

NEWS

HOW TO SET FM FQCY
DEVIATION PRECISELY.....

BESSEL NULL FM DEVIATION MEASUREMENT

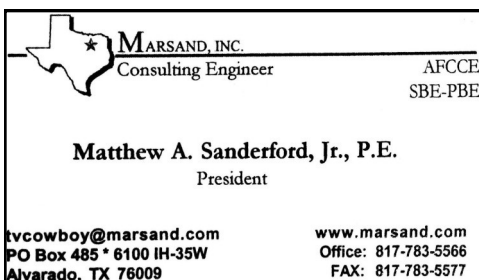
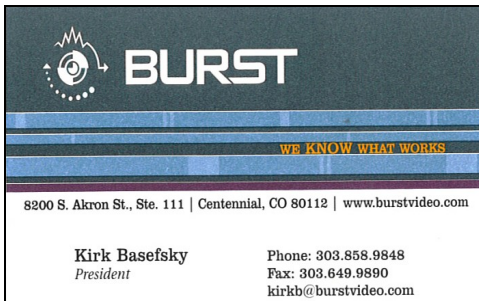
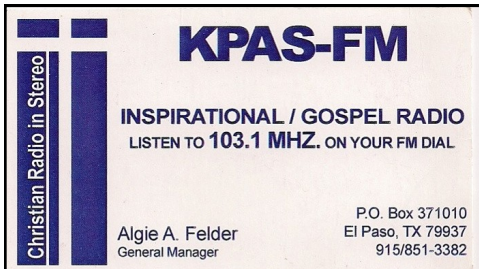
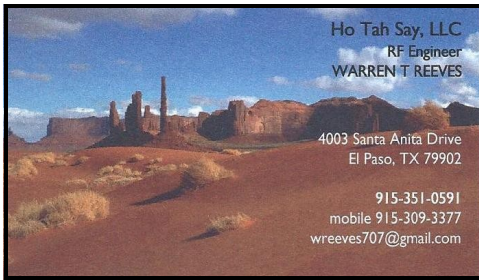
BESSEL NULL FM DEVIATION MEASUREMENT The BESSEL NULL FM deviation measurement is an extremely accurate way to obtain a precise deviation setting on any FM modulator operating at any RF frequency. This test requires a Spectrum Analyzer, Sine-Wave Generator, Audio Frequency Counter, and an accurate dBm meter to verify audio levels. At zero audio input, the Spectrum Analyzer (S.A.) shows only the Carrier Frequency. As the selected audio frequency is slowly increased in amplitude, the original carrier will be seen to decrease in amplitude at the same time that a whole forest of Bessel Function side-bands arise. **OBSERVE ONLY THE CARRIER FREQUENCY AMPLITUDE.** As the audio frequency amplitude increases, the Carrier Amplitude will go through one null after another. Exactly at the desired Carrier Null Number, the carrier will be deviating at the desired deviation. Note that the sine-wave audio frequency will be deviating at Average Program Level (APL) and will indicate Zero VU while a complex audio waveform such as Program Audio, while also

registering Zero VU on the meter, will actually deviate the modulator at a Peak Program Level (PPL). The PPL can be considered to be 10 dB greater than the APL level. As an example, a low frequency sine-wave at APL would deviate at ± 75 KHz, the same level of program audio would cause a deviation of ± 237 KHz, even though the VU meter reading was the same. ($20 \log 237/75 = 10$ dB).

Use the table below to set the deviation of any modulator. You must disconnect any Pre-emphasis in the modulator to prevent errors in the setting of the deviation. The input response must be flat for accurate results.

Choose the carrier null and audio frequency for the deviation you want that will easily pass through the input audio stage of your modulator.

KTSM-TV
KVIA-TV
KRWG-TV
KBNA-AM/FM & KAMA-AM
KHEY-AM/FM, KPRR-FM & KTSM-AM/FM
KLAQ-FM, KISS-FM & KROD-AM
KPAS-FM-
ALGIE A. FELDER CSBE
KINT98.COM
INTERNET RADIO NETWORK
BURST COMMUNICATIONS INC.- KIRK BASEFSKY
GIESLER BROADCASTING SUPPLY INC.
ENTRAVISION COMMUNICATIONS
SCMS, INC.-
TNT BROADCAST AND TELECOMMUNICATIONS CONTRACTORS, INC.-
KSCE-TV
RF Specialties of Texas Dan Sessler.
KCOS-TV
KELP-AM
ARNOLD McClatchy.
MARSAND, INC.
Ho Tah Say. LLC



CARRIER NULL TABLE:

+/- 25 KHz PPL

+/- 75 KHz PPL

+/-237 KHz PPL

Carrier Null DEV Ratio +/-7.9
KHz APL

AUDIO FREQ +/-23.7 KHz APL

AUDIO FREQ +/- 75 KHz APL

AUDIO FREQ:

1 2.40466 3.28766 KHz 9.86297
KHz 31.1894 KHz

2 5.51998 1.43220 KHz 4.29659
KHz 13.5870 KHz

3 8.65489 .913437 KHz 2.74031
KHz 8.66562 KHz

4 11.791 .670485 KHz 2.01146 KHz
6.36078 KHz

5 14.931 .529482 KHz 1.58845 KHz
5.02311 KHz

BESSELart

ENNES WORKSHOP 2017

You will receive the brochure this
week. It's on the mail

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EL PASO, TX SBE CHAPTER 38 MEETING MINUTE

DATE **04/11/2017** LOCATION: **RIO CHINESE BUFF.**

MEETING CALLED TO ORDER: 12:30 PM, BY ANTONIO CASTRO.
THERE WERE 9 ATTENDANTS.

REPORT OF THE SECRETARY: MINUTES IN THE MARCH NEWSLETTER ACCEPTED BY MARIO JIMENEZ, SECONDED BY CARLOS SOSA.

REPORT OF THE TREASURER: \$ 5,476.96 IN THE BANK. ACCEPTED BY JUAN BARRERA, SECONDED BY MARIO JIMENEZ.

REPORT OF THE CERTIFICATION COMMITTEE: NO REPORT .

REPORT OF THE MEMBERSHIP COMMITTEE: SENDING SECOND NOTICE TO 6 SUSTAINING MEMBERS., AND WILL VISIT LOCAL ELECTRONIC SUPPLIERS TO OFFER MEMBERSHIP.

REPORT OF THE FREQUENCY COORDINATOR COMMITTEE: NO REPORT.

REPORT OF THE SCHOLARSHIP COMMITTEE: NO REPORT.

REPORT OF THE WEBSITE COMMITTEE: 2168 HITS LAST TIME, NOW 2181. (13).

REPORT OF THE EAS CHAIRMAN: BOTH NEW MEXICO AND TEXAS MONTHLY TEST WERE RECEIVED AND RELAYED.

REPORT OF THE PROGRAM COMMITTEE: DELGADO FOR MAY.

UNFINISHED BUSINESS: TO ACTIVATE FACEBOOK PAGE. TO PROVIDE LINE UP EL PASO-LAS CRUCES-JUAREZ TV STATIONS.

NEW BUSINESS OR ANY ITEMS FOR THE CHAPTER INTERES: PROPOSED A COMMITTEE FOR INVESTIGATION AND MONITORING AUDIO LEVELS OF OFF AIR TV STATIONS..WILL SEND BALLOT FOR THE 2017 SBE CH-38 ENGINEER OF THE YEAR.

NEXT MEETING DATE AND LOCATION: MAY 9, 2017, @ THE COMO'S ITALIAN RESTAURANT AT NOON.

MEETING ADJOURNED: AT 13:03 PM.

SBE CHAPTER 38 ENGINEER OF THE YEAR 2017 ELECTION WE HAVE 5 (FIVE) NAMES AND WE NEED TO ELECT ONE FROM THEM .WAIT FOR IT !!!

MAY PROGRAM

WE HAD NO PRESENTATION FOR APRIL, BECAUSE OF THE NAB. JUST OUR REGULAR CHAPTER MEETING.

AND FOR MAY, NO PRESENTER AT THIS POINT, BUT IT IS SO IMPORTANT THAT WE ATTEND THE MEETING SO WE KNOW WHO ARE THE 5 FINALISTS FOR THE 2017 CHAPTER ENGINEER OF THE YEAR.

ALSO WE NEED TO BE READY FOR THE 2017 EL PASO ENNES WORKSHOP THIS MONTH.

PLEASE ATTEND AND BRING YOUR INPUT ABOUT NAB.

