SUNSPOTS

REDWOOD EMPIRE DX ASSOCIATION

A DX and Contest-minded Amateur Radio Club serving the California coast north of the Golden Gate Bridge

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Club Call W6KB

Visit our Web Site at http://www.redxa.com/

MEETING ANNOUNCEMENT

Wednesday, February 9, 2011 at Gourmet Garden Restaurant, Petaluma. If you need directions, please call one of the club officers.

6 pm — Social Hour in the Lounge
7 pm — Dinner and Meeting
8 pm — Program

PROGRAM: Our Program for the evening will feature a return performance from Stu K6TU with a presentation on "Broadband 80 Meter Antennas" with a review of a simple antenna design that offers an SWR of 1.6:1 or better across the entire band.

REDXA President's Report

The Rise of RTTY

Ron Castro N6IE

If you've been regularly active on the ham radio bands, you can't help but notice the dramatic increase in the amount of digital signals over the past 25 years. This is no doubt due to the growth of personal computers in ham shacks around the world and the flexibility of digital sound cards that can emulate the waveforms of signals that used to be the exclusive domain of complicated electro-mechanical systems. The ease of downloading a piece of free software and getting on the air with a digital signal is in sharp contrast to the arduous task that RTTY enthusiasts of decades gone by had to dedicate themselves to.

As many radio history buffs know, the origins of teletype preceded some of Marconi's early accomplishments by as much as half a century, and as early as 1849, a crude landline teleprinter device had been installed between Philadelphia and New York for the transmission of "ticker-tape" stock market reports. By 1870 the wire-connected telegraph was still the main

mode of long-distance communications, but a shortage of trained telegraphers caused French inventor Emile Baudot to explore a mechanical method of coded signal generation that would send traffic faster and require fewer skills to decode. Baudot's five-bit code, which was based on an earlier code system developed in 1834 was first sent on a device with five piano keys, two used with the left hand and three with the right to generate the synchronous 1's and 0's that resemble today's RTTY structure. Unfortunately, Baudot's device required skills at least on the level of a commercial telegrapher, and the speeds never got much past 30 WPM.

Development of machine-sent communications languished until the early 1900's by which time early typewriters gave rise to the development of mechanical keyboard teleprinter systems. Baudot's original code was modified to the one we know today by Donald Murray in 1901 when he developed a system that used paper punch tapes as intermediate media between the keyboard and printer. By 1909, the father and son team of Charles and Howard Krum had developed a practical teletype system with synchronized keyboards and printers on both ends of the wire. Outgrowth of the Krums' work resulted in the "Type-15" page printer in the mid 1920's that remained in commercial use as late as the 1970's and was the workhorse of many early ham RTTY enthusiasts. The familiar, rhythmic "clack-clack-clack-clack" sound of the Type-15 is used to this day as the background sound effect on some radio station newscasts.

The marriage of electro-mechanical teleprinters to radio transmission was inevitable. Printing radio telegraphy deployed by aircraft was first pioneered by the Navy in 1922 and ten years later, regular commercial radio teletype communications were used between San Francisco and Hawaii. WWII saw RTTY flourish due to its speed, ease of use and ability to be easily encrypted. The German military used several versions of the encrypted TTY system known as Enigma, thought to be the most advanced and unbreakable system of its time, but history shows that the cryptologists at Britain's Bletchley Park were generally able to keep up with the evolution of coding schemes, shortening the war by as much as two years. US Naval cryptographers were able to crack the code used by Japanese RTTY systems which lead to Japan's crushing defeat in the Battle of Midway and the beginning of the end of the war in the Pacific. New services such as Press Wireless, started using FSK RTTY transmission for news reports in the Far East starting several years before the war and continued service years after.

At the end of the war, thousands of Type-15 machines and the newer Model 19's and 26's went on the surplus market and many were deployed by AP and UPI in radio and wireline systems to gather news from around

the world where it would be fed to newspapers and broadcast stations. It took a few years before amateurs took interest in teletype especially since the FCC didn't allow for FSK transmission until 1953. A few dedicated pioneers managed to get a few signal on the air as early as the late 1940's using "make-and-break" (MAB) keying, which was essentially on-off CW, keyed with Baudot machine-sent code. In 1949, the first coast-to-coast ham RTTY QSO was recorded between W1AW and W6PSW using AFSK on 11 meters. For you younger folks, 11 meters used to be a ham band...although that was even before my time!

CQ Magazine recognized the potential of RTTY and in 1955 started a regular RTTY column. A few years later, Wayne Green's 73 Magazine started publication with numerous articles on the subject. By 1970 it was possible to work hams in over 100 countries in the mode, and in 1971, RTTY Journal issued its first award for 100 countries confirmed in RTTY to ON4BX. The ARRL started issuing RTTY DXCC awards five years later.

The 1980's saw the introduction of personal computers to the mode, although they usually required additional hardware such as the early AEA PK-64 plug-in cards or AEA PK-232 outboard modems that could be interfaced with a Commodore 64. It wasn't until internal DSP-based sound cards became common, and PC's had the power to deploy them, that the stage was set for RTTY to really take off.

The big break came in 2000 when Mako Mori, JE3HHT placed a home-made piece of software on his website for his Japanese friends to download and play with. Today that software, MMTTY is the most popular RTTY program in the world and is used as a stand-alone or as the engine underlying many popular programs such as HamScope, N1MM, Win-Test and numerous others. Since then, sound card based software has boosted the popularity of many TTY-type modes such as PSK-31, JT65, OLIVIA, MFSK16, THROB, AMTOR (and the other "TOR" modes) and even a modern implementation of the obscure Hellschreiber mode, developed by the German army in the 1920's and later used as the transmission engine behind Enigma in the war.

Today, RTTY is growing at a dramatic pace. Virtually every DXCC country is active and in recent years, RTTY contests have attracted a steadily increasing number of logs with more QSO's despite generally poor propagation. If you're not on RTTY, get active and join the fun! If you already have your DXCC Mixed, Phone or CW certificate, why not take a shot at DXCC RTTY? RTTY contesting is downright addictive and you don't have to be a 40-WPM CW 'hotdog' or fight the QRM in phone! If you need help setting up your station for RTTY or learning the ropes of working a pile-up or a contest, remember that

REDXA is blessed with many experienced Elmers, including the ARRL's "Elmer of the Year" award winner, Chuck, N6OJ.

Two popular RTTY contests are happening this month: the CQ World Wide RTTY WPX the weekend of February 12th (right after the February REDXA meeting), and the North American QSO Party, RTTY February 26th. I'll be looking for you in the log!

This month's REDXA meeting is a special one since it's our annual joint meeting with NCCC and we'll have a chance to clink glasses with some of the world's finest contesters. Our program will feature a return performance from Stu K6TU with a presentation on "Broadband 80 Meter Antennas" with a review of a simple antenna design that offers an SWR of 1.6:1 or better across the entire band. It will be a fun evening for everyone, Wednesday, February 9th at the Gourmet Garden in Petaluma. Don't miss it!

Treasurer Report
by Jim, K6JS

REDXA TREASURER'S REPORT

12/31/10 Balance Forward		$2,396.54
INCOME		
Badges	60.00	
Dues	200.00	
Raffle	49.00	
TOTAL INCOME		309.00
EXPENSES		
TOTAL EXPENSES		(0.00)
1/31/11 Ending Balance		$2,705.54

REDXA membership renewal is due. Please submit your dues ASAP. Dues can be mailed to me via my home address, which is current on or QRZ.com mailed to the REDXA P.O. Box or given to me personally at our regularly scheduled meetings.

BOARD OF DIRECTORS MEETING
JANUARY 2011
by Wally, N6AD

NO MEETING WAS SCHEDULED

JANUARY MEETING MINUTES
by Wally, N6AD

President Ron N6IE called the meeting to order at 7:37 pm, January 12, 2011 at the Gourmet Garden in Petaluma. In attendance were 32 members as well as one guest, Dave KJ6DLA. Ron N6IE requested a motion to accept the minutes of the last meeting and Treasurer's Report as published in Sunspots. Both were moved for approval, seconded and adopted without revision.

Old Business: John K6MM reminded us that volunteers are still needed at the 62nd International DX Convention in Visalia in the areas of registration, raffle ticket sales, and flea market help. John appealed to all members to attend this iconic annual event. Spirit Award -- Alan K6SRZ was on hand to formally accept this award presented to him at the last meeting, again with great appreciation for his efforts. REDXA mugs -- If anyone scoring 100 or more QSOs in CQP did not receive a mug please contact President Ron N6IE.

New Business: Upcoming Meetings -- February is our annual joint meeting with the Northern California Contest Club. Bruce W6OSP announced that John K6MM is a new NCCC board member and new web master -- congratulations to John. At the March meeting San Francisco SCM Bill KH6GJV will bring us the latest from ARRL. April may see a presentation on the ZK2 DXpedition by Alan K6SRZ, who was one of the participants and is currently producing the video.

The raffle was won by Bob K6QXY who took home half of $98.

Our program consisted of the recent PJ7E DXpedition to Sint Maarten presented by participants Bruce W6OSP and John K6MM. Sint Maarten PJ7 is one of four new Caribbean DXCC entities resulting from the dissolution of the Netherlands Antilles on 10/10/10, an event which was preceded by a stir of excitement in the DX world as DXpeditions were organized and the prospect of a real bonanza took hold.
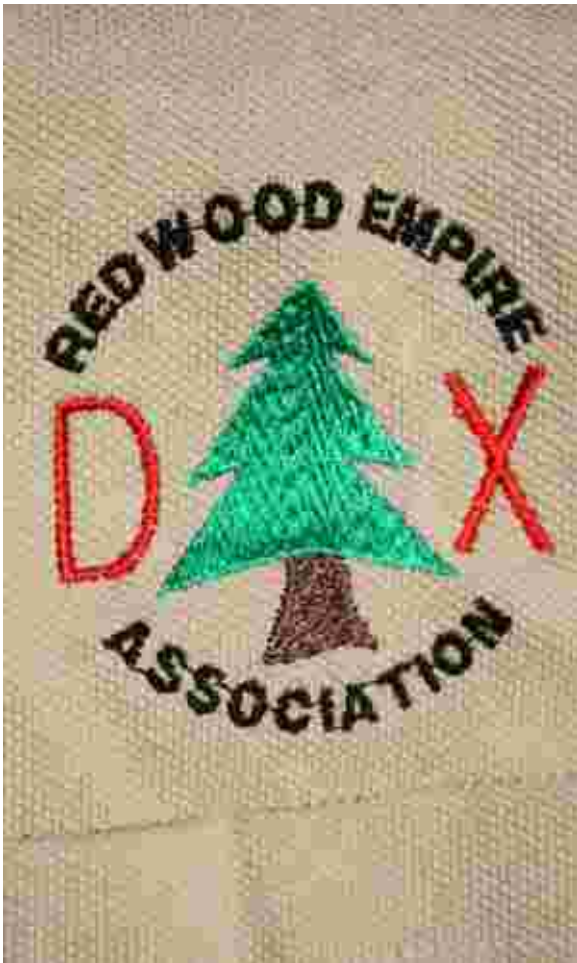
Once on site the team overcame the early obstacles of a delayed boat landing due to high seas during Tropical Storm Otto and neighbors suspicious of intrusive antenna installations. The separation of SSB and CW locations at opposite ends of the island proved an ideal solution in minimizing multi station QRM.

The band plan itself was a tour de force of logic and foresight. In the end, superior planning and the high experience level of the team combined to produce over 74,000 contacts, a commendable result considering the relatively low number of operators and short operating period. See http://www.pj7e.com/ for more information.

The meeting was adjourned at 8:58 pm.

REDXA Embroidered Polo Shirts

There seems to be interest in ordering a new batch of shirts. These are the polo shirts (tan color). Other colors could be available but would need to be fairly light for the embroiderey to stand out. Example: canary yellow, sky blue, etc. with the club logo embroidered over the left. The price will be $30.00 each. This includes all charges and taxes. Please let me know what size(s) you would like. 73, Fred

Contesting and DX News
by Jim, K6JS

RTTY RU

Call	Category	Score
N6OJ	SOLP	98,106

CQ 160

N6IE	SOAHP	31,270 (Remote)

NAQP CW

K6RIM	SOLP	173,840

Calendar of Upcoming Events:

Feb 9	* REDXA Monthly Meeting: ***Joint Meeting w/NCCC***
Feb 12-13	CQ WPX RTTY
Feb 19-20	ARRL International DX CW
Feb 25-27	CQ 160m SSB
Feb 26-27	NA QSO Party RTTY
Mar 5-6	ARRL International DX SSB
Mar 9	* REDXA Monthly Meeting
Mar 26-27	CQ WPX SSB
Apr 13	* REDXA Monthly Meeting
Apr 15-17	Int'l DX Convention Visalia
May 11	* REDXA Monthly Meeting
May 28-29	CQ WPX CW
Jun 8	* REDXA Monthly Meeting
Jun 11-13	ARRL June VHF QSO Party
Jun 18-19	All Asian DX Contest
Jun 25-26	ARRL Field Day

See http://www.hornucopia.com/contestcal/ for more Contest Schedules.

Here is the link for the News Summary:
http://www.arrl.org/sections/?sect=SF

673 Plum Street
Novato, CA 94945

MEETING: FEBRUARY 9, 2011