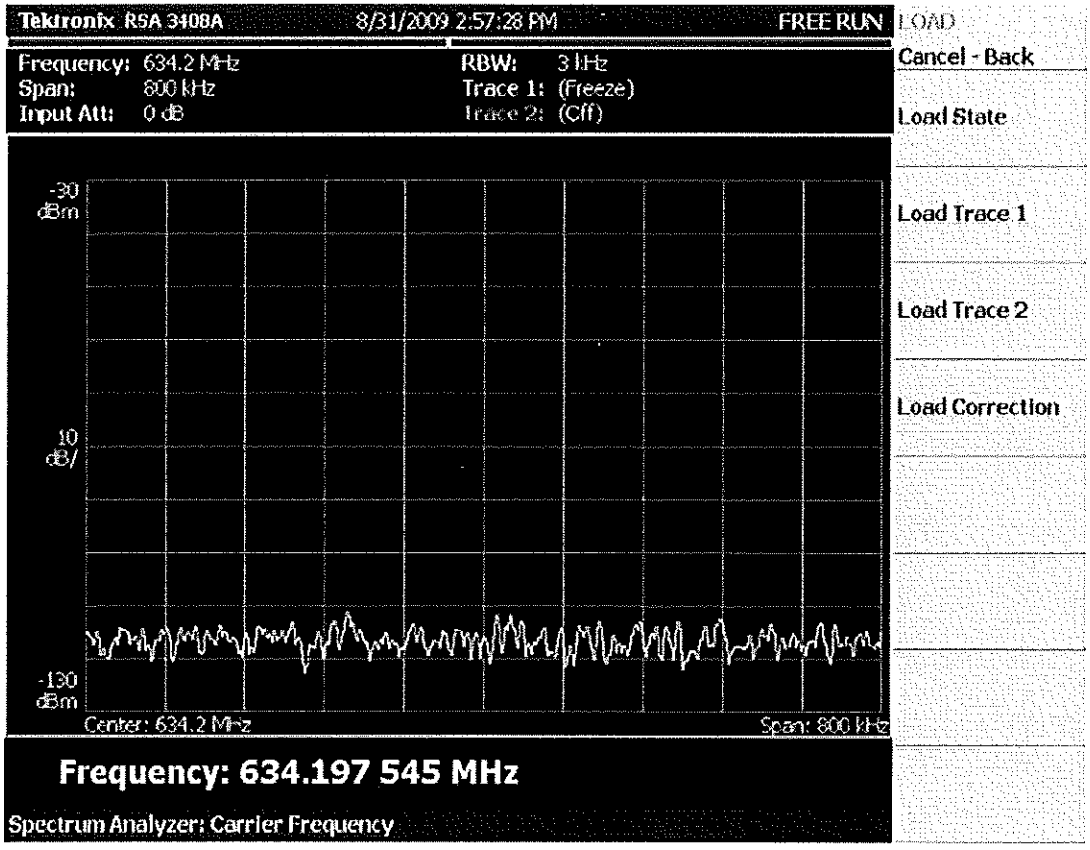
Booster Station Transmission System 4th Harmonic 422.8 mHz. -144.0dBc



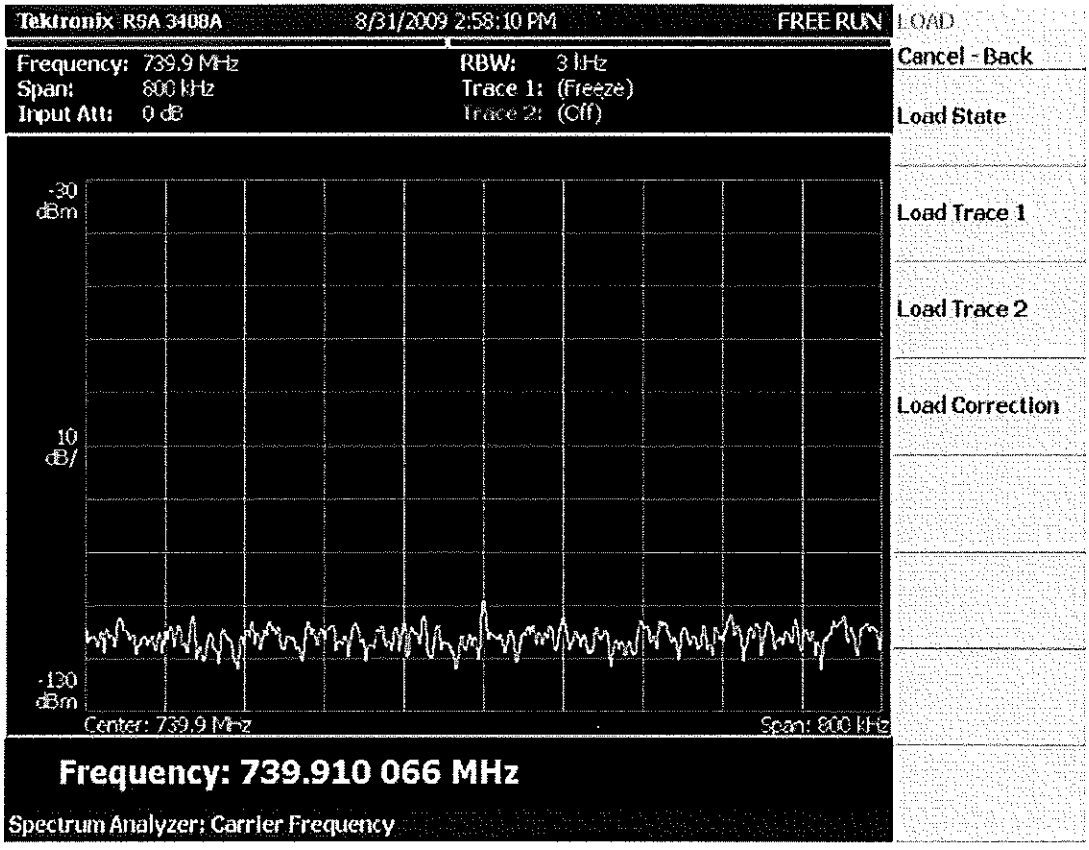
Booster Station Transmission System 5th Harmonic 528.5 mHz. -137.5dBc



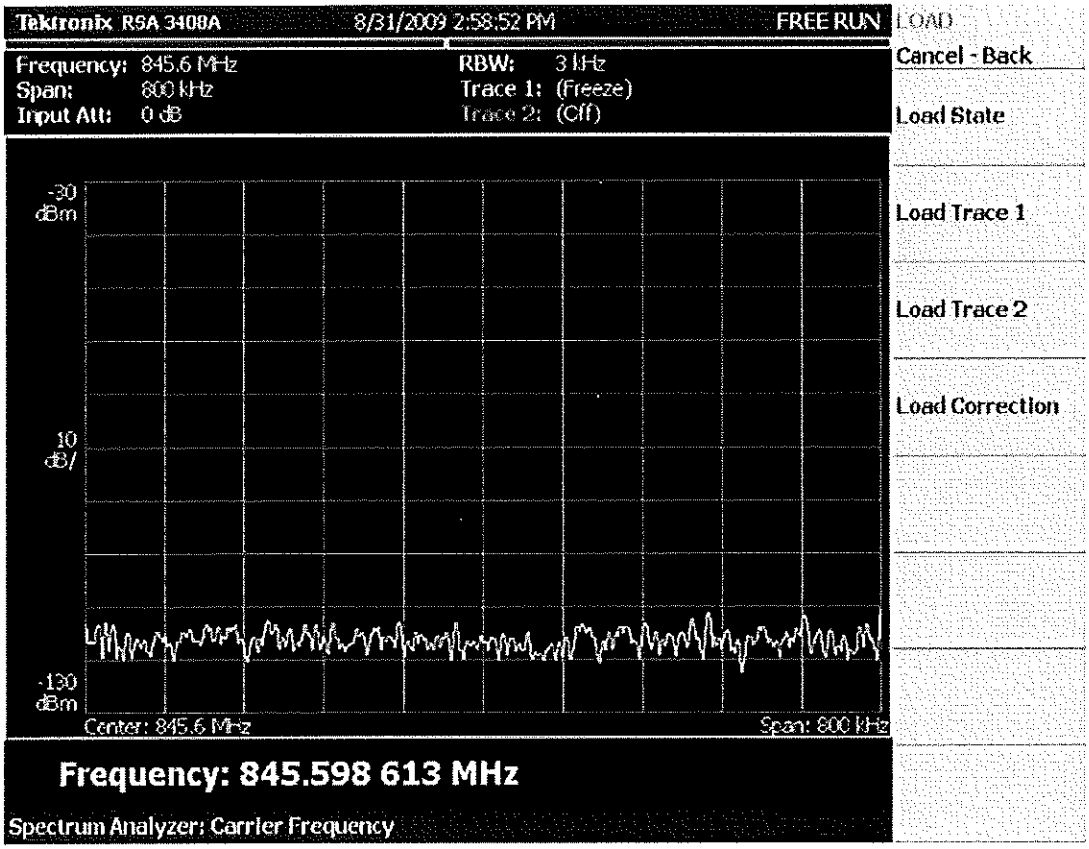
Booster Station Transmission System 6th Harmonic 634.2 mHz. -147.0dBc



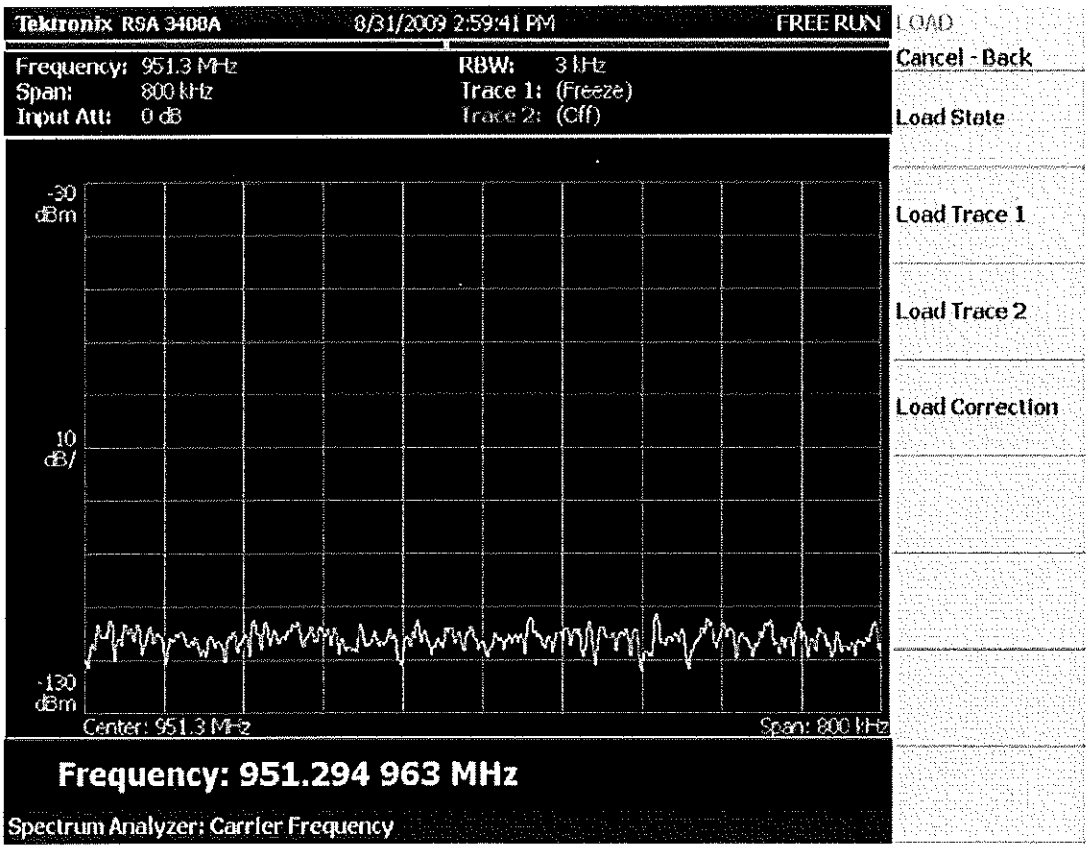
Booster Station Transmission System 7th Harmonic 739.9 mHz. -141.0dBc



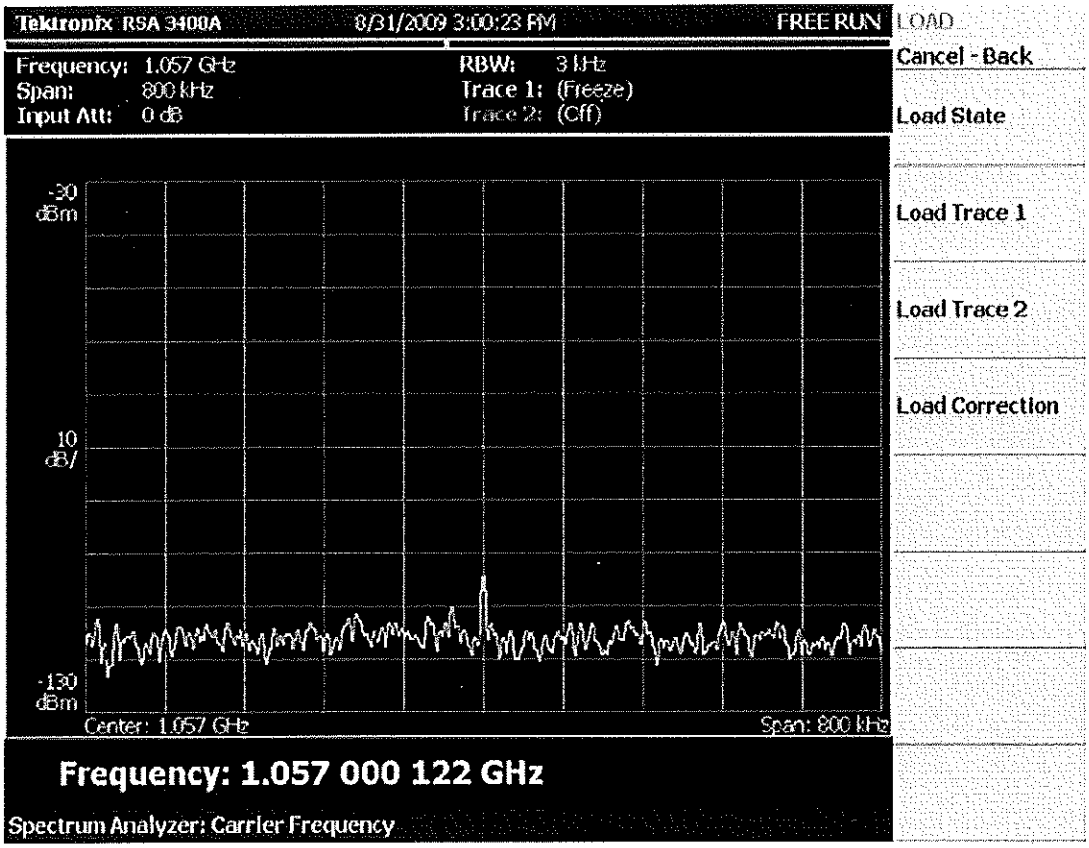
Booster Station Transmission System 8th Harmonic 845.6 mHz. -150.0dBc



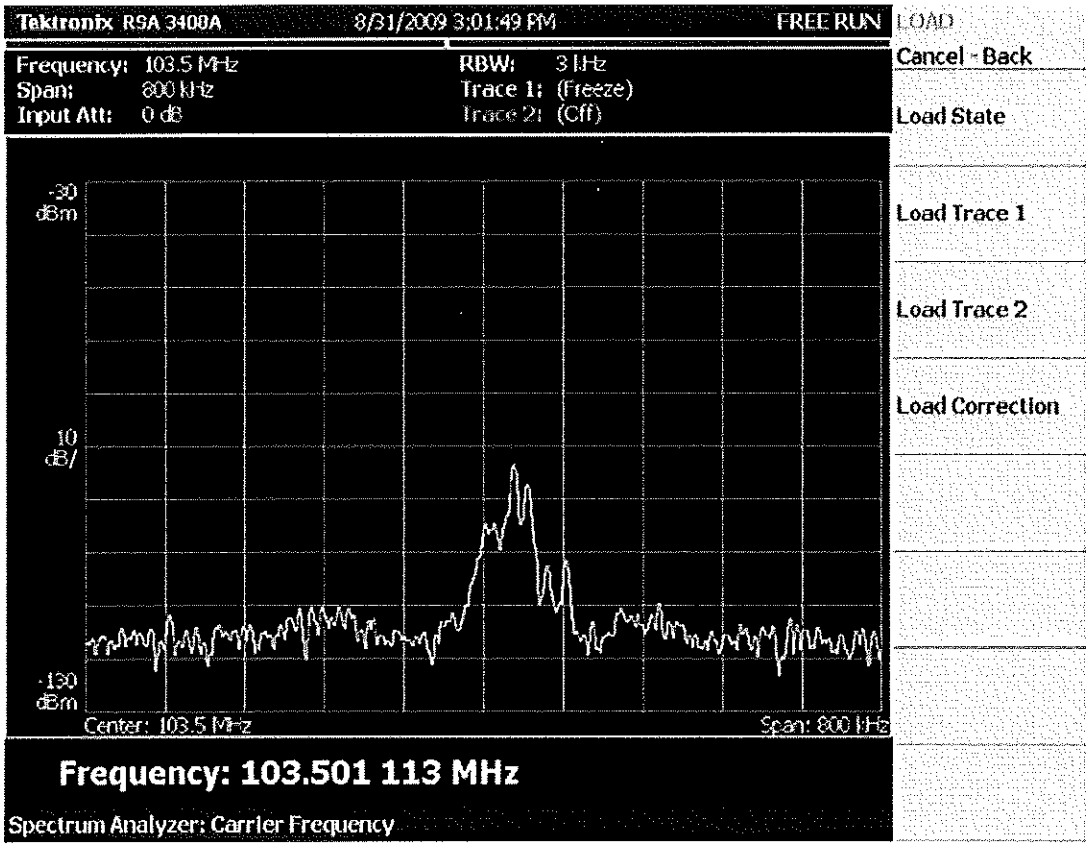
Booster Station Transmission System 9th Harmonic 951.3 mHz. -150.75dBc



Booster Station Transmission System 10th Harmonic 1.057 gHz. -140.5dBc



Measured Intermodulation Product Frequency 103.5 mHz. -98.0dBc
(2 X (A)105.7mHz. – (B)107.9mHz. = 103.5mHz.)



Measurement Equipment Listing

1. Tektronix Spectrum Analyzer model 3408A, serial #B010214, calibrated NBS traceable March 30, 2008.

2. Trilithic Series VF-40003, serial #9711119, Custom Tunable Band-Pass Filter set 50mHz. to 1.4gHz.

3. Tektronix C-5A Scope Camera with Polaroid 667 3000ASA Film

4. Test Cables RG223 or RG-400 Double Shielded Coaxial Cable

5. Hewlett-Packard RF Frequency Counter, model 53181A, serial # 3710A02728, calibrated NBS traceable, 20 August 2009

6. Bird Electronics RF BNC Sniffer Slug

7. Bird Electronics 2watt RF Termination -54dB return loss @ 100mHz.