



DECEMBER
2013

PO Box 3561 El Paso, TX 79923-3561 www.kint98.com

NEWS

Amazing Adaptable AM Radio

Nov. 12, 2013 by Lou Frenzel in Communiqué

Do you listen to AM radio? I do. And as it turns out millions of others do to, despite the growing number of competitors to conventional broadcast radio. AM radio used to be the only entertainment we had and it provided music, ball games, serials (Lone Ranger, Captain Midnight, etc.) and drama shows (The Shadow). Amplitude modulation radio is the oldest form of electronics there is. It is not like it used to be but it is still around thanks to an interesting mix of technology and market factors.

The first AM radio broadcast was from station KDKA in Pittsburgh in 1920. The number of stations grew steadily over the years but tapered off when FM became popular in the late 1950s and beyond. Today there are still roughly 4700 U.S. AM stations broadcasting. That number has remained pretty constant over time but it is down 4% from 1992 to 2012. As for FM stations, there are about 6300 and that does not include the 2800 or so educational FM stations or the 800+ low power FM stations. FM dominates broadcast radio in the U.S.

The question is, why is AM still around? This ancient analog technology has staying power. It works well, it is simple technically, inexpensive and serves a useful purpose. Besides broadcasting, AM is still used in citizens band radio (AM and SSB) and aircraft radio. Marine radio uses FM except for long range marine that uses SSB a derivative of AM. And SSB is still the main transmit mode choice by a huge population of amateur radio operators. And most shortwave (SW) broadcasting is still AM.

AM radio is talk radio, that is, news, weather, traffic, sports and opinion. There are still some AM music stations around but mostly the music moved to FM. AM and FM radio is primarily listened to in the car or truck. Coverage is predominantly local as the range of most AM and FM stations, during the day, is only a maximum of about 100 miles, depending on the geography. FM is VHF (88 to 108 MHz) line of sight (LOS) and AM is mainly ground wave during the day. At night with the sun down the ionosphere layers come into play. AM signals can travel hundreds even thousands of miles on the AM band (530 to 1710 kHz) because of the skip conditions where signals are refracted from the ionosphere layers.

It is amazing what you can hear at night on the AM band with a good radio and a wire antenna. You can hear coast to coast AM stations with ease and even some foreign stations. As for SW (3 to 30 MHz), broadcasts are world-wide. Most SW stations are in the 5 to 19 MHz range and the coverage varies depending on ionosphere conditions, sun spots, time of day, noise environment, and of course your radio and antenna.

OUR SUSTAINING MEMBERS:

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.- THOM JOHNSON

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




TNT
Broadcast & Telecommunication Contractor Inc.
1319 Murchison, El Paso, Texas 79902

Paul V. Terry
President

Mobile: (915) 920-6769
toolhead@juno.com

El Paso Fax: (915) 544-3481
Austin Fax: (512) 829-4911




KPAS-FM

INSPIRATIONAL / GOSPEL RADIO
LISTEN TO 103.1 MHZ. ON YOUR FM DIAL

Algie A. Felder
General Manager

P.O. Box 371010
El Paso, TX 79937
915/851-3382



BURST

WE KNOW WHAT WORKS

8 Twin Tree Court | Cedar Crest, NM 87008 | www.burstvideo.com

Thom Johnson
Sales Engineer


Phone: 505.286.9555
Fax: 505.286.9565
thom@highfiber.com



NewsChannel 9

801 North Oregon
El Paso, TX 79902
915 532-5421
915 532-6793 Fax

KTSM Television
An NBC Affiliate




KEVIN LOVELL
General Manager

KVIA-TV 7
4140 Rio Bravo
El Paso, Texas 79902
Tel. (915) 496-7777
Fax. (915) 532-0070

Website
kvia.com

e-mail
kvia@kvia.com



MARSAND, INC.
Consulting Engineer

AFCCE
SBE-PBE

Matthew A. Sanderford, Jr., P.E.
President

tvcowboy@marsand.com
PO Box 485 * 6100 IH-35W
Alvarado, TX 76009

www.marsand.com
Office: 817-783-5566
FAX: 817-783-5577

Despite the lingering popularity of analog radio, the transition to digital radio is already occurring. In the U.S., HD Radio now broadcasts simultaneously on the same frequencies as the analog AM and FM stations. HD Radio is a digital version of the analog content overlaid on the same analog carriers. You will hear it referred to as in-band on channel (IBOC). It uses OFDM and voice compression to minimize bandwidth but at the same time give greater fidelity to the audio. Noise and fading are less of a problem as well.

Nevertheless, HD Radio has been available for years but it has not become mainstream. Few actually know about it. HD radios are rare devices. Some high-end cars have HD Radio and some table top HD radios are available but they are rare. Furthermore, HD radio quality is less than expected as it is barely a noticeable improvement over the standard quality of FM and AM. There are very few HD AM stations but the majority of FM stations do broadcast in HD. HD offers the benefit of being able to multiplex one or two additional program sources on the same frequency giving stations several additional programming and advertising choices.

More popular than HD Radio is digital satellite radio. The original two U.S. satellite services merged a while back to form Sirius XM. This is a paid subscriber service available in most vehicles today. There are table top satellite radios but generally they are rare as they do require a special antenna that must "see" the satellites to work. Shortwave broadcasting is also going digital, or at least some of it. A new digital technology called Digital Radio Mondiale (DRM) is now used in dozens of SW stations. It uses coded OFDM and digital compression to keep the bandwidth down to that required for SW broadcast (<10 kHz).

SBE CHAPTER 38 OFFICERS

CHAIRMAN Antonio Castro
SBE member # 11456.
KFOX/COX retired Chief Eng.
800 Arredondo dr.
El Paso, TX 79912
915-584-1220 home
915-525-8507 cell
farahjac@sbcglobal.net

VICE CHAIRMAN Carlos Sosa
SBE member # 26533
801 N Oregon St.
El Paso, TX 79902
915-496-4444 Office
csosa@ktsm.com

Treasurer Walter Hanthorn
SBE member # 18307
KSCE TV
4461 Gen. Maloney
El Paso, TX. 79924
915-269-7583 home
915-532-8588 office

Certification Committee: David Halperin.

Membership Committee:
TBD
TBD

Frequency Coord. Committee:
Warren Reeves
Owen Smith

Scholarship Committee: Rick Vilardell

Web Site Committee: Norbert Miles

Sustaining Membership: Antonio Castro
Program Chairman: Warren Reeves

Newsletter: Antonio Castro

EAS Chairman: David Halperin

Executive Committee:
Antonio Castro
Carlos Sosa
Walter Hanthorn

Ho Tah Say, LLC
RF Engineer
WARREN T REEVES

4003 Santa Anita Drive
El Paso, TX 79902

915-351-0591
mobile 915-309-3377
wreeves707@gmail.com

 **ENTRAVISION COMMUNICATIONS CORPORATION**
5426 N. MESA • EL PASO, TEXAS 79912

David Candellana
General Manager

KINT TV 26 • KTFN TV 65 • KINT 93.9 FM
KSVE 1150 AM • KHRO 94.7 FM • KOFX 92.3 FM

KAMA 750
Your Favorite AM Radio Station
QUE BUENA!
920 am KBNA 97.5 fm

NM STATE **KRWG**
TV/FM


www.krwg.org

GIESLER
BROADCASTING
SUPPLY, INC.

800-634-8601

DAN GIESLER
dan@gbs-giesler.com www.gbs-giesler.com

S.C.M.S., Inc.
Broadcast Sales & Service
NEW & USED
Buy/Sell/Trade
Rentals - Remotes/Emergencies
10201 Rodney Blvd, Pineville, NC 28134
800/438-6040 Fax 704/889-4540
www.scmsinc.com

 **Huntleigh**
Technology Group

Ross Dahman
President

Direct: 915.225.2499
Support: 915.832.0100 x3
ross.dahman@huntleigh.com

www.huntleigh.com 100 Stanton Tower - Downtown
100 N. Stanton Suite 700
El Paso, TX 79901

EL PASO, TX CHAPTER 38 MEETING MINUTE
DATE 11/12/2013 LOCATION: KTSM TV STUDIO

MEETING CALLED TO ORDER: 12:20 PM, BY ANTONIO CASTRO,
THERE WERE 16 MEMBERS.

REPORT OF THE SECRETARY: MINUTES ACCEPTED BY GLENN LEFFLER, 2nd BY NORBERT MILES.

REPORT OF THE TREASURER: CURRENT BALANCE OF \$ 5832.89.
ACCEPTED BY NORBERT MILES, 2nd BY GLENN LEFFLER.

REPORT OF THE CERTIFICATION COMMITTEE: MARVIN HANLEY
ASKED FOR CTO CERTIFICATION TESTS FOR HIS STUDENTS. DAVID
HALPERING WILL CONTACT MARVIN.

REPORT OF THE MEMBERSHIP COMMITTEE: NO REPORT.

REPORT OF THE FREQUENCY COORDINATOR COMMITTEE:
NOTHING TO REPORT

REPORT OF THE SCHOLARSHIP COMMITTEE: WAITING FOR
VILARDELL TO BRING APPLICANTS FOR NEXT MEETING

REPORT OF THE WEBSITE COMMITTEE: 1483 HITS LAST REPORT,
NOW 1500 (17 MORE FROM LAST MONTH).

REPORT OF THE EAS CHAIRMAN : TWO MONTHLY TESTS FROM
NEW MEXICO RECEIVED AND WENT TROUGH

REPORT OF THE PROGRAM COMMITTEE: ANOTHER PRESENTA-
TION ABOUT NETWORK ROUTERS, THIS TIME WITH WARREN
REEVES. IT WENT VERY WELL.

UNFINISHED BUSINESS: NONE

NEW BUSINESS OR ANY ITEMS FOR THE CHAPTER INTERES: MI-
CHAEL GIERE FROM KTSM OFFERED A TRAINING COURSE FOR CER-
TIFICATION ON HARD DRIVES. TALKED ABOUT ENNES WORKSHOP
2014.

NEXT MEETING DATE AND LOCATION: MONDAY DECEMBER 9,
2013 , 7 PM, A VERY SHORT ONE, BECAUSE AFTER IT, WILL BE THE
CHRISTMAS PARTY. PLACE: THE OLIVE GARDEN, SUNLAND PARK DR.

MEETING ADJOURNED: AT 13:30 PM.

Note from the EDITOR: !!
LET'S HAVE A GOOD TIME AT THE HOLIDAY
PARTY ON DECEMBER 9. BUT, IF YOU MISS
IT, HAVE A WONDERFUL CHRISTMAS AND
THAT 2014 BE THE BEST YEAR, FULL OF
HEALTH AND BLESSINGS.....!!

DECEMBER PROGRAM

WE HAD ANOTHER GREAT PRESENTATION: THE CONTINUATION OF “NETWORK ROUTERS, SWITCHES AND MODEMS” THIS TIME WITH WARREN REEVES AS THE PRSENTER .

NOW, THE LAST MEETING OF THE YEAR 2013 IS THE HOLIDAY PARTY HOSTED BY DAN GEISLER, DAN SESSLER, JOHN SCHAAB & ELLIS TERRY.

WHEN:

MONDAY DECEMBER 9, 2013.

TIME: 7 P.M.

**WHERE: OLIVE GARDEN REST.,
SUNLAND PARK DR.**

**PLEASE, RSVP TO DAN GEISLER
AND ANTONIO CASTRO BY**



KLAQ KROD
95.5FM 600AM
BRAD DUBOW
GENERAL MANAGER
4180 N. Mesa El Paso, Tx 79912
(915) 544-9550

KELP RADIO 1590 AM
EL PASO'S CHRISTIAN STATION
8900 Commerce
El Paso, Texas 79915
915 / 779-0018
FAX 915 / 779-6841
Arnold McGlatchey
Owner

KCQSO Grande!
P.O. Box 26668
El Paso, Texas 79926
STREET ADDRESS:
9050 VISCOUNT BLVD.
SUITE A 440
EL PASO, TEXAS 79925
PHONE (915) 590-1313 • FAX (915) 594-5394 • WWW.KCQSTV.ORG

Kint98.com World Wide Radio
The Most Music Variety Station
El Paso, Tx. 79903
Promote your business with unlimited radio
advertising with your own webpage
Norbert Miles (915) 256-9940
email: kint98@aol.com

Dan Sessler
President / GM
Box 1010
Newark, Texas 76071-3141
817 489 2730
Mobile 214-697-3477
dsessler@rfstx.net
www.rfspecialties.com

RF Specialties®
OF TEXAS

A VHF version is also available now. A special receiver is needed or you can get a generic PC-based software-defined radio (SDR) and get the DRM software for demodulation.

And don't forget, broadcast TV is already digital; the analog version was phased out in 2009. U.S. digital TV uses 8VSB (8-coding level vestigial sideband), an AM digital modulation method.

Other countries have already made the conversion from analog to digital radio broadcast. The UK and most European countries use Digital Audio Broadcast (DAB) based on a digital standard called Eureka147. It usually operates in the 174 to 240 MHz range or the L-band from 1452 to 1492 MHz. It uses OFDM and MPEG compression to keep the data rate and bandwidth to a minimum. Japan has a similar digital radio called ISDB-T. And let's not forget Internet radio. That's another story.

There have been rumors about phasing out AM and eventually FM radio in the U.S. I don't see any immediate action on this but keep it in mind. There is still time to enjoy the benefits of AM radio. Get a good receiver like a SW radio or one like those from CC Crane. And add an antenna. Then check out your local stations. You will be amazed at what you can hear at night on AM. A real listening experience. And try SW if you can.

Finally, if you have never built and tested a crystal radio, you had better get to it. Once AM broadcast stations go away, the crystal set will be history too. I built one recently just for the fun of it. I used the traditional oatmeal box inductor and a 1N60 germanium diode with ear phones. I had to use 100 feet of antenna to get any signal. I tuned only three local AM stations and they were weak but very listenable.

Anyway, may AM have a long prosperous life.



Chairman Antonio Castro going over our meeting topics,

Engineer Warren Reeves discussing how I.P. Routers and Switches operate and how to configure them.

